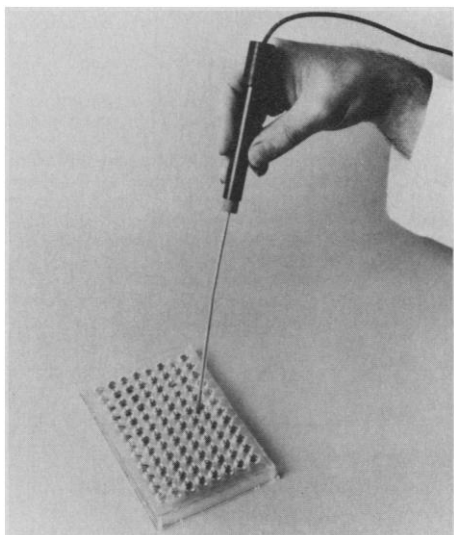


pH Measurements of Microsamples

The combination Micro pH Electrode measures pH levels in liquid samples as small as 10 μ l, smaller than any other commercially available electrode. Model PHR-146 is especially suited for biological assays in containers such as microtiter plates, culture



tubes, cuvettes, micro test tubes, serum cups, and nuclear magnetic resonance tubes. The pH sensor is nonglass and comes with an unlimited guarantee against breakage. It offers high stability and rapid response. The flat sensor surface allows measurements on filter paper and electrophoretic agar surface gels. Lazar Research Laboratories. Circle 453.

Fluorescent Labels

Immunopore AMCA Reagents for fluorescent labeling contain AMCA, a unique fluorophore that absorbs at 345 nm and fluoresces at 440 to 460 nm. AMCA's emission wavelength does not overlap with that of other fluorophores, making it an ideal reagent for multiple labeling. It fluoresces with a distinctive bright blue color. The

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

reagents provide other advantages, including little or no effect on the isoelectric point of proteins after labeling, minimal photobleaching, maximal fluorescence at neutral pH, good quantum yield, no autofluorescence interference, and wide applicability in immunohistochemical staining. Pierce. Circle 463.

Thermoelectric Transducer for Geothermal Exploration

A highly sensitive geothermal heat flux transducer provides direct measurements of the earth's heat flow. The transducer's small size (6 by 6.5 by 0.225 inches) allows installation in bore holes or subsurface burial. Signals can be read with a portable potentiometer, recorder, or data logger. Applications include geothermal surveys, ice and snow heat flow studies, and structural energy conservation research. International Thermal Instrument Co. Circle 448.

Nonformalin Tissue Fixative

Omnifix is a nonformalin alcohol-based tissue fixative that is not only far less toxic than formaldehyde, but also results in superior staining results in many tissues. Omnifix has shown excellent results with common staining techniques, including peroxidase antiperoxidase, avidin-biotin complex, and streptavidin-peroxidase. Omnifix penetrates into tissues more quickly than formalin, thus reducing fixation time. Zymed Laboratories. Circle 462.

Data Collection Software

DataTalk is a menu-driven software package that collects, manipulates, and formats data from instruments with an RS232 port. DataTalk runs on IBM PC/XT/AT, PS/2, or compatible computers. It can collect ASCII data in almost any format as a batch file or in real time. Labtronics. Circle 470.

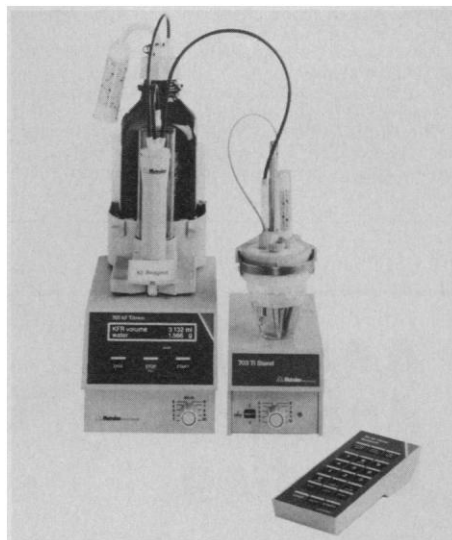
Incubators with Carbon Dioxide Sensing Systems

These water-jacketed incubators have nondispersive infrared carbon dioxide sensors. Designed specifically to monitor carbon dioxide continuously in a range up to 20%, the infrared sensors have no moving parts, making them maintenance-free, are completely solid state, and are unaffected by humidity or moisture. The incubators feature unique multiple heating systems that

deliver excellent temperature uniformity and quick recovery from temperature loss after the door has been opened. Designed for use in cell biology, genetics, virology, cancer research, and other culturing disciplines, the units are equipped with solid-state microprocessors, positive set-point temperature and carbon dioxide controls, and temperature sensors inside the chamber. Model 5415 is a 5.4-cubic foot single chamber; model 5435 is a 10.8-cubic foot vertical dual chamber. Napco Scientific. Circle 469.

Tiny Titrator

The Metrohm Karl Fischer Titrator Model 701 is the smallest available Karl Fischer titrator. Model 701 is equipped for two-way communication with a computer via an RS-



232 hookup and with the operator via an alphanumeric keypad. Model 701 automatically determines the titer, blank, drift, or sample water in 30 s, then aspirates the titrated sample at the touch of a button. Brinkmann Instruments. Circle 466.

Literature

Lab-Line's *Water Bath Catalog* features more than 38 models. The 12-page, color catalog describes constriction materials, temperature ranges, control and uniformity specifications, electrical requirements, capacity, speed, dimensions, and weights for a wide variety of water baths. Lab-Line Instruments. Circle 497.

Hamilton Product Catalog contains information on a variety of precise and accurate scientific syringes, liquid handling and measuring devices, and polymeric high-performance liquid chromatography columns. Hamilton. Circle 503.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year, and is mailed on issue date. Personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference. **SCIENCE** reserves the right, in its discretion, to decline to publish advertisements submitted to it.

LINE CLASSIFIED ADVERTISEMENTS

DEADLINE: Thursday, 10 a.m., 2 weeks prior to issue date. Advertising is accepted only in writing.

POLICIES: All classified ads will be edited and typeset according to **SCIENCE** style guidelines. NO ABBREVIATIONS. Any deadline for applications stated in ad must be at least 2 weeks after date of issue in which ad appears.

CLASSIFICATION: **SCIENCE** publishes line classified ads under the following headings: **Positions Open, Employment Agencies, Fellowships, Situations Wanted, Courses and Training, Meetings, Announcements, and Marketplace.** Advertisers should specify classification desired, however, **SCIENCE** reserves the right to decline classification requests which it believes may be misleading to readers.

RATE: \$41 per line, \$410 minimum, per week. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces per line. No charge for use of blind box number. No agency commission for ads less than 40 lines. No cash discount. Prepayment required for all foreign ads. Purchase orders required for all other advertising.

To **ESTIMATE** ad cost, structure ad copy on a 52-character line; include any desired heading on 32-character lines. Each line of heading, one line of white space between heading and body of ad, and all partial lines (including centered reply information, if desired) are counted as full lines. Multiply total number of lines x \$41 = approximate cost of ad, per week. (This is an approximate cost ONLY. Allow for variation between estimated lines and actual typeset lines and resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment. **SCIENCE** cannot provide proofs of typeset ads.)

BOXES AND LOGOS: Any 1-column line classified ad can be boxed and/or published with logo. No extra production charge for use of box or logo. For boxed ads, one line equals 48 characters and spaces; two additional lines will be added to cost of ad to allow for top and bottom box rules. Logos are billed according to number of lines needed to accommodate logo.

SITUATIONS WANTED ADS: As a service to AAAS members in good standing, **SCIENCE** offers free placement of Situations Wanted ads for individuals seeking full-time or part-time employment. A blind box may be used. Ads must be submitted in writing with text of 20 words or less, not including address or box number, and are limited to two insertions per member in each calendar year. Please enclose **SCIENCE** mailing label including AAAS membership number when submitting ad.

CANCELLATIONS: Deadline for cancellations is 10 a.m. Tuesday, 10 days prior to issue date.

Address ad copy or requests for information to:

SCIENCE Classified Advertising
1333 H Street, NW, Room 940
Washington, DC 20005
Telephone: 202-326-6555
FAX: 202-682-0816

MARKETPLACE AND DISPLAY PERSONNEL ADVERTISEMENTS

For rates, deadlines, and other information about fractional display ads (1/6 page and larger) and all **Marketplace** listings of available products and services, contact:

Scherago Associates, Inc.
1515 Broadway
New York, NY 10036
Telephone: 212-730-1050
FAX: 212-382-3725

RESPONSES TO EMPLOYMENT ADS

Applicants should read Positions Open ads carefully in order to submit all required material when responding, and should especially check for any stated deadline for receipt of applications.

SCIENCE encourages applicants for positions to investigate employment laws, nondiscrimination policies, visa requirements, and cultural differences in the country advertising for employees.

To reply to a blind box ad, address correspondence to:

Box (give number)
SCIENCE Classified Advertising
1333 H Street, NW, Room 940
Washington, DC 20005

POSITIONS OPEN

ANATOMIST/NEUROBIOLOGIST

The Department of Anatomy, Wright State University School of Medicine, invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level. The applicant should have a Ph.D., M.D., or equivalent degree with postdoctoral experience in neurobiology. Preference will be given to applicants with research interest in neuroendocrinology or reproduction using modern cellular and molecular technologies although exceptional neurobiologists from other research areas will also be considered. The candidate will be expected to carry on an active research program and to apply for extramural funding. Primary teaching responsibilities will be in neuroanatomy. Applicants should submit their curriculum vitae, research interest, three recent reprints, and the names of three references by 1 March 1990 to:

Dr. John Pearson, Chair
Search Committee for Neurobiologist
Department of Anatomy
Wright State University
School of Medicine
Dayton, OH 45435

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

DALHOUSIE UNIVERSITY FACULTY OF MEDICINE DEPARTMENT OF ANATOMY, HEADSHIP

Dalhousie University is seeking an individual with an active research program as well as a strong record of accomplishments in the areas of education and administration to provide leadership for its Department of Anatomy, which includes 17 full-time and 8 part-time members.

This person is expected to have a Ph.D. and/or M.D. degree and must be able to administer the department's academic responsibilities in undergraduate, graduate, and residency programs while promoting and enhancing the status of departmental research efforts.

Applications, together with curriculum vitae and the names of three referees, should be sent to: **Dr. D. D. Rasmussen, Chair, Anatomy Search Committee, Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia, Canada H3H 4H7.**

Dalhousie University has a policy of Affirmative Action in hiring qualified women academic staff and, in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

ANATOMIST

ASSISTANT OR ASSOCIATE PROFESSOR to teach in a master's level physical therapy program. Teaching responsibilities include a two-semester gross anatomy course with strong functional and clinical emphasis. Prefer research interests in kinesiology/biomechanics. Responsibilities include supervising student research. Full-time contract beginning June 1990. Application deadline: when position is filled. Send curriculum vitae, transcripts, and three references to: **Dr. M. J. Jewell, Chair, Department of Physical Therapy, Samuel Merritt College, 370 Hawthorne Avenue, Oakland, CA 94609. Telephone: 415-420-6783. An Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR AVIAN MOLECULAR BIOLOGY

The Department of Poultry Science, North Carolina State University (NCSU), Raleigh, is seeking applications for a 12-month, tenure-track, **ASSISTANT PROFESSOR** position available 1 July 1990. The successful candidate will be expected to develop a research program utilizing the techniques of molecular biology in an area such as avian growth and development, nutrition, immune function, reproduction, etc., with the long-term goal of applying the techniques developed to increase the efficiency of performance in economically important avian species. Duties will include 90% research and 10% participation in the department's undergraduate and/or graduate teaching programs. Applications, including curriculum vitae, a statement of research interests, transcripts, and three letters of reference, should be sent to: **G. B. Havenstein, Head, Department of Poultry Science, NCSU, Raleigh, NC 27695-7608.** The deadline for applications is 1 April 1990. *NCSU is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ANIMAL PHYSIOLOGIST

Applications are invited for a tenure-track **ASSISTANT PROFESSORSHIP** beginning 1 September 1990. Candidates should have postdoctoral training in animal physiology, experience using molecular/cellular techniques, and a commitment to establishing an externally funded research program. A willingness to participate in both undergraduate and graduate training programs is expected. Teaching responsibilities will include an introductory course in human physiology and the development of an advanced course in the applicant's area of specialization.

Review of applications will begin 1 February 1990 and continue until the position is filled. Candidates should submit a letter of application, curriculum vitae, and names of three references to: **Dr. Daniel D. Jones, Department of Biology, University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294.**

The University of Alabama at Birmingham is an Equal Opportunity/Affirmative Action Employer.

ANIMAL RETROVIROLOGIST. Applications are invited for a 12-month tenure-track **ASSISTANT/ASSOCIATE PROFESSOR** appointment jointly funded by the Nevada Agricultural Experiment Station and Department of Microbiology, School of Medicine. The candidate is expected to develop an independent research program focused on the molecular biology/immunology of an animal retrovirus. He/she is expected to be an active participant in an interdisciplinary graduate program in cell and molecular biology and will be located adjacent to a molecular biology core facility and existing CMB faculty. A Ph.D. in virology, molecular biology, or related discipline, and postdoctoral training are required. Applicants should submit curriculum vitae, brief statement of research interests, and three letters of reference to: **Stuart Nichol, Retrovirologist Search Committee, Room 146, Howard Building, University of Nevada, Reno, NV 89557.** Application deadline is 1 March 1990. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR position available for candidates with a strong background in **MOLECULAR BIOLOGY.** A tenure-track position is available to candidates with Ph.D. or equivalent degree who have postdoctoral experience and are strongly committed to research and teaching. Preference will be given to individuals with a molecular biology approach to the following fields: immunology, signal transduction, neurobiology, and receptors. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Knowledge of French is an asset. Deadline for applications is 30 April 1990. Curriculum vitae, a brief description of experience in research and teaching, a statement of career objectives and proposed research program, and three letters of recommendation should be sent to: **Search Committee, Department of Pharmacology, School of Medicine, University of Ottawa, 451 Smyth Road, Ottawa, Ontario, Canada K1H 8M5.**

THE UNIVERSITY OF CALGARY DEPARTMENT OF BIOLOGICAL SCIENCES ASSISTANT PROFESSOR IN MICROBIOLOGY

The University of Calgary Department of Biological Sciences invites applications for an assistant professor in microbiology (tenure track) effective 1 July 1990. Ph.D. required; at least 2 years of postdoctoral experience preferred. Applicants must have a demonstrated ability to conduct productive and independent high-quality research in environmental or applied microbiology. Duties will include teaching junior level courses in environmental microbiology and developing further courses in the microbiology program.

Applications, with curriculum vitae, a synopsis of research objectives, and the names of three referees, should be sent by 15 February 1990 to:

Dr. R. W. Davies, Head
Department of Biological Sciences
The University of Calgary
2500 University Drive, N.W.
Calgary, Alberta, Canada T2N 1N4

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary has an Employment Equity Program and encourages applications from all qualified candidates, including women, aboriginal people, visible minorities, and people with disabilities.

POSITIONS OPEN

The Nemours Children's Clinic in Jacksonville, Florida, an affiliate of the University of Florida College of Medicine, invites applications from pediatricians with research expertise in radioactive and stable isotope tracer techniques to join an active research program. Academic appointment will be at the level of **ASSISTANT PROFESSOR OR ASSOCIATE PROFESSOR**, depending on qualifications. Pediatric endocrinologist preferred. Please submit curriculum vitae by recruiting deadline of 15 February 1990 to: **Chairman, Search Committee, Nemours Children's Clinic, P.O. Box 5720, Jacksonville, FL 32247.**

Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR MICROBIOLOGY LOUISIANA STATE UNIVERSITY

The Department of Microbiology has a tenure-track position available in 1990 for a candidate with a Ph.D. degree and at least 2 years of postdoctoral experience. We are seeking a candidate who uses molecular techniques to study important problems in either prokaryotic or eukaryotic microbiology. The successful candidate will have access to excellent facilities for the analysis and synthesis of macromolecules. Salary is competitive and commensurate with qualifications and experience. Review of applications will continue until a suitable candidate is found. Please send curriculum vitae, a letter stating present and future research efforts, and the names and addresses of three references to: **Dr. M. D. Socolofsky, Department of Microbiology, Louisiana State University, Baton Rouge, LA 70803-1715.**

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

The University of San Diego (USD), Department of Biology, invites applicants for a tenure-track position at the **ASSISTANT PROFESSOR** level beginning in September 1990. Teaching responsibilities include **BIOLOGICAL OCEANOGRAPHY**, an introductory principles of biology course for majors, and participation in the general education curriculum. USD is a Catholic university whose primary aim is teaching excellence. Active scholarship by the faculty is considered essential to this aim. The candidate is expected to maintain an active research program which has the potential for undergraduate involvement. Teaching experience is desirable. *Women and minority groups are particularly encouraged to apply.* Send curriculum vitae, a brief description of teaching philosophy and research interests, and names and addresses of three references by 7 February 1990 to: **Chair, Department of Biology, University of San Diego, Alcalá Park, San Diego, CA 92110.**

ASSISTANT PROFESSOR OF BIOLOGY, VERTEBRATE PHYSIOLOGIST. The University of Maine at Machias invites applications for this tenure-track position beginning September 1990. The successful applicant will teach genetics, cell biology, developmental biology, vertebrate anatomy, and physiology, as well as participate in the teaching of first-year courses for majors and nonmajors. Minimum requirements include an earned Ph.D. in biology, a willingness to contribute to the growth and development of a relatively young biology program, and a sensitivity to the needs of students at a variety of skill levels, ages, and backgrounds. Interests in environmental issues, applications of technology to teaching in a rural setting, and the issues of gender in the curriculum are welcome. *Applications from minorities and women are especially encouraged.*

The University of Maine at Machias is a 900-student, independently accredited undergraduate campus of the University of Maine System. Located overlooking the Machias River, it is in an unspoiled portion of the spectacular Maine coast known for its outdoor recreation opportunities and excellent quality of life.

Salary: Starting salary commensurate with experience and qualifications.

A letter of application, detailed curriculum vitae, and three letters of reference should be sent to:

**Professor Charles D. Duncan, Chair
Division of Science and Mathematics
University of Maine at Machias
9 O'Brien Avenue
Machias, ME 04654**

Application closing date is Thursday, 1 February 1990, at 4 p.m.

The university is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR. Applications are invited for a position at the level of assistant professor (tenure track) in the Department of Chemistry at Stanford University, with primary research and teaching interests in the general area of inorganic chemistry. Applicants must be strongly motivated toward creative research and have a commitment to teaching at the undergraduate and graduate levels. In applying, please send curriculum vitae, list of publications, a brief statement of research interests (three pages or less), and, in addition, have three letters of recommendation sent to: **Professor Harden M. McConnell, Chairman, Department of Chemistry, Stanford University, Stanford, CA 94305.** *Stanford is committed to Equal Opportunity through Affirmative Action in employment, and we are especially eager to identify minority persons and women with appropriate qualifications. Applications should be received by 19 January 1990.*

Western State College of Colorado announces the Thornton Chair in Biology. The college anticipates filling an endowed chair position for a molecular biologist beginning August 1990 and invites applications. The position is open to a Ph.D. scientist with an **ASSISTANT PROFESSOR OR ASSOCIATE PROFESSOR** rank, and has a high probability of becoming a tenure-track position in fall 1991. The successful candidate will develop an undergraduate program in molecular biology including two or more of the following courses: recombinant and cloning techniques, immunology, molecular genetics, developmental molecular biology, and microbial physiology. Participation in introductory biology courses will also be expected. Starting salary mid-\$30,000's plus benefits and rank commensurate with experience. Send an application letter, curriculum vitae, and names and addresses of three references to: **Thornton Chair Committee, Department of the Sciences, Western State College, Gunnison, CO 81231.** Review of candidates begins 1 February 1990 and continues until position is filled. *Western State College is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.*

ASSISTANT PROFESSOR REPRODUCTIVE PHYSIOLOGY UNIVERSITY OF VERMONT COLLEGE OF MEDICINE

The Department of Obstetrics and Gynecology is seeking an individual with a Ph.D. or M.D. and postdoctoral research experience in the area of reproductive endocrinology or vascular physiology to join a research group whose interests are in the physiology of reproduction at the cellular or molecular level; specifically, mechanisms of signaling and transduction, steroid hormone action, and the biology of the vascular wall. This tenure-track position offers an opportunity to teach at the undergraduate and graduate level, to interact with other departments in the medical school and to participate in university affairs. Please send résumé, two representative publications, and the names and addresses of three references before 1 May 1990 to: **Dr. Daniel H. Riddick, Chairman, Department of Obstetrics and Gynecology, Sb415 MFU-Fletcher, MCHV, Burlington, VT 05401.** *The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

Two **ASSISTANT PROFESSOR/ASSISTANT ENTOMOLOGIST** positions with the Department of Entomology, University of California, Riverside, California. Ph.D. required; 11 months; 90% research, 10% teaching.

POPULATION GENETICIST: Research and teaching involving arthropod population genetics; experience with parasitoids or predators preferred. Postdoctoral experience advantageous. **URBAN HORTICULTURAL ENTOMOLOGIST:** Research and teaching responsibilities for a strong basic program involving insect pests of ornamental plants, arthropod/host-plant interactions, and/or environmental stress on the association between plants and insects is desirable.

Applicants should send curriculum vitae, transcripts, bibliography, reprints and manuscripts in press, Ph.D. dissertation abstract, names of five references, and statement of research interests to: **R. F. Luck (Population Geneticist) by 15 February 1990; or J. T. Trumble (Urban Entomologist) by 1 March 1990, Department of Entomology, University of California, Riverside CA 92521.** *The University of California is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF SCIENCE

Physical and/or biological sciences, **ASSISTANT PROFESSOR**, Ph.D. by June in one of the natural sciences. Teaching positions in freshman-sophomore general education program. Research required. Positions available September 1990. Deadline for applications: 15 February 1990. Tenure-track; salary negotiable depending on credentials. Send résumé and have three recommendations forwarded. Application will not be reviewed by search committee until recommendations are received. Mail to: **Professor William E. Davis, Jr., Chairman, Division of Science, College of Basic Studies, Boston University, 871 Commonwealth Avenue, Boston, MA 02215.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSORS. New York University (NYU), Department of Biology. The NYU Department of Biology is embarking on a major program of expansion and development. Two tenure-track/probationary positions are presently available, one in the area of molecular biology and gene regulation and the other in developmental biology and genetics, although outstanding individuals in other areas will be considered. Candidates will be expected to establish an active, externally funded research program and to participate in the department's teaching activities. Excellent start-up packages and newly renovated laboratory space. Application letter with curriculum vitae and names and addresses of three references should be sent to: **Professor Efrain Azmitia, Chairperson of the Search Committee, Department of Biology, New York University, 29 Washington Place, Room 954, New York, NY 10003.** *NYU encourages applications from women and members of minority groups.*

ASSISTANT PROFESSOR MOLECULAR IMMUNOLOGY

The Department of Microbiology and Immunology, Baylor College of Medicine, invites applications for a tenure-track faculty position in molecular immunology. We seek an individual of exceptional capabilities with a strong postdoctoral training record and substantial research productivity in molecular biology and/or molecular immunology. The candidate should be determined to establish a strong independent research program and should welcome collaborative interactions with departmental colleagues in T lymphocyte immunoregulation, MHC structure, function, and genetics. Interested applicants should send curriculum vitae, a brief description of research plans, and names of three references to: **Dr. Robert R. Rich, Department of Microbiology and Immunology, M929, Baylor College of Medicine, Houston, TX 77030.** Applications received before 15 February 1990 will receive preference in review. *Baylor College of Medicine is an Equal Opportunity/Affirmative Action Employer.*

THE UNIVERSITY OF CALGARY SMOOTH MUSCLE RESEARCH

The University of Calgary Faculty of Medicine invites applications for faculty positions at the **ASSISTANT PROFESSOR** level or higher from scientists with research interests in smooth muscle structure and/or function within any of the following disciplines: biochemistry, molecular biology, physiology, pharmacology, cell biology, and pathology.

Well-qualified candidates must compete successfully for salary and establishment support by application to the Alberta Heritage Foundation for Medical Research. Applicants require an M.D. and/or Ph.D. and research training at the postdoctoral level. Remuneration will be based on salary scales at the University of Calgary relative to training and experience. Successful applicants will have 75% of their time protected for research.

Interested candidates should submit curriculum vitae, a statement of aims and research interests, and the names and addresses of three references by 1 March 1990 to:

**Dr. M. P. Walsh
Department of Medical Biochemistry
The University of Calgary
3330 Hospital Drive, N.W.
Calgary, Alberta, Canada T2N 4N1**

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary has an Employment Equity Program and encourages applications from all qualified candidates, including women, aboriginal people, visible minorities, and people with disabilities.

RESEARCH PHYSICIST/CHEMIST

Naval Research Laboratory

GM-14 — \$48,592 to \$63,172 per annum
(salary dependent on qualifications)

Conducts theoretical investigations in the field of dynamic simulations of materials properties. Duties involve developing new theories and algorithms for solving new/novel problems in materials design, materials structure and materials properties, and implementing these approaches on state-of-the-art computers.

Qualifications: A degree in Physics or Chemistry (an advanced degree is highly desirable) plus extensive research experience in using molecular dynamics and first-principles Monte Carlo path integral methods. Experience in the following areas is required: first-principles and model Hamiltonian studies of melting, crystal growth, phase transformations, surface reconstruction, internal defects, interface dynamics, electronic relaxation following photoemission, electronic excitation, cluster properties and surface reactivity.

To apply: Submit an Application for Federal Employment (SF-171) or detailed resume by 31 January 1990 to:



Naval Research Laboratory
Civilian Personnel Division
ATTN: 46-008-14 (S)
4555 Overlook Ave., S.W.
Washington, DC 20375-5000
Phone: (202) 767-3030

AN EQUAL OPPORTUNITY EMPLOYER • U.S. CITIZENSHIP REQUIRED

CELL BIOLOGY

Faculty Positions

The Department of Cell Biology at the Duke University Medical Center is planning a major expansion of its faculty over the next several years. Applicants are being sought who have a strong research background using the modern technologies of cell and molecular biology and who are interested in participating in an interactive research community. The major focus of the department is to define molecular mechanisms for the function and development of cells and organs. Most appointments will be at the level of assistant professor.

Please send curriculum vitae, list of three references, and a brief description of proposed research to:

Michael P. Sheetz, Chairman
Department of Cell Biology
Duke University Medical Center
Box 3011
Durham, NC 27710

Duke University is an Equal Opportunity/Affirmative Action Employer.

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
NATIONAL CANCER INSTITUTE

A Senior Executive Service Vacancy

ASSOCIATE DIRECTOR

Cancer Prevention Research Program Division Of Cancer Prevention And Control

Location: Rockville, Maryland

The Associate Director, Cancer Prevention Research Program, will be responsible for the overall planning, coordination and monitoring of a worldwide Cancer Prevention Program designed to provide prompt evaluation of new leads in cancer prevention. The Cancer Prevention Research Program has a staff of approximately 46 who administer a large intramural and extramural program with a budget of approximately \$36 million annually.

This is a Civil Service position in the Senior Executive Service (SES) with an annual salary compensation between ES-1 through ES-4 (currently \$68,700 to \$76,400 per annum). In addition, physicians may be eligible for a Physician's Comparability Allowance up to \$20,000 per year. (Applicants alternatively may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) The individual selected, if not presently in SES, must serve a one-year probationary period.

Applicants must meet the minimum educational requirements for Medical Officer, GS-602. Applicants must further meet established mandatory professional/technical and managerial/executive requirements. Applicants will be further evaluated on the degree to which they possess additional desirable qualifications in the areas of professional/technical qualifications, managerial/executive qualifications, scientific reputation/peer recognition, training and education, and honors and awards. A copy of the requirements may be obtained by contacting Ms. Dolores Guido in the Personnel Management Branch, NCI, at (301) 496-8182.

Applications for Federal Employment (SF-171), are to be sent to the above individual at:

**The National Cancer Institute
Personnel Management Branch
9000 Rockville Pike
Building 31, Room 3A19
Bethesda, Maryland 20892**



A current curriculum vitae and bibliography must accompany all applications for entrance into the SES. Resumes are not acceptable applications for entrance into the SES. Public Health Service Commissioned Officers wishing to enter the SES must follow the above procedures. Officers interested in performing the duties of the position *within the Commissioned Corps* may submit a resume to the above address.

Applications must be received by February 2, 1990.

SELECTION FOR THIS POSITION WILL BE BASED SOLELY ON MERIT, WITH NO DISCRIMINATION FOR NON-MERIT REASONS SUCH AS RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN, POLITICS, MARITAL STATUS, PHYSICAL HANDICAP, AGE, OR MEMBERSHIP OR NON-MEMBERSHIP IN AN EMPLOYEE ORGANIZATION.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN

ASSISTANT PROFESSOR

The Department of Neurology at the University of Minnesota Medical School seeks a Ph.D. neuroimmunologist at the assistant professor tenure-track level to establish a research laboratory in molecular neuroimmunology related to expression of Class I major histocompatibility and other antigens on the surface of neural cells. This effort will contribute to a multidisciplinary research program devoted to multiple sclerosis, AIDS, and related conditions. The research will focus on the molecular basis of immune responses in the central nervous system. Individual will be expected to participate in the teaching of residents, graduate students, and undergraduate students. He or she will also hold an appointment in the appropriate basic science department. The candidate should have achieved a Ph.D. with at least three additional years of neuroimmunology- and neurovirology-related postdoctoral research training. His/her record of publications and references should indicate outstanding promise for an independent research career. Salary is negotiable. Applicants should send curriculum vitae by 31 January 1990 to:

Dr. Richard W. Price
Professor and Head
Department of Neurology
Box 295, UMHC
Harvard Street at East River Road
Minneapolis, MN 55455

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

ASSISTANT/ASSOCIATE PROFESSOR MOLECULAR CANCER PHARMACOLOGY

The Department of Pharmacology and the Cancer Center, Northwestern University Medical School, invite applications for a tenure-track faculty position at the assistant or associate professor level. Prospective candidates should have a Ph.D., M.D., or equivalent degree, have had postdoctoral training, and have demonstrated excellence in research and commitment to teaching. Preference will be given to those who have had experience in the application of molecular biology, genetics, cell biology, or immunology to pharmacological problems as related to cancer. The successful candidate is expected to develop his/her own research program as supported by external funds and to participate in the teaching program. The position will become available effective 1 September 1990. Applicants should have their curriculum vitae, a brief statement of future research plans, and three letters of recommendation sent to: Dr. Toshio Narahashi, Professor and Chairman, Department of Pharmacology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611. Telephone: 312-908-8284. Application must be received by 1 March 1990. *Women and minority candidates are particularly encouraged to apply. We pay special attention to the qualified candidates in these groups. An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR OF PHARMACEUTICS

The Washington State University, (WSU) College of Pharmacy invites applications for a tenure-track annual appointment in pharmaceuticals, effective 1 July 1990. A Ph.D. in pharmaceuticals is required. Research interest compatible with the pharmacology/toxicology graduate program is desirable. Preference will be given to applicants having a professional degree in pharmacy. The candidate must have a demonstrated potential for developing a creative, independent research program for appointment as an assistant professor, or an active extramurally funded research program for appointment at the associate rank. Teaching duties will include participation in team-taught courses for professional pharmacy students and students in the pharmacology/toxicology graduate program.

Applications will be received until 22 February 1990 or until the position is filled. Applicants should provide curriculum vitae, the names and addresses of three references, and a statement of research interests and professional goals.

Contact: William L. Hayton, Ph.D., College of Pharmacy, Washington State University, Pullman, WA 99164-6510. Telephone: 509-335-4750.

WSU is an Equal Opportunity/Affirmative Action Educator and Employer. Protected group members are encouraged to apply.

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHARMACOLOGY AND TOXICOLOGY RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

The Department of Pharmacology and Toxicology of the Rutgers College of Pharmacy is searching for an assistant professor on a tenure-track line. The candidate should have an M.D. or Ph.D. in one of the basic medical sciences and should be prepared to teach in pharmacology and toxicology courses. Candidates should be prepared to develop an independent research program. The department focuses on research on mechanisms of chemical and drug toxicity. We are particularly interested in attracting a person who can apply the techniques of modern molecular biology to the solution of mechanistic problems, but any candidate displaying a record of excellence in research will be considered. Salary is commensurate with experience and qualifications. Candidates should submit current curriculum vitae, a description of research plans, and a list of references by 15 February 1990. Address all correspondence to: Professor Robert Snyder, Chairman, Department of Pharmacology and Toxicology, Rutgers College of Pharmacy, Piscataway, NJ 08855-0789.

Rutgers University is an Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR YALE UNIVERSITY

The Department of Pharmacology, Yale University School of Medicine, invites applications for tenure-track appointments at the assistant or associate professor level to begin in 1990 or 1991. The department currently has a strong program in neuroscience, biochemical and molecular pharmacology, and cancer chemotherapy. Candidates in these areas, as well as those that might bring new strengths to the department, are encouraged to apply. Candidates should have a Ph.D. or M.D. degree, postdoctoral experience, and a strong commitment to research. Applications submitted by 1 March 1990 should include curriculum vitae, description of research interests, and the names of at least three referees and be sent to: Faculty Search Committee, Department of Pharmacology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510. *Yale University is an Equal Opportunity/Affirmative Action Employer.*

The Biology and Microbiology Department at the University of Wisconsin-Oshkosh is seeking applicants for an entry level tenure-track ASSISTANT PROFESSOR to teach basic genetics and share teaching of introductory biology, beginning 1 September 1990. Ph.D. in eukaryotic genetics required. Postdoctoral and teaching experience desirable. Candidate is expected to develop a research program, supervise master's theses, and pursue extramural funding. The university has a unique faculty development program for limited funding of research, and to provide matching funds for extramural grants. Candidate may develop a course in area of interest. Screening of applicants begins 15 January 1990 and will continue until the position is filled. Send letter of application, résumé, three current letters of recommendation, and official transcripts to: M. A. Rouf, Chairman, Department of Biology and Microbiology, University of Wisconsin-Oshkosh, Oshkosh, WI 54901. *The University of Wisconsin-Oshkosh is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR, MOLECULAR PHARMACOLOGY/BIOLOGY. Tenure-track position: Department of Pharmacology, Southern Illinois University (SIU) School of Medicine, in Springfield, Illinois. Ph.D. or M.D./Ph.D. degree, training in pharmacology, and postdoctoral experience are required. Assistant professor applicants have strong potential for fundable research programs and for effective participation in pharmacology graduate and medical courses. In addition, associate professor candidates should have a record of funded research, publications, and teaching. A preference will be given to those who apply molecular biology, genetics, or cell biology to research in pharmacology. Anticipated hire date of 1 July 1990. Send curriculum vitae, representative publications, statement of research plans, and names and addresses of three references by 28 February 1990 to: Dr. Ezio Giacobini, Professor and Chairman, Department of Pharmacology, SIU School of Medicine, P.O. Box 19230, Springfield, IL 62794-9230. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR. Molecular biology, tenure-track, start September 1990. Some start-up funds available. Ph.D., vigorous research program, commitment to undergraduate teaching required. Subdiscipline open. Position open until filled, screening starts January 1990. Send cover letter and curriculum vitae to: Dr. Sidney L. Beck, Chair, Department of Biological Sciences, DePaul University, Chicago, IL 60614. *DePaul University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR OF PHARMACEUTICAL SCIENCES. The Washington State University (WSU) College of Pharmacy invites applications for a tenure-track annual appointment in pharmaceutical sciences, effective 1 July 1990. A Ph.D. in one of the biomedical sciences (biochemistry, medicinal chemistry, pharmacology, toxicology) is required. Research emphasis on studies involving the endocrine system is desirable. Postdoctoral experience is preferred. Preference will be given to applicants having a professional degree in pharmacy. The candidate must have a demonstrated potential for developing a creative, independent research program for appointment as an assistant professor, or an active extramurally funded research program for appointment at the associate rank. Teaching duties will include participation in team-taught courses for professional pharmacy students and students in the pharmacology/toxicology graduate program. Applications will be received until 15 February 1990 or until the position is filled. Applicants should provide curriculum vitae, the names and addresses of three references, and a statement of research interests and professional goals. Contact: Gary G. Meadows, Ph.D., College of Pharmacy, Washington State University, Pullman, WA 99164-6510. Telephone: 509-335-4750. *WSU is an Equal Opportunity/Affirmative Action Educator and Employer. Protected group members are encouraged to apply.*

ASSISTANT PROFESSOR IN RESIDENCE, University of California, San Diego. Research faculty position available for well-trained investigator with Ph.D. in biochemistry, physiology, or related discipline to generate a research program in glucose and insulin metabolism. Experience in whole animal physiologic studies as well as modern in vivo techniques of investigation are preferred. Opportunities to collaborate with other faculty interested in insulin resistance and insulin action exist. This position is at a junior faculty level, but associate professor appointments are possible if commensurate with the candidate's experience and background. The primary appointment will be in the Department of Surgery with collaborative interactions and secondary appointments in other departments as appropriate. Closing date: 31 March 1990. Salary per published scale. Send letter of inquiry and curriculum vitae to: Dr. Jerrold Olefsky, University of California, San Diego, Department of Medicine (V-111G), La Jolla, CA 92093. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSISTANT (OR ASSOCIATE) PROFESSOR position available for a botanist to study factors influencing forest decline. Research should focus on physiological, biochemical, anatomical, or ecological aspects of the problem. Candidates must hold the Ph.D. degree in an appropriate area, have evidence of an active research program, and have a proven record of attracting funding. Send curriculum vitae and have transcripts and three letters of recommendation sent by 1 March 1990 to: Dr. Richard Klein, Botany Department, University of Vermont, Burlington, VT 05405-0086. *The University of Vermont is an Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSISTANT PROFESSOR CELL/MOLECULAR BIOLOGIST

Position available for a scientist having Ph.D. to study cellular molecular aspects of lipoprotein receptor protein. Preference will be given to individuals familiar with protein isolation and characterization techniques and prior background in molecular biology. Send curriculum vitae and three letters of reference to: Frank M. Yatsu, M.D., Professor and Chairman, Department of Neurology, The University of Texas Medical School at Houston, 6431 Fannin, Suite 7.044, Houston, TX 77030. Telephone: 713-792-5777.

The University of Texas is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR MOLECULAR PARASITOLOGY

The Department of Zoology at the University of Georgia invites applications for a tenure-track position starting fall 1990. Investigators working at the molecular level in any area of parasitology are encouraged to apply. Special consideration will be given to those with an expertise in areas such as recombinant DNA techniques, molecular separations, etc. Departmental duties will include contributing to current teaching in parasitology to undergraduate students and developing a course in molecular parasitology at the graduate level. The successful candidate will have a prominent role in the Department of Zoology's current NIH Training Program in Molecular Cell Biology of Parasites and Vectors.

Send curriculum vitae, a statement of career objectives and current and/or planned research, and the names, addresses, and phone numbers of three references to:

Dr. Moises Agosin
Chair, Search Committee
Department of Zoology
University of Georgia
Athens, GA 30605

Closing date for applications is 15 February 1990. *The University of Georgia is an Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSISTANT PROFESSOR

The Department of Physiology at Temple University School of Medicine invites applications for a non-tenure-track position at the level of research assistant professor. Ph.D. in physiology and 1 to 2 years of postdoctoral training required. Candidate must have laboratory experience in experimental physiology, protein biochemistry, and handling of radioactive materials. Applicant will be expected to conduct a variety of experiments involving in vivo thrombosis models, which require microvascular surgery. Skill in ligand-receptor binding studies, polyclonal antibody production, human venopuncture, radiolabeling of proteins, and protein purification also beneficial. Primary research area will involve the purification of various snake venom peptides and the evaluation of their potential antithrombotic activity in biological systems. Opportunity also available for participation in research focused on the localization of specific binding epitopes for plasma proteins on platelet membrane glycoproteins.

Responsibilities will include the coordination of laboratory activities and the supervision of students and technical personnel, as well as independent and collaborative research. Applicant must present evidence of excellent verbal and written communication skills and the ability to obtain research funding. Please send curriculum vitae and three letters of reference to:

Dr. Peter R. Lynch, Chairman
Temple University
School of Medicine
Department of Physiology
3420 North Broad Street
Philadelphia, PA 19140

RESEARCH ASSISTANT PROFESSOR. M.D. or Ph.D. in cell biology and/or tissue culture. Independent investigator capable of directing research and preparing manuscripts and grants. Conduct/direct independent research involving tissue culturing of corneal epithelium and endothelium. Send curriculum vitae, publications list, and three references to: **James P. McCulley, M.D., University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, E7.142, Dallas, TX 75235-9057. Equal Opportunity Employer.**

INSTRUCTOR/ASSISTANT PROFESSOR. Position open immediately for instructor/assistant professor in the Department of Radiology at The University of Texas Southwestern Medical Center at Dallas. Position includes research in NMR microscopy (both imaging and spectroscopy) of experimental and human tumors. Qualifications include an M.D. or Ph.D. degree and advanced training and work experience in the biological effects of radiation and in clinical cancer research. The successful candidate should have an extensive background in pathology. Salary range \$30,000 to \$35,000. Curriculum vitae required. Contact: **Peter Antich, Ph.D., The University of Texas Southwestern Medical Center, Radiology, 5323 Harry Hines Boulevard, Dallas, TX 75235-9058. An Equal Opportunity/Affirmative Action Institution.**

RESEARCH SCIENTISTS PROTEIN CHEMISTRY

Amgen is a recognized leader in the discovery and development of human therapeutic products through applied biotechnology. We are expanding our program on the interactions of protein ligands with cell surface receptors with emphasis on the role of carbohydrate structure in these interactions. As a result, we have opportunities available for **Ph.D. scientists** to contribute to the development of this program.

Qualified candidates for this program must have an unique background covering a variety of disciplines including a general knowledge of protein and glycoprotein purification and structure/function relationships. Experience in characterization of membrane-associated receptors which bind protein ligands is highly desirable. A Ph.D. in Biochemistry or a related field and a minimum of two years' postdoctoral experience are required.

Amgen offers an excellent compensation and benefits package and the unique opportunity to contribute to significant research programs on the leading edge of biotechnology. If you have the necessary skills and qualifications and would like to be a part of a company that places a high priority on its human resources, please send a complete C.V., in confidence, to:

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Recruitment, Dept. #502
Amgen Center
Thousand Oaks
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SCIENTIFIC LABORATORY DIRECTOR

A leading drug testing facility based in Salt Lake City, and a subsidiary of a Fortune 300 company, seeks a Laboratory Director with extensive forensic drug testing experience.

Major responsibility will involve the preparation of a new laboratory facility for NIDA Certification.

Selected candidate must have a degree in natural sciences and meet the DHHS requirements for a Scientific Director of a drug testing facility. Excellent organizational and administrative skills are necessary to oversee laboratory personnel. Publications in the toxicology field and forensic courtroom experience are desirable.

We offer a competitive salary and outstanding company paid benefits. For immediate consideration please forward your resume, with salary requirements, to:

P.O. Box 701050
Salt Lake City, Utah 84170-9962

Equal Opportunity Employer M/F/V/H

POSITIONS OPEN

ASSISTANT PROFESSOR/CELL BIOLOGIST DEPARTMENT OF SURGERY UNIVERSITY OF CONNECTICUT SCHOOL OF MEDICINE

Applications are invited for a Ph.D. cell biologist with interests in endothelial cell biology to work within the Section of Vascular Surgery. Experience with cell culture and/or molecular biology techniques required, and interest in cell-cell interaction and cell-matrix interaction desirable. Independent funding will eventually be required. Send curriculum vitae to:

Steven T. Ruby, M.D.
Department of Surgery
University of Connecticut School of Medicine
263 Farmington Avenue
Farmington, CT 06032

*An Affirmative Action/Equal Opportunity Employer,
M/W/H.*

ASSISTANT PROFESSOR MOLECULAR BIOLOGY/VIROLOGY

The Division of Biology at Kansas State University (KSU) has a tenure-track position available at the assistant professor level effective August 1990. Applicants are invited from investigators with postdoctoral experience in the molecular biology of viruses/oncogene expression/cell growth regulation. The division has a strong research program in molecular biology, excellent facilities, and a distinguished faculty with several million dollars in extramural grants. The successful candidate will be expected to establish a vigorous and creative scholarly program, and to participate in our undergraduate and graduate instruction. Candidates should apply by 23 February 1990 by submitting curriculum vitae and a brief description of future research plans and having three letters of reference sent to:

Terry C. Johnson, Director
Division of Biology, Ackert Hall
Kansas State University
Manhattan, KS 66506-4901

KSU is an Equal Opportunity/Affirmative Action Employer.

INSTRUCTOR IN BIOLOGY

The Division of Biology at Kansas State University (KSU) has a position available at the instructor level effective August 1990. We are especially interested in individuals with a Ph.D. who are interested in a challenging career in undergraduate education. The division has undergraduate programs in biology, microbiology, and fisheries/wildlife biology. Although broadly defined, we are particularly interested in individuals with experience in teaching introductory biology, animal physiology, and/or anatomy. Candidates should apply by 23 February 1990 by submitting curriculum vitae and a brief description of their teaching experience and having three letters of reference sent to:

Terry C. Johnson, Director
Division of Biology, Ackert Hall
Kansas State University
Manhattan, KS 66506

KSU is an Equal Opportunity/Affirmative Action Employer.

BIOCHEMISTRY/MOLECULAR BIOLOGY MEHARRY MEDICAL COLLEGE

FACULTY POSITIONS are available in 1990 in the Department of Biochemistry at the level of assistant or associate professor for well-trained or experienced candidates in the following areas: (i) molecular biology of eukaryotic systems, (ii) membrane biochemistry or molecular biology of signal transduction, and (iii) regulatory aspects of cellular and/or metabolic biochemistry. Successful applicants will be expected to develop and/or maintain a funded research program of high quality, to participate in the graduate and professional (medical, dental, and allied health) school teaching programs of the Department, and to interact with institutional programs in neuroscience and cell/molecular biology. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of potential research projects to: Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208. *Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR. Tenure-track position available for a biochemical geneticist. Ph.D. or M.D./Ph.D. degree required for the position of director of the metabolic evaluation section of the Biochemical Genetics Laboratory. This laboratory, operated as a joint venture by the Medical College of Georgia and the Gracewood State School and Hospital, analyzes physiological fluids with state-of-the-art technology. The successful candidate must be certified/eligible by the AMBG (clinical biochemical genetics) and will be expected to participate in graduate and undergraduate training and to develop an independent, collaborative, clinical or basic research program in the area of inborn errors of metabolism. Applicants should submit curriculum vitae, research goals, and the names and addresses of three references to: Dr. F. A. Hommes, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, GA 30912-2100. *An Equal Opportunity/Affirmative Action Employer.*

AQUEOUS GEOCHEMISTRY UNIVERSITY OF CALIFORNIA, DAVIS

The Department of Land, Air, and Water Resources invites applications for an 11-month, tenure-track teaching and research position as aqueous geochemist at the **ASSISTANT PROFESSOR** level. The successful candidate will be expected to contribute to the department undergraduate teaching program, develop and teach upper division and graduate courses in aqueous geochemistry, and participate in student advising. The appointee will establish an active research program in aqueous geochemistry with special emphasis on ground water quality.

A Ph.D. with emphasis in geochemistry and a strong background in aqueous low-temperature geochemistry and physical chemistry is required. Demonstrated knowledge and interest in kinetics of chemical weathering, isotope, trace element chemistry, and hydro-geochemical modeling and advanced analytical methods are desired. The position commences on or about 1 July 1990.

Applicants should submit a résumé; academic transcripts; statement of research and teaching interests and experience; copies of publications, reports, and manuscripts; a summary or abstract of Ph.D. dissertation; and names, addresses, and telephone numbers of at least four references, postmarked by 28 February 1990, to:

Dr. James W. Biggar, Chair
Aqueous Geochemist Search Committee
Department of Land, Air and Water Resources
University of California
Davis, CA 95616

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

BEHAVIOR/PHYSIOLOGY OREGON STATE UNIVERSITY

The Department of Zoology invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level, beginning September 1990. We are interested in scientists whose research interests complement those of our faculty in areas of animal behavior and physiology, especially behavioral endocrinology, and behavioral neurobiology. The successful candidate will be expected to teach at the graduate and undergraduate levels, including an undergraduate physiology course, and to establish an active research program. Submit curriculum vitae, concise statement of research plans, and have three letters of recommendation sent by 1 March 1990 to: Frank L. Moore, Department of Zoology, 3029 Cordley Hall, Oregon State University, Corvallis, OR 97331-2914. *OSU is an Affirmative Action/Equal Opportunity Employer and is responsive to the needs of dual-career couples.*

BIOLOGY. ASSISTANT PROFESSOR with specialty in plant science, beginning September 1990. Tenure-track position. Ph.D. required. Responsibilities include teaching plant science, nonmajors introductory biology, and electives in specialty area. Candidate must be willing to develop an undergraduate research program. New science facility opening spring term 1990. Send letter of application, résumé, transcripts, and three letters of reference to: Dr. R. B. Angstadt, Chairman, Department of Biology, Lycoming College, Williamsport, PA 17701. Applications invited through 1 February 1990. *Lycoming College is an Equal Opportunity Employer.*

POSITIONS OPEN

BIOCHEMIST/ORGANIC CHEMIST. Tenure-track **ASSISTANT PROFESSORSHIP** beginning September 1990 at ACS-approved department in liberal arts college. Must have Ph.D. in biochemistry or related discipline and show evidence of commitment to undergraduate education and research. Teach biochemistry lecture/laboratory; share responsibility for organic, analytical, and general chemistry lecture/laboratory. Willingness to help develop new course for nonscience majors. *Minority and female applicants strongly encouraged.* Detailed letter of application, including statement of teaching philosophy; brief statement of research interests; names, addresses, and telephone numbers of three references; and curriculum vitae must be received before 1 February 1990 by: Dr. Brian W. Moores, Department of Chemistry, Randolph-Macon College, Ashland, VA 23005. *An Equal Opportunity Employer.*

BIOLOGY. Tenure-track position available 13 August 1990. Duties include coordinating and teaching general biology, ecology, and entomology. Required: background in secondary education, teaching experience in ecology and entomology, Ph.D. (a.b.d. and/or master's degree considered). Rank: **ASSISTANT PROFESSOR.** Apply to: Director of Human Resources Management, Northwest Missouri State University, Maryville, MO 64468. Provide a letter of application addressing the position; current résumé; names, addresses, and telephone numbers of five references; and current transcript. Application deadline: 14 March 1990, or until filled. *Affirmative Action/Equal Opportunity Employer. Northwest encourages women and minorities to apply.*

BIOLOGY FACULTY POSITIONS

PLANT BIOLOGIST: Tenure-track, **ASSISTANT PROFESSOR**; to begin August 1990. Teach three undergraduate courses annually to include freshman-level, team-taught principles of biology and diversity of life courses and an advanced specialty course. Initiate/maintain research program involving undergraduates. Ph.D. and commitment to undergraduate teaching and research required. Training in vascular or non-vascular plant biology with emphasis in morphology, development, ecology, molecular biology, or systematics preferred.

PLANT PHYSIOLOGIST: One-year sabbatical leave replacement; to begin August 1990. **ASSISTANT PROFESSOR** rank. Teach one-semester upper-division plant physiology course and participate in two semesters of team-taught, freshman-level principles of biology course. Ph.D. in plant physiology and commitment to undergraduate teaching required.

To apply, submit letter describing interests and goals as they relate to undergraduate teaching and research, curriculum vitae, transcripts, and three reference letters by 15 February 1990 to: **Plant Biology Search or Plant Physiology Search (please specify), University of Puget Sound, P.O. Box 7297, Tacoma, WA 98407.** *An Equal Opportunity/Affirmative Action Educator/Employer.*


BIOLOGY

Tenure-track position in the Department of Biology, available fall 1990, for an entry-level individual with primary interest in developmental biology. Candidates will be expected to convey biological principles to departmental majors, pre-professionals, and honors and graduate students in specialty areas. Responsibilities: To teach courses in structure and development of vertebrates, genetics, and introductory biology; to conduct research in specialty area and promote student involvement in research; and be an active member of the academic community. Minimum qualification: Earned doctorate in a biological science by 22 August 1990. Preferred qualifications: Demonstrated teaching ability; publication or documented scholarly activity. Submit résumé, documentation of scholarly activity (e.g., reprints of publications or creative scholarly activities), three letters of reference, and transcripts to:

Dr. Anne Cartwright
Search and Selection Committee
Biology Department
Ball State University
Muncie, IN 47306
Telephone: 317-285-8820

Review of applicants will begin 22 January 1990 and continue until the position is filled.

Ball State University practices Equal Opportunity in education and Employment.



We've been quietly improving
the world's health for over 110 years.

Research is the lifeblood of Eli Lilly and Company. Since our successful introduction of insulin in 1923, Lilly scientists have been involved in the discovery, development and manufacturing of the highest quality health care, diagnostic, and agricultural products. With current investments of more than \$600 million in research and development programs, our continued success requires the finest scientific talent available.

Today, under the direction of Dr. Carlos Lopez, we are involved in HIV, Influenza and Herpes Virus research. Departmental expansion has created opportunities for talented virologists to participate in our efforts.

SENIOR VIROLOGISTS

As a Senior Scientist, you will establish a balanced research program that will encompass both basic and applied approaches to antiviral drug development. We require a Ph.D. in Virology, Molecular Biology or Microbiology and two or more years of relevant postdoctoral fellowship experience. You must also have at least two years background in research work with HIV, Influenza, Herpes Simplex Virus or a closely related virus and publications to document your experience.

We offer an attractive salary and benefits package. We also provide excellent opportunities for continued growth through in-house seminars and off-site programs.

If you would like to join Dr. Lopez in this vital research area, send your *curriculum vitae* to:

John W. Crooks
Ph.D. Recruitment (SVR)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, IN 46285

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Lilly

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POSITIONS OPEN

BIOLOGY DEPARTMENT CHAIR. Millikin University. Seek persons with genetics/molecular biology background and experience supervising undergraduate research. Prefer private college teaching experience. Tenure-track **ASSOCIATE OR FULL PROFESSOR**, starts August 1990. Send letter, curriculum vitae, transcripts, names of three references, and statement of teaching and research interests by 9 February 1990 to: **Dean Gerald Redford, College of Arts and Sciences, Millikin University, Decatur, IL 62522. Equal Opportunity Employer.**

BIOLOGIST

Tenure-track position for a cell biologist/microbiologist beginning fall 1990. Ph.D. required. Duties include advanced courses for undergraduates in specialty area, contribution to the department's general education offerings, and advising of undergraduate research. Send résumé and three letters of reference by 15 February 1990 to: **Director of Personnel, St. Ambrose University, 518 West Locust Street, Davenport, IA 52803.**

Affirmative Action/Equal Opportunity Employer.

BIOLOGY. Two positions, **ASSISTANT/ASSOCIATE PROFESSOR**. #4-02-9006: tenure-track; environmental science, animal physiology, and embryology; Ph.D. required, excellent undergraduate teaching credentials. #4-01-8001: temporary, 1-year sabbatical leave replacement; general biology, genetics, evolution, invertebrate zoology; Ph.D. required. Successful teaching experience. Reference position number when contacting: **Dr. Karel Rogers, Biology Department Chair, Adams State College, Alamosa, CO 81102. Telephone: 719-589-7211.** Application reviews begin 23 February 1990. Positions begin 24 August 1990. *Affirmative Action/Equal Opportunity Employer.*

BIOLOGY

Tenure-track position in the Department of Biology, available fall 1990, for an entry-level individual with primary interest in invertebrate biology and a strong commitment to teaching. Responsibilities: to teach entomology, a nonmajors' honors symposium in biology, and related courses; to conduct research in specialty area and promote student involvement in research; and to be an active member of the academic community. Minimum qualification: earned doctorate in a biological science by 22 August 1990. Preferred qualifications: demonstrated teaching ability; publications or documented scholarly activity. Submit résumé, documentation of scholarly activity (e.g., reprints of publications or creative scholarly activities), three letters of reference, and transcripts to:

**Dr. Carl E. Warnes
Search and Selection Committee
Biology Department
Ball State University
Muncie, IN 47306
Telephone: 317-285-8820**

Review of applicants will begin 22 January 1990 and continue until the position is filled.

Ball State University practices Equal Opportunity in education and employment.

BIOLOGICAL NMR SPECTROSCOPISTS

The Pittsburgh NMR Center for Biomedical Research is searching for one or possibly two Ph.D.-level scientists with experience in applications of NMR spectroscopy and imaging to metabolic studies in animals. These are full-time staff appointments and salary depends on experience and qualifications. Responsibilities include collaborative interaction with medical scientists, probe construction, and development and implementation of new NMR techniques. The center is multidisciplinary involving scientists from both the University of Pittsburgh and Carnegie Mellon University. The center houses a 4.7-Tesla, 40-cm Bruker BIOSPEC II and a 2.4-Tesla rapid imaging spectrometer is under construction. In addition, center personnel have access to a 7.0-Tesla, 15-cm bore Bruker BIOSPEC II and Bruker AM-300 and AM-500 spectrometers.

Applicants should send curriculum vitae and have three letters of recommendation sent to: **Dr. Chien Ho, Pittsburgh NMR Center for Biomedical Research, Carnegie Mellon University, 4400 Fifth Avenue, Pittsburgh, PA 15213.** Review of applications will begin on 15 February 1990 and will continue until suitable candidates are recruited. *Carnegie Mellon University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

BIOLOGICAL SCIENCES

Two tenure track **ASSISTANT PROFESSOR** positions are anticipated for fall 1990. Successful candidates will be expected to maintain a vigorous research program, actively seek extramural funding, direct M.S. and Ph.D. students, and contribute to the teaching of introductory courses. A Ph.D. and postdoctoral experience are required. Candidates with expertise in the following areas will be considered:

PATHOGENIC MICROBIOLOGY. The candidate's research should focus on modern approaches to the study of pathogenic microorganisms. Teaching duties will include a course in medical microbiology and an advanced course in his/her area of expertise.

PLANT DEVELOPMENT BIOLOGY. The candidate should have a strong background in plant biology and employ modern techniques to study plant development. Teaching duties will include a course in plant development and an advanced course in his/her area of expertise.

Send a letter of interest, curriculum vitae, brief statement of research goals, representative reprints, and three letters of reference by 31 January 1990 to: **Dr. Marvin J. Starzyk, Chair, Department of Biological Sciences, Northern Illinois University, DeKalb, IL 60115-2861. Telephone: 815-753-1753.** *Northern Illinois University is an Affirmative Action/Equal Opportunity Employer.*

BIOSTATISTICS CONSULTANT for manufacturer in Cincinnati area. Plan and design of experiments and interpretation and analysis of statistical data on a broad range of studies of the basic chemistry, safety, and efficacy of experimental products for the health care market, including oral products, OTC dermatologic preparations, and prescription drugs. Collaborate with technology development scientists, engineers, and medical doctors on design and analysis of clinical and pre-clinical studies. Consult with scientists in a wide range of disciplines; consult with clients; understand client technologies in order to prepare biostatistical data; communicate the fundamentals of statistics to clients. As required, develop appropriate statistical theories in order to perform analyses. Plan methods of data collection. Evaluate source data and translate results for presentation by computer printout, graphs, reports, etc., generated by using Statistical Analysis System (SAS) and FORTRAN language. Utilize skills and knowledge in diverse methods of analysis; e.g., multivariate methods, non-parametric statistics, non-parametric tests of interchangeability, tests of agreement, linear models, categorical data methods; design experiments subject to restraints of practical investigation. Requires Ph.D. in biostatistics and 1 year of experience in the job described, or 1 year of experience in pre- or postdoctoral biomedical statistical research involving consulting with researchers and medical professionals employing clinical trial data analyses. The 1 year of experience or graduate level coursework must involve multivariate methods, non-parametric statistics, linear models, categorical data methods, FORTRAN, and SAS. Forty hours per week, 8 a.m. to 4:30 p.m., Monday to Friday; \$45,000 per year. Send résumé (no calls) to: **G. Maugans, JO#1099665, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

BOTANIST/MOLECULAR BIOLOGIST

Tenure-track **ASSISTANT PROFESSOR** position starting fall 1990. Teaching responsibilities may include plant physiology, plant genetics, general botany, and introductory biology, as well as graduate courses in the area of interest. Research specialty in plant molecular biology, plant physiology, or plant biotechnology is desired. The candidate will be expected to supervise graduate students, conduct and publish scholarly research, and write grant proposals. Other responsibilities include participation in departmental matters, student advisement, service on committees, and community service. Minimum qualifications: Ph.D. in botany, biological sciences, or related field (from an accredited institution) and teaching experience in botany. To request an Application for Academic Employment, contact: **Dr. Edward Mercer, Chair, Biological Sciences Department, California State Polytechnic University, 3801 West Temple Avenue, Pomona, CA 91768.** Completed applications must be postmarked no later than 16 February 1990. Official confirmation of highest degree will be required of all finalists. *Affirmative Action/Equal Opportunity Employer. Cal Poly, Pomona, only hires individuals lawfully authorized to work in the United States.*

POSITIONS OPEN

BIOCHEMIST. Initiate and conduct research in protein sequencing and peptide synthesis. Perform advanced chemical procedures for digestion, derivatization and cleavage of proteins and for purification of peptides. Perform blotting techniques to transfer proteins from electrophoresis supports onto sequencing supports. Interpret data. Devise state-of-the-art procedures to enhance research capabilities and fabricate appropriate scientific instrumentation. Submit research proposals. Publish in scholarly journals. Train and supervise technical staff. Requires Ph.D. in biochemistry or one of the life sciences; demonstrated ability to (i) perform digestion derivatization and cleavage of proteins and purification of peptides, (ii) perform electrophoresis, blotting, high-pressure liquid chromatography separations, and (iii) perform solid phase, manual, and automated peptide synthesis. Forty hours per week, \$35,000 annually. Apply to: **Mr. Bernie Childerston, P.O. Box 94600, Lincoln, NE 68509,** referring to Job Work Number 512633. *Affirmative Action/Equal Opportunity Employer.*

BIOLOGY. Full-time position in medical laboratory technology curriculum, available February 1990. Candidate must be licensed M.T. with A.S.C.P. certification. Master's required; Ph.D. and/or supervisor's license preferred. Will teach clinical chemistry and related subjects. Salary and rank dependent upon qualifications. Send résumés to: **Chairperson, Biological Sciences and Geology, Queensborough Community College/CUNY, M-213, Bayside, NY 11364.** *Affirmative Action/Equal Opportunity Employer.*

BIOLOGY TENURE-TRACK POSITIONS

The joined Biology Department of Manhattan College/College of Mount Saint Vincent invites applications for two tenure-track positions at the level of **ASSISTANT PROFESSOR** available September 1990:

GENETICIST/MOLECULAR BIOLOGIST. Responsibilities include teaching the introductory level genetics course, a graduate level course in molecular biology in our interdisciplinary program in biotechnology, and possibly upper division electives in microbial genetics and recombinant DNA.

ANIMAL PHYSIOLOGIST. Responsibilities include teaching in our full-year cell/systemic physiology sequence, general biology, and anatomy-physiology for nonmajors. Knowledge of electrophysiology is desirable.

A Ph.D. is required as is a strong commitment to undergraduate education, advisement, and research. Knowledge and experience in electron microscopy is desirable, computer background beneficial. Previous instruction of nonmajors a plus. Salary commensurate with experience. Applicants must send a letter of application including research interests, curriculum vitae, graduate transcripts, and three letters of recommendation by 1 February 1990 to: **Dr. William A. Tramontano, Chair, Department of Biology, Manhattan College/College of Mount St. Vincent, Riverdale, NY 10471.**

An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

CELL BIOLOGY. ASSISTANT OR ASSOCIATE PROFESSOR. Tenure-track position available fall 1990. Seek individual with extensive training in cellular/subcellular biology using techniques of molecular biology and immunology. Candidate will develop new courses in cellular/subcellular biology and teach biology courses for the general education requirement. Successful record of college teaching, research, and postdoctoral experience preferred. Ph.D. required. Newly expanded science facility includes appropriate laboratory space for student and faculty research. Collaborative research in biochemistry and biopsychology, done jointly with students, is a goal for this position. Send curriculum vitae, statement of research interests, and three letters of reference by 31 January 1990 to: **Dr. George Boone, Head, Department of Biology, Susquehanna University, Selinsgrove, PA 17870.** *Minority and women candidates are encouraged to apply. An Affirmative Action/Equal Opportunity Employer.*

CLINICAL TOXICOLOGIST

SmithKline Beecham Clinical Laboratory in Seattle has a position open for a Ph.D. clinical toxicologist to manage the Department of Toxicology. Interested parties should send résumé to:

**SmithKline Beecham Clinical Laboratories
1737 Airport Way South, Suite 2000
Seattle, WA 98134
Telephone: 206-623-8100**

EDITOR

Full-time position available for individual with demonstrated management and editorial ability for bi-weekly international newsletter in the neurosciences. Responsibilities include design, editing and distribution of newsletter and other scientific publications.

Strong academic background in the biological sciences is essential. Experience in desktop publishing is desirable.

Attractive salary and benefits are offered. Candidates should submit resume and cover letter including names, addresses and telephone numbers of three professional references to Dr. Darwin L. Cheney.

Fidia Research Foundation

1640 Wisconsin Avenue, N.W.

Washington, D.C. 20007

Equal opportunity employer

PLANT BIOTECHNOLOGY

Sogetal

Sogetal, located in the San Francisco Bay Area, is a research center for ORSAN, the biosciences division of LAFARGE COPPEE. We have developed leading technology for the hybridization of small grains, and are establishing a vigorous program for the genetic engineering of cereals.

We announce the following immediate opening in our multidisciplinary program:

PLANT MOLECULAR BIOLOGIST

The ideal candidate will have a PhD in molecular biology, with 0-2 years of post-doctoral experience and experience with plant transformation technology/gene expression for cereals.

Interested applicants please send curriculum vitae to:

Human Resources / GEML

Sogetal, Inc.

3876 Bay Center Place

Hayward, CA 94545

Equal opportunity employer

Opportunities in Biological Process Sciences

SmithKline Beecham Pharmaceuticals' Biological Process Sciences Department has expanded into a new Biopharmaceutical Pilot Plant and is seeking highly qualified B.S., M.S., and Ph.D. level candidates to fill positions in our Bioreactor Scale-up Group. We offer both the opportunity and challenge to become an active member of a team of scientists and engineers whose research focuses on the development of state-of-the-art processes and technologies for production of Biopharmaceuticals.

The Bioreactor Scale-up group is responsible for the development of large scale fermentation and cell culture processes, as well as the implementation of novel process control strategies. We have already installed, in our Pilot Plant, a number of different types of computer-controlled bioreactors and are currently investigating the utility of each with a variety of expression systems. We are seeking individuals with cell culture experience, preferably in bioreactors, who will be able to aid in the development of these systems.

Our state-of-the-art research facility is located in suburban Philadelphia, PA. SmithKline Beecham provides a stimulating and challenging work environment with opportunity for professional growth, as well as an attractive compensation and benefits package. For confidential consideration, please forward your resume to: Barbara Schwartz, Senior Employment Administrator, H0109, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.



SmithKline Beecham
Pharmaceuticals

BROOKHAVEN NATIONAL LABORATORY

Biology Department Protein Biochemist

Applications are invited for a staff position in the area of protein biochemistry, structure and function. The selected candidate will lead an active program of independent research; preference will be given to candidates whose research interests complement existing Biology Department programs.

The Department has unique facilities for structural analysis including neutron and X-ray scattering and crystallography stations, and high resolution Scanning Transmission Electron Microscopes. Strong programs exist in molecular genetics, structural biology, DNA damage and repair, virology and plant molecular biology.

Candidates having a Ph.D. or equivalent degree and relevant postdoctoral training should submit a curriculum vitae, a list of at least three professional references, and a brief statement of research interests to: Dr. Carl W. Anderson, Chairman, Protein Biochemist Search Committee, Biology Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., New York 11973. Deadline for applications is January 15, 1990. Equal opportunity employer, M/F.



**BROOKHAVEN
NATIONAL LABORATORY**
ASSOCIATED UNIVERSITIES, INC.

ImmuCell Corporation is a young, public company engaged in the development, production and marketing of diagnostics, immunoprophylactics, and immunotherapeutics for the animal and human health care industries. Expansion of our product development program has created a need for the following new positions:

Senior Scientists

Two positions are available for Ph.D.-level scientists with postdoctoral training in microbiology and the immune response to infection and who have had substantial experience in the isolation and characterization of bacterial or viral antigens. Qualified candidates will have project responsibility for development of specific immunotherapeutic/prophylactic products.

Research Assistants/Associates

Two positions, available in separate project teams, both require a Bachelor's degree in biology/biochemistry and at least one year of postgraduate experience in a research laboratory. Candidates must possess laboratory skills in microbiology, protein chemistry, and immunoassay technology.

ImmuCell offers a competitive compensation package that includes potential equity participation, as well as a beautiful coastal New England setting with an outstanding quality of life. Our entrepreneurial environment provides the opportunity to grow professionally and to attain commensurate recognition and reward.

Please send resume and salary history to: **Ms. Virginia Hebert, Administrator, ImmuCell Corporation, 966 Riverside Street, Portland, ME 04103.**

ImmuCell

IMMUNOASSAY

RESEARCH & DEVELOPMENT OPPORTUNITIES ST. LOUIS, MO & BOSTON, MA

At Vitek Systems, our state-of-the-art technology and continuing dedication to customer satisfaction have made us world leaders in automated clinical microbiology systems. We are currently expanding our research and development activities in automated infectious disease diagnostics. Several excellent opportunities exist for innovative immunoassay researchers to lead groups in the development of these assays.

Qualified candidates will have a Ph.D., or M.S. with equivalent experience, in immunochemistry or a related field and more than five years experience in immunoassay research on non-isotopic technology. The ideal candidates will have successfully developed commercial immunoassays for infectious diseases.

Most importantly, Vitek is looking for leaders who can work as part of a multidisciplinary team and help us expand the capabilities of our automated immunoassay system for this rapidly growing area of our business.

These positions will be located in St. Louis, MO. and Boston, MA. If you would like to explore an exciting opportunity with a company that offers comprehensive benefits, competitive salaries and relocation assistance, send your resume or CV to: **Judy Julius, VITEK SYSTEMS, 595 Anglum Dr., Dept. 007-87, Hazelwood, MO 63042.**

Equal Opportunity Employer
A Smoke Free Environment

VITEK SYSTEMS

DEAN

University of Maryland School of Medicine

The University of Maryland School of Medicine, located in Baltimore, Maryland, invites nominations and applications for the position of Dean.

As one of the Country's leading medical schools, the University of Maryland School of Medicine and its 800 full-time faculty members provide instruction and training to approximately 600 medical students, 160 graduate students, and 500 residents and clinical fellows. The School is located on the campus of the University of Maryland at Baltimore, which includes a 747 bed Teaching Hospital, with a new Shock Trauma Center and a new 324 bed Veterans Administration Hospital which is scheduled for completion in 1992. In addition, the Campus includes Schools of Dentistry, Pharmacy, Nursing, Social Work, and Law with unique interprofessional ties to the School of Medicine.

The School of Medicine has experienced extraordinary growth and development in its academic and clinical programs during the last 15 years. The School ranks in the top 40 medical schools on the basis of research grant awards and has a well established and highly successful Medical Service Plan. The School's total financial resources for the 1989-1990 academic year are approximately \$150 million.

The School of Medicine has outstanding modern educational, research and clinical facilities and an ambitious master plan to increase research and clinical space by more than 50% during the next few years.

We seek an energetic and visionary Dean who will promote the continuous development of the School of Medicine and strengthen interprofessional programs with the other schools. Candidates should possess an M.D. or a Ph.D. degree and be qualified for the rank of Professor. Those who have demonstrated leadership and excellence in education, research and administration will be given particular consideration. A distinguished academic background with scholarly attainments, excellent managerial skills and a strong reputation in the provision of exemplary health care are among the criteria that will be used in the selection of final candidates.

Applications with curriculum vitae and nominations, including the names and addresses of at least three references, may be submitted for confidential review by the Search Committee to:

Omar M. Salazar, M.D., FACR
Professor & Chairperson Dept. of Radiation Oncology
Chairperson, Search Committee for the Dean
University of Maryland School of Medicine
Bressler Research Building, Room 14-037
655 W. Baltimore Street
Baltimore, Maryland 21201
ATTN: Barbara Kopp

UMAB is an equal opportunity affirmative action employer.

Director of Research

Research and Development

The MicroScan Division of Baxter Healthcare Corporation, the leader in Microbiology Diagnostics, has an opening for a Director of Research in our Research and Development Department.

The individual we seek must have a Ph.D. in Molecular Biology; and 1-2 years Post Doctoral experience is desirable. The qualified individual must also have 3-5 years management experience in the development of nucleic acid probe-based products for the diagnosis of infectious diseases. Experience with the following technologies is also required: sample handling, *in vitro* N.A. amplification, non-isotopic labeling, linker/conjugation chemistries and homogeneous assays.

Our ideal candidate will have a sound grasp of infectious diseases, and the operation of a clinical microbiology laboratory. Furthermore, strong project management capabilities must be demonstrated in work history. The Director of Research will report directly to the Vice President of R&D.

Interested and qualified candidates, please send your resume stating current salary to: **Vice President, Human Resources, Baxter Healthcare Corporation, MicroScan Division, 1584 Enterprise Boulevard, West Sacramento, California 95691.** We are an equal opportunity employer m/f/h/v.

MicroScan Division

Baxter

Cell Biologist

Cutter, a leading San Francisco Bay Area manufacturer of biological products, has an immediate opening for a Senior Level Cell Biologist.

Research, develop and direct the validation of new cell biology assays related to monoclonal antibody or recombinant cell protein production. Serve as technical and scientific expert in cell biology. Assume that procedures, methods and practices conform to applicable regulations, have specific merit and meet the needs of the Quality Assurance Department.

Ph.D. or equivalent in Life Sciences, plus 5-10 years relevant experience, including mammalian cell culture techniques, demonstrated ability in laboratory and research activities including data analysis and the generation of experimental protocols. Must have excellent communication and interpersonal skills. Familiarity with immunoassays, virology and molecular biology desirable.

Qualified candidates send resume and salary requirements to: Debra Wilkins, Cutter Biological, P.O. Box 1986, Berkeley, CA 94701.



EOE/AA

Insect Biochemist/ Toxicologist

Du Pont's Agricultural Products Department

has an opening for an Insect Biochemist/Toxicologist in its Insect Biochemistry/Physiology Group. This position is part of a multidisciplinary group involved in the elucidation of the mode of action of new compounds and the characterization of new biochemical targets for pest control. The successful candidate will have a Ph.D. in Biochemistry or related field with direct experience in Insect Biochemistry/Physiology.

At Du Pont you'll find a stimulating scientific environment in a modern research facility located near Wilmington, DE. Our Mid-Atlantic location offers a wide range of academic, cultural, and recreational activities. We provide excellent compensation, benefits and relocation assistance. Qualified candidates should send their resumes and references to Professional Staffing, Employee Relations, Room X-51867, Du Pont Company, Wilmington, DE 19898.



An Equal Opportunity Employer M/F/H/V
U.S. Citizenship or Permanent Visa
Required and meet other appropriate
IRCA requirements

St. John's University New York

FACULTY POSITIONS

The Department of Biological Sciences, St. John's University, New York, seeks energetic candidates for two tenure-track positions with expertise in molecular, cell, developmental biology or developmental neurobiology. Rank and salary are open and depend on qualifications. Postdoctoral experience and evidence of good research productivity are required. Successful applicants will be expected to conduct an externally funded research program and to teach a course in their specialties in the doctoral program. Candidates should submit curriculum vitae with a list of publications, a brief statement of research interests, and names of at least three references by 1 January 1990, to: **Dr. Richard Lockshin, Chair, Department of Biological Sciences, St. John's University, Jamaica, NY 11439.** An Equal Opportunity Employer—M/F.

PRESIDENT

MICHIGAN CANCER FOUNDATION

The Board of Directors of the Michigan Cancer Foundation invites nominations/applications for the position of President. The MCF is a nonprofit organization that, for more than 40 years, has been solely devoted to laboratory and epidemiological research as well as patient and community service for the purpose of minimizing the losses due to cancer. The Foundation has a full-time staff of 325 scientists, technicians, epidemiologists, social workers, nurses and physicians. An active volunteer cadre of more than 3,000 persons contributes to the continuing care and support of cancer patients and their families in the Detroit metropolitan area and to providing information on cancer prevention.

The MCF's modern, central laboratories and offices are located in the Cultural Center of Detroit between Wayne State University and the Detroit Medical Center. The Foundation is supported by grants from the federal government, the United Ways, fees for services and generous contributions from the community. The MCF is a cosponsor, with Wayne State University, of the Meyer L. Prentis Comprehensive Cancer Center.

The successful applicant should have an outstanding record of achievement in an area that is compatible with the major disciplines of the Foundation programs. This record should include demonstration of leadership qualities and significant administrative experience. In addition, it is important that the candidate be familiar with and sensitive to the complex needs of research and service programs. Applicants should submit a current curriculum vitae and the names of at least three individuals who will serve as references.

Applications/nominations should be sent to: The Honorable Dennis W. Archer, Associate Justice, Michigan Supreme Court, 1200 Comerica Building, 211 West Fort Street, Detroit, Michigan 48226.

The MCF is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

BIOCHEMICAL PHARMACOLOGIST

ASSISTANT PROFESSOR level position. Ph.D. in pharmacology, biochemistry, molecular biology, or related area. Undergraduate degree in pharmacy desirable. Responsibilities include teaching biochemistry course for pharmacy students and development of research program using techniques of biochemistry/molecular biology to pursue fundamental pharmacologic questions. Send curriculum vitae, brief description of research interests, and names and addresses of three references by 31 January 1990 to: **J. Mark Winston, Ph.D., College of Pharmacy and Health Sciences, Drake University, Des Moines, IA 50311.** *Equal Opportunity/Affirmative Action Employer. Applications from qualified minorities and women especially encouraged.*

CHAIRMAN, Department of Health Sciences. Applications are invited for the position of chairman, Department of Health Sciences. The successful candidate must demonstrate the ability to conduct extramurally funded research and is expected to maintain an active research program. In addition, the candidate will be expected to foster faculty development.

The Department of Health Sciences is housed in Sargent College of Allied Health Professions at Boston University. The department has eight full-time faculty whose research is focused in areas related to neuroscience, exercise science, and nutrition. The department offers baccalaureate, master's, and doctoral degrees in applied anatomy and physiology, and a master's degree in nutrition.

In the fall of 1990, the college will move to a new, six-story facility which will house administrative offices, classrooms, research laboratories, and a multidisciplinary health clinic. As this is also a period of programmatic remodeling, the preferred candidates will have the vision necessary to institute changes in partnership with the faculty.

A letter of application, curriculum vitae, and the names of at least three references should be sent to: **Catherine Certo, Sc.D., P.T., Chairman, Search Committee, Boston University Sargent College, One University Road, Room 101, Boston, MA 02215.**

An Equal Opportunity/Affirmative Action Employer.

SIGMA XI OPENINGS

DIRECTOR OF MEMBERSHIP

Sigma Xi seeks a scientist looking for a career shift. A new position has been established, the director of membership, who will manage one of the four divisions at the society's headquarters. This person will be responsible for working with the membership committee to develop and implement policies dealing with the society's 110,000 members, including analyzing trends and identifying problems and solutions. Applicants should have a Ph.D. in a technical field. Send résumé and salary requirements to the attention of: **Dr. John Ahearne, Executive Director.**

PROGRAM ADMINISTRATOR - PROGRAMS

Develop and expand several of the society's programs. Essential qualifications include broad scientific education, a talent for writing, and experience in writing and managing grant proposals. An advanced research degree is required. Some travel is involved. Send résumé and salary requirements to: **Dr. Evan Ferguson, Director of Programs.**

PROGRAM ADMINISTRATOR CHAPTERS AND CLUBS

Develop and maintain links between headquarters and the society's 520 local groups, primarily in North America. Essential qualifications include broad scientific education, a talent for writing, knowledge of the scientific research environments in which the society's chapters and clubs exist, and the capacity to represent the society and to explain its objectives and activities to both scientists and nonscientists. Applicants should have a Ph.D. in a technical field. Involves frequent travel. Send résumé and salary requirements to: **Dr. Evan Ferguson, Director of Programs.**

All positions available 1 January 1990 and will be located in the society's new headquarters in Research Triangle Park, North Carolina.

**Sigma Xi, The Scientific Research Society
345 Whitney Avenue
New Haven, CT 06511**

Sigma Xi is an Equal Opportunity Employer.

POSITIONS OPEN

CELL/DEVELOPMENTAL BIOLOGIST

The University of Nebraska-Lincoln School of Biological Sciences seeks cell development biologist as tenure-track **ASSISTANT PROFESSOR**. Expected to develop a successful, externally funded research program in inter- or intra-cellular signalling pathways required for animal cell growth or differentiation. Representative research programs include but are not limited to: growth factor/hormone generation of, and cellular response to, second messengers; cellular mitotic matrix; and mechanisms of pattern formation.

Must possess postdoctoral research experience and participate in undergraduate and graduate level instructional programs. This is the first of several anticipated positions in animal cell growth and development.

Applications from women and minorities strongly encouraged. Forward curriculum vitae, three letters of recommendation, and a synopsis of proposed research postmarked by 15 February 1990 (or until suitable candidates apply thereafter) to: **Dr. Steven D. Schwartzbach, Search Chair, University of Nebraska-Lincoln, School of Biological Sciences, Lincoln, NE 68588-0343.**

Affirmative Action/Equal Opportunity Employer.

CHAIR, DEPARTMENT OF BIOCHEMISTRY

Temple University School of Medicine. The search for the chair of the Department of Biochemistry has been extended. Candidates should have proven leadership ability and must be nationally recognized for their scientific contributions to biochemistry or related fields. The successful candidate must have demonstrated interest and ability in effective teaching and the capability of providing the administrative leadership to continue and extend the department's established strengths in research, teaching, and service. An excellent opportunity exists to expand an already strong department and its collaborations with other basic science departments, as well as with the Fels Research Institute for Molecular Biology and Cancer Research, and the thrombosis center. Applications will be accepted until 15 February 1990 and should include curriculum vitae, a summary of current research, a description of teaching and administrative experience, and the names, addresses, and telephone numbers of three or more references. Mail applications to: **Helen R. Buckley, Ph.D., Chair of the Search Committee, Department of Microbiology and Immunology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, PA 19140.** *Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON of the Department of Environmental Sciences. As tenured full professor and associate director of the New Jersey Agricultural Experiment Station (NJAES) for Environmental Programs at Cook College, Rutgers, The State University of New Jersey, New Brunswick, New Jersey.

The Department of Environmental Sciences has a multidisciplinary teaching, research, and extension mission focused on the challenges to the environment. The 26-faculty-member program offers M.S. and Ph.D. degrees with specialties that include water and wastewater treatment, air pollution and industrial hygiene, soil science, fate and transport of contaminants in ecosystems, exposure assessment, and radiation. An undergraduate curriculum is offered with options in soil sciences, pollution and treatment sciences, water resources, environmental chemistry, environmental health, and radiation-nuclear sciences.

RESPONSIBILITIES: The chair will provide leadership in achieving excellence in teaching, research, and extension. The individual will be responsible for recruiting and developing an expanding faculty, facilitating multidisciplinary team research, and identifying and attracting external program funding.

The successful candidate will also serve as an Associate Director of the New Jersey Agricultural Experiment Station and will provide leadership for all NJAES research programs related to the environment.

The appointee will have a Ph.D. in a field aligned with departmental programs and have a distinguished record of grantsmanship, teaching, and nationally recognized research. Administrative experience is desirable.

Send résumé to: **Search Committee for Chairperson, Environmental Science Department, P.O. Box 231, Cook College, Rutgers, The State University, New Brunswick, NJ 08903.**

Rutgers University is an Affirmative Action/Equal Opportunity Employer. Review of applications will begin 1 January 1990.

POSITIONS OPEN

DEAN OF THE COLLEGE OF SCIENCE AND TECHNOLOGY. Applications and nominations are being invited at Southeast Missouri State University. Available 1 July 1990. Send complete curriculum vitae and at least three current letters of recommendation to: **Dean Search Committee Chairperson, College of Science and Technology, Office of the Dean, 102 Rhodes Hall, Southeast Missouri State University, Cape Girardeau, MO 63701.** Screening will begin 31 January 1990. *Equal Opportunity/Affirmative Action Employer, M/F.*

DEVELOPMENTAL NEUROSCIENCE DEPARTMENT OF OBSTETRICS AND GYNECOLOGY UNIVERSITY OF NEBRASKA

Applications are invited for an **ASSISTANT PROFESSOR**, tenure leading, position within the Department of Obstetrics and Gynecology, College of Medicine. Successful candidates are expected to establish an outstanding independent research program in the area of developmental neuropharmacology/neurobiology. Requirements include a Ph.D. in pharmacology, biochemistry, or related field and at least 2 years of postdoctoral experience. Projects should include working as part of a team studying effects of CNS toxic insults or early (neurochemical/behavioral) drug exposure and CNS dysfunction. Salary and start-up funds are competitive. Applicants should send curriculum vitae, significant reprints, statement of research plans, and names of three references to: **Dr. William Rayburn, Professor and Chairperson of Search Committee, Department of Obstetrics/Gynecology, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, NE 68105.** FAX: 402-559-5015. Application deadline is 1 April 1990. *The University of Nebraska is an Equal Opportunity Employer.*

DEPARTMENT HEAD/PROFESSOR AGRONOMY IOWA STATE UNIVERSITY

Nominations and applications are invited for the position of head and professor of the Department of Agronomy at Iowa State University. The head of agronomy is responsible for faculty development and the administration of programs and budgets for one of the largest agronomy departments in the United States, consisting of over 70 faculty. Candidates must have a Ph.D. in crop science, soil science, agricultural meteorology, or a related field, and must have established a nationally recognized record in research, teaching, and/or extension to qualify for the rank of professor. Experience in the administration of budgets and personnel is preferred. Applications should include curriculum vitae, the names of five references, and a statement addressing the candidate's administrative philosophy and ability to work with and provide leadership to a diverse faculty. The application deadline is 1 March 1990 or until the position is filled. Send inquiries, applications, or nominations by 1 March 1990 (or until position is filled) to: **Dean L. Isaacson, Chair of Agronomy Search Committee, Iowa State University, 2101 Agronomy, Ames, IA 50011.** Telephone: 515-294-3440.

PRESIDENT, INCLEN, INC.

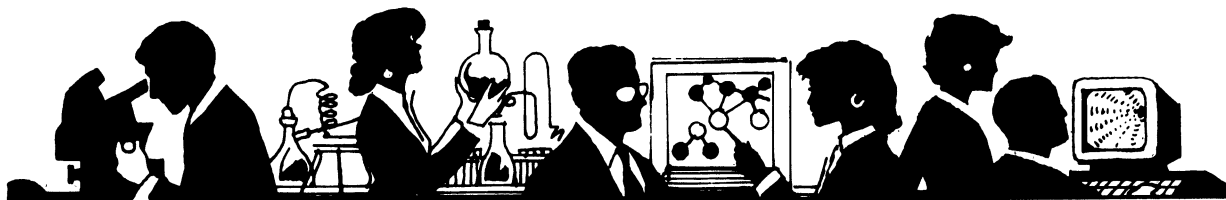
The International Clinical Epidemiology Network (INCLEN) was established in 1982 to support the development of clinical epidemiology units in medical schools in the developing world.

A president is being sought to take responsibility for INCLEN's transition from Rockefeller Foundation sponsorship to an independent, self-supporting body. The candidate will be a health professional (M.D. or Ph.D.) with skills in leadership, fund-raising, management, and administration. Experience in teaching and research related to international health and development is preferred.

Some flexibility in start date is possible. The candidate will devote a portion of his/her time to this position immediately, increasing to full time on a schedule to be negotiated with the Board of Directors. Salary will be commensurate with experience. Substantial international travel will be required.

Submit curriculum vitae immediately to: **Dr. Peter Tugwell, Chairman, INCLEN, Inc., Search Committee, McMaster University Health Sciences Center, Building 74, Room 20, 1200 Main Street West, Hamilton, Ontario, Canada L8N 3Z5.** Telephone: 416-525-9140, ext. 4050. FAX: 416-574-2838.

For more than a century the employees of Burroughs Wellcome Co. have applied their talents to the discovery and development of important new medicines. Their abilities and initiative have brought our company preeminence in both the pharmaceutical industry and the scientific world...as our 1988 Nobel winners give eloquent testimony.



GREAT PEOPLE MAKE A GREAT COMPANY

Assistant Supervisor, General Pharmacology

Pos.#61532-4: To supervise pharmacological studies needed to screen, profile and develop compounds for identifying leads, developing program level compounds and filling reports for IND/NDA submission. Candidates need a Ph.D. in physiology or pharmacology **OR** a Master's degree in pharmacology, physiology or a biological science with two years experience in pharmacological testing and physiological procedures **OR** a Bachelor's degree in one of the above disciplines with four years experience as above. Other factors considered: experience in CV, autonomic and CNS testing. Experience in pharmaceutical industry and laboratory supervision.

Associate Pharmacologist

Pos.#61488-4: To perform existing and initiate new research and drug development programs in the areas of lipid, lipoprotein and atherosclerosis. Candidates need a Ph.D. in a biological science **OR** a Master's degree in a biological science with two years experience in lipid/lipoprotein metabolism/atherosclerosis **OR** a Bachelor's degree in a biological science with four years experience as above. Other factors considered: relevant **in vivo** and **in vitro** experience; experience in the use of radioisotopes; experience in tissue culture.

Research Biochemist

Pos.#61533-4: To discover novel hypocholesterolemic agents that reduce serum cholesterol levels by inhibition of squalene epoxidase and to isolate and characterize squalene epoxidase and other protein factor(s). Candidates need a Ph.D. in biochemistry, pharmacology or nutrition with concentration in enzyme kinetics relevant to cholesterol biosynthesis **OR** a Master's degree in a biological or biochemical science with two years experience in enzyme kinetics and cholesterol and lipoprotein metabolism **OR** a Bachelor's degree in a biological or biochemical science with four years experience as above. Other factors considered: experience with lipoprotein receptors and cholesterol metabolism; experience with HPLC and immunoblot techniques.

Protein Biochemist

Pos.#61531-4: To develop a program to study regulation of multi-drug efflux pump by phosphorylation and to characterize effects of MDR reversing agents on phosphorylation, ATPase activity and drug transport. Candidates need a Ph.D. in a biological or biochemical science **OR** M.D. **OR** Master's degree in biological or chemical science with two years experience in enzymology or protein chemistry **OR** a Bachelor's degree in a biological or chemical science with four years experience as above. Other factors considered: experience in membrane protein purification or characterization; HPLC purification of proteins; cell culture experience.

As a valued professional at Burroughs Wellcome Co. you will receive a salary commensurate with your experience. And you will be supported by the highest level of benefits in our industry. If you are interested in working for us, submit your resume, indicating position number in your cover letter, by February 19, 1990 to: **Burroughs Wellcome Co., Scientific Recruiting and Staffing, 3030 Cornwallis Road, Research Triangle Park, NC 27709.**

For information on job opportunities with Burroughs Wellcome Co. at Research Triangle Park, call our Job Information Line at **(919)248-8347** from any touch tone phone.



**BURROUGHS
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An Equal Opportunity Employer

POSITIONS OPEN

DEPARTMENT DIRECTOR, ANTIVIRAL RESEARCH. Coordinate, supervise, and manage antiviral research using knowledge of advanced antiviral chemotherapy, chemistry, and biology. Develop and direct studies, define novel targets of antiviral chemotherapy, coordinate studies in related areas to insure timely completion of studies, and provide technical expertise to other departments. Ph.D. in virology or biochemistry plus 3 years of experience in the job offered required; 40 hours per week; \$80,000 per year. Send résumé to: Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109. Refer to Job Order #3063861.

DIRECTOR NORTH CAROLINA STATE MUSEUM OF NATURAL SCIENCES RALEIGH, NORTH CAROLINA

Seeking director to be responsible for the administration of all museum operations, including financial and staff management, resource development, long-range planning, marketing/media relations, educational program development, and research and collection management. Send letter of application and résumé to: W. G. Parham, Chairman, Search Committee, P.O. Box 27647, Raleigh, NC 27611.

Equal Opportunity/Affirmative Action Employer.

DIRECTOR, TROPICAL FRUIT AND VEGETABLE RESEARCH LABORATORY, Agricultural Research Service (ARS), U.S. Department of Agriculture, Honolulu, Hawaii. Salary range: \$59,216 to \$76,982, commensurate with training and experience, plus 22.5% cost of living allowance. Requires Ph.D. level knowledge of entomology research. Prefer working knowledge of tephritid fruit flies; skill in directing and coordinating long-range, multidisciplinary research; knowledge of control/eradication programs; knowledge of research administration/resource management/budget planning; also skill in meeting and dealing effectively with diverse groups of people. Closing date for application is 26 January 1990. Request announcement and application materials from: Rita Millard, telephone: 301-344-3138, ARS, Personnel, Greenbelt, MD. Contact: J. E. Gilmore, telephone: 808-988-2158, for technical information relative to position. *An Equal Opportunity Employer.*

LOUISIANA STATE UNIVERSITY (LSU) MEDICAL CENTER VICE CHANCELLOR FOR ACADEMIC AFFAIRS AND DEAN OF THE GRADUATE SCHOOL

As a member of the senior executive staff of LSU Medical Center, this full-time senior official reports directly to the chancellor. As vice chancellor, this person is responsible, in a broad sense, for providing professional counsel and advice, exercising leadership and guidance, developing long-range goals and objectives, formulating and administering policies, and coordinating the academic affairs of all of the professional schools in the medical center.

As dean of the graduate school, this individual is responsible for the development and enhancement of policies and programs and the coordination and direction of all academic matters, including the curriculum, under the purview of the chairperson within the Graduate School.

Candidates for the position must possess at least a doctoral degree in one of the basic health sciences; have a minimum of 5 years of academic administrative experience in a university health science center; demonstrate a strong commitment to academic excellence through their background and experience in original writing, research, and education of graduate students in the basic health sciences; and possess effective oral and written communication skills.

Academic rank and salary commensurate with qualifications.

Nominations and applications, including curriculum vitae and the names of three references, should be forwarded not later than 1 February 1990 to:

Dr. Jack H. Rayson
Search Committee Chairman
1100 Florida Avenue
New Orleans, LA 70119

LSU Medical Center is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

CONSERVATION DIRECTOR. Responsible for implementation and management of association's conservation endeavors. Requires advanced degree in biological sciences, with emphasis on genetics/population biology. Excellent interpersonal skills/leadership capabilities mandatory. Excellent fringe benefits. Opportunity for international travel. Salary commensurate with experience/qualifications. Submit résumé, curriculum vitae, and salary requirements to: Bob Wagner, American Association of Zoos and Aquariums, Oglebay Park, Wheeling, WV 26003 before 19 January 1990.

U.S. DEPARTMENT OF ENERGY ASSOCIATE DIRECTOR FOR SUPERCONDUCTING SUPER COLLIDER OFFICE OF ENERGY RESEARCH

The Department of Energy (DOE) is seeking applicants for the Senior Executive Service position of Associate Director for Superconducting Super Collider. This executive provides for managerial and financial oversight of the Superconducting Super Collider (SSC) project; recommends strategies and budgets for construction of the facility; formulates long-range plans, project goals, and research objectives of the SSC program; approves overall project cost, schedule, and technical baselines and changes thereto; ensures proper utilization of SSC facilities and personnel; and ensures that the program meets the research needs of DOE. Interfaces with high-level government and industry officials.

The preferred candidate will be a U.S. citizen with a high degree of professional training leading to a bachelor degree in the physical sciences or engineering. He/she will have extensive experience in managing major construction projects or administering large, complex, scientific research programs. Salary range: \$68,700 to \$78,600 per annum.

Résumé should highlight: (i) major research and development construction involvement; (ii) specialized experience in physical sciences or engineering. Location: Washington, D.C. Direct inquiries to: SSC Recruitment Officer, Room 4E-060, U.S. Department of Energy, 1000 Independence Avenue, SW, Washington, DC 20585. Telephone: 202-586-8461. Résumés or Standard Form 171, "Application for Federal Employment," must be postmarked no later than 31 January 1990. *U.S. Department of Energy is an Equal Opportunity Employer.*

DIRECTOR OF RESIDENT INSTRUCTION

North Dakota State University (NDSU) of Agriculture and Applied Science invites applicants for the position of director of resident instruction, College of Agriculture, (80%) and associate director, Agricultural Experiment Station (20%). The director of resident instruction administers planning, implementation, and evaluation of all instructional programs in the college as well as other related duties. Send a letter of application stating professional goals, academic and administrative philosophies, and curriculum vitae, and have four current letters of reference sent to: G. D. Statler, Department of Plant Pathology, NDSU, Fargo, ND 58105-5012. Telephone: 701-237-7058. FAX: 701-237-7851. Closing date: 1 March 1990. *NDSU is an Equal Opportunity Institution.*

DIRECTOR OF PHARMACOLOGY. Neurex Corporation, a dynamic bio-pharmaceutical company located in the San Francisco Bay area, is developing unique pharmaceuticals for the treatment of stroke. We are currently seeking a pharmacologist to direct in-house and extramural in vivo pharmacological studies. A Ph.D. in pharmacology and 5 to 10 years of industrial experience subsequent to postdoctoral studies are required. Extensive experience with animal models important, preferably in the area of CNS ischemia. Familiarity with the IND application process essential. Prior experience dealing with the FDA preferred. Neurex offers competitive salaries, excellent benefits, and equity participation. For immediate consideration, please send your curriculum vitae and references to: HR1000, Neurex, 3760 Haven Avenue, Menlo Park, CA 94025. *Neurex is an Equal Opportunity Employer.*

POSITIONS OPEN

DIRECTOR OF MONTANA CENTER OF EXCELLENCE IN BIOTECHNOLOGY

Applicant must have a record of outstanding research, scholarship, and leadership. Primary responsibility will be development of biotechnology in Montana. The successful candidate must be eligible for a half-time academic appointment at the University of Montana and will be expected to obtain external funding. Letters of application, including curriculum vitae, statement of research interests, and names and addresses of three references should be submitted to: Thomas W. North, Division of Biological Sciences, University of Montana, Missoula, MT 59812. Telephone: 406-243-2118. This position will remain opened until filled. Screening of applicants will begin January 1990. *Affirmative Action/Equal Opportunity Employer.*

MUSEUM DIRECTOR, Idaho Museum of Natural History. We seek a dynamic leader for the State Museum of Natural History, housed on the campus of Idaho State University in Pocatello. The director (a 12-month, dean's level, nonacademic position) must provide leadership in seeking accreditation and in expanding the museum's efforts in research, exhibits, education, and capital growth. Duties include fund-raising, long-range planning, working with professional curators, and general responsibility for educational and interpretive programs. Applicants should have (i) an advanced degree, doctorate preferred; (ii) experience in museum management; (iii) demonstrated ability to develop local and/or national funding sources for museum programs; and (iv) the ability to represent the museum effectively in public, high-visibility settings. Closing date: 16 February 1990. Nominations welcome. Duties begin 1 July 1990. Letter of application with résumé, and at least three letters of reference should be sent to: Museum Director Search Committee, c/o Vice President for Academic Affairs, Box 8063, Idaho State University, Pocatello, ID 83209. Telephone: 208-236-2171. *An Equal Opportunity/Affirmative Action Employer.*

ECOLOGIST

The University of Texas at El Paso (UTEP) is seeking an ecologist for an ASSISTANT PROFESSOR, tenure-track position to start in fall 1990. Ph.D. required, salary competitive. Duties include teaching in a broad-based undergraduate and graduate program and productive research. Preference will be shown to those with expertise in desert ecosystems, but any ecological subdiscipline using current methodology will be considered. Applications will be accepted until suitable candidates are identified. Send curriculum vitae, statement of research interests, and names, addresses, and telephone numbers of three references to: Dr. Arthur H. Harris, Department of Biological Sciences, The University of Texas at El Paso, El Paso, TX 79968-0519. *UTEP is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

ELECTRON MICROSCOPY SPECIALIST. Tenure-track position available to manage TEM/SEM laboratory, assisting faculty, training graduate students, developing techniques, and participating in on-going research in the area of connective tissue regeneration. M.S. degree in biological field and 3 to 6 years of working experience in EM laboratory required. Ph.D. is preferred. Salary range: \$29,000 to \$30,000. Submit application, including curriculum vitae, research activities, and names of three references, to: Dr. Moon-Il Cho, Department of Oral Biology, 305 Foster Hall, State University of New York, Buffalo, NY 14214. *We are an Equal Opportunity/Affirmative Action Employer.*

TEACHING POSITION, EVOLUTIONARY BIOLOGIST. The Department of Biology, Emory University, invites applications for a non-tenure-track position at the ASSISTANT PROFESSOR rank. Responsibilities include teaching undergraduate courses in evolutionary biology and ecology and participating in graduate courses. The successful candidate should have experience in research and will become involved in supervising students in independent research. The position is renewable for up to 3 years. Send curriculum vitae, a statement on experience and interest in teaching, and have three letters of recommendation sent to: Evolutionary Biologist Search Committee, Department of Biology, Emory University, Atlanta, GA 30322. Review of applications will begin in January 1990. *Emory is an Equal Opportunity/Affirmative Action Employer.*

Nutrition Research

The Procter & Gamble Company in Cincinnati, Ohio is seeking to fill entry-level openings in nutrition research. Successful candidates will have a Ph.D. degree in biochemistry or nutrition with an emphasis in lipid, vitamin or mineral nutrition. Preference will be given to individuals who have conducted animal or human investigations in these areas. Postdoctoral experience is desirable but not required. Good written and oral communication skills are also important requirements.

Besides offering a stimulating environment for professional and personal growth, we offer a fringe benefit package (medical, dental, profit sharing) that ranks in the top 5% of U.S. corporations.

Candidates must be presently authorized to work in the U.S. on a full-time basis. Resumes, with a list of publications, should be sent to:

Dr. T. J. Logan, Manager
Ph.D. Recruiting
Nutrition Research Positions
The Procter & Gamble Company
Miami Valley Laboratories
P.O. Box 398707
Cincinnati, Ohio 45239-8707

Procter & Gamble is an EQUAL OPPORTUNITY EMPLOYER

Procter & Gamble

NATIONAL INSTITUTE ON AGING NATIONAL INSTITUTES OF HEALTH

The Neuroscience and Neuropsychology of Aging Program (NNA) is seeking applicants for the position of **Health Scientist Administrator**. Areas of responsibility include the development and management of a portfolio of research in the neuropharmacology of dementing disorders, specifically Alzheimer's disease. NNA is interested in studies ranging from basic neuropharmacology and drug design to Phase III clinical trials of agents in humans. Applicants should possess an M.D., Ph.D. or equivalent training and research experience in neuropharmacology and clinical trials methodology.

The position will be filled through the Civil Service or Commissioned Corps of the U.S. Public Health Service. The position is a GS-12/13/14 with a salary range of \$35,825 to \$65,444 depending upon the qualifications of the applicant. Benefits include a retirement plan, health and life insurance, sick and annual leave. Duty station—Bethesda, Maryland.

Submit Application for Federal Employment (SF-171), curriculum vitae, and bibliography to:

Ms. Ann Baldwin
NIA Personnel Office
9000 Rockville Pike
Bldg. 31, Room 2C11
Bethesda, Maryland 20892



Call Ms. Baldwin at (301) 496-5347 for further information.

Applications must be received or postmarked by February 15, 1990.

U.S. Citizenship Required.
NIH IS AN EQUAL OPPORTUNITY EMPLOYER

The Upjohn Company, a worldwide leader in pharmaceutical research and development, has a need for a **Synthetic Organic Chemist** and a **Mass Spectrometry Associate**.

SYNTHETIC ORGANIC CHEMIST

An immediate opening is available for a synthetic organic chemist in the Drug Metabolism Research unit of The Upjohn Company's Pharmaceutical Research and Development Division. The chemist will conduct synthesis, purification, and analysis of radioactive and stable isotope labeled compounds.

This position requires a BS/BA or MS degree in organic chemistry, a strong interest and background in organic synthesis, and familiarity with modern methods of separation and physical-chemical analyses. Previous experience in radiochemical handling, detection, and measurement methods is highly desirable.

MASS SPECTROMETRY ASSOCIATE

An immediate opening is available for a highly motivated research associate in the Drug Metabolism Research unit of The Upjohn Company's Pharmaceutical Research and Development Division. The research associate will work with the unit's mass spectrometry scientist as a member of interdisciplinary teams involved with drug metabolism, disposition and bioanalytical research projects. These projects include drug metabolite structure elucidation, both with and without radioisotopes, and the development of specific and sensitive methods for the quantitative measurement of drugs and metabolites using mass spectrometry. These projects also include the advancement of new bioanalytical technology and applications in biopharmaceutical and pharmacokinetic studies during lead-finding and pre-clinical phases of drug development. The successful candidate will work closely with the unit's mass spectrometry scientist and other facility personnel on these projects.

This position requires a BS or MS degree and experience in the operation/maintenance/routine repair of mass spectrometry equipment. The ability to independently operate, maintain and perform routine simple repairs of mass spectrometry equipment is required as is the ability to independently perform routine analyses. Experience with both magnetic and quadrupole instrumentation is desirable but not required. Excellent problem solving, communication and interactive skills are highly desirable.

Kalamazoo is a medium-sized community in southwestern Michigan, midway between Chicago and Detroit offering varied cultural events, moderate housing costs, lakes and woodlands minutes away, and educational opportunities which are available at several local universities and community colleges.

We offer a stimulating and challenging work environment. Candidates may expect a salary and benefits package commensurate with their education and experience. For confidential consideration please submit your resume to:

The Upjohn Company

Ad Number 230902-HA for the Synthetic Organic Chemist •
Ad Number 890741-AA for the Mass Spectrometry Associate

7000 Portage Road, Kalamazoo, MI 49001
or Fax Number (616/329-5525)

Please refer to above Ad Numbers in all correspondence.

AN EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER M/F

POSITIONS OPEN

DNA REPAIR REPLICATION. The Department of Biomedical Chemistry, School of Pharmacy, University of Maryland at Baltimore, and the Medical Biotechnology Center of the Maryland Biotechnology Institute invite applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level. The position is jointly supported by the two units with a primary appointment in the Medical Biotechnology Center. Candidates should have research interests in the enzymes involved in DNA replication or repair, particularly in the interaction of drug molecules with such enzymes. Individuals with laboratory experience in relevant microbial or eukaryotic systems are preferred. Candidates are expected to attract external funding and establish an independent research program. Teaching responsibilities will include participation in an undergraduate microbiology course and in the graduate program. Applications should include complete curriculum vitae, a summary of research plans, and three letters of reference, and should be sent to: **Dr. Marilyn K. Speedie, Department of Biomedical Chemistry, University of Maryland at Baltimore, 20 North Pine Street, Baltimore, MD 21201.** *An Equal Opportunity/Affirmative Action Employer.*

EARTH SYSTEMS SCIENTIST. Ecology and Environment, Inc., an international leader in environmental consulting, is seeking to fill a key position in its Special Projects Group at its Buffalo, New York, Corporate Center. We seek an outstanding individual to advance our corporate capabilities in the areas of global and transboundary environmental problems. Applications are invited from Ph.D.'s in either atmospheric science, climatology, geoscience, or oceanography with postdoctoral experience. Applicants should have technical expertise in one or more of the following: atmospheric physicochemistry, biogeochemical cycles, numerical climate models, ocean-atmosphere interaction, paleoclimatology, and remote sensing. Laboratory and field experience necessary. We desire candidates with a commitment to solving environmental problems, who have superlative technical and communication skills, and are interested in substantial interdisciplinary interaction. Qualified candidates should submit résumé to: **Jennifer McDonough, Ecology and Environment, 368 Pleasantview Drive, Lancaster, NY 14086.** *Equal Opportunity Employer.*

ECOLOGY, UNIVERSITY OF MONTANA

ASSISTANT OR ASSOCIATE PROFESSOR. Tenure-track. Ph.D. with specialty in behavioral ecology, population ecology, conservation biology, or plant-animal interactions. Productive research, pursuit of outside research support, supervision of M.S. and Ph.D. graduate students, and participation in interdepartmental wildlife biology program required. Send curriculum vitae, statements of teaching and research interests, three letters of recommendation, and evidence of successful teaching by 1 February 1990 to: **Ecology Search, Division of Biological Sciences, University of Montana, Missoula, MT 59812.** *Affirmative Action/Equal Opportunity Employer.*

EVOLUTIONARY BIOLOGIST

The Department of Zoology at Southern Illinois University at Carbondale (SIUC) is seeking a tenure-track **ASSISTANT PROFESSOR** in molecular evolutionary biology to start 16 August 1990. Ph.D. required; postdoctoral training in several aspects of molecular biology; e.g., recombinant DNA, immunology. The successful candidate will establish a vigorous, funded research program and teach courses in a specialty area plus the general biology or zoology core curriculum. Demonstrated competence in teaching, publishing, and grantsmanship are highly desirable. Send curriculum vitae, graduate and undergraduate transcripts, published papers, and a statement of research interests, and request at least three letters of recommendation be sent to: **Dr. Lee C. Drickamer, Chair, Department of Zoology, Southern Illinois University at Carbondale, Carbondale, IL 62901. Telephone: 618-536-2314. Deadline: 23 February 1990 or until position is filled. SIUC is an Affirmative Action/Equal Opportunity Employer.**

FACULTY POSITION. Biologist, Ph.D. Teaching responsibilities include introductory biology, cell biology, and microbiology in a 4-year, Christian, liberal arts college in the Presbyterian tradition. Send curriculum vitae and statement of teaching and research interests to: **Dr. Gregory D. Jordan, Acting Dean of the Faculty, King College, Bristol, TN 37620.** *King College is an Equal Opportunity Employer.*

POSITIONS OPEN

ENVIRONMENTAL PHYSIOLOGIST

Tenure-track **ASSISTANT PROFESSOR** to join an active program in ecology and environmental biology. Research area open. Responsibilities include courses in general physiology, introductory biology, and the area of specialization, and maintaining an active research program involving graduate students. Ph.D. required; postdoctoral experience preferred. Available August 1990. Send curriculum vitae, unofficial transcripts, and names and telephone numbers of three references by 16 February 1990 to: **Dr. Gary W. Childers, Department of Biological Sciences, Southeastern Louisiana University, P.O. Box 814, Hammond, LA 70402.**

TWO FACULTY POSITIONS IN NUTRITIONAL BIOCHEMISTRY. The Department of Nutrition of Case Western Reserve University is undergoing major expansion at Mount Sinai Medical Center in Cleveland. Two positions will be opened in 1990 in nutritional biochemistry, at rank and salary commensurate with experience. Candidates are expected to develop independent research programs using modern techniques of stable isotope technology, biochemistry, or molecular biology. They will also participate in graduate teaching and in the training of graduate and postdoctoral students. Applicants should submit their curriculum vitae, representative reprints, brief description of future research plans and teaching interests, and three letters of reference to: **Dr. Henri Brunengraber, Chairman Designate, Department of Nutrition, Case Western Reserve University, Cleveland, OH 44106.** *Case Western Reserve University is an Equal Opportunity Employer. Women and members of minority groups are encouraged to apply.*

UNIVERSITY OF OXFORD TITULAR UNIVERSITY LECTURERSHIP IN PHYSIOLOGY IN ASSOCIATION WITH OFFICIAL FELLOWSHIP AT ST. JOHN'S COLLEGE

Applications are invited from candidates who have specialized in any area of physiology or related disciplines for a titular university lecturership in physiology, in association with an official fellowship at St. John's College, tenable from 1 October 1990. The full stipend associated with the titular university lecturership will be met by the college; and the title may at a later date (though with no commitment to do so) be converted into a stipendiary university post. Further details may be obtained from: **Professor Colin Blakemore, University Laboratory of Physiology, Parks Road, Oxford, OX1 3PT, England,** to whom applications (13 typescript copies or, in the case of overseas candidates, 1 copy)—to include full curriculum vitae, list of publications, and a statement of research interests and teaching experience—should be sent, together with the names of three referees who have agreed to send their opinions without further requests by the same date.

FACULTY POSITIONS IN PHARMACOLOGY AND MARINE NATURAL PRODUCTS

The Center of Marine Biotechnology of the Maryland Biotechnology Institute, University of Maryland System, is seeking outstanding candidates to fill full-time tenure-track positions in pharmacology and marine natural products.

The successful candidates will be expected to establish independent research programs in, or related to, the following areas: development and application of screening and secondary evaluation protocols for use with extracts and isolates from marine organisms and the isolation and identification of biologically active natural products from the marine biosphere. Areas of particular interest to the center include, but are not limited to, antiviral, cardiovascular, antiinflammatory, and CNS activities; enzyme inhibition; and receptor binding assays. Many opportunities exist for collaborative research at the Center of Marine Biotechnology.

Candidates must have a Ph.D. and a minimum of 1 year of postdoctoral experience. Applicants should submit a letter of application, curriculum vitae, statement of ongoing research, a brief description of research plans, and the names and addresses of three references to: **Pharmacology Search Committee, Center of Marine Biotechnology, 600 East Lombard Street, Baltimore, MD 21202.** For best consideration, applications should be received by 31 January 1990.

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

POSITIONS OPEN

FACULTY POSITION. Institute of Marine and Coastal Sciences (IMCS). **ECOSYSTEM ECOLOGIST** with strong research interest and experience in nutrient dynamics and productivity of coastal, near-shore, and riverine systems. A focus on mineralization of organic matter in benthic communities, as well as microbial utilization of dissolved organic matter, are especially desirable. Send applications by 1 March 1990 to: **Dr. Frederick Grassle, Director, IMCS, Old Blake Hall, Room 203, Cook College, P.O. Box 231, Rutgers University, New Brunswick, NJ 08903.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN MOLECULAR BIOLOGY. Applications are sought for a molecular biologist at the **ASSISTANT OR ASSOCIATE PROFESSOR** level (tenure track) to initiate competitive molecular biological research in one of the following areas: acute inflammation; gene expression and protein function in lung cells and leukocytes; cellular receptors; and stimulus-transduction mechanisms. Interested candidates should send curriculum vitae and suggested references to: **Charles E. McCall, M.D., Department of Medicine, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, NC 27103.** *Affirmative Action/Equal Opportunity Employer.*

DUKE UNIVERSITY FACULTY POSITION IN CELL AND LEUKOCYTE BIOLOGY

We have an opening, beginning in the summer 1990, for a **JUNIOR FACULTY MEMBER** (nontenure track) to join our research group. The laboratory, comprising six faculty members with diverse backgrounds in cell biology, molecular biology, biochemistry, immunology, and leukocyte biology, investigates the functions of macrophages and how these are regulated. Interactions between second messengers and gene regulation are emphasized. We seek a highly qualified scientist with interests and skills in second messengers. A background in either cyclic nucleotides, kinases, or ion fluxes would be highly desirable, but not necessary. The position offers the opportunity for the successful candidate to join a well-established laboratory, develop and supervise a productive ongoing research program, and develop independent research initiatives. An attractive working environment and salary are offered. Interested individuals should send their curriculum vitae and the names of at least three references to:

**Dolph O. Adams, M.D., Ph.D., Director
Laboratory of Cell and
Molecular Biology of Leukocytes
Box 3712
Duke University Medical Center
Durham, NC 27710
Equal Opportunity Employer.**

FACULTY POSITIONS. Offered jointly by the Departments of Mathematical Sciences and Biology, San Diego State University (SDSU). Applications are invited for two tenure-track mathematical scientist appointments, to begin August 1990. Rank open. Ph.D. in mathematics, statistics, computer science, or equivalent required; postdoctoral experience desirable.

COMPUTATIONAL BIOLOGIST: particularly interested in individuals with demonstrated competence in applications of computational methods to molecular biology, and with research interests in one or more of the following areas: pattern recognition, large database management, neural networks, simulated annealing, expert systems.

ECOLOGICAL MODELER: research interests in some aspect of mathematical or theoretical ecology, focusing on simulation modeling of ecosystem processes (especially spatially explicit models and problems related to hierarchy and scale). Opportunities to participate in existing research programs in the Systems Ecology Research Group.

Applications, including curriculum vitae, research interests, selected publications, and at least three letters of recommendation, should be sent by 15 February 1990 to: **Dr. Peter Salamon, telephone: 619-594-7204, Computational Biologist Search Committee, or Dr. James F. Reynolds, telephone: 619-594-5976, Ecological Modeler Search Committee, Department of Mathematical Sciences, San Diego State University, San Diego, CA 92182.** *Applications from women, ethnic minority, and disabled individuals are especially encouraged. SDSU is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITIONS IN TAIWAN. Positions available immediately at all ranks in physiology, anatomy, virology, parasitology, and public health, preferably with cellular or molecular approaches. Chairmanship also available, commensurate with qualifications. Chinese language proficiency required. Housing provided. Send curriculum vitae, research summary, and a list of three references to: **Dean, National Cheng-Kung University Medical College, Tainan, Taiwan 70101, Republic of China.**

The Department of Biology, College of St. Thomas, invites applications for a full-time, temporary (1-year) **FACULTY POSITION** to begin September 1990. Rank and salary are negotiable. Duties will include lectures and some laboratory sections for a nonmajors course in general biology and an elective course for majors in either general botany or animal diversity.

The College of St. Thomas is a coeducational, Catholic liberal arts college committed to the total development of the individual student. The successful candidate will have the Ph.D. or substantial progress toward the Ph.D. and a strong commitment to teaching at the undergraduate level and in a liberal arts context.

Send letter of application, curriculum vitae, and have three letters of recommendation sent directly, to: **Ms. Penny M. Pease, Mail #4050, College of St. Thomas, 2115 Summit Avenue, St. Paul, MN 55105.** All materials must be received by 1 February 1990.

The College of St. Thomas is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS IN MOLECULAR BIOLOGY/BIOCHEMISTRY OREGON GRADUATE INSTITUTE OF SCIENCE AND TECHNOLOGY (FORMERLY OREGON GRADUATE CENTER)

FUNGAL/YEAST MOLECULAR BIOLOGIST: Research interests in gene expression/regulation, cellular processes such as protein translocation, or the genetics of industrial organisms.

MICROBIAL BIOCHEMIST: Background in biochemistry, enzymology, and/or molecular biology with research interests in degradation/transformation, metabolic regulation, or the synthesis of natural products.

Requirements: Ph.D., several years of postdoctoral experience, and ability to develop a strong research program and graduate-level courses in areas of specialty. Appointments will be made at the level of **ASSISTANT PROFESSOR** or higher depending on qualifications.

Send curriculum vitae, a statement of research interests, and the names, addresses, and phone numbers of three references by 15 March 1990 to: **Dr. Michael H. Gold, Search Committee Chair, Department of Chemical and Biological Sciences, Oregon Graduate Institute, 16600 N.W. Von Neumann Drive, Beaverton, OR 97006-1999.**

Equal Opportunity Employer

NONTEURE-TRACK TEACHING POSITIONS

The Department of Biology of Georgia State University has openings for two nontenure-track teaching positions beginning fall 1990. Instruction will be at the undergraduate level and includes the following areas: anatomy, physiology, zoology, and introductory biology. Candidates must have a Ph.D. degree in a related discipline. Appointment will be as a **VISITING ASSISTANT PROFESSOR** at a salary of \$33,000 on a 12-month basis. Appointments will be reviewed on an annual basis. Send curriculum vitae and three letters of recommendation to: **Department of Biology, Georgia State University, Atlanta, GA 30303** by 15 March 1990. *Georgia State University, a unit of the University System of Georgia, is an Equal Opportunity/Affirmative Action Employer. (04259.)*

GRADUATE POSITIONS. In aquatic and avian medicine, available immediately to study infectious diseases emphasizing any of the areas of bacteriology, virology, parasitology, immunology, or molecular biology. Graduate students earn an M.S. or Ph.D. in veterinary medical sciences. Generous stipends are available to qualified applicants. Applicants holding either a B.S., M.S., or D.V.M. degree are urged to apply. Interested individuals should request information and an application packet from: **Dr. A. Jerald Ainsworth, Coordinator-VMS Graduate Program, College of Veterinary Medicine, Drawer V, Mississippi State, MS 39762.**

Patent Examiners



You could play a vital role in the advancement of microbiology as a Patent Examiner at the U.S. Patent and Trademark Office. You'll continue a 200-year old tradition of fostering American innovation by evaluating patent applications involving recombinant DNA, molecular and cellular immunology, molecular genetics, microorganisms, cell biology, cell culture, fermentation, enzymology and clinical chemistry.

This challenge requires a minimum of a four-year degree in Molecular Biology, Biochemistry, Immunology, Enzymology, Embryology, Protein Chemistry, Microbiology or Cell Biology.

A PhD or MS degree with relevant research experience preferred. A BS degree with significant research experience will be considered. These research areas would be beneficial: DNA cloning, protein chemis-

try, gene expression, sequencing techniques, mutants, hybridoma technologies, monoclonal antibody applications, mammalian or plant cell lines, cell culture, immunossays, hybridization techniques, fermentation, enzymatic reaction, diagnostics, and automation of clinical analysis.

We offer a salary commensurate with experience, complete benefits and an excellent location in Arlington, VA. Contact the Patent & Trademark Office, Office of Personnel, One Crystal Park, Suite 700, Washington, D.C. 20231. Or call toll-free: 800-368-3064 or (703) 557-3631 in the Washington, D.C. area. An equal opportunity employer.



DRUG METABOLISM SCIENTISTS

Sandoz Research Institute is a leader in the research and development of ethical and over-the-counter pharmaceuticals. We are looking for two Drug Metabolism Scientists to become integral members of the Drug Metabolism Team.

You will be responsible for development and utilization of analytical chromatographic methods for monitoring radioactively labeled drugs and metabolites in biological samples. Duties will include isolation and identification of metabolites, development of methods (especially gradient HPLC), and acquisition and processing of results with electronic data systems.

Qualified candidates should possess a BS/MS degree in Chemistry or equivalent with an interest in the biotransformation of new drugs. Good organization and laboratory skills and 3-5 years' related experience is essential.

Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and an excellent benefits package. Our campus-like facilities are conveniently located in northern New Jersey. For prompt consideration, respond to position #812DC by forwarding your resume with salary requirement in confidence to:



SANDOZ
bringing research to life

Staffing Department
SANDOZ PHARMACEUTICALS CORP
East Hanover, New Jersey 07936
An Equal Opportunity Employer M/F/H/V

The Race is Hours!

GENE-TRAK Systems is one of the largest groups in the world dedicated to the research and development of DNA probe based products coupling nucleic acid hybridization technology with the Q-BETA amplification system for the diagnosis of infectious diseases.

RESPIRATORY DISEASE DIAGNOSTICS

Openings exist for **PROJECT LEADERS** and **RESEARCH SCIENTISTS** in the research and development of amplified nucleic acid-based assays for the detection and identification of pathogens causing respiratory diseases. Candidates should have experience in molecular biology and sample processing, and familiarity with clinically relevant organisms that cause respiratory diseases.

MICROBIOLOGIST positions available to assist in the development of probe-based diagnostic assays to detect respiratory pathogens. Applicants must have previous experience with culture and identification of relevant microorganisms. Requires a minimum of two years of clinical laboratory experience.

GENE-TRAK Systems, located in the western suburbs of Boston, offers a lucrative compensation and benefits package that includes equity participation. Send your CV to: Brian Mazar, Dept. S/I-5, GENE-TRAK Systems, 31 New York Avenue, Framingham, MA 01701.

an equal opportunity employer

**GENE-TRAK
SYSTEMS**

POSITIONS OPEN

FACULTY POSITION DEPARTMENT OF BIOLOGY QUEENS COLLEGE OF THE CITY UNIVERSITY OF NEW YORK (CUNY)

The Department of Biology of Queens College of CUNY is seeking applications for a full-time, tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** rank to begin in the fall 1990. Applicants must have a Ph. D. or equivalent degree, appropriate postdoctoral training, and demonstrated ability to establish a strong independent research program using molecular, cellular, or biochemical approaches to problems in any of a broad range of areas including: membrane biology, mechanisms of hormone action, neurobiology, developmental biology, immunology, and virology. Competitive salary (\$30,078 to \$58,129, commensurate with qualifications and experience) and start-up funds are available. The department has excellent laboratory space in a new building provided with high-level core equipment and animal facilities. Queens College offers a stimulating scientific environment and is committed to high-quality research and teaching. Participation in both undergraduate and Ph.D. level courses is expected.

Candidates should submit curriculum vitae with a summary of present and future research interests, and request that three letters of recommendation be sent, all of which must be received no later than 15 March 1990. Send to **Dr. Corinne A. Michels, Chair of Search Committee, Department of Biology, Queens College of CUNY, 65-30 Kissena Boulevard, Flushing, NY 11367.**

Queens College/CUNY is an Affirmative Action/Equal Opportunity Employer. Women, minorities, and disabled individuals are encouraged to apply.

HEMOSTASIS RESEARCH SCIENTIST

The Hemostasis-Thrombosis Research Group at the Toronto Hospital is offering a staff position in its Division of Hematology. We are seeking a scientist (Ph.D. or M.D.) with postdoctoral training to join a growing molecular biology/biochemistry group with research interests in the anticoagulant properties of vascular endothelial cell receptors and expression of platelet and endothelial cell surface antigens. The successful applicant will be expected to develop a strong, independent research program complementary to these ongoing research activities. Excellent facilities and space are available. Submit applications to: **Dr. D. M. C. Sutton, The Toronto Hospital, Western Division, 25 Leonard Avenue, Suite 311, Toronto, Ontario, Canada, M5T 2R2.**

HUMAN ENVIRONMENTAL PHYSIOLOGIST

A faculty position is open at the **ASSISTANT OR ASSOCIATE PROFESSOR** level for candidates with a solid publication record and experience working with human subjects. Opportunities are available to develop a strong research program in environmental physiology in collaboration with the Divisions of Pulmonary Medicine, Occupational Health, and Physiology. Please send curriculum vitae and statement of present and future research plans to: **Dr. Wayne Mitzner, Division of Physiology, Department of Environmental Health Sciences, The Johns Hopkins University School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205. Telephone: 301-955-3612. FAX: 301-955-0299. The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer.**

MOLECULAR/CELL BIOLOGIST. Birmingham-Southern College seeks to fill a 1-year sabbatical replacement position beginning 25 August 1990. Birmingham-Southern College is a small, private liberal arts college with a student enrollment of 1935. Teaching responsibilities will include genetics, cell biology, introductory biology for nonmajors, and a course in the applicant's field or related area. Ph.D. preferred. Individuals who will complete their Ph.D. by 1 September 1990 will be considered. Send curriculum vitae, transcripts of undergraduate and graduate education, and three letters of recommendation to: **Dr. Irvin Penfield, Box A-1, Birmingham-Southern College, Birmingham, AL 35254. Applications accepted through 1 April 1990. Equal Opportunity Employer.**

POSITIONS OPEN

HEALTH EDUCATORS

The University of Medicine and Dentistry of New Jersey (UMDNJ), School of Osteopathic Medicine, Center for Addiction Research, has several part-time/full-time positions available for health educators. The work is part of a federally funded project concerning drug use and risk for AIDS. The health educators conduct training sessions for enhanced AIDS education programs at drug treatment facilities and research offices in Newark and Jersey City. Full-time staff may also participate in a program of in-depth interviews with drug users and their sexual partners.

Bachelor's degree in behavioral science, human or social services, public health, or a related field, plus 2 years of professional experience in the training/education area, preferably in a substance abuse or AIDS treatment setting. Master's degree with one or more years of experience preferred. Good part-time work for a recent Ph.D. or graduate student working on dissertation. Hours negotiable; minimum of ten per week.

Contact: **Victor Lidz, Ph.D., Center for Addiction Research, 401 Haddon Avenue, Camden, NJ 08103, telephone: 609-757-9771, or Lenore Robison, Health Behavior Project, 14 Park Place, Newark, NJ 07102, telephone: 201-624-7920. The UMDNJ is an Affirmative Action/Equal Opportunity Employer, M/F/H/V.**

HUMAN GENETICIST

Immediate opening for an M.D. or Ph.D. with interest in molecular, biochemical, population, or cytogenetics. Responsibilities include the development of an independent research program and to provide administrative support for the NIGMS Human Genetic Mutant Cell Repository. Development funds and joint medical school faculty appointment are available. Send curriculum vitae, statement of research interests, and the names of three references to:

**Dr. Gerard J. McGarrity, President
The Coriell Institute for Medical Research
401 Haddon Avenue
Camden, NJ 08103**

Affirmative Action/Equal Opportunity Employer.

HUMAN GENETICIST

The Department of Molecular Genetics, Biochemistry, and Microbiology is searching for a human geneticist. This full-time faculty appointment can be at any level. The department can provide a competitive salary, generous space and set-up funds. In addition, the human geneticist will be part of our Program of Excellence in Molecular Biology of the Heart and Lung and will receive direct research support from this grant, including supplies and two postdoctoral fellows. The Program of Excellence also provides core facilities in transgenic mice, cell culture, and DNA analysis. The department of 27 members has a strong concentration in molecular genetics and conducts several human genetic programs within the department and in consort with pediatrics. Interested candidates should contact: **Jerry B. Lingrel, Ph.D., Professor and Chair, Department of Molecular Genetics, Biochemistry, and Microbiology, College of Medicine, Cincinnati, OH 45267-0524, and provide curriculum vitae and a short write-up of research interests as well as names of individuals who can provide letters of recommendation.**

The Department of **IMMUNOLOGY AND INFECTIOUS DISEASES** at a major research university seeks a Ph.D. with 3 years of postdoctoral training or experience in molecular biology/cell biology. Employee should be capable of establishing an active, independent research program which would be a component of a larger unit in the area of host resistance to infection.

Demonstrable experience in a variety of techniques and broad spectrum of skills is required, including isolation of nucleic acids (RNA, DNA) from a number of biological sources such as phage, bacteria, protozoa, eukaryotes; construction of genomic and cDNA libraries from parasitic protozoa; cloning, subcloning, and expressing stage-specific genes in bacterial vectors; sequencing technology; maintenance of mammalian tissue culture cells; and maintenance of various forms of the protozoan parasite *Trypanosoma cruzi*.

Salary: \$35,000 per annum. Job site: Palo Alto, California. Send this ad and your résumé to: **Job #DB10637, P.O. Box 9560, Sacramento, CA 95823-0560, no later than 20 January 1990.**

POSITIONS OPEN

INFECTIOUS DISEASE RESEARCH

The U.S. Naval Medical Research Unit No. 2 (NAMRU-2), Manila, Philippines, announces U.S. Civil Service openings:

SUPERVISORY MICROBIOLOGIST (GM-14/15). Chief Scientist, managing programs in Manila and Jakarta on malaria, HIV, arboviral diseases, and diarrheal diseases. Research areas include epidemiology, immunology, rapid diagnosis, pathogenesis, treatment, and vector bionomics. Develop and manage independent research in one or more of the above. Requirements: Ph.D. in relevant field, or M.D. with tropical medicine or epidemiology training, superior publication record, and experience in supervision of research. Prior overseas experience desired. Salary range: \$48,592 to \$74,303.

MEDICAL RESEARCH PHYSICIAN (GM-13). Head, Tropical Medicine Division. Areas of research are malaria, enteric diseases, HIV, and arboviral diseases, with emphases in epidemiology, pathogenesis, and treatment. Field studies/international travel integral; opportunity to develop and guide independent and emerging research efforts, and assess disease problems. Required: M.D. and infectious disease/tropical medicine/epidemiology experience. Salary range: \$41,121 to \$53,460.

MICROBIOLOGIST (GS-12). Emphasis on rapid diagnosis of viral diseases. Field studies and international travel integral. Required: Ph.D. in virology, microbiology, or related discipline. Salary range: \$34,580 to \$44,957.

NAMRU-2 is an established Navy research facility with state-of-the-art laboratories. Positions have applicable civil service overseas benefits, including 15% differential, housing, education, and home references to Commanding Officer, NAMRU-2, APO San Francisco 96528-5000. Telephone: 632-732-3776. FAX: 632-732-3107. U.S. citizenship is required. An Equal Opportunity Employer.

INSECT POPULATION GENETICS. Tenure-track **ASSISTANT PROFESSORSHIP**, available 1 July 1990. Ph.D. in entomology or related field. Research should include: insect population genetics, genetics of hostplant or pesticide resistance, or genetics of plant/herbivore or host/parasite interactions. Empirical approach, including field experience and work in agroecosystems, preferred. Participate in graduate and undergraduate teaching and interact with existing programs in IPM, insect/plant and insect/vertebrate interactions, and evolutionary biology. Send curriculum vitae, statements of research goals and of teaching experience and interests, complete transcripts, and names of five referees by 1 March 1990 to: **Dr. Charles Mitter, Population Genetics Search, Department of Entomology, University of Maryland, College Park, MD 20742.**

MARINE STUDIES FACULTY POSITION UNIVERSITY OF SAN DIEGO (USD)

Tenure-track **ASSISTANT PROFESSOR** position; Ph.D. and broad background in oceanography required. Desirable areas include: paleoclimate and ocean circulation modeling or marine policy issues (to include but not be confined to international, defense, maritime, ecologic, commercial, and scientific aspects of ocean politics); experience in teaching, ocean data gathering and processing, or stable isotope tracers preferred. Individual will teach basic courses in undergraduate oceanography and graduate classes in paleoceanography, ocean modeling, and/or domestic and international marine policy, and be expected to play an active role in marine policy education/development in the local ocean studies community. The marine studies program at the University of San Diego is a new program at the university. Both graduate and undergraduate programs exist. The undergraduate program offers degrees in marine science (with a double major in a science) and ocean studies (with a double major in a nonscience). The graduate program currently offers a master of marine science or master of ocean studies for those involved in science and nonscience, respectively. A number of very specific marine areas of expertise are being developed, hence the search for an individual to work with biologic oceanographers and geologists. USD is an independent Catholic university of 5900 students. Please send letter of application and curriculum vitae before 5 February 1990, to: **Dr. R. E. Casey, Marine Studies, University of San Diego, Alcala Park, San Diego, CA 92110.** Women and minority applicants are encouraged to apply. The University of San Diego is an Affirmative Action/Equal Opportunity Employer.

Research Professionals in Biotechnology

ImmunoGen is a rapidly growing biotechnology company dedicated to the development of immunotoxins and other cancer therapeutics. We are seeking talented scientists to join us in exploring new approaches to human disease. Research positions are available at Ph.D., M.S. and B.S. levels in our expanding research programs. Candidates should enjoy taking the initiative in solving scientific problems to achieve near-term and long-term goals.

STAFF SCIENTISTS IN BIOCHEMISTRY

Candidates should have a Ph.D. in Biochemistry or related disciplines, with a strong research background in biochemistry. People with a proven record of realizing ideas through developing independent research projects, such as group leaders or junior faculty, would be strong candidates.

STAFF SCIENTISTS IN CELL BIOLOGY

Candidates should hold a Ph.D. in cell biology, immunology or related disciplines and have a strong research background and publication record in mammalian cell biology.

STAFF SCIENTIST IN MOLECULAR BIOLOGY

Our newly established molecular biology laboratory is developing a research program to include among other projects cloning, characterization and expression of cell surface antigens, construction, mutagenesis and expression of chimeric proteins. Qualified candidates should possess a Ph.D. in molecular biology and have a strong background in molecular cloning methods, cDNA library construction and screening, and DNA sequencing.

RESEARCH ASSOCIATES

A number of opportunities exist for associate scientists at the B.S. and M.S. level in cell biology, molecular biology, biochemistry and organic chemistry. Research areas include characterization and study of human cell lines, *in vitro* evaluation of immunotherapies for cancer and other diseases, DNA cloning and sequencing, drug synthesis and immunoconjugate construction.

ImmunoGen offers an excellent salary and benefits package including 100% paid Health and Dental Insurance and Tuition Assistance. The company is located in a new, fully equipped, state-of-the-art laboratory in Cambridge, midway between the campuses of HARVARD and MIT.

Please send a detailed resume including three references and a statement describing your scientific interests and career goals. All responses will be acknowledged. Reply to: Jeanne Horgan, Personnel Department, ImmunoGen, Inc., 148 Sidney Street, Cambridge, MA 02139.

IMMUNOGEN, INC.

An Equal Opportunity Employer

POSITIONS OPEN

LEPIDOPTERAN BIOLOGY HARVARD UNIVERSITY DEPARTMENT OF ORGANISMIC AND EVOLUTIONARY BIOLOGY

The Sidney A. and John H. Hessel **PROFESSORSHIP OF BIOLOGY**, for research and teaching in lepidopteran biology, with responsibility for curating the lepidopteran collection of the Museum of Comparative Zoology.

Applicants should have demonstrated excellence in research and a commitment to teaching at the graduate and undergraduate levels, as well as a strong interest in systematics and a readiness to assume curatorial responsibilities for a large and important collection of lepidoptera. Curriculum vitae, statement of interest, and names of three recommenders should be sent to the committee no later than 22 January 1990:

**Committee: Hessel Professorship Search
(Attention: E. O. Wilson)**

**Department of Organismic and Evolutionary Biology
26 Oxford Street
Cambridge, MA 02138-2902**

Harvard University is an Affirmative Action/Equal Opportunity Employer.

MICROBIOLOGIST OR BIOGEOCHEMIST. The Colorado School of Mines, Department of Environmental Sciences, invites applications for a tenure-track position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level, depending on qualifications.

The applicant should possess a Ph.D. in microbiology, biochemistry, or a related field. A minimum of 2 years of experience in research and teaching is required. Research interests related to microbial processes in geochemistry, transformation of organic or inorganic pollutants, and waste management would be appropriate. The candidate must have a commitment to excellence in teaching and to the development of a successful graduate research program.

Teaching duties will include courses in applied microbiology and biogeochemistry. The person occupying this position should be able to work cooperatively in building an interdisciplinary graduate research program combining microbiology, geochemistry, and environmental science. A joint appointment with the Department of Chemistry and Geochemistry is an option.

Applications will be accepted until 15 January 1990 or until such time as the position is filled. Candidates should send résumé, statement of professional goals, and at least three letters of reference to:

**Colorado School of Mines
Environmental Science Search Committee
P.O. Box 69
Golden, CO 80401**

*An Equal Employment Opportunity/
Affirmative Action Employer.*

Females and minorities encouraged to apply.

MOLECULAR BIOLOGIST

Studying cellular or developmental phenomena in a eukaryotic system.

The Biology Department of Boston College has a full-time tenure-track position available at the **ASSISTANT PROFESSOR** level beginning in September 1990 for an individual with a Ph.D. and at least 2 years of postdoctoral experience to establish a vigorous, externally funded research program. In addition to teaching in his/her area of expertise, the candidate will be expected to contribute to departmental teaching needs in one area such as: introductory biology, immunology, cellular biology, or evolution.

Boston College, a university of 14,000 students, has a growing Biology Department with 20 faculty members and 50 graduate students in the M.S. and Ph.D. programs. The university has a strong commitment to research and offers competitive salaries, excellent start-up funds, and well-equipped facilities. Applications should include curriculum vitae, a list of publications, and a summary of current and future research plans. Applicants should also arrange for three letters of reference to be sent. All materials should be received by 31 January 1990 by:

**Search Committee
Biology Department
Higgins Hall
Boston College
Chestnut Hill, MA 02167**

Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

GENETICS COMPUTER GROUP TECHNICAL ASSISTANCE AND EDUCATION

The Genetics Computer Group (GCG) is seeking two individuals with strong backgrounds in molecular biology/biochemistry, strong interpersonal skills, and experience with scientific analysis using computers to provide technical assistance for the GCG Sequence Analysis Software Package. The GCG software is used by biologists for the analysis of protein and DNA sequences. Applicants must have a minimum of a master's degree in molecular biology or a related field. Previous teaching experience and programming experience would be helpful. One of the positions will require traveling to present seminars. Salary range is \$27,000 to \$32,000 plus fringe benefits. Send résumés to: **Genetics Computer Group, Inc., 575 Science Drive, Suite B, Madison, WI 53711. Telephone: 608-231-5200.**

MAMMALIAN CELL MOLECULAR GENETICISTS

The newly reorganized Department of Microbiology and Molecular Genetics at the University of Vermont is continuing to expand its research base in molecular biology. Tenure-track positions at the **ASSISTANT AND/OR ASSOCIATE PROFESSOR** level are available in areas of molecular genetics related to mammalian cells and viruses. Areas of interest include, but are not limited to, (i) molecular virology; (ii) fundamental mechanisms of DNA replication, recombination, gene expression, or protein synthesis; and (iii) mechanisms of cell growth and differentiation. The candidate should be trained in genetics and molecular biology, and utilize modern approaches to problems of eukaryotic cell biology at the molecular level. A Ph.D. and postdoctoral experience are required. The expanded department will occupy three floors in a new Microbiology Center. Start-up funds and interim renovated space are available. Faculty members hold appointments in both the College of Agriculture and Life Sciences and the College of Medicine. The department's primary emphasis is on research; teaching responsibilities are to undergraduate, graduate, and medical students. Research interests of the department center on basic problems in molecular genetics with several groups focusing on cell and molecular biology of mammalian cells.

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

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

Review of applications will begin immediately and continue until the positions are filled. *Women and minorities are encouraged to apply. The University of Vermont is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR IMMUNOLOGIST

The Department of Microbiology, Immunology, and Parasitology, New York State College of Veterinary Medicine, Cornell University, seeks candidates for a **SENIOR FACULTY POSITION** in immunology. Rank and salary will be commensurate with experience. The successful candidate will be expected to have an independent, competitively funded research program emphasizing molecular or cellular aspects of immunology. In addition, it is anticipated that she/he will assume a leadership role in immunology in the department, contribute to the teaching of the discipline, and have the opportunity to participate in a campus-wide program in immunology. Applicants should have a Ph.D., D.V.M./Ph.D., or M.D./Ph.D. and several years of research experience. This position is part of a major commitment by the department to use molecular approaches in biomedical research. Applications, including curriculum vitae, outline of future research plans, and the names and addresses of three referees, should be sent to: **Dr. Roger J. Avery, Chairman, Department of Microbiology, Immunology, and Parasitology, College of Veterinary Medicine, 616 Veterinary Research Tower, Cornell University, Ithaca, NY 14853-6401 by 15 February 1990. Telephone inquiries will be welcomed: 607-253-3400.**

Cornell University is an Equal Opportunity/Affirmative Action Employer/Educator.

POSITIONS OPEN

UNIVERSITY OF GUELPH MICROANATOMIST/CELL BIOLOGIST DEPARTMENT OF BIOMEDICAL SCIENCES ONTARIO VETERINARY COLLEGE

Applications are sought for a probationary (tenure-track) **ASSISTANT PROFESSORSHIP** in microanatomy, which is available immediately. The person appointed will be required to teach microanatomy to D.V.M. and non-D.V.M. students and to participate in the graduate program of the department. The department and the college have research activities in a number of basic science areas and faculty enjoy productive collaborative links across campus and with closely located medical schools. The appointee would thus be in a stimulating environment to develop his or her research program. Applicants should have a Ph.D. degree or its equivalent and have had experience in teaching microanatomy (histology and cell biology). In addition, postdoctoral or equivalent research experience would be expected.

The salary is negotiable and is subject to final budgetary approval. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.* Applications together with a curriculum vitae and the names and addresses of three referees should be sent to: **Dr. D. G. Porter, Chair, Department of Biomedical Sciences, Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada N1G 2W1.**

The University of Guelph is committed to Employment Equity.

MICROBIOLOGY POSITION IN BOTANY AT ERINDALE

The Department of Botany, University of Toronto, invites applications for a tenure-track **ASSISTANT PROFESSORSHIP** in microbiology at the Erindale Campus, beginning 1 July 1990. A Ph.D. degree is required and postdoctoral experience is preferable. The candidate should have expertise in a non-medical aspect of the ecology, physiology, or genetics of microorganisms, including bacteria, cyanobacteria, or microalgae, and will be expected to develop an active, externally funded research program. Teaching duties will include participation in introductory microbiology with opportunities to develop and participate in advanced courses according to the specific interests of the candidate. Salary commensurate with qualifications. Applicants should send curriculum vitae, copies of representative publications, and arrange to have three letters of reference sent to: **Dr. J. B. Anderson, Search Committee Chairman, Department of Botany, Erindale College, University of Toronto, Mississauga, Ontario, Canada L5L 1C6, before 15 March 1990. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. The University of Toronto encourages both women and men to apply.**

CENTER FOR MOLECULAR BIOLOGY

DIRECTOR. A new Center for Molecular Biology in the School of Medicine, Loma Linda University, is seeking applications and nominations for the position of founding director of the center. The applicant should be a person who has an outstanding record of research accomplishments in any area of modern molecular biology, although preference will be given to individuals investigating eukaryotic gene structure or control. The interdisciplinary center is to be housed in newly renovated laboratories.

ASSISTANT, ASSOCIATE, OR FULL PROFESSOR. The Center for Molecular Biology in the School of Medicine invites applications for a faculty position at the assistant, associate, or full professor level. An innovative person is sought with training and research interests in an area of modern molecular biology. The successful applicant will be expected to establish an independent, extramurally funded research program and to contribute to the teaching of molecular biology to medical and graduate students.

Interested candidates should submit a statement of research interests, curriculum vitae, and the names of three individuals willing to provide letters of reference to: **Dr. Barry L. Taylor, Interim Director, Center for Molecular Biology, Department of Microbiology, Loma Linda University, Loma Linda, CA 92350. Loma Linda University is a private institution where education is pursued within a Christian environment. An Equal Opportunity Employer.**

Senior Research Scientists/ Molecular Immunologists

Merck Sharp & Dohme Research Laboratories, a world leader in pharmaceutical research and development has immediate openings for two senior research molecular biologists in the Department of Molecular Immunology.

Candidates must have a Ph.D., M.D. or equivalent with a minimum of 2 years post-doctoral experience and the ability to conduct independent research in one of the following areas: 1) development of transgenic animal models of autoimmune disease; 2) transcriptional regulation of gene expression; or 3) intracellular receptors and signal transduction. Individuals will be expected to perform and supervise a broad range of molecular biological techniques and interact with members of interdisciplinary project teams. Excellent oral and written communication skills are essential and publication in primary scientific journals is encouraged.

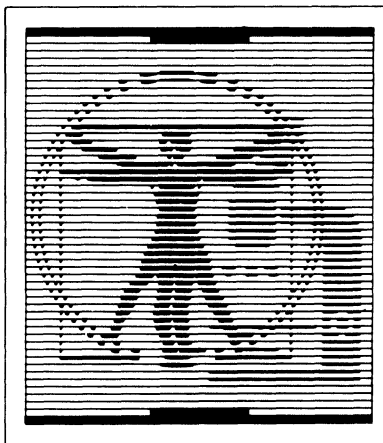
Merck Sharp & Dohme Research Laboratories is located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Interested individuals should send their resume and the names of three references to: **Ms. Susan F. Glinka, P.O. Box 2000, Merck & Co., Rahway, NJ 07065; please indicate Ad #400 in your cover letter.**

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If you are ready to make a lasting contribution, build a career with Program Resources, Inc. at the National Cancer Institute's Frederick Research Facility. Right now, we have opportunities for researchers to support ongoing studies on protein-DNA interactions.

Using chemically synthesized DNA, you will survey crystallization conditions; isolate repressor-

operator, transcription-activator-DNA or oncogene product-DNA co-crystals suitable for x-ray diffraction analysis; and collect and analyze data by crystallographic methods to obtain structure of protein-DNA complex at high resolution.

You must have working experience in molecular biology, biochemistry, or x-ray crystallography. These roles are one-year appointments subject to renewal.

PRI offers a salary commensurate with credentials plus an attractive fringe benefits program including insurances, relocation allowance, and a 401(K) savings plan. For consideration, please forward CV in confidence to Barbara Norton-Gill, Technical Recruiter:

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NCI-FCRF
P.O. Box B
Frederick, MD 21701



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POSITION AVAILABLE

**DIRECTOR, OFFICE OF EXTRAMURAL PROGRAM REVIEW
ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION
PUBLIC HEALTH SERVICE
DEPARTMENT OF HEALTH AND HUMAN SERVICES**

The Alcohol, Drug Abuse, and Mental Health Administration invites nominations and applications for the position of Director, Office of Extramural Program Review, National Institute on Drug Abuse.

This is a Senior Executive Service position in the career Civil Service, with an annual salary range of \$68,700 to \$76,400. Physicians may also be eligible for a Physicians' Comparability Allowance of up to \$20,000 per year. The position is located in Rockville, Maryland.

The Director is responsible for establishing policies, procedures, and standards to govern the review process and for providing authoritative advice and consultation to the Institute Director and other senior program officials on a wide range of scientific and management issues related to the Institute's extramural research program. The Director is responsible for planning and directing the activities of the Office which consists of three branches and a staff of 40. The Director is also responsible for coordinating and directing the peer and objective review of grant applications and contract proposals for extramural drug abuse research and has a budget of approximately \$135 million.

Minimum qualifications requirements include the following: a degree of Doctor of Medicine, Doctor of Osteopathy, or a bachelor's or higher degree in an academic field relating to the health sciences pertinent to the work of the position. Professional background must include responsible experience in the scientific administration of biomedical and/or behavioral research funded through grants and contracts which demonstrates familiarity with the extramural review function. Applicants must have an extensive knowledge of research methodology and a knowledge of neuroscience, biomedical, behavioral, or clinical sciences in areas relevant to drug abuse. Candidates must also have experience in the management of programs demonstrating competence to assume leadership in planning, directing, coordinating, and allocating resources, and other responsibilities associated with executive leadership of a major national program.

Further information about the position and qualifications may be obtained by contacting Mr. Morgan DuBrow or Ms. Leslie Everheart at 301/443-5030. Applications (Application for Federal Employment, SF 171) accompanied by a current curriculum vitae and bibliography should be submitted to Ms. Everheart at the Division of Personnel Management, Alcohol, Drug Abuse, and Mental Health Administration, 5600 Fishers Lane, Room 15C-26, Rockville, Maryland 20857. Complete application material (which *must* include the SF 171) must be postmarked by March 1, 1990.

Applications from women and minority group members are encouraged.

THE ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION IS AN EQUAL OPPORTUNITY EMPLOYER



POSITIONS OPEN

MARINE ECOLOGY

The Alabama Marine Environmental Sciences Consortium (MESC) announces the availability of a faculty position at the **ASSISTANT/ASSOCIATE PROFESSOR** level to complement a growing program in estuarine and shelf ecology. Applicants with expertise in zooplankton/larval ecology, with particular emphasis on the biotic and abiotic factors that influence the recruitment of marine species, are especially sought.

Successful applicants are expected to develop a vigorous research program and must have demonstrated a strong potential to attract extramural funding. Teaching responsibilities normally include two courses per year (on the quarter system). Courses are taught year round, with a summer program of nearly 100 undergraduate and graduate students in residence. Graduate student advisement is strongly encouraged and may be facilitated by joint appointment at an MESC member university. Such an appointment is negotiated through the MESC administration. Salary is for 10 months and is competitive.

MESC is an independent agency of Alabama higher education, housed at the Dauphin Island Sea Laboratory, a 36-acre campus with office, laboratories, library, and dormitory facilities located 35 miles south of Mobile, Alabama. The laboratory, located at the confluence of Mobile Bay and the Gulf of Mexico, operates the 65-foot R/V *A. E. Verrill*, several smaller vessels, and a 15,000-gallon recirculating seawater system. Applications, including curriculum vitae and statement of research and teaching interests, along with the names and addresses of three references, should be sent to: **Dr. Kenneth L. Heck, Jr., Marine Environmental Sciences Consortium, P.O. Box 369, Dauphin Island, AL 36528.**

Deadline for receipt of applications will be 1 March 1990, with an anticipated starting date of September 1990.

MOLECULAR BIOLOGIST. ASSISTANT PROFESSOR OR ASSOCIATE RESEARCH SCIENTIST. Yale University. The position is for a molecular biologist to spearhead studies targeted at understanding the control of parathyroid hormone-related peptide gene expression in normal and malignant cells. Two or more years of postdoctoral experience and an interest in molecular endocrinology or oncology are desirable. A summary of research background, with curriculum vitae and the names and telephone numbers of three references, should be sent by 15 February 1990 to: **Dr. A. Broadus, Endocrine Section, Fitkin I, Department of Internal Medicine, Yale University, Box 3333, New Haven, CT 06510. Telephone: 203-785-4183. Equal Opportunity/Affirmative Action Employer.**

MOLECULAR/POPULATION GENETICS AND INSECT TAXONOMY

The Department of Entomology, Rutgers, The State University of New Jersey, invites applications for two **FACULTY POSITIONS** in a department committed to research excellence.

MOLECULAR OR POPULATION GENETICIST: rank and area of specialty are open. The successful candidate will be expected to develop a strong research program that uses contemporary genetic techniques to address fundamental problems in insect biology and management. Opportunities for interdisciplinary research within the department, and with the Agricultural Biotechnology Center and Center for Theoretical and Applied Genetics.

INSECT TAXONOMIST: assistant professor, although higher rank may be considered for candidates with unusual qualifications. The successful candidate will be expected to develop a strong research program in taxonomy and evolutionary biology of insects, and curate the entomology museum.

Responsibilities for both positions include establishing nationally recognized research programs and development of appropriate courses. Academic appointments will be 70% research and 30% teaching.

Send curriculum vitae, selected publications, a statement of research interests, and the names, addresses, and telephone and FAX numbers of at least three references to: **Dr. Donald J. Sutherland, Chairman, Department of Entomology, Box 231, Rutgers University, New Brunswick, NJ 08903. Telephone: 201-932-9774. FAX: 201-932-7229. Deadline is 30 March 1990 or until suitable candidates are selected.**

An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

MOLECULAR OR CELLULAR NEUROBIOLOGY position available in the Division of Neuropsychopharmacology of the Department of Pharmacology at the Medical College of Pennsylvania, Philadelphia, Pennsylvania. Applications are invited for a position at the level of **ASSISTANT PROFESSOR** for individuals with a strong interest in neuropharmacology, particularly in molecular and cellular neurobiology. The Department of Pharmacology emphasizes interdisciplinary approaches to the study of neural plasticity and behavior. The current major research themes of the department are anatomical and molecular correlates of behavior, development and aging, feeding behavior, and learning and memory. Candidates must have Ph.D. and/or M.D. degrees and postdoctoral training. The successful candidate will be expected to maintain an extramurally funded research program and teach medical and graduate students. Send complete curriculum vitae, including publications list, brief statement of future research plans, and names and addresses of three references, to: **Dr. Jay Roberts, Chairman, Department of Pharmacology, or Dr. Benjamin Weiss, Chief, Division of Neuropsychopharmacology, Department of Pharmacology, Medical College of Pennsylvania, Philadelphia, PA 19129.**

NEUROBIOLOGIST. Tenure track, level open. We seek an energetic and creative individual to join the growing and interactive Neurobiology Division. Teaching to include participation in medical neuroscience and graduate courses. Area of interest open, but preference given to those using molecular and cellular approaches to fundamental questions regarding neuronal interaction. Send curriculum vitae, description of research, and names of three references to: **R. M. Beckstead, Department of Anatomy and Cell Biology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.**

An Equal Opportunity/Affirmative Action Employer.

PHARMACAL SCIENCES, ASSISTANT PROFESSOR. Applications and nominations are invited for a 12-month, tenure-track faculty position at the rank of assistant professor in the Department of Pharmacal Sciences, Auburn University School of Pharmacy. Applicants are expected to possess a Ph.D. in pharmacology, toxicology, biochemistry, or related discipline. The successful candidate will be expected to participate in the instructional programs of the department and to develop an active research program in an area related to their disciplinary expertise and interests. Salary and start-up funds for the successful applicant will be competitive. *Minorities and women are encouraged to apply for this position.* Nominations and applications should be sent to the chair of the Search Committee. Applications should include curriculum vitae/résumé, names and addresses of three references, and a statement of research interests. The position is available immediately and the search will remain open until the position is filled. Materials should be sent to: **Thomas N. Riley, Ph.D., Department of Pharmacal Sciences, School of Pharmacy, Auburn University, Auburn University, AL 36849.**

Auburn University is an Affirmative Action/Equal Opportunity Employer.

PHYSICAL CHEMIST/COMPUTER SCIENTIST. Two positions available at World Precision Instruments, Inc. (WPI). Physical chemist or equivalent needed to design state-of-the-art electrochemical sensors and other transducers. Ph.D. and work experience required. Also seeking person skilled in programming and data acquisition with advanced computer science degree and/or equivalent experience. Company moving to Sarasota, Florida. Send résumé and bibliography to: **President, WPI, 375 Quinipiac Avenue, New Haven, CT 06513.**

PLANT ECOLOGIST. Tenure-track position begins 27 August 1990. Ph.D. required. Applicants should have a strong interest in teaching; undergraduate research is encouraged. Primary teaching responsibilities include ecology, field botany, biostatistics, and introductory biology. Central College is a selective undergraduate institution with a strong science program, widely known for international studies. Send curriculum vitae, transcripts, and three letters of recommendation by 5 February 1990 to: **W. H. Bearce, Dean of the College, Central College, Pella, IA 50219. Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.**

POSITIONS OPEN

PALEOECOLOGY OF TROPICAL AMERICA SMITHSONIAN TROPICAL RESEARCH INSTITUTE

The Smithsonian Tropical Research Institute is planning a major expansion of its terrestrial and marine research program in the paleoecology of tropical America. The institute is a bureau of the Smithsonian Institution and has headquarters in the Republic of Panama. The paleoecology program is documenting the environmental and ecological history of the region over the last 5 million years. We anticipate two new permanent staff positions to begin in October 1990. We invite applicants at any level in the following disciplines: vertebrate paleontology, paleobotany, invertebrate paleontology, micropaleontology, paleoceanography, and paleoclimatology. Annual salary from \$30,000 to \$59,000 plus benefits and allowances. Level will depend on qualifications. Substantial set-up funds and research support. Screening will begin 15 March 1990 and continue until positions are filled. Applications should include statement of research interests, curriculum vitae, reprints, and names, addresses, and telephone numbers of five references. Send to:

**Paleoecology Search Committee
Smithsonian Tropical Research Institute
APO Miami 34002-0011**

The Smithsonian Institution is an Equal Opportunity/Affirmative Action Employer, and appointment can be made without regard to nationality.

PEDIATRIC GASTROENTEROLOGIST

The Department of Pediatrics, Wright State University School of Medicine, and the Children's Medical Center, Dayton, Ohio, seek a third gastroenterologist. This will be a full-time faculty position at the **ASSISTANT PROFESSOR** level. Applicants must be licensable to practice medicine in Ohio, Board-eligible or -certified in pediatrics and completing a 2- or 3-year fellowship in pediatric gastroenterology. The successful candidate will be capable of performing all common gastrointestinal procedures, conducting independent research in the areas of cholestatic liver disease or gastrointestinal transport, and showing interest and skills in the teaching of medical students and residents. Applications received by 15 February 1990 will be considered; if the position is not filled therefrom, applications will be considered as received until the position is filled. Interested candidates should send curriculum vitae and the names of three references to: **Stephen L. Newman, M.D., Director, Division of Gastroenterology and Nutritional Support, Department of Pediatrics, Wright State University School of Medicine, The Children's Medical Center, One Children's Plaza, Dayton, OH 45404-1815. Wright State University School of Medicine and the Children's Medical Center are Affirmative Action/Equal Opportunity Employers.**

PHYSICAL AND/OR BIOLOGICAL SCIENCES. ASSISTANT PROFESSOR. Ph.D. by June in one of the natural sciences. Teaching positions in freshman-sophomore general education program. Research required. Positions available September 1990. Deadline for applications: 15 February 1990. Tenure track, salary negotiable depending on credentials. Send résumé and have three recommendations forwarded. Application will not be reviewed by search committee until recommendations are received. Mail to: **Professor William E. Davis, Jr., Chairman, Division of Science, College of Basic Studies, Boston University, 871 Commonwealth Avenue, Boston, MA 02215. An Equal Opportunity/Affirmative Action Employer.**

PLANT BIOLOGIST

The Biology Department at Grinnell College seeks to fill a 1-year sabbatical replacement appointment in plant physiology or plant molecular biology. Major duties include teaching in the department's team-taught introductory biology and cell biology courses, and offering an advanced course in plant physiology or molecular biology. Send curriculum vitae, copies of all transcripts, and three letters of recommendation to: **Dr. Bruce A. Voyles, Department of Biology, Grinnell College, P.O. Box 805, Grinnell, IA 50112.** The search will remain open until the position is filled; to be assured of consideration, submit all application materials by 2 February 1990. *Grinnell College is an Equal Opportunity/Affirmative Action Employer and especially seeks women and minority candidates.*

Assay Development

We are seeking a PhD-level biochemist or molecular biologist to work on the development of new medical diagnostic tests for viral diseases based upon a unique nucleic acid probe technology. Prior experience (at least 2 years) in the development and market introduction of new products in medical diagnostics is essential. Strong interpersonal skills and the ability to work within a team setting are crucial to this position. Please send resume to: Personnel Department, Chiron Corporation, 4560 Horton Street, Emeryville, CA 94608 (Position NAC-208). No calls, please.



ENZYMATICS, INC.

Enzymatics, Inc. uses state-of-the-art applied enzymology and chemistry to develop and manufacture a new generation of instrument-independent medical diagnostics and biosensors. We are looking for motivated problem solvers to join our rapidly growing team.

- **Research Group Leader,** will have 6+ years of postdoctoral experience and an expertise in protein chemistry and protein/lipid interactions. The qualified individual will form and lead a research team. Job #RO3
- **Pilot Plant Director,** will create and direct a team which will oversee the transfer of products from R&D to manufacturing. The qualified candidate will have a thorough background in mechanical engineering and chemistry. Process development experience and 6+ years' industrial experience are required. Job #RO4
- **Research Associates,** MS/BS and 2+ years of laboratory problem-solving experience. Job #RO5

Come join the excitement. Stock options, competitive salaries and benefits to all employees. Send resume, salary history and three references to:

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355 Business Center Drive
Horsham, PA 19044
EOE M/F/H

Pharmaceutical

ANALYTICAL BIOCHEMIST

Drug Disposition and Metabolism

ICI Pharmaceuticals Group, dedicated to the challenge of discovering and developing important new therapeutic agents, has an excellent opportunity in the Drug Disposition and Metabolism Department, which is responsible for elucidating the pharmacokinetics and metabolism of all new drug candidates.

The scientist we seek will have a PhD in Analytical Chemistry or Analytical Biochemistry with experience in the development and validation of protein binding bioassays (ELISA, RIA, etc.), and secondary expertise in the areas of electrophoresis and HPLC. Previous industrial or postdoctoral experience (3-5 years) will be a plus.

We offer an excellent salary and benefits program and a research environment conducive to individual creativity, visibility and advancement.

Please send your resume with salary requirement, in confidence, to:

S. M. Deavens, ICI Pharmaceuticals,
Wilmington, DE 19897. FAX: 302-984-5127



Pharmaceuticals Group

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Faculty Members



C A B M
CENTER FOR ADVANCED BIOTECHNOLOGY AND MEDICINE

The Center for Advanced Biotechnology and Medicine is a newly established molecular biology research program jointly administered by the University of Medicine and Dentistry of New Jersey and Rutgers University and funded by the New Jersey Commission on Science and Technology.

CABM is seeking investigators with research and teaching interests in biomolecular structure, cell and developmental biology, molecular genetics, and molecular pharmacology. Interested candidates should send curriculum vitae and the names of three references to:

Aaron J. Shatkin, Director, or
Robert M. Namovicz, Executive Officer
CABM, 679 Hoes Lane
Piscataway, NJ 08854-5638

Jointly administered by the University of Medicine and Dentistry of New Jersey and Rutgers, The State University of New Jersey.
An Equal Opportunity/Affirmative Action Employer M/F/H/V.

Research Associate in Cellular Biology or Experimental Immunology

Departement of Surgery, University of Basel

To work in the field of tumor and transplantation immunology within a surgical group. You will also be encouraged to pursue an independent research project. Our unit is located within the Departement of Research (22 independent research groups including immunology, molecular biology). FACS, cell culture and animal facilities are available.

Persons with a Ph.D. in biology or immunology, a thorough knowledge and experience in experimental biology including cell culture and FACS are appropriate for this position. Applicants should have postdoctoral experience and demonstrated the ability to develop and maintain an active research program.

The position is under a yearly renewable contract at 90'000.-sFr. p.a. Applications should be made by sending full cv plus names and addresses of three referees to Prof. Felix Harder, Chairman of the Departement of Surgery, University of Basel, Kantonsspital, Spitalstrasse 21, CH 4031 Basel, Switzerland

POSITIONS OPEN

PARASITE BIOCHEMIST. Applications are invited for a tenure-track position as **ASSISTANT PROFESSOR** of biology with research experience and expertise in parasite cell biology. Preference will be given to individuals who have research experience and expertise in enzymology and biochemistry. The candidate must have postdoctoral experience (2 years minimum). The position will be within the Biology Department, as part of the OBOR Academic Challenge Program in Molecular Parasitology. Candidates will be expected to maintain an active research program in parasite cell biology. The candidates will be expected to develop graduate and undergraduate courses in areas of expertise and teach introductory biology. Applicants should send curriculum vitae, current reprints, research interest, and arrange to have three letters of recommendation sent before 25 February 1990 to: **Dr. Donald G. Lindmark, Department of Biology, Cleveland State University, East 24th and Euclid Avenue, Cleveland, OH 44115.** *Equal Opportunity Employer, M/F/H.*

PLANT MOLECULAR BIOLOGIST

The University of Nevada, Reno, invites applications for a tenure-track position in plant molecular biology at the **ASSISTANT/ASSOCIATE/FULL PROFESSOR** level. The position is joint between the Departments of Plant Science and Biochemistry. Individuals taking a molecular approach to the study of photosynthesis, development, or environmental stress are particularly encouraged to apply, but all candidates with a demonstrated expertise in plant molecular biology will be seriously considered. Postdoctoral experience is required. The primary duty of the successful applicant will be to develop a strong externally funded research program in their area of expertise, as well as to participate in teaching and graduate education (Master's and Ph.D.). He/she will be provided with newly renovated laboratory space associated with other faculty in our core cell and molecular biology facility, as well as necessary start-up funds. Opportunity for continuing research support will be available through the Agricultural Experiment Station. Send curriculum vitae, a statement of research interests, copies of recent publications, and the names and telephone numbers of three references no later than 15 February 1990 to: **Dr. Carol Condit, Plant Molecular Biologist Search, Department of Plant Science, University of Nevada, Reno, NV 89557-0101.**

Affirmative Action/Equal Opportunity Employer. The university employs only U.S. citizens and aliens lawfully authorized to work in the United States.

PLANT MOLECULAR SYSTEMATIST UNIVERSITY OF CALIFORNIA, DAVIS

The Department of Botany invites applications for a tenure-track faculty position at the rank of **ASSISTANT PROFESSOR** (11 months) starting 1 July 1990. Candidates should have a firm grounding in molecular techniques and command of modern systematic principles and methodology. The successful candidate will be expected to develop an active program of research focused on problems of plant evolution and phylogeny. The molecular systematist will be expected to offer a course in plant systematics at the upper-division level and one or more specialized courses at the graduate level, and may participate in the undergraduate biology core sequence. Responsibilities would also include supervision of graduate students and advising at the undergraduate or graduate levels.

Applications, including curriculum vitae, official transcripts of graduate work, description of research and teaching interests, list of publications with selected reprints, and the names and addresses of three referees, should be sent by 1 March 1990 to: **Plant Systematics Search Committee, Department of Botany, University of California, Davis, CA 95616.**

POSTDOCTORAL POSITION. Research directed toward understanding the dynamics of polyamine metabolism in relation to (i) abiotic stress responses in higher plants or (ii) plant fungal pathogen sensitivity to inhibitors of polyamine biosynthesis. Strong background in biochemistry and molecular biology required. Individual would interact with large, diverse group of environmental biologists. Appointment is for 2 years, starting 1 June 1990; salary is competitive. Send curriculum vitae and names of three references to: **Dr. Leonard H. Weinstein, Director, Environmental Biology Program, Boyce Thompson Institute for Plant Research, Ithaca, NY 14853.** Application deadline is 31 March 1990.

POSITIONS OPEN

PRODUCT MANAGER, INTERNATIONAL. Diagnostic company seeks individual with advanced degree/experience in either pathology, immunology, biochemistry, or related science. Must be bilingual in Italian, Spanish, and French. A highly ambitious, dedicated, results-oriented individual strong in communication, organization, and people skills who is willing to travel extensively. We offer an excellent salary package and an ideal location. Please send résumé to: **BioGenex Laboratories, Inc., 4600 Norris Canyon Road, San Ramon, CA 94583.**

POSTDOCTORAL POSITION IN MOLECULAR SYSTEMATICS

Phylogenetic analysis of lower Lepidoptera using DNA sequencing technology. Training either in systematics or molecular biology essential. Send curriculum vitae and names and phone numbers of three references to: **Jerome Regier or Charles Mitter, Department of Entomology, University of Maryland, College Park, MD 20742.**

POSTDOCTORAL POSITION available early 1990 for a Ph.D. in biochemistry/cell and molecular biology to study the biochemical properties and mechanisms of activation of an arachidonic acid hydrolyzing phospholipase A₂ from inflammatory cells. Send curriculum vitae and names of three references to: **Christina Leslie, Ph.D., Department of Pediatrics, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Denver, CO 80206.**

POSTDOCTORAL POSITION. Available immediately in the Viral Gastroenteritis Unit at the Centers for Disease Control (CDC) for a molecular biologist/virologist to work with a variety of novel enteric viruses. The laboratory is interested in gene cloning, sequencing, and PCR amplification of both RNA and DNA viruses. Position is for 2 to 3 years with salary depending upon experience.

Applicants should send their curriculum vitae and two references to: **Dr. Roger Glass, Chief, Viral Gastroenteritis Unit (G04), Centers for Disease Control, Atlanta, GA 30333. Telephone: 404-639-3577.**

CDC is an Equal Opportunity Employer and provides a smoke-free work environment.

NEUROIMMUNOLOGY AND MOLECULAR NEUROBIOLOGY

The Center for Cell Biology, affiliated with the Cellular and Clinical Neurobiology Program of Wayne State University, is seeking scientists for challenging **POSTDOCTORAL AND RESEARCH ASSOCIATE POSITIONS** available immediately in an interdisciplinary neuroscience research program. Special emphasis is placed on dopamine-containing neurons, their role in the basal ganglia, and immunologic processes affecting their function. Candidates should have a background in neuroscience, molecular biology, or immunology. Laboratories within the Center include:

* **Laboratory of Molecular Neurobiology (M. J. Bannon, Ph.D.):** Regulation of neurotransmitter gene expression in vivo, in culture, and in postmortem tissues.

* **Laboratory of Clinical Immunology (C. M. Brickman, M.D.):** Autoimmune phenomena and targeted neuronal antigens associated with Parkinson's disease and lupus cerebritis.

* **Laboratory of Neurochemistry (G. Kapatos, Ph.D.):** Cellular and molecular biological characterization of the dopamine neuron phenotype in rat and human using tissue culture and flow cytometric techniques.

* **Laboratory of Neurophysiology (L. A. Chiodo, Ph.D.):** Electrophysiological properties of in vivo and in vitro dopamine neurons and their modulation using intracellular and extracellular techniques.

* **The Laboratory of Biochemical Pharmacology (J. Granneman, Ph.D.):** Molecular mechanisms of membrane signal transduction and their physiological regulation; role of second messengers in cell function.

* **The Laboratory of Clinical Neuroscience (P. LeWitt, M.D.):** Behavioral and pharmacologic study of neurodegenerative disorders, particularly parkinsonism, including the investigation of new therapeutic approaches.

Laboratories with an asterisk have positions available immediately. Send résumés and names of three references to the appropriate investigator(s): **c/o Center for Cell Biology, Sinai Hospital of Detroit, 6767 West Outer Drive, Detroit, MI 48235.**

POSITIONS OPEN

POSTDOCTORAL POSITION

The University of Southern California (USC) Comprehensive Cancer Center has postdoctoral positions available to study DNA damage induced by DNA reactive antitumor agents. The role of DNA repair in drug resistance will also be investigated. This work will involve HPLC, DNA sequencing and transfection, PCR techniques, and enzymology. Experience preferred. Send curriculum vitae, research interests, and names of three references to:

**Dr. Neil W. Gibson
University of Southern California
USC Cancer Center
Cancer Research Laboratory
Room 208
1303 North Mission Road
Los Angeles, CA 90033**

NEUROBIOLOGY AND MEMORY

POSTDOCTORAL POSITIONS available immediately to study neuroendocrine regulation of memory formation. Projects include: interactions of circulating epinephrine and glucose levels with brain functions, assessed with behavioral, neurophysiological and neurochemical measures; age-related memory deficits in rodents and humans; pharmacology of long-term potentiation. Please submit curriculum vitae and references to: **Dr. Paul E. Gold, Department of Psychology, Gilmer Hall, University of Virginia (UVA), Charlottesville, VA 22903.** *UVA is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION PROTEIN VIBRATIONAL SPECTROSCOPY

Infrared and Raman spectroscopy are being used together with normal mode analysis to study the conformations of peptides and proteins. Of particular interest are conformations of peptides in solution and their changes on interaction with proteins. The research will be carried out primarily at the University of Michigan, but interactions with the Biophysical Sciences Group of Monsanto Corporate Research, near St. Louis, provide a unique opportunity to gain insights into areas of potential importance in biotechnology. Experience in experimental vibrational spectroscopy is required, with knowledge of normal mode analysis desirable. Interested candidates should send their résumés, together with names and addresses of three references to: **Professor S. Krimm, Biophysics Research Division, The University of Michigan, 220 Bonisteel Boulevard, Ann Arbor, MI 48109-2099.**

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

POSTDOCTORAL RESEARCHER

Two-year postdoctoral position for theoretical research in protein conformation and interactions. Background in physical chemistry and Fortran programming required. Helpful: exposure to biophysics and some experience with UNIX and/or CMS. Send curriculum vitae and transcripts and arrange for three letters of recommendation to be sent to: **Professor George Nemethy, Department of Biomathematical Sciences, Box 1023, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION. Battelle, Pacific Northwest Laboratories (PNL), is seeking a postdoctoral fellow to conduct two-dimensional NMR studies on nucleic acids. Research will involve structural studies on DNA oligonucleotide sequences that are being analyzed for sensitivity to interaction with mutagenic chemicals. The appointee will conduct research both at PNL and with faculty members at the University of Washington in Seattle. PNL is one of five national multiprogram energy laboratories operated by the Battelle Memorial Institute under a contract with the U.S. Department of Energy. A staff of approximately 3000 personnel conduct research in physics, chemistry, materials, engineering, mathematics and computer science, earth and environmental sciences, and the life sciences.

Applicants should send a résumé, reprints of publications, and the names of four references to: **Dr. T. S. Tenforde, Chief Scientist, Life Sciences Center (K1-50), Battelle, Pacific Northwest Laboratories, P.O. Box 999, Richland, WA 99352.** Deadline for receipt of applications is 16 February 1990. *Battelle is an Equal Opportunity Employer.*

Inflammation research opportunities

Pfizer Central Research, an industry leader in inflammation research, has several opportunities for scientists to contribute to the discovery of new drugs for the treatment of inflammatory diseases. You will join well-established and growing teams of interdisciplinary scientists and will work in newly constructed and well-equipped laboratory facilities. For each position, a PhD, appropriate postdoctoral training and a record of accomplishment in your research endeavors are required. Previous industrial research experience, including project management skills, is welcome but not essential.

Osteoarthritis – You will focus on developing and applying systems related to the pathogenesis and treatment of osteoarthritis. Appropriate fields of training include protein biochemistry, molecular biology, cell biology or experimental pathology. For those with *in vitro* expertise, experience with cytokine regulation of cartilage biochemistry/metabolism is particularly sought. For those whose primary experience has been with *in vivo* models of osteoarthritis, experimental assessment of mechanisms and pharmacological effects will be important.

Ultrastructure/Microscopy – You will be responsible for a laboratory which exploits ultrastructural techniques and histology in conjunction with multiple research programs in the inflammation area. Both morphologic and analytic (e.g. immuno-labeling) endpoints will be pursued. Expertise in light and electron microscopy (scanning and transmission) is required. Experience interfacing these techniques with computer assisted image analysis to obtain quantitative results is highly desirable. You will be expected to lead the continued acquisition and exploitation of state-of-the-art imaging/microscopic technology by the group.

Inflammation Models – You will have research experience in the area of acute and chronic *in vivo* models of inflammatory disease. You will apply known models and establish new ones relevant to novel drug targets. The ability to extract multiple levels of information from such models is particularly important (e.g. symptomatic, histological, biochemical).

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



In addition to a stimulating research environment and an excellent opportunity for professional recognition and advancement, we offer a competitive salary/benefits package and an opportunity to live in an attractive Connecticut shore community. Qualified applicants should submit their resume and references in confidence to: Dr. Jerry K. Larson, Assistant Director, Employee Resources, Pfizer Central Research, Eastern Point Road, Groton, Connecticut 06340. An equal opportunity employer.



POSITIONS OPEN

POSTDOCTORAL POSITION. We have a position open in the Division of Urology, University of Pennsylvania School of Medicine. The successful candidate will study the molecular properties and pharmacology of potassium and calcium channel modulators in vascular and non-vascular smooth muscles. Experience with tracer flux measurement techniques is required. Although this is an academic position within the University of Pennsylvania, the research will be conducted in the laboratory of a nearby pharmaceutical company. The salary range for this unique academic-pharmaceutical postdoctoral position is \$25,000 to \$34,000. Funds are available for relocation. All interested individuals should send their résumé and the names and addresses of three references to: **Dr. Robert M. Levin, Director of Basic Research, Division of Urology, University of Pennsylvania Hospital, 3006 Ravdin Courtyard, 3400 Spruce Street, Philadelphia, PA 19104.**

POSTDOCTORAL RESEARCH SPECIALIST. Production and testing of chimeric genes/genomes of plant RNA viruses. Requires experience and proficiency in manipulation of plant viruses; production, sequencing, cloning, restructuring, and mutagenesis of cDNA of RNA viruses; and in vitro synthesis of RNA. Ph.D. in plant molecular biology/virology and at least 2 years of relevant postdoctoral experience required. Salary: \$23,500 per year. Send résumé to: **T. Moore, KY 788307, Department for Employment Services, 300 South Upper Street, Lexington, KY 40508.**

POSTDOCTORAL ASSOCIATE DEVELOPMENTAL BIOLOGY ARIZONA STATE UNIVERSITY/ GOOD SAMARITAN REGIONAL MEDICAL CENTER

Arizona State University and Good Samaritan Regional Medical Center invite applications for a postdoctoral position in a newly established Infertility Research Program. Preference shall be given to applicants with strong background in developmental and cell biology. Projected starting date is spring 1990. Applicants must be prepared to participate in ongoing and new research projects which relate basic and clinical research to human fertility in conjunction with an active clinical infertility treatment program. Submit curriculum vitae, reprints, statement of research interests, and three letters of reference to: **Dr. Robert W. McGaughey, Department of Zoology, Arizona State University, Tempe, AZ 85287-1501.** Deadline is 5 February 1990 or the 15th of each month thereafter until the position is filled.

Arizona State University and Good Samaritan Regional Medical Center are Equal Opportunity/Affirmative Action Employers.

POSTDOCTORAL POSITION IN NUCLEAR MAGNETIC RESONANCE

The Massachusetts General Hospital Nuclear Magnetic Resonance Center (MGH NMR) has an opening for a postdoctoral fellow (Ph.D. and/or M.D.) trained in nuclear magnetic resonance. The center is located in a new facility in Charlestown, Massachusetts, approximately 2 miles from the main campus. This new facility is comprised of approximately 20,000 square feet of research, clinical, educational, and administrative space, with seven NMR imaging systems on site.

The work will involve using flow related contrast to image tissue perfusion. Experience with whole body and animal NMR imaging systems, and with animal models of perturbed vascular physiology, is desired. Candidates should submit curriculum vitae and three letters of reference to: **Bruce R. Rosen, M.D., Ph.D., Director of Clinical NMR, MGH NMR Center, 2nd Floor, Building 149, 13th Street, Charlestown, MA 02129.**

SENIOR RESEARCH ASSOCIATE for university in northeastern Ohio to work in a new long-range research program to develop and characterize novel, more effective photosensitizing drugs for photodynamic tumor therapy. The job involves the design and chemical synthesis of drugs and research as to how their physical and photochemical properties are affected by structure. No experience is required. Must have Ph.D. in chemistry; 40 hours per week, varied overtime; 8 a.m. to 5 p.m.; \$1700 per month. Qualified applicants reply by résumé (no calls) to: **C. Bussard, JO# 1084487, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

POSITIONS OPEN

POSTDOCTORAL POSITION available to study the mechanism of action of interleukin-1. Expertise in DNA methodologies or gene transcription preferred. Send curriculum vitae and names of three references to: **Dr. Steven B. Mizel, Department of Microbiology and Immunology, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, NC 27104. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately to study the role of a membrane tyrosine kinase substrate in signal transduction in colon carcinoma and adenoma cells. Training in biochemistry and molecular biology essential. Initial salary \$25,000, renewable for 3 years. Send curriculum vitae and names and telephone numbers of three references to: **Eileen Friedman, Ph.D., Laboratory of GI Tumor Biology, Memorial Sloan-Kettering Cancer Center, Box 244, 1275 York Avenue, New York, 10021.**

POSTDOCTORAL POSITION available to study the structure and function of electron transfer metallo-proteins using two- and three-dimensional NMR and site-directed mutagenesis. Ph.D. in chemistry essential and NMR experience desirable. Send curriculum vitae and three references to: **Dr. Kuntz, Department of Pharmaceutical Chemistry, University of California, San Francisco, CA 94143, or Dr. Waskell, VA Medical Center, University of California, 4150 Clement Street, San Francisco, CA 94121. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN BACULOVIROLOGY. To study the regulation of baculovirus gene expression. Ph.D. degree in molecular biology or related discipline. Salary up to \$24,000. Send curriculum vitae and names of three references by 15 February 1990 to: **G. F. Rohrmann, Department of Agricultural Chemistry, Oregon State University (OSU), Corvallis, OR 97331. OSU is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973. OSU has a policy of being responsive to the needs of dual-career couples.**

POSTDOCTORAL POSITIONS. ECOLOGY, POPULATION GENETICS, or MARINE BIOLOGY. One- or 2-year appointments available. Areas of current faculty interest: plant population biology, physiological plant ecology, disturbance and tropical forests, nutrients and primary productivity in tropical forests, primary succession, or biomechanics of marine invertebrates. Some teaching possible. Fluency in Spanish highly desirable. Ability to interact with others important. Send curriculum vitae, reprints, and three letters of reference to: **Ned Fletcher, Department of Biology, University of Puerto Rico, Rio Piedras, PR 00931.**

POSTDOCTORAL POSITION available immediately to study blue light signal transduction in plants. Work centers on a rapid blue light-mediated change in protein phosphorylation [PNAS 85, 8003 (1988)]. Candidate must have Ph.D. and experience in molecular biology techniques. Protein biochemistry and purification skills also desirable. Send curriculum vitae and three references to:

**Dr. Winslow R. Briggs
Carnegie Institution of Washington
290 Panama Street
Stanford, CA 94305**

An Equal Opportunity Employer.

POSTDOCTORAL POSITIONS IN DEVELOPMENTAL BIOLOGY

Research with **Hans Bode** (differentiation and patterning in hydra), **Marianne Bronner-Fraser** (neural crest cell lineage and migration), **Peter Bryant** (cell adhesion and proliferation control in *Drosophila*), **Susan Bryant** (growth and patterning in vertebrate limbs), **Scott Fraser** (cell lineage and communication in nervous system development), **Ronald Meyer** (vertebrate nerve regeneration), **Ben Murray** (role of cell-adhesion molecules in development), or **Robert Steele** (developmental genetics of proto-oncogenes). *U.S. citizenship or permanent residency status required.* Send résumé and research interests and have three letters of recommendation sent to: **Director, Developmental Biology Center, University of California, Irvine CA 92717.** Deadline: 1 March 1990. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION IN VIROLOGY

Available immediately to investigate, at a molecular level, the role of herpes simplex virus glycoproteins in viral pathogenesis. Doctorate degree and experience in molecular biology required. Send curriculum vitae to: **Harvey Friedman, M.D., Infectious Diseases, 534 Johnson Pavilion/6073, Philadelphia, PA 19104. The University of Pennsylvania is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION in developmental neurobiology of the taste system. Neurophysiological, morphological, and immunocytochemical differentiation of salt taste circuits is studied in nucleus of solitary tract, and the role of afferent activity in determining neural rearrangements is examined in fetal mammals. Cellular mechanisms in differentiation of taste bud receptive fields in the tongue are also studied. Applicants should have experience with current neurobiological techniques. Starting date flexible. Send letter of research interest, curriculum vitae, and names of three references to: **Dr. Charlotte Mistretta, Department of Biologic and Materials Sciences, School of Dentistry, University of Michigan, Ann Arbor, MI 48109. A Nondiscriminatory Affirmative Action Employer.**

POSTDOCTORAL POSITION, Yale University School of Medicine. Available February 1990, for **NEUROCHEMIST/RECEPTOR BIOLOGIST** in research group studying neurochemistry of childhood neuropsychiatric disorders (autism, Tourette's syndrome, OCD, ADHD). To study monoamine and amino acid receptors in animal and human brain and platelets. Send curriculum vitae and names of three references to:

**Dr. George M. Anderson, Ph.D.
Yale University School of Medicine
Child Study Center, Room I-268
P.O. Box 3333
New Haven, CT 06510-8009**

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION, MOLECULAR AND DEVELOPMENTAL BIOLOGY. Postdoctoral position is available immediately to use gene targeting to generate mice with mutation at a nonselectable gene or to use microinjections to generate dominant mutation by integration of a deleted gene. In addition, we are interested in transcription regulation of these genes. Strong background in molecular biology or developmental biology is desirable. For immediate consideration, mail or facsimile curriculum vitae plus the names and telephone numbers of three references to: **Dr. C. Howe, Research Associate Professor, The Wistar Institute, 36th and Spruce Streets, Philadelphia, PA 19104. FAX: 215-898-3868. Equal Opportunity Employer, M/F.**

MOLECULAR BIOLOGY OF CELL ADHESION RECEPTORS

POSTDOCTORAL POSITIONS are available in a laboratory working on the structure, function, and regulation of membrane receptors involved in cell-cell and cell-matrix interactions. A background in the cloning and expression of proteins is required. Positions are offered for 2 years with possibility of renewal. Competitive salaries. Please submit curriculum vitae and names of two references to: **Professor R. L. Juliano, Department of Pharmacology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7365. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION, PLANT MOLECULAR BIOLOGY. A position is available for a USDA-funded study of host-pathogen interactions. The candidate will characterize, at the molecular level, the hypersensitive response induced on bean by nonpathogenic *Pseudomonas syringae* pathovars. Specific goals of this project include analysis of plant defense gene induction during a hypersensitive response, and isolation and characterization of inducible hypersensitive-specific plant genes. Candidates must have a recent Ph.D. in plant pathology, genetics, biochemistry, or related field. This position is funded for 2 years, with a salary of \$22,000 per year and additional benefits. Applicants should submit a résumé, a brief description of research experience and interests, and three letters of recommendation to: **Peter B. Lindgren, Department of Plant Pathology, North Carolina State University, Raleigh, NC 27695-7616. An Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION. Available immediately, to study viscosity and microcirculatory characteristics of human abnormal and sickle blood by viscometry and intravital techniques (videomicroscopy, hemodynamic measurements, dual-slit cross-correlation, video-image splitting, fluorescence microscopy). Emphasis will be given to blood cell-endothelium interaction, vascular tone, and perfusion conditions. Reply with names of three references to: **Dr. D. K. Kaul, Associate Professor of Medicine, Room U-917, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461. Telephone: 212-430-3702.**

Applications are now being accepted for a **POSTDOCTORATE POSITION.** Applicants should have research experience with enzymes, preferably in the area of enzyme mechanism. Send curriculum vitae and the names and addresses of three references to:

Paul F. Cook, Ph.D., Chairman
Department of Microbiology and Immunology
Texas College of Osteopathic Medicine
3500 Camp Bowie Boulevard
Fort Worth, TX 76107-2690

The Texas College of Osteopathic Medicine is an Affirmative Action/Equal Opportunity Employer.

TWO POSTDOCTORAL POSITIONS IN INTERMEDIARY METABOLISM in the Department of Nutrition of Case Western Reserve University are available as of 1 July 1990. Projects involve (i) regulation of ketone body metabolism [*J. Biol. Chem.* 263, 18036 (1988)], (ii) development of non-invasive procedures for probing tissue metabolism in humans, and (iii) designing, synthesizing, and testing new compounds for intravenous nutrition. Candidates must be nonsmokers and should be proficient in enzymatic and GCMS assays, the use of stable isotopes for metabolic studies, and, if possible, organic synthesis. Applicants should submit their curriculum vitae and three letters of recommendation to: **Dr. Henri Brunengraber, Chairman Designate, Department of Nutrition, Case Western Reserve University, Cleveland, OH 44106. Case Western Reserve University is an Equal Opportunity Employer. Women and members of minority groups are encouraged to apply.**

POSITIONS OPEN

POSTDOCTORAL POSITION available to study cell cycle control and cellular aging in budding yeast [*J. Bact.* 171, 37 (1989); *Exp. Gerontol.* 24, 423 (1989)]. Research includes cloning [*J. Biol. Chem.* 264, 14312 (1989)] and characterization of genes whose expression is age-related and the isolation of mutants with an altered life span. This position is for someone who wishes to broaden his/her expertise in molecular biology in an excellent research atmosphere. Send a biographical sketch, including a bibliography, a brief summary of past research, and the names, addresses, and phone numbers of three references to: **Dr. S. M. Jazwinski, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center (LSUMC), 1901 Perdido Street, New Orleans, LA 70112. LSUMC is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN MOLECULAR RETROVIROLOGY

This position is immediately available for an individual interested in the molecular interaction of retroviral Gag proteins in the assembly of HIV and SIV particles. The investigations will be carried out in the laboratory of Dr. John Wills at Louisiana State University (LSU) Medical Center [see *J. Virol.* 63, 4331 and *Nature* 340, 323 (1989)] in collaboration with the Connaught Centre for Biotechnology Research in Toronto, Canada. The collaborative nature of this position should appeal to individuals interested in industrial or basic research. The project will involve the use of noninfectious expression vectors and will utilize site-directed, in vitro mutagenesis and other state-of-the-art techniques in molecular virology. The successful candidate will have a Ph.D. in molecular biology or a related discipline and proven experience with recombinant DNA techniques. LSU Medical Center is a thriving research center and offers an excellent environment for postdoctoral training in molecular virology.

Please send curriculum vitae and three letters of reference to: **Dr. John W. Wills, Department of Biochemistry and Molecular Biology, LSU Medical School-Shreveport, 1501 Kings Highway, P.O. Box 33932, Shreveport, LA 71130.**

An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION to study pharmacology and electrophysiology of serotonin receptor activation in vitro in rat hippocampal slices. Opportunity to interact with other departmental investigators who use a variety of biochemical, anatomical, and molecular approaches to study signal transduction. Experience with intracellular recording desirable. Available immediately. Contact: **Dr. J. Goldfarb, Department of Pharmacology, Box 1215, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS. Molecular analysis of the physiological roles of G-proteins. One project is to identify biochemical processes responsible for the different sensitivities and kinetics of retinal rods and cones. Another is to identify physiological roles of G-proteins in *Drosophila* using a variety of molecular and genetic methods. Please send curriculum vitae and names of three references to: **James Hurley, Ph.D., Howard Hughes Medical Institute, SL-15, University of Washington, Seattle, WA 98195.**

POSTDOCTORAL POSITION MOLECULAR BIOLOGY/NEUROBIOLOGY UNIVERSITY OF COLORADO

A postdoctoral position is available immediately to utilize state-of-the-art molecular biological techniques to address questions regarding brain function. Instrumentation for fluorescent automated DNA sequencing, PCR, oligonucleotide synthesis, and oocyte microinjection is available, as is a transgenic mouse facility devoted to neurobiological studies. Excellent collaborative opportunities in neurobiology and molecular biology are available, utilizing both human and animal systems. Strong preference will be given to applicants who have a solid background in molecular biological techniques. Interested applicants should send curriculum vitae, description of research background and interests, and names of three references to: **Dr. James Sikela, Department of Pharmacology, C236, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262. The University of Colorado is an Equal Opportunity/Affirmative Action Employer.**

**AIDS Research at the
Centers for Disease Control
Atlanta, Georgia**

Research Microbiologist

The Laboratory Investigations Branch, HIV/AIDS Division, in collaboration with the National Institute of Allergies and Infectious Diseases, the National Institutes of Health, seeks 4 scientists to participate in an HIV/SIV genetic analysis project. The principle function of these positions will be to determine the genetic variability and evolutionary rates and to develop strain-specific probes for molecular epidemiologic studies of HIV and SIV. The scientists will be part of an existing effort at CDC to better understand the evolution, transmission and detection of HIV/SIV.

Candidates with a Ph.D. in molecular biology, microbiology, or biochemistry with pre-doctoral experience in the use of recombinant DNA technologies are preferred. Successful candidates must have good communication and writing skills and the ability to work as part of a team. Salary is approximately \$30,000.

For additional information regarding the positions, contact **Dr. Chin-Yih Ou** at (404) 639-3955 or **Dr. Gerald Schochetman** at (404) 639-1000. Interested applicants should send their applications and curriculum vitae to:

William R. Hudson
Personnel Management Specialist
Centers for Disease Control
1600 Clifton Road
Atlanta, Georgia 30333

CDC is an equal opportunity employer and provides a smoke-free work environment.

INTERNATIONAL SPINAL RESEARCH TRUST \$750,000 GRANT

The ISRT is dedicated to encourage and support research which may lead to the restoration of function after spinal cord injury. In the past it has done this mainly by funding relatively small pilot and project grants and intends to continue financing such grants. However, it also recognises the huge potential of recent basic discoveries of the many factors associated with growth, guidance and target recognition. In order to advance, it may now be useful to form groups from various disciplines who would co-operate on the next stages. It intends to offer core support of some \$750,000 over three years to allow such a group to form. It is intended that this money would augment the group's other sources of funds in order to facilitate collaboration.

Applicants are asked to send a two page letter outlining a plan of research for such a potential grouping. A preliminary budget breakdown is also requested. Background material on available research facilities and on the record of the principal investigators should be included. The project may be in basic, applied or clinical sciences in any country. Successful applicants will be approached by ISRT for detailed plans. Applications should be sent to the Research Director, International Spinal Research Trust, Nicholas House, River Front, Enfield, Middlesex EN1 3TR, England, by 26th February 1990. Preliminary selection will be completed by 9th April 1990.

ADVANCED PHOTON SOURCE

Argonne National Laboratory

Call for Letters of Intent

The Advanced Photon Source (APS), a national user facility to be constructed at Argonne National Laboratory, will produce extremely brilliant X-rays for applications in a broad range of scientific disciplines. It is scheduled to begin serving users in the fall of 1995.

The APS is now seeking initial expressions of interest, in the form of letters of intent, from users who wish to participate in Collaborative Access Teams to develop and manage APS sectors. (A sector consists of an insertion-device beam line and a contiguous bending-magnet beam line.) Letters of intent are welcome both from groups requiring one or more sectors and from groups requiring less than a whole sector. In the latter case, the APS will assist in forming associations among groups whose combined needs would justify the use of a whole sector.

Letters of intent, prepared according to APS guide-lines, are due by May 1, 1990. Groups whose letters of intent are approved will be invited to submit full proposals.

The guidelines for preparation of letters of intent can be obtained from: **Elizabeth Stefanski, User Program Administrator, Advanced Photon Source, Building 360, ARGONNE NATIONAL LABORATORY, 9700 South Cass Ave., Argonne, IL 60439.**

ARGONNE NATIONAL LABORATORY

POSTDOCTORAL RESEARCH ASSOCIATE

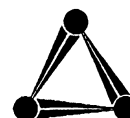
Molecular Biology Cell Death Genes

Cambridge NeuroScience Research Inc., a leading neurotechnology company located in Cambridge, MA, adjacent to MIT, has an immediate opening for a POSTDOCTORAL RESEARCH ASSOCIATE in MOLECULAR BIOLOGY. This individual will participate in a project designed to utilize gene products involved in neurodegeneration to develop treatments for stroke, trauma and Alzheimer's disease. Initial studies involve isolation and characterization of human homologues of genes known to be involved in programmed and pathological cell death. Candidates should have solid training in eukaryotic molecular biology: rapid DNA sequencing essential; experience in expression cloning desirable; background in neuroscience valuable.

Submit CV and names, addresses and phone numbers of three references to: **Director of Human Resources, Cambridge NeuroScience Research, Inc., One Kendall Square, Bldg. 700, Cambridge, MA 02139.** Applications received before February 15, 1990 will receive priority consideration.

An equal opportunity employer

**Cambridge NeuroScience
Research, Inc.**



Use your background skills to help us achieve our goals.

Staff Scientist

We're Anaquest, a division of the BOC GROUP and a recognized leader in the development and manufacture of specialized pharmaceutical products. Our position of leadership in our field and continued growth has resulted in an outstanding opportunity for a Staff Scientist.

The individual we seek will perform receptor binding in the biochemistry lab. Additional responsibilities will include enzymology and HPLC with electrochemical detection of catecholamines. A BS/MS in biochemistry or pharmacology and experience in receptor binding are required. Familiarity with radioisotopes is essential.

In return, Anaquest offers a competitive compensation package that includes an excellent salary and comprehensive benefits, as well as a highly professional work environment. For immediate confidential consideration, please send your resume to: **Human Resources, Box SS, Anaquest, 100 Mountain Avenue, Murray Hill, NJ 07974.** We are an equal opportunity employer M/F/H/V.

Anaquest



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Critical Care
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UNIQUE CAREER CHANGE OPPORTUNITY

Ph.D.s & Doctoral Professionals

The College of Osteopathic Medicine and Surgery in Des Moines, Iowa, is offering a new accelerated three-year program leading to the Doctor of Osteopathy (D.O.) degree. Doctors of Osteopathy are fully licensed physicians who practice all aspects of medicine in every state.

Your Ph.D. or other doctoral degree in biological sciences, natural sciences or certain medical or health care professions qualifies you to be considered for admission to this accelerated program.

The Graduate Professional Education Program (GPEP) features:

- Three years of didactic and clinical training.
- Significant reduction in total tuition and living costs compared to standard four-year medical programs.
- Financial assistance to qualified students.
- Self-paced learning through independent study.

For more information and an application contact:

**Admissions Office — GPEP Program
University of Osteopathic Medicine
and Health Sciences**
3200 Grand Avenue, Des Moines, IA 50312
(515) 271-1452

Research

LAB RESEARCH ASSOCIATES

ImClone Systems Inc. is an innovative biotechnology company developing diagnostics, vaccines and therapeutics for the human healthcare market. Excellent positions are available for experienced individuals at the B.S. and M.S. levels with backgrounds in the following areas:

MOLECULAR BIOLOGY — Protein expression

PROTEIN CHEMISTRY — chromatography experience, HPLC & FPLC

SYNTHETIC CHEMISTRY — nonradioactive labeling and purification of synthetic DNA; peptide synthesis

IMMUNOASSAYS — ELISA experience

IMMUNOLOGY/MONOCLONAL ANTIBODIES — tissue culture techniques, hybridoma fusion, ELISA and Western Blot

We offer a competitive salary and a wide range of benefits. Send your resume and salary requirements to: **M. Satterlee, ImClone Systems Inc., 180 Varick Street, New York, NY 10014.**



ImClone Systems Incorporated

Equal Opportunity Employer

TAKING IMAGINATION ONE STEP FURTHER.

Life Technologies, Inc. is one of the most prominent names in life sciences research, industrial bioproducts and biotechnology. LTI supplies more than 2,000 products world-wide including GIBCO BRL Research Products and Molecular Diagnostics Products. LTI is seeking qualified professionals for the following positions:

SCIENTIST I — Molecular Diagnostics / DNA Diagnostics
Exper. in DNA cloning, assay devel., antibody / nucleic acid interaction, genetic markers, hybridization.

SCIENTIST — Molecular Diagnostics / Cytodiagnostics
Extensive exper. w/ in situ hybridization techniques, cloning, probe development, molecular biology.

SCIENTIST III — Cell Biology
Extensive exper. in cellular regulation by extracellular/intracellular factors, transmembrane signaling mechanisms or intracellular biochemistry.

SCIENTIST II — Molecular Biology
Experience in cloning & gene expression/regulation.

STAFF SCIENTIST II — Molecular Transfer
Extensive exper. in tissue culture, molecular biology, transfection of DNA and other macro molecules into eukaryotic cells.

TRAINING CENTER GROUP LEADER — Tech Services —
PhD w/ knowledge of molecular biology techniques and experiences w/ cDNA cloning and in situ hybridization to establish work shop programs for customers.

LTI ALSO PROVIDES OPPORTUNITIES AT ALL LEVELS FOR THE FOLLOWING DISCIPLINE AREAS:

**MOLECULAR BIOLOGY
MICROBIOLOGY**

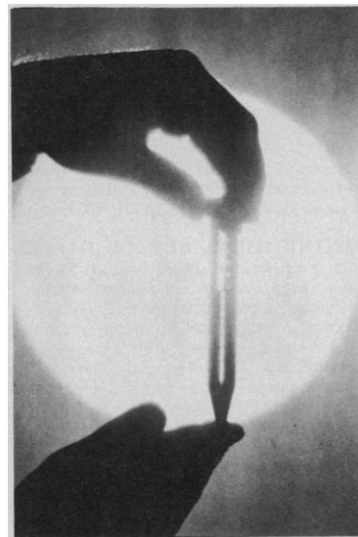
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ENZYMOLGY**

**CELL BIOLOGY
IMMUNOLOGY**

LTI offers an excellent salary, opportunities for career advancement, and an impressive roster of benefits, including: company-paid pension, life / medical / dental insurance, tuition reimbursement, stock purchase plan. Please forward your resume or C.V. with salary requirements in complete confidence to: **C. Kress, Employment Manager, Dept. 3-150, Life Technologies Inc., P.O. Box 6009, Gaithersburg, MD 20877, (301) 840-5974 (fax).**

*LTI promotes a drug free workplace.
We hire and promote equally.*

LIFE TECHNOLOGIES, INC.



RESEARCH SCIENTIST

A research scientist is required to conduct neurobehavioral toxicology and physiologic testing on laboratory animals; to train and supervise laboratory technicians to conduct neurobehavioral toxicology testing using rodents and primates; to conduct neurochemical analyses using High Pressure Liquid Chromatography (HPLC) and spectrophotometer instrumentation; to conduct cardiovascular recording and analysis for respiratory sinus arrhythmias; to formulate and develop research protocols for neurobehavioral and physiologic testing; to prepare laboratory animals for gross necropsy and neuropathology and to prepare scientific research papers, reports and proposals. Additionally must have at least 6 months experience in using High Pressure Liquid Chromatography and spectrophotometer instrumentation; must have at least 6 months of experience in performing neurobehavioral research using Good Laboratory Practices standards of the Toxic Substance Control Act or have 1 graduate level course on Good Laboratory Practices; must have surgical skills related to bioscience research; must have research training in the area of neurobehavioral research as evidenced by at least one article published in a professional journal in the area of neurobehavioral effects of drugs and chemicals. Qualifications required include: MS degree in Pharmacology and Toxicology. Need 6 months experience in job offered or 6 months experience in neurobehavioral research in the area of toxicology of drugs or chemicals using rodents or primates under Good Laboratory Practices standards. A salary of at least \$16.83 per hour.

Apply To: Texas Employment Commission
San Antonio, Texas
or
Send resume to the
Texas Employment Commission
TEC Building
Austin, Texas 78778
J.O. #5424386

BROOKHAVEN NATIONAL LABORATORY

Macromolecular Crystallography

The Biology Department, Brookhaven National Laboratory, seeks to fill two scientific staff positions at any level to develop independent research programs in macromolecular crystallography:

- Emphasis on X-ray applications
- Emphasis on neutron applications or new techniques

Unique facilities of the Biology Department include beam lines at the National Synchrotron Light Source for conventional and Laue crystallography, time-resolved diffraction and UV spectroscopy; beam lines at the High Flux Beam Reactor for neutron crystallography and scattering; and the Brookhaven Scanning Transmission Electron Microscope. The Department also has customary facilities for sample preparation.

The new staff members will have laboratory space in the Biology Department which has a staff of twenty-six scientists who would be available to collaborate in the areas of viral, bacterial and plant biology and biochemistry, molecular genetics and cloning (including site-directed mutagenesis), and bioenergetics.

Candidates should submit a curriculum vitae and statement of research interests to: J.S. Wall, Chairman, Crystallography Search Committee, Biology Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., N.Y. 11973. Equal Opportunity Employer M/F.

**BROOKHAVEN
NATIONAL LABORATORY**
ASSOCIATED UNIVERSITIES, INC.

POSITIONS OPEN

POSTDOCTORAL POSITION in regulation of gene expression in liver and hepatoma cells available 1 April 1990 for an individual with background in molecular biology. Salary negotiable. Send curriculum vitae with names of three references to: **Dr. Jen-Fu Chiu, Department of Biochemistry, University of Vermont College of Medicine, Burlington, VT 05403.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately to study molecular mechanisms of axonal degeneration in toxic states. Ph.D. in neurochemistry, pharmacology, enzymology in situ hybridization, axonal transport polyacrylamide gel electrophoresis desirable. Salary negotiable. Apply with two to three references by 10 February 1990 to: **Dr. P. S. Spencer, Center for Research on Occupational and Environmental Toxicology, Oregon Health Sciences University (OHSU), 3181 S.W. Sam Houston Park Road (L474), Portland, OR 97201-3098. OHSU is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATES

Several positions are available to work on eicosanoids, gonadotropins, and growth factors regulation of reproductive endocrine functions. Candidates with experience in the following areas will be considered: cell micromanipulation techniques, inositol phospholipid metabolism, protein kinases, Ca^{2+} fluxes, eicosanoids synthesizing enzymes, smooth muscle contractions, etc. If interested, contact: **Dr. Ch. V. Rao, Department of Obstetrics/Gynecology, 438 MDR Building, University of Louisville, Louisville, KY 40292.**

POSTDOCTORAL RESEARCH ASSOCIATE position available for Ph.D. to study molecular and physiological response mechanisms of platelets to streptococci. Certain streptococci induce unique platelet (i) signal transduction pathways that may (ii) mediate dynamic cardiovascular sequelae in vivo. Experience in molecular biology or cardiovascular physiology preferred. Send curriculum vitae, description of research goals, and three references by 20 February 1990 to: **Dr. Mark C. Herzberg, School of Dentistry, University of Minnesota, Minneapolis, MN 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**

TWO POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS are immediately available. Areas of study include (i) molecular biology of brain glucose transport in vascular as well as brain parenchymal cells and (ii) pathophysiology and metabolism of isolated brain microvessels in diabetes and hypoglycemia. Send résumé to: **Anthony L. McCall, M.D., Ph.D., Oregon Health Sciences University, Medicine (111), Portland Veterans Administration Medical Center, P.O. Box 1034, Portland, OR 97207. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE. The applicant must demonstrate experience in pharmacokinetics, drug metabolism, and toxicology. Research activities will involve studying drug binding, in vivo and in vitro drug metabolism and purification, and characterization of cytochrome P-450 isozymes in rat, rabbit, and man. Salary: \$22,000. Send curriculum vitae and names of three references to: **Kentucky Job Service, 300 South Upper Street, Lexington, KY 40508. Attention: Tillie Moore. KY J.O. #788303.**

POSTDOCTORAL RESEARCH POSITION(S). Available spring 1990 in molecular endocrinology. At least one, possibly two, positions will be filled. Studies will focus on the regulation of gene expression by prolactin and the regulation of protein structure and function by tyrosine kinases. Approaches will include transcriptional analysis of hormone responsive sequences, in vitro mutagenesis and recombination, and binding experiments. Qualifications: doctorate in physiology, biochemistry, genetics, or other appropriate field with record of publishable research. Experience in recombinant DNA and/or hybridization methods helpful but not essential. Send curriculum vitae and names of three references by 30 January 1990 to: **Nelson D. Horsemann, Ph.D., Department of Physiology and Biophysics, College of Medicine, University of Cincinnati, Cincinnati, OH 45267-0576.**

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

POSITIONS OPEN

RADIOECOLOGIST

The University of Georgia's Savannah River Ecology Laboratory invites applications for a senior-level **FACULTY POSITION** in radioecology. The successful candidate will be expected to assume a lead role in an existing program of research and training. Applicants should have a history of research excellence and success in obtaining extramural funding. Previous experience with aquatic ecosystems, computer modeling, and graduate education are also desirable. Academic rank, departmental affiliation, and salary are negotiable. Applicants should submit curriculum vitae, statement of research interests, copies of recent publications, and letters of recommendation to: **Dr. J. E. Pinder III, Chairman, Radioecologist Search Committee, Savannah River Ecology Laboratory, Drawer E, Aiken, SC 29802. Applicants must be U.S. citizens.** Application materials and letters of recommendation should be received by 5 February 1990.

RESEARCH ASSOCIATES. Two postdoctoral positions for recent Ph.D.'s with experience in biochemistry, molecular endocrinology, or reproductive physiology to study either the biosynthesis, expression, and function of alpha-interferons and related lymphokines produced by mammalian embryos or the prostaglandin control of protein synthesis and secretion in the mammalian uterus. Submit curriculum vitae and names of three references to: **Dr. R. M. Roberts, 158 ASRC, University of Missouri, Columbia, MO 65211.**

ASSOCIATE RESEARCH SCIENTIST. Study and analyze the electroencephalographic tracings of patients with intractable epilepsy to determine where and how epileptic seizures and related electrical events occur. Analyze with computer assistance the occurrence of interictal spikes and seizures, with special reference to their temporal and spatial relations at various sleep and arousal states. Reconstruct the anatomical positions of the electrodes using specialized computer and MRI techniques. M.D. or Ph.D. in neurophysiology required. Must have 6 months of experience in job offered or 6 months of postdoctoral experience in clinical neurophysiology; epilepsy electrophysiology research; intensive computerized intracranial EEG monitoring; MRI localization of intracranial electrodes; and clinical polysomnography and sleep research. Monday to Friday; 8:00 a.m. to 5:00 p.m.; \$37,500 per annum. Please send résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06099. Refer to Job Order #3063260.**

RESEARCH SCIENTISTS

CELLULAR IMMUNOLOGIST. This scientist-level position involves: expediting product research and development into clinical trials and designing and performing laboratory research to generate human T-cell clones and to grow and characterize monoclonal antibodies against human T-cells. The successful candidate will supervise the development of cell-mediated immune surveillance models used to evaluate potential immunotherapeutics. The position requirements include: a Ph.D. in immunology, biochemistry, biology, or a related field; experience in generating and characterizing monoclonal antibodies against human T-cell-specific molecules, and experience in designing and executing research related to T-cell epitope mapping using human T-cell clones.

MOLECULAR BIOLOGIST: CHIMERIC ANTIBODY DEVELOPMENT. This new scientist-level position involves: the design and development of procedures for the construction of chimeric antibody genes, the development of methods for improved efficiency of expression and characterization of chimeric antibody products from mammalian or bacterial cells. The individual will collaborate with other groups at IDEC and supervise technical support staff. Position requirements include: an appropriate Ph.D. (e.g., molecular biology, molecular immunology, or biochemistry) and 2 to 5 years of experience in chimeric antibody construction and expression.

IDEC Pharmaceuticals Corporation is a 3-year-old biotechnology company with laboratories in San Diego and the San Francisco Bay area and is currently involved in the development and manufacture of anti-idiotypic antibodies for immunotherapy of cancer, AIDS, and auto-immune diseases. We offer a competitive compensation package to our employees.

Please apply by sending your curriculum vitae to: **Jedd Wickes, Human Resources Director, IDEC Pharmaceuticals Corporation, 11099 North Torrey Pines Road, #160, La Jolla, CA 92037.**

POSITIONS OPEN

RESEARCH ASSOCIATE to study mechanisms of cell-mediated immune responses to HIV as part of a large epidemiologic investigation of HIV infection in homosexual men. Faculty nontenure-track position, 2 to 3 years duration, available 1 July 1990. Ph.D. required. Salary commensurate with experience and background. Send curriculum vitae and names of three references to: **Dr. Charles Rinaldo, Department of Infectious Diseases and Microbiology, A417 Crabtree Hall, University of Pittsburgh, Graduate School of Public Health, Pittsburgh, PA 15261. An Affirmative Action/Equal Opportunity Employer.**

Applications are invited for a **RESEARCH ASSOCIATE** position in the Analytical Instrumentation Facility of North Carolina State University (NCSU). Applicant will participate in teaching graduate and undergraduate courses in materials science and engineering. Applicant must have a Ph.D. in material engineering, experience in the use of advanced SEM and laser microscopy and in designing electron optic and detection systems, and an extensive publication record in advanced characterization techniques. Forward résumé and references to: **P. E. Russell, Materials Science and Engineering, Box 7907, NCSU, Raleigh NC 27695. Telephone: 919-737-3096. FAX: 919-737-7724. Deadline: 15 February 1990.**

RESEARCH ASSOCIATE

Brigham and Women's Hospital has an opening for a research associate to study electrophysiology of smooth muscle. Applicant should have experience with in vivo experimentation, chronic animal preparations, and basic physiological techniques. Experience with patch clamp technique welcome.

Candidates should have a Ph.D. in a related field and capacity for interdisciplinary research and growth. Please send résumé, letter of interest, and names of references to: **D. S. Sugarbaker, M.D., Department of Surgery, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115.**

SENIOR RESEARCH SPECIALIST. Applicant should be familiar with basic biochemical techniques, including methods of protein purification and the use of radioisotopes, etc. The successful candidate will work independently, but with supervision. Responsibilities will involve general management of a research laboratory and experiments on enzyme turnover. A B.S. or M.S. degree in biology and/or biochemistry with a minimum of 5 years of laboratory experience is required. Salary is open, based upon qualifications. Send résumé to: **Dr. Richard Koehn, Department of Ecology and Evolution, State University of New York (SUNY) Stony Brook, Life Sciences, Stony Brook, NY 11794. SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. (AK 302.)**

SENIOR RESEARCH ASSOCIATE for a medical care and research center in northeastern Ohio to conduct research to develop appropriate management protocol for treatment of gastrointestinal bleeding; perform a 7-year retrospective chart review of prior gastrointestinal bleeding patients; analyze generated data using computerized statistical analysis and software programs Dbase 3+ and Lotus 123; design and formulate computer research programs to perform statistical analysis and devise treatment protocols; monitor enteral alimentation to prevent gastrointestinal bleeding and attendant problems in mechanically ventilated patients in intensive care unit settings by performing biochemical assays to measure and quantify gastric acidity in order to measure the buffering capacity of various diet supplements employed in enteral feeding, using electro metric titrators and pH meters; perform radio immunoassay measurements of atrial natriuretic factor. No experience required in above duties, but applicants will qualify with: M.D. or foreign equivalent as determined by approved credentials evaluation agency. Medical degree clinical rotation must have included at least a 4-month assignment in internal medicine; one undergraduate level course in statistics or biomathematics and human behavioral science; 1 year of post-medical school internship must have included at least 4 months of active patient care in internal medicine; and published at least one scholarly research article in a professional medical journal. Forty hours per week; 8 a.m. to 5 p.m.; \$24,000 per year. Qualified applicant should send résumé (no calls) to: **G. Maugans, JO# 1084503, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

Postdoctoral Research Fellowships

The Parke-Davis Pharmaceutical Research Division of Warner-Lambert has initiated a multidisciplinary postdoctoral research program which will provide exciting opportunities to conduct basic studies in areas of potential therapeutic utility. The following Fellowships are currently available:

Site Directed Mutagenesis of Enzymes (Fellowship A)

The Fellow will construct mutant enzymes from existing cloned genes. Selective modification through site-directed mutagenesis will be used to elucidate active site mechanism, cofactor interaction, and the relationship between catalysis and protein glycosylation.

Applicants should have experience in recombinant DNA technologies and enzyme kinetics. A background in protein purification and site-directed mutagenesis is desirable. A Ph.D. in Biological Sciences and related experience is required.

Investigative Genetic Toxicology (Fellowship B)

The Fellow will work in the Genetic Toxicology Section within the Department of Pathology and Experimental Toxicology. This project will involve an assessment of underlying mechanisms for clastogenicity in mammalian cells in-vitro (e.g., DNA binding/adduct formation, free radical induction, DNA precursor pool size alterations) and an investigation of drug-induced clastogenic effects in multiple tissues in-vivo (e.g., bone marrow, lung, bladder, germinal tissue). Possible interventions to prevent clastogenicity will also be explored.

Applicants should have a Ph.D. in Genetic Toxicology or related discipline with experience relevant to the project described.

Structure-Activity Relationships and Peptidomimetic Design (Fellowship C)

Using existing structure-activity data, the Fellow will develop computer-assisted drug design methodologies to combine molecular modeling and statistical techniques toward the design of peptidomimetic structures.

Applicants should have a Ph.D. in Chemistry or a related science, with experience in analyzing peptide structure-activity data. Programming experience and knowledge of Fortran in conjunction with VAX, VMS, and UNIX-based environments is desirable.

Physiology of Hippocampus In-Vitro (Fellowship D)

The Fellow will investigate the effects of hypoxia and hypoglycemia on electrophysiology, ionic flux, neurotransmitter release and oxygen tension in isolated hippocampal slices. The goals of the research will be to describe contributions of various ionic and neurotransmitter mechanisms to cell injury in the central nervous system.

Applicants should have a Ph.D. in Neuroscience or a related discipline, and experience related to the project.

Hepatocyte Culture/Drug Metabolism (Fellowship E)

The Fellow will develop methodologies and applications for primary human and animal hepatocyte cultures to study drug biotransformation processes. An emphasis will be placed on in-vitro/in-vivo correlations, species comparisons and factors altering metabolism.

Applicants should have a Ph.D. in the pharmaceutical sciences, and experience in cell culture techniques. A knowledge of drug biotransformation processes and bioanalytical methodologies is desirable.

All appointments are for one year, renewable for a second year. Compensation includes \$32,000 annual salary with relocation expenses and an attractive benefits package. Our modern research facilities are located adjacent to the University of Michigan in an outstanding living and working environment.

Send letter of application with curriculum vitae and names of three references to:

Jack Moyer, Human Resources
Parke-Davis Research Division
Warner-Lambert Company
2800 Plymouth Road
Ann Arbor, MI 48105

Please indicate the Fellowship you are applying for.

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POSITIONS OPEN

RESEARCH ASSOCIATE. Ph.D. in biochemistry, cellular biology, and molecular biology. Two positions available. Salary commensurate with experience and training. Send résumé with letters of recommendation to: **G. A. Kaysen, M.D., Ph.D., University of California, Davis, Department of Veterans Affairs, 150 Muir Road, Martinez, CA 94553.** An Equal Opportunity Employer.

RESEARCH ASSOCIATE. Conduct research on the microbiological degradation of polynuclear aromatic hydrocarbons. Ph.D. in microbiology or related field required; experience in metabolite isolation by HPLC and GC preferable. Position provides opportunity for developing program of candidate's interest. Send résumé and names of three references to: **Dr. H. Sikka, Director, Great Lakes Laboratory, State University of New York College at Buffalo, 1300 Elmwood Avenue, Buffalo, NY 14222.** Telephone: 716-878-5422.

RESEARCH SCIENTIST to perform, direct, and analyze experiments utilizing advanced analytical and spectroscopic techniques to determine and predict structure-activity relationships of certain novel ring systems leading to the rational design and synthesis of such compounds as potential therapeutic agents for the treatment of acute allergy, inflammation, and asthma. Ph.D. in chemistry required plus 2 years of experience as scientific researcher. Previous experience must include 2 years of hands-on experience performing research in synthetic organic chemistry focusing on enantioselective syntheses and application of organo-tin compounds to synthesis. Previous experience must also include 1 year of hands-on experience in synthesis of novel platelet activating factor antagonist and application of platelet aggregation assays in structure activity studies. Forty hours per week; Monday to Friday, 8 a.m. to 4:30 p.m. Salary: \$48,000 per year. Send résumés to: **Linda Stewart, Rorer Central Research, 640 Allendale Road, King of Prussia, PA 19406.** Equal Opportunity Employer.

SENIOR RESEARCH ASSOCIATE for Cleveland, Ohio, facility to develop research protocol to determine the efficiency of bronchodilators and steroids in critically ill children and infants suffering from acute respiratory distress caused by respiratory syncytial virus, a major cause of serious and often fatal respiratory illness, through performance of the following duties: Select infant subjects and assess their suitability for study by reviewing their complete medical histories and examinations; supervise the randomization schedule pertaining to the various bronchodilators being studied; comprehensive chart review of subject's response to experimental medication; process all biological specimens collected from research subjects and inoculate samples into transport medium. Establish a database framework for study of research subjects; review results of follow-up examinations taken by attending physicians; analyze generated data using IBM personal computer and UNIX operating system, write and submit the results of the research for publication in medical journals. No experience required in job described, but applicants will qualify with the following: M.D. or foreign equivalent as determined by approval credentials evaluation agency; degree must have included at least one undergraduate level course in statistics or biomathematics incorporating UNIX operating system or one undergraduate course in statistics or biomathematics and one undergraduates level course in UNIX operating system. Degree also must have included one course in medical research covering computerized statistical analysis; 1-year post-medical school internship must have been in active patient care setting. Forty hours per week, 8 a.m. to 5 p.m.; \$23,170 per year. Qualified applicants, should send résumé (no calls) to: **C. Bussard, JO# 1084495, Ohio Bureau of Employment Service, P.O. Box 1618, Columbus, OH 43216.**

VISION SCIENTIST. Tenured or tenure-track position available to join strong research-oriented group of vision scientists. Research specialization in the area of experimental optics, or human psychophysics, or human corneal physiology is desirable. Applicants must have an O.D. (or equivalent) and a Ph.D. in physiological optics. Rank and salary dependent on qualifications. Send letter of application, curriculum vitae, copies of selected publications, and three letters of reference to: **Dean Jerry L. Christensen, School of Optometry, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121.** Women and minorities are encouraged to apply. Deadline: 28 February 1990.

FELLOWSHIPS

HUDSON RIVER FOUNDATION FELLOWSHIPS

DOCTORAL FELLOWSHIPS sponsor doctoral research on topics of environmental, ecological, and public health concern to the Hudson River estuary. The fellowships provide a stipend of \$11,000, plus 1,000 toward supplies. Applications must be received by 30 March 1990.

TIBOR T. POLGAR FELLOWSHIPS support undergraduate and graduate research projects on the ecology (chemical, physical, and biological) and public policy aspects of the Hudson River estuary. Summer salaries of \$3500 and limited research funds will be provided. Sponsoring professors will receive a \$250 stipend. Proposals must be submitted by 2 March 1990.

Information on how to apply for these fellowships may be obtained by requesting the foundation's Annual Program Plan from: **The Hudson River Foundation, 122 East 42nd Street, Suite 1901, New York, NY 10168.** Telephone: 212-949-0028.

POSTDOCTORAL FELLOWSHIP IN CELLULAR AND MOLECULAR CARDIOVASCULAR PHARMACOLOGY TRAINING PROGRAM. (\$20,000 per year, NIH supported; U.S. citizens or permanent residents.) Direct inquiries to: **A. L. Bassett, Ph.D., Department of Pharmacology R189, University of Miami School of Medicine, P.O. Box 016189, Miami, FL 33101.** Equal Opportunity/Affirmative Action Employer.

ONCOLOGY RESEARCH FELLOWSHIP MEDICAL AND RADIATION ONCOLOGY RESEARCH STARTING 1 JULY 1990

CLINICAL AND LABORATORY RESEARCH FELLOWS required to work in a multidisciplinary cancer center. Potential areas for clinical study include pain and symptom control, clinical pharmacology, clinical trials in breast cancer, molecular monitoring of lymphomas, immunotherapy, gynecologic malignancies, and other aspects of clinical epidemiology related to cancer. Laboratory research in the areas of immunology, radiobiology, or molecular biology can be undertaken. A 2-year commitment would be preferred, particularly in the laboratory area, but 1-year posts will be considered. Please apply with curriculum vitae and three letters of reference to:

Dr. Kathleen I. Pritchard
Head, Division of Medical Oncology

or

Dr. Alon J. Dembo
Head, Division of Radiation Oncology
Toronto-Bayview Regional Cancer Centre
2075 Bayview Avenue
Toronto, Ontario, Canada M4N 3M5

GRADUATE FELLOWSHIPS AND ASSISTANTSIPS in animal, plant, and prokaryotic molecular and cell biology are available in the interdepartmental Ph.D. program. Research areas include studies on regulation of gene expression during growth, differentiation, and reproduction; ultrastructural-functional relationships; transport channels; vision; signal transduction; photoregulation; host-parasite interactions; molecular genetics; and molecular analysis of protein/enzyme structure and function. Please contact: **Dr. Inder K. Vijay, Program in Molecular And Cell Biology, Animal Sciences Center, University of Maryland, College Park, MD 20742.**

A limited number of **POSTDOCTORAL FELLOWSHIP POSITIONS** will be available in the fall of 1990 for research in marine sciences, applied biology, marine natural products chemistry, and biomedical marine research. Research areas include physical oceanography, marine botany, marine habitat restoration, invertebrate larval biology, invertebrate fisheries ecology, aquaculture, zooplankton biology, bioluminescence and photoecology, invertebrate reproduction and development, fish ecology and behavior, marine natural products chemistry, tumor biology, virology, microbiology and blue-green algal culture, immunology, molecular biology, and sponge physiology and taxonomy. Deadline for application is 1 April 1990. Specify area of interest with request for information brochure and application packet from: **Kathy Morton, Postdoctoral Program, Harbor Branch Oceanographic Institution, Inc., 5600 Old Dixie Highway, Fort Pierce, FL 34946.** An Equal Opportunity Employer.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS IN THE DEPARTMENT OF ANATOMY AND NEUROBIOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

Several positions for research in individual laboratories in the department are available for candidates who have demonstrated research promise at the predoctoral or postdoctoral level. The emphasis of research in the department is in the neurosciences with special expertise in neuromorphology, sensory physiology, and molecular neurobiology. The faculty of the department and their research interests are:

Dr. Robert Blanks: Eye movement control, physiology of upper airway.

Dr. James Fallon: Chemical neuroanatomy, transmitters, and growth factors.

Dr. Christine Gall: Limbic/olfactory anatomy, neuropeptides, neurochemical plasticity.

Dr. Roland Giolli: Visuomotor system.

Dr. Stewart Hendry: Primate visual system.

Dr. Paul Isackson: Molecular neurobiology.

Dr. Edward Jones: Sensory-motor anatomy and physiology.

Dr. Glenn Kageyama: Oxidative metabolic development and plasticity.

Dr. Leonard Kitzes: Auditory system anatomy and physiology.

Dr. Sandra Loughlin: Monamines, peptides, and growth factors and their receptors.

Dr. Diane O'Dowd: Function and regulation of ion channels in *Drosophila*.

Dr. Charles Ribak: Epilepsy, neurotransmitters, and circuits.

Dr. Richard Robertson: Thalamocortical development.

Dr. Malcolm Semple: Auditory processing.

Dr. Martin Smith: Cellular and molecular aspects of synaptogenesis.

Dr. John Swett: Spinal cord and peripheral nervous system.

Dr. Yasuhiro Torigoe: Peripheral nervous system and oculomotor control.

Applications or inquiries for additional information should be sent to:

Dr. Edward Jones, Professor and Chairman
Department of Anatomy and Neurobiology
University of California, Irvine
Med Surge II, Room 364
Irvine, CA 92717

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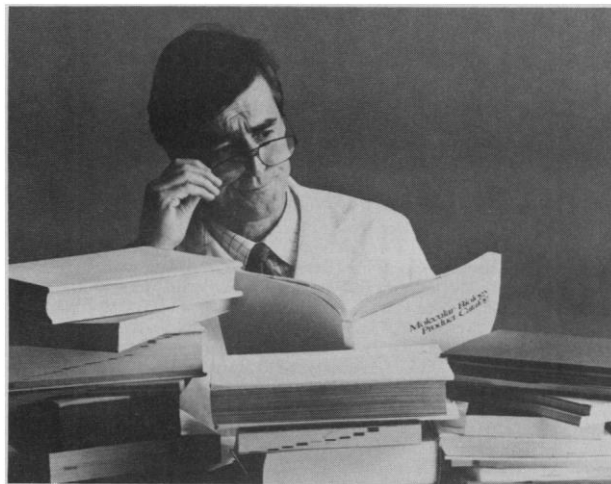
DOCTOR OF ARTS IN BIOLOGICAL SCIENCES. FELLOWSHIPS are available for persons interested in the D.A. degree in biological sciences. The program stresses preparation for undergraduate teaching at colleges and universities. Applicants must hold a master's degree in some area of biology. Deadline for receipt of application is 1 March 1990. For more information contact: **Chairman, D.A. Committee, Department of Biological Sciences, Idaho State University, Pocatello, ID 83209.** An Equal Opportunity Employer.

POSTDOCTORAL FELLOW

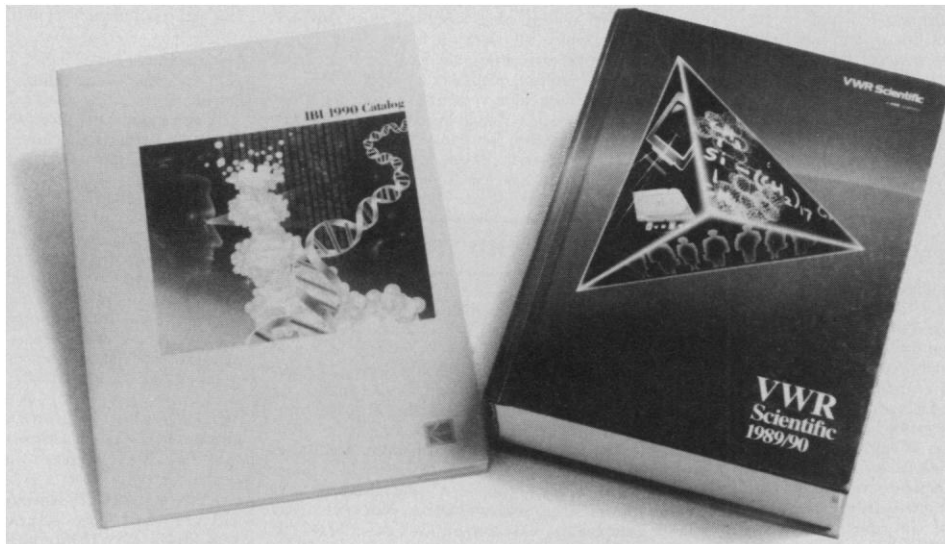
Postdoctoral position available immediately at the University of Pennsylvania to study PDGF-modulated MYC expression. Familiarity with molecular biological techniques and use of eukaryotic expression vectors required. Send curriculum vitae and three references to: **Dr. C. D. Scher, The Children's Hospital of Philadelphia, 34th and Civic Center Boulevard, Philadelphia, PA 19104.** Equal Opportunity Employer.

The Department of Psychiatry at the University of Oklahoma Medical Center is offering 1- and 2-year **FELLOWSHIPS** in substance abuse and cross-cultural psychiatry for PGY-4 or -5 psychiatric physicians. Core training includes inpatient and consultation and outpatient programs; advanced training includes teaching, administration, and research. Send correspondence, including résumé and three letters of reference, to: **Joseph Westermeyer, M.D., Ph.D., Chair, Department of Psychiatry, University of Oklahoma Medical Center, P.O. Box 26901, 5SP 530, Oklahoma City, OK 73190.** The University of Oklahoma is an Affirmative Action/Equal Opportunity Employer. If you would like further information, contact: **Sarah Suemnick, telephone: 405-271-6425.**

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FELLOWSHIPS

AMERICAN FOUNDATION FOR AGING RESEARCH (AFAR)

GRADUATE FELLOWSHIPS IN AGING RESEARCH: Basic biological sciences; cancer, neurological, and immunological diseases; and other health-related problems.

For applications and information, contact: **AFAR, Box 7622, 128 Polk Hall, North Carolina State University, Raleigh, NC 27695-7622.**

POSTDOCTORAL FELLOWSHIP. Available immediately in a multidisciplinary environment to study the disposition of anti-HIV drugs in animals and/or the mechanistic basis of increased clearance of drugs in cystic fibrosis. Strong background in analytical chemistry, biochemistry, drug metabolism, or pharmacokinetics desirable. Experience with nucleoside and nucleotide chemistry preferred. Send curriculum vitae and three letters of references to: **Dr. J. D. Unadkat, Department of Pharmaceutics, BG-20, University of Washington, Seattle, WA 98195. Telephone: 206-545-2869. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIP (microbiology) in the Sid W. Richardson Ocular Microbiology Laboratory, for American citizen with M.D. or Ph.D. in microbiology or infectious diseases, to study molecular biology of bacterial and fungal infections of the eye. Please send curriculum vitae and names of three references to: **K. Wilhelmus, M.D., Cullen Eye Institute, Baylor College of Medicine, 6501 Fannin, Houston, TX 77030.**

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

ECOLOGICAL RESEARCH FELLOWSHIP

The Institute of Ecosystem Studies (IES) will award a fellowship for a 3-month period during the summer 1990. The successful candidate will hold the Ph.D. and will conduct ecological research as a part of the program of IES at the Mary Flagler Cary Arboretum in Millbrook, New York. The award includes a summer stipend plus limited funds for research. Candidates should be interested in collaborating with a diverse group of ecologists and ecosystem scientists. Submit letter of application, curriculum vitae, and names of three referees by 1 March 1990 to: **Dr. S. T. A. Pickett, Institute of Ecosystem Studies, The New York Botanical Garden, Box AB, Millbrook, NY 12545-0129. An Equal Opportunity Employer.**

SUMMER MINORITY FACULTY POSITIONS PURDUE UNIVERSITY WEST LAFAYETTE, INDIANA

The Purdue Minority Faculty **FELLOWS PROGRAM** invites applications for summer research and/or teaching positions at the West Lafayette campus. Blacks, Hispanics, and native Americans are encouraged to apply. Fellows who are selected will receive a cost of living adjustment and a supply and expense budget totaling \$3000, plus a regular 8-week summer salary.

Positions are available in the schools of: agriculture; consumer and family sciences; education; engineering; health sciences; liberal arts; management; nursing; pharmacy and pharmaceutical sciences; science; technology; and veterinary medicine.

Application deadline is 1 February 1990. For application and further information contact:

**Dr. Clara Bell, Director
Minority Faculty Fellows Program
School of Nursing
Purdue University
West Lafayette, IN 47907
Telephone: 317-494-0242**

Purdue University is an Affirmative Action/Equal Opportunity Employer.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS UNIVERSITY OF COLORADO SCHOOL OF MEDICINE B. F. STOLINSKY RESEARCH LABORATORIES DENVER, COLORADO

Postdoctoral research fellowships in molecular and biochemical investigations of human inborn errors are available immediately at the B. F. Stolinsky Laboratories. This NIH-funded training program is open to candidates with Ph.D. or M.D. degree. Research is focused on molecular genetic analysis and biochemical characterization of genes and proteins involved in glutaric acidemia types I and II, homocystinuria, and several neurologic diseases. Research positions are in the laboratories of **Drs. Stephen Goodman, Jan Kraus, Frank Frerman, and W. Davis Parker.** Applicants should send curriculum vitae, three letters of recommendation, and a statement of research goals to: **Dr. Frank Frerman, Postdoctoral Training Program, Department of Pediatrics, Box C233, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver, CO 80262.**

Affirmative Action/Equal Opportunity Employer.

RESEARCH FELLOWSHIP AND TRAINING PROGRAM IN PSYCHONEUROIMMUNOLOGY AT UNIVERSITY OF CALIFORNIA AT LOS ANGELES (UCLA). Available for 1 or 2 years beginning July 1990, following completion of Ph.D. degree or an M.D. and residency program. Practical and didactic research training provided in immunology, behavioral sciences, and neurosciences, and in basic or clinical interdisciplinary research under preceptorship of one or more senior investigators. Fellows will be expected to acquire knowledge of all aspects of this interdisciplinary field, in which they lack the background. Salary ranges competitive, depending on level of experience. Address letters of inquiry, outline of a proposal, curriculum vitae, and three letters of recommendation to: **Herbert Weiner, M.D., Professor and Program Director, Room C8-861, Neuropsychiatric Institute, UCLA, 760 Westwood Plaza, Los Angeles, CA 90024-1759. UCLA is an Equal Opportunity/Affirmative Action Employer.**

COURSES AND TRAINING

COMPACT FREEZE-DRYING COURSE: Fundamental Aspects of the Preservation of Sensitive Biologicals.

A 3-day international course covering the principal issues involving the freezing and freeze-drying of pharmaceuticals, biological cultures (viruses, bacteria, cells, etc.) and derivative biological materials (vitamins, antibodies, enzymes, etc.).

Presented by the American Type Culture Collection and the Merieux Foundation, 2 to 4 April 1990; Mayflower Hotel, Washington, D.C. Contact: **ATCC Workshops, 12301 Parklawn Drive, Rockville, MD 20852. Telephone: 301-231-5566. FAX: 301-770-2587.**

NEUROSCIENCE

The Neuroscience Training Program at the University of Colorado Health Sciences Center (UCHSC) provides multidisciplinary training leading to the Ph.D. or M.D./Ph.D. degree. Participating faculty have established research programs in the areas of molecular, cellular, developmental, behavioral, and medical neurobiology, as well as neuroanatomy, neurochemistry, neurophysiology, and neuropharmacology. Tuition plus a generous stipend are provided. For further information, contact: **Dr. N. W. Seeds, Neuroscience Program, Box B121, UCHSC, 4200 East 9th Avenue, Denver, CO 80262. Equal Opportunity/Affirmative Action Employer.**

PRE- AND POSTDOCTORAL TRAINING IN IMMUNOLOGY at Boston University School of Medicine. Areas of research specialization include lymphokine action growth control of T and B cells, autoimmunity, neuroimmunology, aging, genetic engineering of immunoglobulin, expression of myc and IL-1 genes, and studies of HIV biology. Ph.D. program openings for June and September 1990. Applicants must be eligible for NIH training grant support. Direct inquiries to: **Richard Miller, Department of Pathology, Boston University, 80 East Concord Street, Boston, MA 02118.**

COURSES AND TRAINING

NATIONAL SCIENCE FOUNDATION (NSF) OCEANOGRAPHY SHORT COURSE San Diego, California 24 June to 14 July 1990

Instructors of undergraduate courses with marine science content will receive current information in ocean research, hands-on experience in sampling and data analysis, and new teaching materials. Project director is **Dr. Richard Phillips** of the University of San Diego, where participants will live and earn three graduate units in marine studies. Funding covers tuition, \$250 per week stipend, and room/meals. Contact: **Shannon O'Dunn, NSF Co-Director, Grossmont College, 8800 Grossmont College Drive, El Cajon, CA 92020. Telephone: 619-465-1700, ext. 690. FAX: 619-461-3197.**

THIRD ANNUAL COMPLEX SYSTEMS SUMMER SCHOOL 4 TO 29 JUNE 1990

For graduate students and postdoctoral fellows, an intensive introduction to "complex" behavior in mathematical, physical, and living systems. Topics include learning algorithms; stochastic processes in the physical and biological sciences; connectionist models of cognition; pattern formation in chemical systems; computational complexity. Subsistence stipends available. Application deadline: 1 March 1990.

Co-Directors: **Lynn Nadel, Psychology, University of Arizona,** and **Daniel Stein, Physics, University of Arizona.**

Information: **Andi Sutherland, Santa Fe Institute, 1120 Canyon Road, Santa Fe, NM 87501. Telephone: 505-984-8800. FAX: 505-982-0565. EMAIL: summerschool@sfi.santafe.edu.**

CARDIOVASCULAR TRAINING PROGRAM.

The Cardiovascular Center of Albert Einstein College of Medicine is seeking qualified postdoctoral candidates to pursue fundamental research in cardiovascular diseases. Areas of research include: the mechanics of cardiac muscle; the contractile biophysics of the cardiac sarcomere and cell; cellular cardiac electrophysiology; intracellular calcium and cardiac function; the molecular biology of normal and abnormal myocardium; corrections of cardiac function; physiology, flow dynamics, and pathophysiology of the coronary circulation; left ventricular diastolic function; and platelet function in ischemic myocardium. *Training is supported by the NIH National Research Service Award Program which requires that applicants must be United States citizens or non-citizen nationals or have a permanent visa.* Candidates must have completed doctoral training (M.D., Ph.D., or equivalent). For information and application forms, write: **Ronald S. Aronson, M.D., Division of Cardiology, Forchheimer Building, Room G42, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.**

SUPERIOR GRADUATE STUDENT PROGRAM. Louisiana State University Medical Center (LSUMC), New Orleans, Louisiana. The Louisiana Board of Regents has provided stipend support (\$15,000 per year plus tuition) for a limited number of highly qualified graduate students in the following areas of research: (i) cardiovascular science, including molecular, cellular, and organismic approaches to the study of cardiovascular disease; (ii) molecular and cell biology, including gene structure, function, and cloning; and (iii) neuroscience, including neurochemistry transmission and growth factors. For application forms and information, contact: **Marilyn L. Zimny, Ph.D., Acting Dean for Graduate Studies, Louisiana State University Medical Center, 433 Bolivar Street, New Orleans, LA 70112-2223. LSUMC is an Equal Opportunity/Affirmative Action Employer.**

TRAINEESHIPS: TOXIC SUBSTANCES. Graduate traineeships are available from the environmental and ecological instruction and training program at the University of California, Davis. Trainees will receive an appointment with faculty conducting research on transport, fate, exposure, and effects of toxic substances in ecosystems. Applicants must be admitted into one of several graduate groups for study toward the M.S. or Ph.D. degree. Inquiries should be directed to: **Dr. Dennis E. Rolston, Land, Air, and Water Resources, University of California, Davis, CA 95616. Telephone: 916-752-2113.**

MacArthur Foundation Postdoctoral Traineeships in Aging

The MacArthur Foundation Research Program on Successful Aging invites applications from graduates of advanced degree programs to conduct research on a collaborative, interdisciplinary study of aging in six sites.

Trainees will work with a team of investigators working on longitudinal studies of elderly and will have a unique opportunity to be a part of interdisciplinary gerontologic research. While most trainees will be based in laboratories of investigators leading population-based studies, there is also an interest in applicants with a biological or physiological orientation who will serve as liaison between these studies and other more clinically-oriented and basic biological studies that are part of the research program.

The focus of the studies is on the maintenance of physical and cognitive functioning in a psychosocial and physiologic context and on developing new interdisciplinary approaches to larger issues in health and aging.

Positions are available for M.D.'s or Ph.D.'s with an interest in aging, physiology, neuropsychology, endocrinology, epidemiology, basic biologic sciences, biostatistics, psychology, psychiatry, sociology or related fields. Positions are available at the University of Southern California, University of California at Irvine, Mt. Sinai Medical Center in New York, Duke University, Harvard University and the University of Michigan.

Emphasis will be placed on candidates' abilities to work in an interdisciplinary setting. Positions are available for terms of 1 or 2 years.

Salaries range up to \$40,000, commensurate with qualifications and university policy.

Submit curriculum vitae, publications, names of three references, preferences for a specific site and a 2-page statement, including areas of expertise and future research plans to:

Lisa F. Berkman, Ph.D.
Department of Epidemiology
Yale School of Medicine
60 College Street
New Haven, Connecticut 06510

Affirmative Action Employer

Deadline for Applications to be received is January 30, 1990

Protein Chemist

Pfizer Central Research wishes to add to its Molecular Genetics Research Group an assistant or associate scientist with training and experience in protein purification and characterization. You will be involved in research directed toward micro-scale isolation of new protein targets.

You should possess a BS or MS degree in Biochemistry or Chemistry or the equivalent, and have a working knowledge of protein structure.

Pfizer offers a stimulating scientific research environment with the opportunity to interact with scientists from several disciplines. In addition, we provide a competitive compensation/benefit package along with generous relocation assistance to this southeastern Connecticut shoreline community. Please send a resume, a description of your research experience, and names of three references to: Mrs. Lorraine C. Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



ENVIRONMENTAL SCIENCE AND ENGINEERING FELLOWSHIPS SUMMER 1990 Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for ten environmental science and engineering fellowships available for summer 1990. The Fellows will work at the U.S. Environmental Protection Agency (EPA), with the Office of Research and Development, in Washington, DC, to assist in identifying and assessing the significance of long-range environmental problems and opportunities. The ten-week fellowships will run June 4 through August 10, 1990.

Applicants must be postdoctoral to mid-career scientists and engineers. Candidates may be from the physical, biological, or behavioral sciences, or any field of engineering or other relevant professional fields. Fellows are expected to be critical thinkers, articulate, adaptable, and able to work with a variety of people from different professional backgrounds. Applicants must be residents of the U.S.

The 1990 Environmental Fellows will receive a stipend of \$800 per week and a nominal additional amount for temporary relocation expenses and travel in connection with the fellowships.

A detailed, future-oriented research project will be conducted by each Fellow which is of mutual interest to the Fellow and EPA. A project report will be submitted at the completion of the summer's work. Typical areas of research interest within EPA include: environmental risk assessment; biological pesticides; acid deposition; mobile source air pollution; oxidants, gases and particles; global climate; municipal waste water and spills; drinking water; hazardous waste; chemical testing and assessment; pesticides; radiation; and energy.

Deadline for applications is March 1, 1990. The awards will be announced by April 30, 1990. The continuation of this program, now in its 10th year, is contingent on the availability of funds. For further information and specific application requirements contact:

Environmental Science and Engineering Fellows Program
American Association for the Advancement of Science
1333 H Street, NW, Washington, DC 20005
202/326-6600

COURSES AND TRAINING

GRADUATE TRAINING PROGRAM IN MOLECULAR BIOPHYSICS. The Roswell Park Graduate School offers training in molecular biophysics leading to the Ph.D. degree in biophysics. Opportunities for graduate research in many areas related to the cancer problem with emphasis on biomolecular structure/function studies. Assistantships and fellowships provide tuition waiver and \$10,000 per calendar year. Participating faculty are affiliated with Roswell Park Cancer Institute, the nation's oldest cancer research institute, and the State University of New York at Buffalo. Address inquiries to: **Dr. Harold C. Box, Chairman, Biophysics Department, Roswell Park Cancer Institute, Buffalo, NY 14263.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANTSHIPS GRADUATE PROGRAM IN NEUROSCIENCE

The Neuroscience Program in the College of Medicine at the Milton S. Eshelby Medical Center of the Pennsylvania State University has assistantships available in August 1990. This interdepartmental program is designed to confer a Ph.D. degree with a major in neuroscience. Participating faculty have established research programs in molecular biology of the nervous system, neurophysiology, neuroendocrinology, behavioral science, neuropharmacology, neurovirology, and cerebral blood flow and metabolism. Interested candidates are invited to apply to: **Dr. Robert B. Page, Director, Neuroscience Program, P.O. Box 850, Hershey, PA 17033.** *An Equal Opportunity/Affirmative Action Employer.*

BIOLOGY GRADUATE ASSISTANTSHIP

Ph.D. program in biology at Wesleyan University (Middletown, Connecticut) has assistantships available beginning 1 September 1990 for qualified students. Research interests of the faculty include pattern formation, cell interactions, and gene expression in early development of a variety of systems; mechanism of pattern generation and electroreception in the nervous system; the neural and endocrine basis of photoperiodism; and the genetic basis of evolutionary change. All students will be supported with 12-month stipends, good fringe benefits, tuition waiver, and dependency allowances. Contact: **Peggy Miano, Graduate Admissions, Department of Biology, Wesleyan University, Middletown, CT 06457.** Telephone: 203-347-9411, ext. 2656.

TEACHING AND RESEARCH ASSISTANTSHIPS IN BIOLOGICAL OCEANOGRAPHY. Old Dominion University invites applications to its M.S. and Ph.D. programs in biological oceanography. Areas of interest include fish population dynamics, larval recruitment and physiology, interdisciplinary modeling, aquaculture, and phytoplankton and microbial ecology. Deadline for fall admissions is 15 February 1990. Contact: **Dr. J. R. McConaughy, Oceanography, Old Dominion University, Norfolk, VA 23529.**

NEW INTEGRATED PH.D. TRAINING PROGRAM with full cross-campus access to faculty in anatomy, biochemistry, cell biology, developmental biology, environmental health science, genetics, molecular biology and microbiology, neuroscience, nutrition, pathology/immunology, and pharmacology. Contact: **Bio-medical Sciences Training Program, W452s, Case Western Reserve University (CWRU) School of Medicine, Cleveland, OH 44106.** *CWRU is an Equal Opportunity Employer.*

GRADUATE TRAINING IN VIRAL ONCOLOGY AND IMMUNOLOGY

Stipends are available for students pursuing a Ph.D. in molecular oncology or immunology beginning September 1990. The principal interests of participating faculty are viral and cellular oncogenes, growth control, and molecular, cellular, and tumor immunology.

Students will be supported chiefly by an NIH programmatic training grant, requiring U.S. citizenship or resident status. *We strongly encourage applications from minority students.* Limited funding is also available outside of this source. Information and application forms are available from: **Dr. R. B. Carroll, Graduate Student Advisor, Department of Pathology, New York University (NYU) Medical School, 550 First Avenue, New York, NY 10016.**

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MEETINGS

SECOND INTERNATIONAL SYMPOSIUM ON IMMUNOTOXINS GROSVENOR RESORT LAKE BUENA VISTA, FLORIDA 14 to 16 JUNE 1990

Genetic Engineering of Toxins: Dr. John T. Murphy, Dr. David FitzGerald, Dr. Michael Lord. **Physiology of Toxins:** Dr. Sjur Olsnes, Dr. Yacta Endo, Dr. John Collier. **New Antibody and Ligand Chemical Conjugates with Toxins:** Dr. Michael Bjorn, Dr. John Lambert, Dr. S. Ramakrishnan. **In Vivo Studies:** Dr. Lawrence Greenfield, Dr. Philip Thorpe, Dr. Richard Youle, Dr. Daniel Valleria. **New Applications and Developments:** Dr. Lou Houston, Dr. Michael Piatak, Dr. Ron Wiley, Dr. Vera Byers. **Clinical Trials:** Dr. Patrick Scannon, Dr. Walter Blattler, Dr. Ellen Vitetta, Dr. Thomas Griffin.

For information, contact: **Dr. Arthur E. Frankel, Florida Hospital Cancer Center, 500 East Rollins Street, Suite 305, Orlando, FL 32803.**



VIIIth INTERNATIONAL CONGRESS OF VIROLOGY

Berlin, 26 to 31 August 1990

in affiliation with the

**IUMS-Symposium on Development
in Diagnosis and Control of Infectious Diseases
24 to 26 August 1990**

An Interdivisional Meeting of the International Union of Microbiological Societies (IUMS) including the Sessions of the International Committees, Commissions, and Federations of the IUMS, Sessions of the WHO, and Different Satellite Symposia.

Topics of the International Congress of Virology, 26 to 31 August 1990: Molecular Biology; Virus-Cell Interactions; Pathogenesis and Immunity; Diagnosis and Control. All fields of virology will be covered by the Congress, including viruses of animals, plants, and prokaryotes, major problems on clinical virology, and AIDS.

Topics of the IUMS-Symposium, 24 to 26 August 1990: New developments in diagnosis of infectious diseases; Prospects for control of infectious diseases in developing countries; Impact of biotechnology on vaccine development.

Congress Secretariat

**K.-O. Habermehl, Chairman
H. Zeichhardt, Congress Secretary
Institute for Clinical and Experimental Virology
Free University of Berlin
Hindenburgdamm 27 D-1000 Berlin 45**

Telephone: 030-798 36 95, Fax: 030-834 30 61

15 February 1990: Deadline for submission of abstracts

ANNOUNCEMENTS

SOLICITATION FOR COLLABORATIVE PROJECT PROPOSALS

The Division of Research Resources of the National Institutes of Health has established a Resource for Biomedical Sensor Technology at Case Western Reserve University. The goal of this Resource is to provide scientists and clinicians with the opportunity for collaboration in areas of biomedical sensor instrumentation research. This includes, but is not limited to, electrochemical sensors, application of microelectronic technology to sensor development, and packaging and biocompatibility studies of sensors.

Researchers in the United States and abroad interested in establishing collaborations are encouraged to submit inquiries describing the project of interest. Proposals will then be prepared jointly with one of the Resource faculty members. Further information can be obtained by contacting:

**Michael R. Neuman, Ph.D., M.D.
Electronics Design Center
Case Western Reserve University
Cleveland, OH 44106
Telephone: 216-459-5039
BIDNET: Neuman @ CWRU**

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HEALTH, SAFETY & ENVIRONMENTAL PROFESSIONALS

Los Alamos National Laboratory, an international leader in technological and scientific research and development, has challenging positions for Health, Safety and Environmental professionals. As a leading R&D institution, we provide a challenging work environment and an attractive salary/benefits package. Los Alamos, a community surrounded by scenic mountain ranges, is close to the artistic and cultural centers of Santa Fe and Taos.

Professional and technician positions are available for entry and experienced personnel in the following discipline areas:

Health Physics

Operational health physics, radiation monitoring, instrumentation and calibration, radiation dosimetry and measurements, accelerator health physics, ALARA engineering, plutonium health physics, and accident/safety analysis.

Clinical Psychology

Demonstrated experience in field of substance abuse counseling and education. Several years postdoctoral experience in setting requirements for independent use of diagnostic and therapeutic techniques with adults, including neurological screening.

Risk/Safety Analysis

Application of risk analysis techniques to a wide range of new and existing operations and facilities; preparation and review of safety analysis reports; development of new analysis tools and techniques; and development of risk assessment policy and guidance.

Industrial Hygiene

Operational industrial hygiene with experience in recognition, evaluation and control of health hazards; experience in working with engineering documents to identify potential health, safety, environmental hazards; workplace monitoring for a wide variety of health hazards; present training to operational organizations; and accident/safety analysis.

Waste Management

Chemical and low-level radioactive waste management; waste minimization and transportation requirements; chemical process design; chemical treating and handling; radioactive and nonradioactive chemical and

PCB waste management; development and implementation of technical and administrative programs that comply with federal regulations; chemical process design; project management; incinerator operation; and radioactive and nonradioactive waste management.

Environmental Sciences

Environmental regulations; assessment and interpretation of environmental issues; assessment of environmental impacts; environmental toxicology assessments; translating regulatory mandates in compliance efforts; wastewater management and regulations pertaining to wastewater and toxic substance control; broad hazardous waste programs background; knowledge of RCRA regulations and requirements; accidents/safety analysis.

Criticality Safety

Experience in nuclear criticality safety desirable; knowledge of neutron transport theory and calculations and commonly used computer codes such as KENO and ONETRAN/ANISN; accident/safety analysis.

Environmental, Safety & Health Appraisals

Experienced environmental scientists, waste management scientists, health physicists, industrial hygienists, fire protection engineers, quality assurance specialists, maintenance specialists and safety engineers with extensive knowledge of ES&H regulations are needed as members of ES&H appraisal teams. Teams evaluate ES&H programs, identify ES&H management and non-compliance issues, recommend program improvements, and evaluate corrective actions.

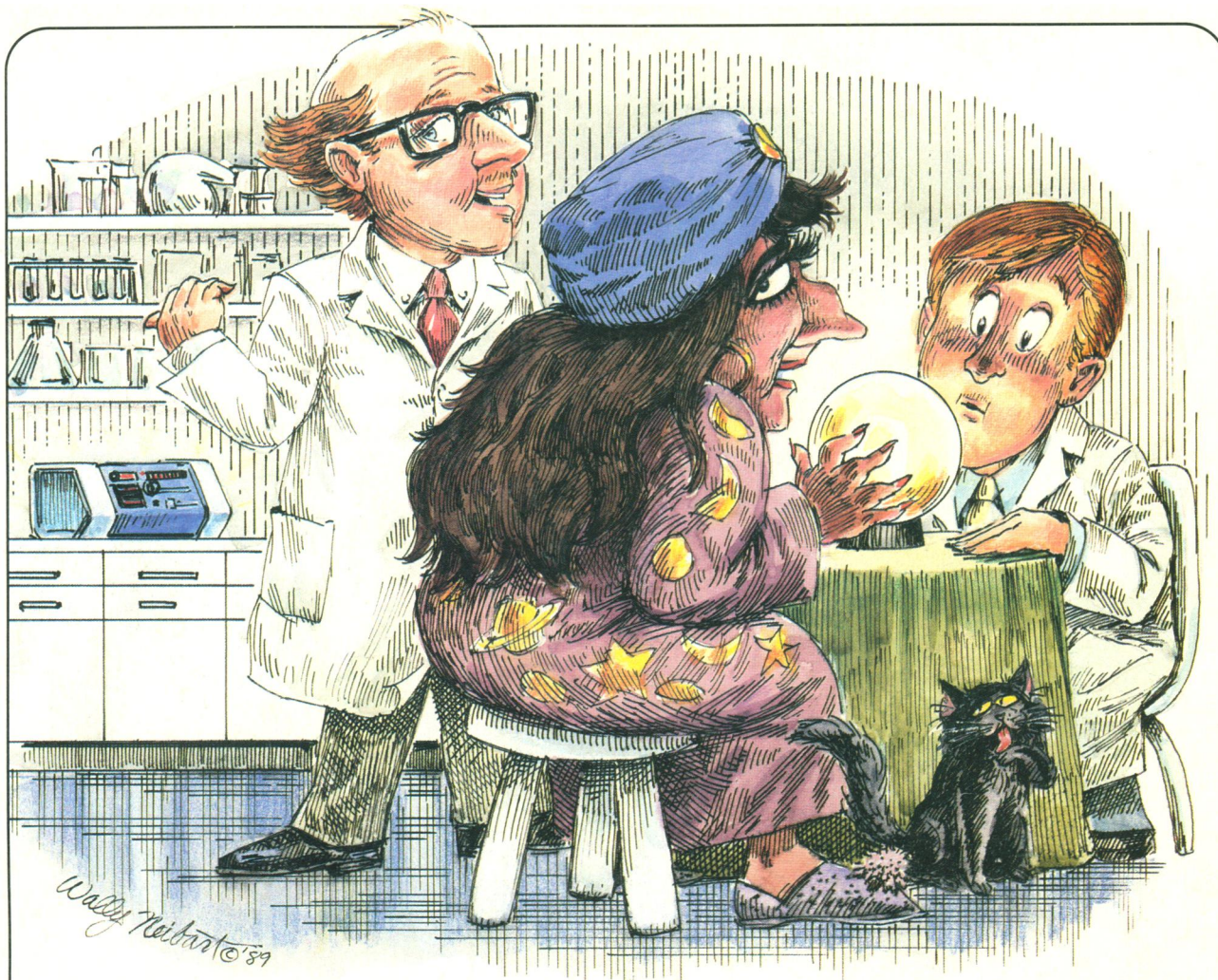
All staff member positions require a Bachelor's, Master's or PhD in appropriate field of interest or the equivalent combination of education and professional-level experience. Technician positions require college-level courses or the equivalent combination of education and experience.

To formally apply for the above areas, you must reference Job Number **G0002** on your resume. Please send resume to Leona Thorpe (MS P280), Personnel Services Division **G0002-FA**, Los Alamos National Laboratory, Los Alamos, NM 87545.

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