

## Products & Materials

### Monoclonal Antibodies

Three mouse monoclonal antibodies (MAbs) to integrins and one to fibronectin are available. The MAb to integrin  $\alpha 2$  can be used in immunoprecipitation of the  $\alpha 2\beta 1$  complex as well as cellular staining. The MAb to integrin  $\alpha 3$  has been tested for immunoprecipitation of the  $\alpha 3\beta 1$  complex as well as cellular staining. The MAb to integrin  $\alpha 5$ /FnR is specific for the human fibronectin receptor; it inhibits fibronectin-mediated cell attachment and can be used in cellular staining of  $\alpha 5\beta 1$ . The MAb to fibronectin inhibits cell attachment of human fibronectin and can be used in protein immunoblotting, cellular staining, and paraffin sections. Oncogene Science. Circle 447.

Two new high-affinity MAbs to human p67 *c-myc* exhibit broad reactivity and can be used for many research applications. Oncogene Science. Circle 435.

### Hydrophobic Interaction Chromatography Column

The new HRLC MP7 HIC column, packed with a weakly hydrophobic matrix, can purify proteins of up to  $10^6$  daltons, with more than 80% recovery of enzymatic activity. The column matrix allows elution to be accomplished with buffers instead of the strong solvent typically used in reversed-phase chromatography. Bio-Rad Laboratories. Circle 436.

### New Generation LC/MS Instrument

The API I LC/MS is the newest member of the manufacturer's family of API (atmospheric pressure ionization) liquid chromatograph/mass spectrometer products. The API I LC/MS is a single quadrupole mass spectrometer version of the successful API III LC/MS/MS system. These high-performance mass analyzers can be coupled directly to any high-performance liquid chromatograph. Innovation in the interface

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.

technology has expanded the range of compounds that mass spectrometry is capable of analyzing to include biomolecules such as proteins, peptides, carbohydrates, and nucleotides; polymers; and highly polar materials such as phosphates, sulfates, and quaternary ammonium salts. Perkin-Elmer Sciex Instruments. Circle 437.

### Nonlinear Dynamic Systems Software

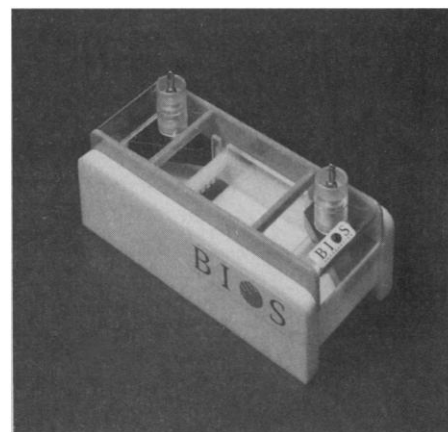
SIMULAB is the first program for simulating and analyzing nonlinear dynamic systems based on the X/Motif and Macintosh windowing systems. SIMULAB offers a complete set of tools for modeling and analyzing dynamic systems, including linear, nonlinear, continuous, and discrete models. Systems can be described graphically in block diagram form or mathematically by differential equations. The software can be integrated with the developer's MATLAB numeric computation software for additional analysis and graphics capabilities. The program is available for use on the Apple Macintosh, HP 9000 Series 300 and 400 under HP-UX, Sun-4 and SPARCstation, and DECstation and DEC VAX under Ultrix. Versions for VAX/VMS and MS-DOS computers under Windows will be available later this year. The MathWorks. Circle 438.

### Protein HPLC Systems

Bio-Rad's high-performance liquid chromatography (HPLC) protein gradient systems provide high-pressure binary or ternary gradients with corrosion-resistant solvent delivery. The new HPLC software makes it easy to set up and run methods, using a mouse and pull-down video menus. The systems provide video and/or printed chart display, storage, and reanalysis of raw data from up to two detectors for complete, quantitative analysis. The systems allow the user to develop methods quickly, purify samples, and quantify and archive all data automatically. Bio-Rad Laboratories. Circle 439.

### Minigel Apparatus

The QUICKEE Minigel is designed for quick and easy gel electrophoresis of DNA or RNA samples. The unit can quickly check enzyme digestions, polymerase chain reactions, ligations, plasmid preparations, and much more. Convenient features include: gels are cast directly in the lid of the unit or in the optional gel casting tray, an ultraviolet-



let-transparent running tray eliminates the need for glass slides, a variety of combs are available for different applications and sample volumes, and, because the size is only slightly larger than a hand, it uses minimal bench space. Gel size is 0.8 cm by 7.4 cm by 5.0 cm, requiring only 26 ml of agarose. BIOS Corp. Circle 440.

### Literature

*Guide to Critical Cleaning* is a ten-page brochure that covers procedures for manual cleaning, soaking, ultrasonic cleaning, clean-in-place methods, and machine-washing techniques. Alconox. Circle 441.

A *Reagent Chemical Brochure* provides six pages on Baker Analyzed reagents. J. T. Baker. Circle 442.

*1991 Cell Culture Reagents* is a catalog that details a broad selection of reagents designed for cell biology researchers using growth factors and cytokines, cell harvesting and dissociating enzymes, and media supplements. Boehringer Mannheim Biochemicals. Circle 443.

*Immunochemical Products* is a catalog that lists monoclonal and affinity-purified polyclonal antibodies with conjugates; reagents for antibody purification, flow cytometry, hybridoma technology, histostaining and colloidal gold labeling; enzymes and substrates; protein A and G reagents; and purified hormones and proteins. Zymed Laboratories. Circle 444.

*Stable Isotopes for Research and Industry* is a catalog of more than 1100 enriched stable isotopes and stable isotope-labeled compounds. Isotec, a Matheson Gas Products Co. Circle 445.

The *Oncogene Science Newsletter* features 17 different CD mouse monoclonal antibodies as well as time-saving cell selection and identification systems. A chart explains CD expression on various subsets of cells and their application in specific cell detection. Oncogene Science. Circle 446.

# Personnel Placement

## LINE CLASSIFIED ADVERTISEMENTS

**DEADLINES:** Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* publishes each Friday, except the last Friday of the year. Advertisements must be submitted in writing.

**HOW TO SUBMIT A CLASSIFIED AD:** Prepare double-spaced typewritten ad copy on a separate sheet. Do not include any abbreviations. *Science* will edit and typeset ads according to *Science* guidelines. Deadline for applications stated in ad must be at least 2 weeks after date of publication. Also include a cover sheet which gives name and phone number of contact person, desired date of publication, and billing information, including any special invoicing requests. Mail or FAX materials to

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

**CLASSIFICATIONS:** *Science* publishes line classified ads under the following headings: **Positions Open, Employment Agencies, Situations Wanted, Courses and Training, Meetings, Announcements, and Marketplace.** Advertisers should specify classification desired.

**HOW TO CALCULATE RATE FOR CLASSIFIED AD:** Ads are \$41 per line with a \$410 minimum. One line equals 52 characters and spaces, centered headings equal 32 characters and spaces.

To ESTIMATE ad cost, count total number of 52 character lines and multiply by \$41 to find approximate cost of ad per week. Each line of centered heading counts as one line. Also count one line for white space between headline and first line of text, all partial lines are also counted as full lines (including all centered reply information).

Remember, this is a rough estimate only. Allow for variation between estimated typewritten lines and ads when actually typeset for magazine. Therefore, purchase orders must allow additional funds for flexibility and/or adjustment. *Science* cannot provide proofs of typeset ads.

**PREPAYMENT DISCOUNT:** A 3% cash discount is granted to all prepaid line ads. Prepayment made in U.S. dollars by checks drawn on U.S. banks is required on all foreign ads.

**CREDIT CARDS:** *Science* accepts MasterCard and VISA. Both personal and corporate cards may be used. Prepayment does not apply to credit cards.

**BOXES AND LOGOS:** Any line classified ad can be boxed and/or published with logo to increase its visibility on page. Since the box takes up additional space, one line now equals 48 characters and spaces. Two additional lines will be added to allow for top and bottom rules. Logos are billed according to the number of lines needed to fit logo in space.

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

## DISPLAY PERSONNEL ADVERTISEMENTS

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

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

**CONDITIONS:** Personnel advertising is accepted only with the understanding that the advertisers do not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference. *Science* reserves the right, at its discretion, to decline to publish advertisements submitted to it and to decline classifications which it considers misleading.

## POSITIONS OPEN

**ASSISTANT PROFESSOR.** Agricultural Engineering Department, The University of Maryland. A tenure-track 10-month faculty position with 100% teaching in the area of ecological and biological systems engineering including water quality/water chemistry is available. Appointee is expected to teach undergraduate and graduate courses in agricultural engineering and natural resources management curricula and develop research projects on ecological or biological systems engineering. A Ph.D. in biological engineering (and/or combined biology and engineering) or closely related fields is required. Application deadline is 1 August 1991 or until position is filled. Applicants should send résumé, academic transcripts, and three letters of reference to: **Dr. Adel Shirmohammadi, Agricultural Engineering Department, The University of Maryland, College Park, MD 20742.**  
*An Equal Opportunity/Affirmative Action Employer.*

## VERTEBRATE PHYSIOLOGIST—ANATOMIST

The Department of Biology of Wilkes University offers a full-time, **ASSISTANT PROFESSOR** faculty position commencing on 28 August 1991. The successful candidate will be expected to teach courses in human anatomy and physiology for nursing students, a sophomore level course in comparative anatomy, upper level courses in mammalian physiology and histology and to take part in general biology laboratory instruction. While excellence in teaching is the principal objective of the department, a research program including involvement with advanced undergraduates is expected.

This is a tenure-track position, but 1-year appointments will be considered.

Applicants must submit full curriculum vitae, three letters of recommendation, reprints of recent publications, and a statement of teaching philosophy. Due to time constraints, the deadline for receipt of applications is 22 July 1991.

Wilkes is a comprehensive regional university with a strong science and engineering component and with a wide range of undergraduate programs as well as a limited number of master's degree programs. The university is located within the historic district of the city of Wilkes-Barre, along the Susquehanna River and has an undergraduate enrollment of approximately 2000 students. There are approximately 200 biology majors, of whom some 70% are in various premed programs. The placement of alumni to graduate and professional programs has been very strong. Submit materials to:

**Dr. Lester Turoczi, Chairman**  
Department of Biology  
School of Science and Engineering  
Wilkes University  
Wilkes-Barre, PA 18766

*Wilkes is an Affirmative Action/Equal Opportunity Employer.*

## BIOMOLECULAR ENGINEERING COLLEGE OF ENGINEERING AND TECHNOLOGY OHIO UNIVERSITY

Applications are invited for a tenure-track faculty position in biomolecular engineering at the rank of **ASSISTANT PROFESSOR**. Applicants should have a Ph.D. with an outstanding academic record in an engineering or related discipline. The successful candidate will participate with an active group in extending the biomolecular engineering area within the College of Engineering and Technology and develop a research program of national recognition on the synthesis of recombinant proteins and peptides, their large-scale production, and separation. A strong commitment to both undergraduate and graduate education is expected. Ohio University has an established, internationally renowned program in molecular and cellular biology which, together with the Edison Animal Biotechnology Center, provides a unique opportunity for the foundation of a highly successful Biomolecular Engineering Program. A special new building to house the program is already in the planning stage and the new faculty will have the opportunity to work closely with architects to provide a state-of-the-art engineering facility. Substantial start-up funds are available. A résumé, a brief summary of research experience and plans, and names of at least three references should be sent to: **Professor W. P. Jepson, Chairman of Chemical Engineering Department, Stocker Center, Ohio University, Athens, OH 45701.** Applications will be accepted until 15 September 1991 or until position is filled. *Ohio University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**BIOPHARMACEUTICS / PHARMACOKINETICS.** The Division of Pharmaceutical Sciences seeks a highly qualified individual with a Ph.D. degree to fill a tenure-track position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. Responsibilities include teaching in both the professional and graduate degree programs and development of an active extramurally funded research program. Applicants should send curriculum vitae, statement of research interests, and names and addresses of three references by 1 August 1991 to: **Chair, Biopharmaceutics/Pharmacokinetics Search Committee, School of Pharmacy—C238, University of Colorado Health Sciences Center, 4200 East 9th Avenue, Denver, CO 80262.** *The University of Colorado is committed to Equal Opportunity and Affirmative Action.*

## DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY LOYOLA UNIVERSITY CHICAGO

The Department of Microbiology and Immunology of Loyola University Chicago has an immediate opening for a tenure-track virology position at the level of **ASSISTANT OR ASSOCIATE PROFESSOR**. While the successful candidate is expected to obtain extramural funding, the salary is not dependent upon grant funds. Please submit curriculum vitae and the names and addresses of three persons from whom letters of reference can be solicited to:

**Katherine L. Knight, Ph.D., Chair**  
Department of Microbiology and Immunology  
Loyola University Medical Center  
2160 South First Avenue  
Maywood, IL 60153

*Loyola University Chicago is an Equal Opportunity Educator/Employer.*

**DIRECTOR, TRANSPLANTATION RESEARCH LABORATORY.** Seeking a Ph.D. in chemistry, immunology, or molecular biology with interest and experience in transplantation science to direct research laboratory within an extremely active liver transplant program. Newly developed facilities, with support from established liver research unit. Need an innovative self-starter to take charge. Interested candidates should send their résumés to: **Charles Miller, M.D., Director, Liver Transplantation, The Mount Sinai Medical Center, Box 1104, One Gustave Levy Place, New York, NY 10029.**

AMVAX, Inc., a human pediatric vaccine research, development, and manufacturing company, has position openings.

## PRODUCTION DIRECTOR

The individual will be responsible for directing and managing the production of bacterial vaccines. The successful candidate must have a M.S./Ph.D. and a minimum of 5 years of experience in the production of bacterial products under GMP conditions. The individual will report directly to the vice president of manufacturing.

## RESEARCH ASSOCIATE— FERMENTATION

Qualified candidate must have a B.S./M.S. in microbiology and a minimum of 3 years of experience in small scale and large scale fermentation. A knowledge of GMP and experience in polysaccharide purification would be highly beneficial. *Equal Opportunity Employer.* We offer highly competitive salaries and benefits. Send curriculum vitae/résumé to:

**AMVAX, Inc.**  
Personnel Director  
12040 Indian Creek Court  
Beltsville, MD 20705  
Telephone: 301-470-6100;  
FAX: 301-470-6198

A position in Batavia Area Office located at Fermi National Accelerator Laboratory to serve as **PROJECT MANAGER** for the Fermilab Main Injector construction project. *Equal Opportunity Employer. U.S. citizenship required.* Position is graded at GM-15; salary ranges from low \$60,000's to low \$80,000's. Candidates must have an engineering degree. Send résumés no later than 2 August 1991 to: **U.S. Department of Energy, Federal Personnel Branch/Ms. Lyon, 9800 Cass Avenue, Argonne, IL 60439.**

## POSITIONS OPEN

### ECOLOGICAL MODELING/ ENVIRONMENTAL TOXICOLOGY

A tenure-track research/teaching appointment up to the level of **PROFESSOR** is available in Clemson University's Department of Environmental Toxicology and The Institute of Wildlife and Environmental Toxicology. Responsibilities will involve modeling biological movement and effects of contaminants in wildlife to include prediction of effects from multiple contaminants. Models will be based on toxicology research data from vertebrate and invertebrate species. Ability to integrate fate and effects models and population models is essential as is advanced computer skills. The integration of ecosystems modeling with GIS technology to develop modeling processes that involve geographic and landscape variables is essential. Requirements include Ph.D. in appropriate discipline and excellence in research as demonstrated by publication record and other achievements.

Send curriculum vitae, letter of application, and list of references by 19 July 1991 to: **Dr. Raymond Noblet, Department of Environmental Toxicology, P.O. Box 709, Pendleton, SC 29670.**

*Equal Opportunity/Affirmative Action Employer.*

### THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

Seeks **DEPUTY DIRECTOR** of the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture.

Applicants should hold a Ph.D. or equivalent degree in one of the agricultural sciences with thorough knowledge and experience with isotope and radiation applications in agricultural research. A minimum of 15 years of experience in scientific administration at the national level; experience in international administration desirable.

Tax-free emoluments of approximately U.S.\$67,500 per annum. Additional allowances for dependents. Initial contract for 3 years. Six weeks annual leave. Travel and removal expenses paid. Applicants must send their curriculum vitae quoting **Vacancy Notice No. 91/029** to: **The Division of Personnel, International Atomic Energy Agency, P.O. Box 100, Wagramstrasse 5, A-1400 Vienna, Austria, before 21 September 1991.**

### CURATOR/SYSTEMATIST

Position for **ASSISTANT CURATOR** of the U.S. National Tick Collection, Institute of Arthropodology and Parasitology (IAP) Georgia Southern University. Candidate must have Ph.D. in a zoological science, training in modern systematic theory and practice, background in taxonomy and systematics of taxa of medically important arthropods (preferably ticks), and experience in computer applications. Duties include curating the National Tick Collection, providing tick identification service, conducting and publishing original research on ticks, and obtaining external grant support. Salary competitive depending upon qualifications. Send letter of application, names of three references, curriculum vitae and official copy of educational transcripts to: **J. H. Oliver, Jr., Director, IAP, Georgia Southern University, Landrum Box 8056, Statesboro, GA 30460-8056. Deadline: 1 September 1991. Position available 1 October 1991. Georgia Southern is an Affirmative Action/Equal Opportunity Institution. The names of applicants and nominees, résumés, and other general nonevaluative information are subject to public inspection under the Georgia Open Records Act.**

### PROGRAM ADMINISTRATOR—PROGRAMS SIGMA XI THE SCIENTIFIC RESEARCH SOCIETY

Develop and expand several of the society's programs, including grants-in-aid of research; regional and national lectureships; special lectures; science, mathematics, and engineering education; and science and society. Essential qualifications include broad scientific education, a talent for writing, and experience in writing and managing grant proposals. An interest or involvement in science education or science and society topics is advantageous. A Ph.D. or equivalent degree is required. Some travel is involved. This position may be of particular interest to research scientists with 3 to 5 years of work experience. Position available 1 September 1991, or until filled. Send résumé and salary requirements to: **Dr. Evan R. Ferguson, Director of Programs, Sigma Xi, The Scientific Research Society, P.O. Box 13975, Research Triangle Park, NC 27709. Sigma Xi is an Equal Opportunity Employer.**

5 JULY 1991

## Program Director Research In Health Care Measurements and Standards

Harvard Community Health Plan is New England's largest and most successful health maintenance organization. We are currently engaged in a search for a visionary individual to initiate and be responsible for a major enterprise to develop and promote a new state-of-the-art general system of measurements and standards for the health care industry. The program will receive its core funding from the Harvard Community Health Plan Foundation which has made the realization of this system its ultimate research goal.

In pursuit of this agenda, the Program Director will lead a research and development unit and develop the next generation of applied technology to measure and report on the performance of health care organizations nationally. This will lead to the progressive definition of an integrated, exportable system of measurement which can globally assess the quality of care delivered by an organized entity. The program should draw together a new system of measurements and related technologies which present a comprehensive picture of health care.

The individual selected will have an important senior role within our organization. Due to the complexity and ambition of this endeavor, candidates must demonstrate broad intellectual scope and flexibility, critical analytical ability, facility for program/project design and direction, and expertise in research. Of equal importance are a comprehensive understanding of managerial issues, entrepreneurial ability, and excellent interpersonal skills.

**Interested candidates may apply to: John M. Ludden, M.D., Medical Director, Harvard Community Health Plan, 10 Brookline Place West, Brookline, MA 02146. An equal opportunity employer.**



Harvard Community  
Health Plan

## Immunologist/Immunotoxicologist

The Procter & Gamble Company has an entry-level opening in Cincinnati, Ohio for an immunologist with Ph.D. or postdoctoral training. This opening is in the Human Safety Division at the Miami Valley Laboratories.

Research experience in immunology is required to establish a research program in the area of immunotoxicology with special attention directed towards understanding regional immune responses. In addition, experience in the areas of molecular biology and/or cell biology techniques is desirable.

Procter & Gamble is a world

leader in the research, development, and manufacture of consumer products. We offer a highly competitive salary, a fringe benefit package in the top 5% of U.S. firms, and excellent opportunities for personal and career growth.

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  
Immunology Position, Box FG  
The Procter & Gamble Co.  
Miami Valley Laboratories  
P.O. Box 398707  
Cincinnati, Ohio 45239-8707**

*Procter & Gamble is an  
EQUAL OPPORTUNITY EMPLOYER*

# Procter & Gamble

## POSITIONS OPEN

### RICE UNIVERSITY EXECUTIVE DIRECTOR FOR THE INSTITUTE OF BIOSCIENCES AND BIOENGINEERING

Position in institute with responsibilities for coordinating, developing programs, grants, and information materials. Responsible and creative person required, Ph.D. in biosciences or bioengineering, plus research and some administrative experience (5+ years) required. Send letter of application, curriculum vitae, and names of references to: **Jan West, Rice University, Employment Office, P.O. Box 2666, Houston, TX 77252. Telephone: 713-527-4074, Equal Opportunity Employer/Affirmative Action, M/F/V/H.**

**DIRECTOR OF MOLECULAR PATHOLOGY.** The Department of Pathology, Emory University School of Medicine, is seeking an M.D. or Ph.D. to run the molecular pathology laboratory at Grady Memorial Hospital. The successful candidate will have training and at least 3 years of experience in nucleic acid-based diagnostic techniques including blotting and amplification technology. Demonstrated experience in applications of these techniques to diagnostic laboratory medicine as well as in effective collaboration and communication with clinicians and housestaff is expected. The candidate must show evidence of accomplishment in a basic or clinical research program. Closing date for receipt of applications is 15 August 1991. Applicants should submit recent curriculum vitae and the names of three references to: **Kenneth W. Sell, M.D., Ph.D., Professor and Chairman, Department of Pathology, 703 WMB, Emory University, Atlanta, GA 30322. Emory University is an Affirmative Action/Equal Opportunity Employer.**

**DIRECTOR.** Rhode Island Atomic Energy Commission (RIAEC), Rhode Island classified civil service position. Principal task is oversight of operation and utilization of RI Nuclear Science Center and its 2-MW research reactor. Successful applicant will be active participant in upgrade and conversion of reactor to LEU fuel. Advanced degree required in science or engineering with several years of appropriate experience. Send résumé including references and salary history to: **Chairman, RIAEC, South Ferry Road, Narragansett, RI 02882-1197.**

### INFORMATION SPECIALIST FOR THE BASIC SCIENCES

The William H. Welch Medical Library, The Johns Hopkins University School of Medicine, invites applications for this position which provides a full range of library and information services to basic sciences departments. Primary responsibilities include: identification of problems and needs faced by scientists and students when retrieving and managing information from scientific databases, consultation and instruction to solve those problems and needs, and participation in the library's instructional program. Applicants should have a graduate degree in the biological/life sciences and a master's degree in library science, experience with teaching and online searching, and an understanding of research and academic environments.

The library offers a competitive salary and benefits package. Applicants should submit an application letter and curriculum vitae to: **Craig Mulder, The Welch Medical Library, The Johns Hopkins University School of Medicine, Baltimore, MD 21205-2113. The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.**

**FACULTY POSITION.** Department of Basic Pharmaceutical Sciences. Applications and nominations are sought for a tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** level in the Department of Basic Pharmaceutical Sciences (rank and salary negotiable). Candidates with distinguished records of scholarship and extramural funding may be considered for appointment at the level of professor. Applicants should have a Ph.D. or equivalent in one of the pharmaceutical sciences with research interest in site-directed drug delivery, molecular/cell biology, or pharmacodynamics. The successful applicant will teach pharmacotherapeutics and should have a commitment to developing an extramurally funded research program. Send curriculum vitae, statement of research interests, and the names of three references to: **Carl J. Malanga, Ph.D., West Virginia University (WVU), School of Pharmacy, Morgantown, WV 26506. WVU is an Affirmative Action/Equal Opportunity Institution.**

## POSITIONS OPEN

ARS is seeking a **RESEARCH LEADER/LOCATION COORDINATOR** to lead the research program at the Foreign Disease-Weed Science Research Unit in Frederick, Maryland. The mission of the unit is research on foreign plant pathogens, which threaten American agriculture, use of plant pathogens for biological weed control, and interaction of herbicides and plant growth regulators for enhanced weed control. Degree in plant pathology or plant physiology or a related discipline; knowledge of plant pathology and plant disease research methods; ability to manage a research program and provide leadership; and ability to communicate in order to interact with scientists, agencies, and public are required. Knowledge of plant physiology and working with diseases under full quarantine are desirable. *Must be a U.S. citizen.* Salary range \$44,000 to \$69,000 commensurate with experience. For information on the research program and position, contact: **Dr. Arthur L. Schipper at 215-233-6668.** For information on application procedures/forms, contact: **Beverly Webert at 301-344-1921.** Applications in response to this advertisement must be marked 1N058, and be postmarked by 14 August 1991.

*USDA/ARS is an Equal Opportunity Employer.*



**ENVIRONMENTAL STUDIES AND TOXICOLOGY.** The Board on Environmental Studies and Toxicology (BEST) of the National Research Council (NRC) is seeking a **PROGRAM OFFICER** for a study on air pollutants. Responsibilities include working with a committee, directing work of panels, and providing intellectual overview of report. Requires an M.D. or equivalent and at least 3 years of experience in research, teaching, or administration in toxicology, epidemiology, pharmacology, environmental health science, or a related science. Must understand utilization of scientific information in decision-making and have ability to integrate data from a wide variety of disciplines. Please submit curriculum vitae and names of references to: **NRC/BEST, HA 354-RT, 2101 Constitution Avenue, NW, Washington, DC 20418. Equal Opportunity Employer.**

### FACULTY POSITION—GROSS ANATOMY

The Department of Cellular and Structural Biology at The University of Texas Health Science Center at San Antonio invites applications for a tenure-track faculty position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. Applicants must have a doctoral degree and previous teaching experience in gross anatomy but should be qualified to teach in all of the anatomical disciplines. Preference will be given to individuals with a productive research program capable of generating extramural support. Salary will be commensurate with qualifications. Submit a letter of application, curriculum vitae, and the names of three references to: **Dr. Barbara H. Bowman, Chair, Department of Cellular and Structural Biology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7762.**

*An Equal Opportunity/Affirmative Action Employer.*

### BIOCHEMISTRY/ MOLECULAR BIOLOGY TEXAS A&M UNIVERSITY

The Department of Biochemistry and Biophysics is seeking applications for **FACULTY POSITIONS.** These are 12-month, tenure-track positions to be filled by September 1991. Academic rank is open and dependent upon experience and qualifications. Outstanding individuals having research interests dealing with the molecular aspects of regulation, structure, mechanism, or function in microbial, animal, or plant systems are sought. In addition to research, participation in the department's undergraduate and graduate teaching programs will be required. A Ph.D. in either biochemistry or a related field, plus appropriate postdoctoral experience, is required.

Applicants should send curriculum vitae, list of publications, a brief description of current and future research directions, and have three letters of reference sent to: **Dr. Robert D. Wells, Department of Biochemistry and Biophysics, Texas A&M University, College Station, TX 77843-2128.**

*The Texas A&M University System is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### DNA AND PROTEIN CHEMISTRY FACILITY MANAGERS

Two positions are available for individuals to manage the DNA/Protein Microchemical Core Facility (MCF) at San Diego State University (SDSU). The DNA Chemistry Manager will perform oligonucleotide synthesis and purification, as well as DNA sequencing and computer analysis of DNA and RNA. The Protein Chemistry Manager will perform peptide synthesis and sequencing, as well as protein purification and computer analysis of protein sequences. Applicants for these positions should have a master's or doctoral degree in a molecular or analytical science, as well as extensive experience with the equipment required to perform the relevant analyses and the demonstrated ability to maintain equipment, supervise personnel, and manage a fee-for-service facility. The MCF is designed to provide for instructional and research support for individuals participating in the California State University Program for Education and Research in Biotechnology (CSUPERB). Salary range approximately \$2915 to \$3512, depending on qualifications. Applicants should submit a résumé and the names of three references to: **SDSU, Personnel Services, San Diego, CA 92182-0741. For more information telephone: 619-594-4646.**

*Equal Employment Opportunity/Affirmative Action/Title IX Employer.*

### FACULTY POSITIONS IN MOLECULAR BIOLOGY AND MOLECULAR PHARMACOLOGY

The Department of Pharmacology and Molecular Biology at The Chicago Medical School is initiating the third phase of faculty recruitment for tenure-track positions at all levels. Preference will be given to applicants who have established an independent research program in any aspect of gene expression and molecular pharmacology. The school is located in a modern facility adjacent to the very pleasant North Shore community of Lake Bluff, 38 miles from downtown Chicago and yet easily accessible by car or train, with proximity to forest preserves, Lake Michigan, and cultural attractions. The department is now in an exciting stage of growth and development and has already recruited faculty of high calibre. Excellent core facilities and strong graduate program (Ph.D. and M.D./Ph.D.) with substantial financial support are available. Salary, start-up funds, and other benefits highly competitive. Please send curriculum vitae, research plans, and three names for reference to: **Dr. Samson T. Jacob, Chairman, Department of Pharmacology and Molecular Biology, The Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064. The Chicago Medical School is an Equal Opportunity/Affirmative Action Employer.**

### FACULTY POSITION PROKARYOTIC MICROBIOLOGIST

Applications are invited for two tenure-track positions in the Department of Microbiology, University of Pennsylvania School of Medicine, to commence 1 July 1992. Candidates at the **ASSISTANT PROFESSOR** level are preferred, but others will be considered. Applicants should have an established research interest in prokaryotic molecular genetics, physiology, or pathogenesis. Candidates should have at least 2 years of postdoctoral experience and are expected to demonstrate the potential to develop a strong, independently funded research program. Teaching responsibilities include participation in a team-taught microbiology course for medical students and prokaryotic molecular genetics for graduate students. Send curriculum vitae, names of at least three references, and a description of past research accomplishments and future plans to: **Dr. Daniel Portnoy, Search Committee, Department of Microbiology, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6076. Application deadline: 30 October 1991. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION.** At Stanford University Center for conservation biology. Plant ecologist with research interests in conservation biology sought for renewable 12-month position. Strong quantitative experience, especially in applications of science to practical conservation problems. Ph.D. and at least two peer-reviewed papers required. Send letter, curriculum vitae, names/telephone numbers of three references, and statement of research interests by 12 August 1991 to: **Dennis Murphy, Department of Biological Sciences, Stanford University, Stanford, CA 94305.**

## INFLAMMATION & TISSUE REPAIR

SmithKline Beecham, a world leader in pharmaceutical research has the following opportunities for Ph.D. trained scientists in the expanding Inflammation and Tissue Repair (ITR) Product Support Department. This group is responsible for worldwide non-clinical studies for ITR products that are in late-phase clinical trials or currently marketed.

### SCIENTIFIC ADVISOR

This scientist will oversee worldwide non-clinical ITR studies and answer all technical inquiries regarding products in this category. Responsibilities include designing and executing experimental protocols in accordance with strategic goals and educating the scientific community on the advantages of SB products through published papers and lectures. Requirements include a Ph.D. in physiology or pharmacology, postdoctoral experience in inflammation or related discipline and five years' postdoctoral experience. Experience with small animal models and isolated tissue and isolated cell preparations is preferred. Supervisory and industry experience desired. (Position #G-0171).

### ITR INVESTIGATOR

This scientist will design and execute experimental protocols, present experimental results at U.S. and international meetings, and publish research in peer reviewed journals. This individual will provide technical advice to Marketing, Sales Training and Product and Project teams as necessary. Requirements include a Ph.D. in physiology or pharmacology, postdoctoral experience in inflammation or related discipline and experience with a variety of animal models and isolated tissue and cell preparations. (Position #G-0172).

SmithKline Beecham offers a competitive salary, benefits and relocation package and a stimulating environment in which to excel and grow. Our state-of-the-art research facility is located in suburban Philadelphia, near Valley Forge, PA. For confidential consideration, forward your C.V. to: T. Gallagher, Senior Employment Administrator, (Position #), SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406. Equal Opportunity Employer, M/F/H/V.



**SmithKline Beecham**  
*Pharmaceuticals*

## CHANCELLOR UNIVERSITY OF NEBRASKA MEDICAL CENTER and VICE PRESIDENT UNIVERSITY OF NEBRASKA

The University of Nebraska invites applications and nominations for the position of Chancellor of the University of Nebraska Medical Center (UNMC) and Vice President of the University of Nebraska. The Chancellor is the chief administrative officer of a modern, innovative medical center which is a major health resource for the State of Nebraska and surrounding region. In certain targeted areas, such as liver and bone marrow transplantation and cancer research, UNMC is a national resource.

The Chancellor of the medical center is appointed by and reports to the President of the University of Nebraska. Responsible for providing leadership for all instructional, research and service programs of UNMC, the Chancellor also is expected to develop and maintain effective relationships with all appropriate constituencies.

One of four campuses of the University of Nebraska, which has a total enrollment of 50,000, UNMC serves some 2,400 students in colleges of medicine, nursing, pharmacy and dentistry. The School of Allied Health is a part of the College of Medicine. In addition, UNMC offers graduate studies and research opportunities in a variety of basic science, medical science and health care areas. University Hospital is an integral part of UNMC and is a major midwest referral center. UNMC's Eppley Institute for research in Cancer and Allied Diseases is a designated cancer research center of the National Cancer Institute. The Meyer Rehabilitation Institute is a center for the diagnosis and treatment of children and adults with developmental, genetic, physical and emotional disabilities.

The University seeks an individual with demonstrated leadership ability, a record of excellence in intellectual and academic performance, significant administrative experience in higher education and a personal commitment to education and research. An earned doctorate is desirable. A commitment to affirmative action is essential.

Initial screening of candidates will begin on or about July 15, 1991 and will continue until the position is filled. Applications and nominations should be submitted to:

**James O. Armitage, M.D.**  
Chairman  
Search Advisory Committee  
**UNIVERSITY OF NEBRASKA**  
3835 Holdrege Street  
Lincoln, NE 68583-0745

The University of Nebraska is an affirmative action, equal opportunity employer which actively seeks and encourages nominations and expressions of interest from women and minorities.

## POSITIONS OPEN

### INSTITUTE OF BIOSCIENCES AND TECHNOLOGY TEXAS A&M UNIVERSITY

Texas A&M University is establishing the Institute of Biosciences and Technology (IBT) in the Texas Medical Center in Houston. The function of the IBT is to merge the strengths of the Colleges of Agriculture and Life Sciences, Veterinary Medicine, and Engineering with the scientific and clinical strengths of the Texas Medical Center. All **FACULTY** in the Houston IBT will have positions in academic departments in College Station. Academic rank is dependent upon experience and qualifications. Outstanding individuals having research interests dealing with a broad range of biomedical investigations are sought. The 11-story IBT building is scheduled for completion in September.

Applicants should send curriculum vitae, list of publications, and a brief description of current and future research interests and have three letters of reference sent to: **Dr. Robert D. Wells, Director, Institute of Biosciences and Technology, Texas A&M University, College Station, TX 77843-2128.**

*The Texas A&M University System is an Affirmative Action/Equal Opportunity Employer.*

### IMMUNOCHEMIST AND IMMUNOLOGIST

National Cancer Institute, National Institutes of Health (NIH), Public Health Service, is seeking applicants for the following positions: **IMMUNOCHEMIST:** To work closely with molecular biologists and immunologists to define new strategies and methodologies for the radiolabeling and analysis of novel genetically engineered forms of immunoglobulins and Ig-like molecules. Preference for at least 3 years of postdoctoral training. **IMMUNOLOGIST:** To analyze and define the host's immune response in antitumor active immunotherapy systems using recombinant vaccinia constructs, peptides, etc., and study the interactions of various effector cell populations with novel recombinant forms of Ig's, will also interact with molecular biologists in gene therapy experiments. Preference for at least 3 years of postdoctoral training. Salary commensurate with experience. Please submit curriculum vitae, bibliography, and names of three references to: **Dr. Jeffrey Schlom, Laboratory of Tumor Immunology and Biology, National Cancer Institute, Building 10, Room 8B07, NIH, 9000 Rockville Pike, Bethesda, MD 20892. U.S. citizenship and/or permanent residency required depending upon type of appointment. An Equal Opportunity Employer.**

**POSTDOCTORAL ASSOCIATE POSITION.** To examine the molecular genetics of alphavirus pathogenesis. The relationship of virus structure and replication to induction of disease is being investigated using full-length cDNA clones of Sindbis and Venezuelan equine encephalitis viruses. One goal of these studies is to determine the molecular and cellular basis for the effect of specific mutations on viral pathogenesis. A second goal is the informed development of new alphavirus vaccines. A wide range of projects is available within these research contexts, depending on the interests and training goals of the applicant. To apply, send curriculum vitae and the names of three references to: **Robert E. Johnston, Ph.D., Department of Microbiology and Immunology, University of North Carolina at Chapel Hill, CB7290 804 FLOB, Chapel Hill, NC 27599. The University of North Carolina is an Equal Employment/Affirmative Action Employer.**

### BEHAVIORAL PHARMACOLOGIST/ TOXICOLOGIST

**A POSTDOCTORAL POSITION** in the Intramural Research Award Fellowship or Visiting Fellow Program is available for basic and applied research in evaluating preclinical efficacy and safety of potential drug abuse treatment compounds. Particular focus is on treatments for cocaine and amphetamine abuse and toxicity in animal models. The individual would work within a laboratory consisting of behavioral pharmacologists and medicinal chemists. Applicant, with a background in pharmacology or behavioral neuroscience, must have received a Ph.D. within the last 3 years. Send curriculum vitae, citizenship status, and three representative publications to: **Dr. J. M. Witkin, Drug Development Group, NIDA Addiction Research Center, P.O. Box 5180, Baltimore, MD 21224. NIDA is a drug-free and smoke-free workplace. Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION.** Available immediately for the study of novel mammalian G protein-linked serotonin receptor genes and their gene products. Several projects are available involving regulation of gene expression or effector mechanisms, depending on mutual interests. Prior experience in recombinant DNA techniques, cell culture, in situ hybridization or immunocytochemistry is highly desirable. *U.S. citizenship required.* Contact: **Dr. Mark W. Hamblin, GRECC 182B, Seattle VA Medical Center, 1660 South Columbian Way, Seattle, WA 98108. Telephone: 206-764-2308. Equal Opportunity Employer. Minorities are encouraged to apply.**

**POSTDOCTORAL POSITION.** Available 1 July 1991 to participate in ongoing studies of molecular mechanisms of signal transduction. Familiarity with receptor biochemistry and recombinant DNA technology desirable. Projects employ molecular approaches to study receptor-effector coupling, regulation, and function of G protein-linked receptors. Send résumé and names of three references to: **Dr. Gary R. Luthin, Department of Physiology, Mail Stop 409, Hahnemann University, Broad and Vine, Philadelphia, PA 19102. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION.** To investigate the biochemical and cellular mechanisms of a new antithrombotic protein therapeutic. Ph.D. in biochemistry, molecular or cell biology and experience with one or more of the following: protein purification and characterization, regulation of gene expression, cell culture, cell receptors, cytokines. Salary to \$35,000. Send curriculum vitae with names and telephone numbers of three references to: **Carolyn L. Orthner, Ph.D., American Red Cross, Holland Laboratory, 15601 Crabbs Branch Way, Rockville, MD 20855. Equal Opportunity Employer, M/F/H/V.**

### POSTDOCTORAL POSITION

Position in the Department of Pharmacology is immediately available, emphasizing studies on electrophysiology of inhibitory and excitatory amino acids. Experience in the molecular expression of amino acid receptors in *Xenopus* oocytes and the subsequent electrophysiological recordings is highly desirable. Knowledge and application of patch clamp techniques would also be an advantage. Send your curriculum vitae and names of three references to: **Dr. D. Martin, Department of Pharmacology, Box 3813, Duke University Medical Center, Durham, NC 27710. Duke University is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITION

Available in the study of platelets in clinical coagulation, cardiac surgery, and transfusion medicine. Current research includes preservation of platelets for extending shelf-life and characterization of membranous microparticles released from platelets during activation. Studies will be carried out in the laboratory of Arthur P. Bode, Ph.D. Must have background in applied science, preferably with interest/experience in clinical pathology laboratory.

Send curriculum vitae and three letters of reference to: **H. Thomas Norris, M.D., Department of Clinical Pathology and Diagnostic Medicine, Brody 1S-08, East Carolina University School of Medicine, Greenville, NC 27858. An Equal Opportunity/Affirmative Action University. Applicants must comply with provisions of the immigration reform and control act.**

### MOLECULAR AND CELLULAR NEUROBIOLOGY POSTDOCTORAL POSITIONS

Four postdoctoral positions centering around genetically determined degenerative diseases of the central nervous system in humans and animals are available immediately in interdisciplinary programs developed at Indiana University Medical Center in Indianapolis. Two positions require graduate or postgraduate experience in biochemistry and/or molecular biology and two positions require graduate or postgraduate experience in neuro-morphology. Salaries competitive. *Equal Opportunity Employer.* Send curriculum vitae along with the names, addresses, and telephone numbers of three references to: **Dr. B. Ghatti, Associate Director, Program in Medical Neurobiology, Room 142, Medical Science Building, 635 Barnhill Drive, Indiana University School of Medicine, Indianapolis, IN 46202.**

## POSTDOCTORAL RESEARCH SCIENTIST

Merck Sharp and Dohme Research Laboratories at West Point, PA has an immediate opening for a postdoctoral research position in the Genetic and Cellular Toxicology Department. The area of research will involve the development of in vitro models to assess mechanisms of toxicity of pharmaceutical drug candidates. Applicants should have a background in cell biology, toxicology, or molecular biology, and should be familiar with tissue culture methods.

Excellent salary and benefit programs accompany this position at our modern research facilities located 25 miles northwest of Philadelphia.

Please send curriculum vitae with references, transcripts and cover letter to:

**Personnel Manager  
Ad #C-22  
Research Personnel, WP42-2  
Merck Sharp & Dohme  
Research Laboratories  
West Point, PA 19486**

EEO/AA/VH/Employee



Merck & Co., Inc.

## Fermentation

OmniGene, Inc., a Cambridge, MA biotechnology company, seeks a highly motivated Ph.D.-level scientist to work with its molecular biologists on the development of recombinant bacterial strains for the production of proteins, vitamins, and amino acids. Requirements include at least 3 years of experience in microbial fermentations and working knowledge of computer-controlled, research scale fermentors and related equipment. Experience with *Bacillus* advantageous. OmniGene offers competitive salaries, based on experience, and an attractive package of fringe benefits.

OmniGene is a world leader in the development and application of next-generation technologies in the areas of microbial production systems and diagnostics, and has established commercial operations in DNA probe diagnostics.

**Qualified candidates should forward resume to: OmniGene, Inc., Human Resources Department, 85 Bolton Street, Cambridge, MA 02140.**

OmniGene is an equal opportunity employer.





NeXagen, Inc., a new, Boulder-based biotechnology company, is seeking an elite group of senior scientists and research associates dedicated to drug development. The Company's scientists will utilize the next generation of drug discovery technology to identify and design novel therapeutic agents for the treatment of several major diseases. Successful candidates will be involved in an interactive research program with many scientists at the University of Colorado Boulder Campus.

## Senior Scientists

NeXagen is seeking scientists with Ph.D.s. or M.D.s., having at least two years of postdoctoral experience. Candidates should have a documented ability to conduct independent research and have a strong background in several of the following areas: cloning and analysis of nucleic acids and peptides, nucleotide chemistry, protein purification, receptor/ligand interactions, macromolecule delivery and transport within mammalian cells.

## Research Associates

The Company requests that applicants have a B.S. or M.S. and prior laboratory experience. Candidates with a background in molecular biology or biochemistry, and with exposure to one or more of the areas mentioned above, are strongly desired.

NeXagen offers competitive salaries and benefits as well as the opportunity to work in a dynamic, highly motivated and interactive scientific environment. For consideration, please submit your curriculum vitae and three reference letters to: Larry Gold, Recruitment Effort, NeXagen, Inc., 1085 14th Street, Suite 1203, Boulder, CO 80302.

**NEXAGEN**

## MOLECULAR BIOLOGY

**QIAGEN INC.** is a fast growing Los Angeles area company, committed to excellence in the development and marketing of unique and innovative products for molecular biology. We are seeking highly motivated and talented individuals to join our expanding sales team.

### Eastern Regional Sales Manager

Applicants should have a BS/MS degree in molecular biology or related fields and 2+ years of lab experience in molecular biology. 3-5 years sales experience is required (in molecular biology consumables preferred). Will be responsible for six sales reps in the Eastern region.

### Technical Sales Representatives

Applicants should have a BS/MS degree in molecular biology. Prior sales experience is beneficial, but not required. Sales territories are available in the Northeast, Southwest, Midwest and Northwest.

We offer competitive salaries, benefits including relocation assistance and a challenging, high growth environment. For immediate consideration, please send a resume, salary history and reference names to:

**QIAGEN, INC., Human Resources,**  
9259 Eton Avenue, Chatsworth, CA 91311  
(Phone: 800-426-8157, Fax 818-718-2056).



## The Division of AIDS

National Institute of Allergy and Infectious Diseases  
National Institutes of Health

## ASSOCIATE DIRECTOR Clinical Research Programs

The Associate Director, Clinical Research Program will lead the Medical, Pediatric, Epidemiology, and Community Clinical Research Branches of the Division, and be responsible for setting the Division's agenda in treatment and epidemiology research. The ideal candidate will be a physician and have extensive experience in HIV medicine and clinical trials, a broad scientific perspective, proven leadership abilities, and be BC/BE or similarly credentialed in internal medicine, pediatrics or epidemiology/public health.

For more information send C.V. to and/or call:

**Dr. Jack Killen**

Deputy Director, Division of AIDS  
National Institute of Allergy and  
Infectious Diseases

Control Data Building, Room 249P  
6003 Executive Boulevard  
Bethesda, MD 20892  
(301) 496-0545



U.S. Citizenship required

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## POST DOCTORAL SCIENTIST

## CARDIOVASCULAR PHARMACOLOGY

SmithKline Beecham, a world leader in pharmaceutical research, has an immediate Postdoctoral Scientist opportunity available in its Cardiovascular Pharmacology Department.

As a member of this research group, the selected candidate, in collaboration with pharmacologists, biochemists, and molecular biologists, will explore interactions between endothellum and vascular smooth muscle as they relate to muscle proliferation. The main research focus will be to establish new cardiovascular models *in vivo* and *in vitro*.

Requirements for this position include a Ph.D. in Pharmacology, Physiology, Cell Biology or Molecular Biology, and research experience with growth factors and cell culture is desired. In addition, the successful candidate must have a demonstrated record of contribution to scientific publications and good oral and written communication skills. Research experience with surgery and a foundation of molecular biology techniques is also desired.

Our state-of-the-art research facilities are located in suburban Philadelphia, near Valley Forge, PA. We offer a competitive compensation/benefits/relocation package and a stimulating environment in which to grow and excel. For confidential consideration, please submit your C.V. and the names of three references to: Nancy Hasson, Employment Administrator, #H0173, 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

## Postdoctoral Scientists

Genentech Inc., a state-of-the-art leader in the biotechnology industry, has immediate opportunities for two Postdoctoral Scientists to conduct independent research on the **integrin family of cell adhesion receptors**.

You will be joining a multidisciplinary team whose goal is to discover specific integrin antagonists. Current studies are directed at characterizing novel integrins. Parallel studies are directed at elucidating the molecular and cellular basis of integrin/ligand interactions as well as understanding their biological functions.

Qualified candidates must have a PhD with experience in one of the following areas: Protein Engineering, Molecular and Cell Biology, or Biochemistry. Candidates with an interest in structural biology are particularly encouraged to apply.

Genentech offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For immediate consideration, please send your resume to Yvonne Davino, Genentech, Inc., Dept. YSSB, 460 Point San Bruno Blvd., South San Francisco, CA 94080. We actively support and promote affirmative action and equal employment opportunity.

### Genentech, Inc.

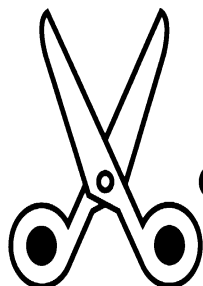
**Public Health Service  
National Institutes of Health**

### Fellowship in Brain Lipid Metabolism

The Laboratory of Neurosciences, National Institute on Aging, National Institutes of Health, invites applications for a Fellowship position to study brain lipid metabolism in relation to development, aging and neuroplasticity, pharmacological and physiological activation in animals. Research opportunities include examination of incorporation of radiolabeled fatty acids into brain, using analytical techniques to examine mass and specific activity within precursor pools and phospholipid species; examining brain lipid composition in Alzheimer's disease. The position is located in Bethesda, Maryland, and is available immediately.

Interested candidates should submit their Curriculum Vitae and two letters of recommendation to: **Stanley I. Rapoport, M.D., Chief, Laboratory of Neurosciences, National Institute on Aging, National Institutes of Health, Bldg. 10, Room 6C103, 9000 Rockville Pike, Bethesda, MD 20892**

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

The Laboratory Investigations Branch, Division of HIV/AIDS, is seeking scientists with proven ability to conceive and conduct independent research in molecular virology, immunovirology, and recombination genetics. The Centers for Disease Control provides a unique opportunity to collaborate in strongly established epidemiology programs at an international level and maintains a large historical library of HIV variants from throughout the world on which to draw for research. Qualified researchers will participate in studies of viral as well as host regulatory elements involved in HIV genetic variation and altered immunopathogenicity.

Ph.D., M.D., or equivalent years of experience in Microbiology, Immunology, or Molecular Biology with specific training in tissue culture and the handling of viral pathogens preferred. Experience in the immunopathogenesis of retroviruses, in vitro expression systems, and/or protein chemistry is desirable. Salary will depend on experience.

For additional information regarding these positions, contact **Dr. Mark A. Rayfield** or **Dr. Gerald Schochetman** at (404) 639-1000. Interested applicants should send their applications and curriculum vitae to:

**William Nelson  
Personnel Management Specialist  
Centers for Disease Control  
1600 Clifton Road  
Atlanta, Georgia 30333**

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and provides a smoke free environment.*

Pharmaceutical

**REGIONAL MEDICAL ASSOCIATE**

**WE HAVE \$9.2 BILLION  
IN SALES. WOULD YOU CARE  
TO MAKE IT \$10 BILLION?**

SmithKline Beecham is a \$9.2 billion global pharmaceutical and health care company. Our world famous products and reputation mean unsurpassed opportunities for individuals to combine their scientific and marketing expertise as Regional Medical Associates.

Our Regional Medical Associates establish relationships within major medical institutions for the purpose of acting as scientific liaison and providing in-depth information regarding SmithKline Beecham products. This includes the training of representatives and medical professionals. Travel 45%.

To qualify, you must have a Ph.D. in Pharmacology, Toxicology, Microbiology or related life sciences. Strong marketing and communication skills and a high degree of initiative are also required. An opportunity currently exists in the San Francisco Bay to Sacramento Valley area.

We offer one of the best compensation packages—including car—in the industry. If you'd like to be a part of our success, send your resume and salary history to: SCIENCE, BOX #6, Science Classified Advertising, 1333 H Street, NW, Room 940, Washington, DC 20005. We are an Equal Opportunity Employer, M/F/H/V.



**SmithKline Beecham**  
Pharmaceuticals



**NATIONAL UNIVERSITY OF SINGAPORE  
LEE KUAN YEW  
POSTDOCTORAL FELLOWSHIP**

A prestigious research fellowship known as the *Lee Kuan Yew Postdoctoral Fellowship* was recently established in the National University of Singapore (NUS). Applications for the Fellowship are invited from candidates with excellent academic records and research potential, and who had obtained their PhD degrees in the last few years.

The Fellowship will be tenable for 3 years in the first instance, with possible extension for 2 further years. It will be held concurrently with the candidate's appointment as a research staff member in the **Faculty of Medicine, Faculty of Science or the Institute of Molecular and Cell Biology**.

Under the Fellowship, a tax-free stipend of US\$1,500 per month will be provided. This will be in addition to the following terms of appointment normally provided to a research staff member:

- Gross annual emoluments range from S\$50,390 to S\$64,200. (The commencing salary will depend on the appointee's qualifications and experience.) (US\$1.00 = S\$1.74 approximately)
- Leave and medical benefits will be provided. Depending on the type of contract offered, other benefits may include: provident fund benefits or an end-of-contract gratuity, a settling-in allowance of S\$1,000 or S\$2,000, subsidised housing at nominal rentals ranging from S\$100 to S\$216 p.m., education allowance for up to three children subject to a maximum of S\$10,000 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore.
- The appointee may undertake consultation work of a specialist nature, subject to prior approval, and retain consultation fees up to the equivalent of 60% of annual gross salary in any one year.

All academic staff have access to the following computer and telecommunication resources: an individual microcomputer (an IBM-AT compatible or Apple Macintosh), an IBM mainframe computer with 16 MIPS of computing power; an NEC SX supercomputer with 665 MFLOPS of computing power; departmental laser printers; a wide spectrum of mainframe and microcomputer software; on-line library catalogue; voice-mail; the international computer networks—BITNET and INTERNET, linking academic institutions and research centres all over the world. The campus-wide network, which is based on the high speed optical fibre based FDDI technology, enables the academic community to access all the computing resources in the University from the convenience of the individual workstation.

Application forms and further information on terms and conditions of service may be obtained from:

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

Enquiries may also be sent through BITNET to PERWPH@NUS3090, or through Telefax: (65) 7783948.

National Cancer Institute  
National Institutes of Health  
Public Health Service

# CANCER PREVENTION FELLOWSHIP PROGRAM

The Division of Cancer Prevention and Control (DCPC) is accepting applications for the Cancer Prevention Fellowship Program (CPFP). The purpose of this program is to attract individuals from a multiplicity of health science disciplines into the field of cancer prevention and control. The program provides for: Master of Public Health training (new feature); Participation in the DCPC Cancer Prevention and Control Academic Course; Working at NCI directly with individual preceptors on cancer prevention and control projects; Field assignments in cancer prevention and control programs at other institutions. Funding permitting, as many as ten Fellows will be accepted for up to three years of training, beginning July 1, 1992 (date may vary for M.P.H. applicants). Benefits include selected relocation and travel expenses, paid federal holidays, and participatory health insurance.

## ELIGIBILITY

M.D. or D.D.S. from a U.S., territorial, or Canadian Medical School or equivalent experience. Foreign medical graduates must have current ECFMG/FMGEMS certification and appropriate experience, e.g., one year residency in a training program approved by the Accreditation Council for Graduate Medical Education.

## OR

Ph.D., Dr. P.H. or other doctoral degree in a related discipline (epidemiology, biostatistics, and the biomedical, nutritional, public health or behavioral sciences) or equivalent experience. Foreign education must be comparable to that received in accredited U.S., territorial, or Canadian institutions.

## PLUS

U.S. citizenship or resident alien eligible for citizenship within four years.

For details and application catalog send a postcard or letter with your name and home address to:

**Douglas L. Weed, M.D., M.P.H., Ph.D., Director, Cancer Prevention Fellowship Program, Division of Cancer Prevention and Control, National Cancer Institute, Executive Plaza South, T-41, Bethesda, MD 20892.**

Further Inquiries: Mrs. Barbara Redding (301) 496-8640 or 496-8641

**Deadline For Receipt of Applications:  
SEPTEMBER 1, 1991**

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# THE EMF- CANCER QUESTION

## A Science Reprint Booklet

Due to the popularity of *Science's* recent three-part series by Robert Pool examining the debate over the possible biological effects of electromagnetic fields, we put the articles together in one convenient and comprehensive reprint booklet. The first article looks at the epidemiological evidence for a link between electromagnetic fields and cancer. The second article deals with cell and animal studies, and the third examines policy questions and the politics behind the research.

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## POSITIONS OPEN

### POSTDOCTORAL POSITION

A postdoctoral position is available to study regulation of cardiac myocyte ion currents and contractions by neurotransmitters and intracellular messengers. Candidates with recent Ph.D. or M.D. should have broad preparation and expertise in cellular electrophysiology and signal transduction. Send curriculum vitae and three letters of reference by 31 August 1991 to: **Dr. Achilles Pappano, University of Connecticut Health Center, Pharmacology L6004, Farmington, CT 06032.** An Affirmative Action/Equal Opportunity Employer, M/W/H.

### POSTDOCTORAL POSITION

#### IN HUMAN GENETICS THE ROCKEFELLER UNIVERSITY

Position available immediately for a Ph.D. in molecular biology to participate in ongoing work using linkage analysis and positional cloning approaches to identify the genetic defect in Fanconi anemia, an autosomal recessive disease with predisposition to birth defects and malignancy. Send curriculum vitae and three references to: **Dr. Arleen D. Auerbach, The Rockefeller University, 1230 York Avenue, New York, NY 10021.**

An Equal Opportunity/Affirmative Action Employer.

### WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

**POSTDOCTORAL POSITION.** Available in cell and molecular biology of receptor trafficking and its regulation by post-translational modification. Experience in immunochemical methods, transfection/expression in mammalian cells including site-directed mutagenesis is desirable. Send curriculum vitae and two references to: **Dr. Robert Fallon, Departments of Cell Biology and Pediatrics, Washington University School of Medicine, Box 8116, St. Louis, MO 63110.**

### POSTDOCTORAL POSITION

Available for investigations of cellular/molecular mechanisms of neurodegenerative diseases. Our laboratory uses a variety of approaches to study several human neurodegenerative diseases, including Alzheimer's disease and motor neuron disease, and related animal models. This position is part of a research program dealing with several research areas, including the neuronal cytoskeleton, transmitter systems, the amyloid precursor protein, and trophic factors.

Send curriculum vitae and two letters of recommendation to: **Donald L. Price, M.D., Neuropathology Laboratory, The Johns Hopkins University School of Medicine, 509 Pathology Building, 600 North Wolfe Street, Baltimore, MD 21205-2181.** Affirmative Action/Equal Opportunity Employer. We encourage applications from minorities. Because of funding requirements, applicants limited to U.S. citizens/permanent residents.

### CENTRE FOR POPULATION BIOLOGY THREE POSTDOCTORAL RESEARCHERS

#### INSECT ECOLOGIST MATHEMATICAL POPULATION BIOLOGIST EXPERIMENTAL POPULATION BIOLOGIST

Required at Imperial College's NERC-sponsored Interdisciplinary Research Centre, based at Silwood Park, Ascot:

An **INSECT ECOLOGIST** with interests in theoretical and experimental metapopulation dynamics, and population genetics, to work principally on the insect fauna of ragwort (in collaboration with the Genetics Group at University College London).

A **MATHEMATICAL POPULATION BIOLOGIST** to study the implications of mass mortality for the dynamics and genetics of metapopulations (in collaboration with the NERC Sea Mammal Research Unit, Cambridge).

An **EXPERIMENTAL POPULATION BIOLOGIST** with an interest in developing and testing population models in simple laboratory systems. Candidates interested in linking models with field populations also considered.

All posts are to March 1994 in the first instance. Salary range: £11,399 to £18,165 (under review).

Further details and applications: **Professor J. H. Lawton, FRS, Centre for Population Biology, Imperial College at Silwood Park, Ascot, Berks SL5 7PY, England. Telephone: 0344-294346.** Closing date: 2 August 1991.

## POSITIONS OPEN

**POSTDOCTORAL POSITION.** Available in neuroendocrinology. Applications are invited from persons with a Ph.D. and/or M.D. for research with a neuroendocrine group investigating the roles played by neuropeptides in central disorders and in small-cell carcinoma. *Position restricted to U.S. citizen or resident.* Send curriculum vitae and three letters of reference to: **Dr. William G. North, Department of Physiology, Dartmouth Medical School, Hanover, NH 03756.** *Dartmouth College is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION.** Research involves insect behavioral response to toxins and its genetic correlation with physiological susceptibility. Expertise in quantitative genetics is required; expertise in mathematical modeling and behavioral studies is desirable. Applications for this 2-year position will be accepted immediately and until the position is filled. Submit curriculum vitae and names and addresses of three references to: **Dr. Casey W. Hoy, Department of Entomology, Ohio Agricultural Research and Development Center, Wooster, OH 44691.**

### CORNELL UNIVERSITY COLLEGE OF VETERINARY MEDICINE DEPARTMENT OF PATHOLOGY

**A POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY** is available immediately to participate in a study of gene interaction during lung development. Emphasis will be placed on studying the interaction between protooncogenes and differentiation-specific genes. Candidates will have a Ph.D. in molecular biology and experience in DNA sequencing techniques. To apply, please send curriculum vitae and three letters of recommendation to: **Dr. Roy Levine, Department of Pathology, College of Veterinary Medicine, Cornell University, Ithaca, NY 14853-6401.** *Cornell University is an Equal Opportunity/Affirmative Action Employer/Educator.*

### POSTDOCTORAL POSITIONS

Two postdoctoral positions available immediately to study mechanisms of retinoid receptor-mediated regulation of epithelial growth and differentiation or autocrine factors involved in epithelial transformation. These projects will employ techniques of normal and transformed human keratinocyte cell culture, hybridization analysis of RNA expression, protein purification, cDNA cloning, and gene transfer using defective retroviruses. Applicants should have a Ph.D. emphasizing molecular or genetic approaches to the study of problems in cell or developmental biology and employment eligibility verification. Send curriculum vitae, summary of research experience, thesis abstract, reprints, and the names of three references to: **Dr. James G. Rheinwald, Department of Research and Development, BioSurface Technology, Inc., 64 Sidney Street, Cambridge, MA 02139.** *An Equal Opportunity Employer.*

### POSTDOCTORAL FELLOW

A postdoctoral fellowship is available in the Radiation Effects Branch of the Naval Research Laboratory. The position is in a new basic research program to study ionizing radiation interactions in macromolecules, including DNA. Applications are invited from candidates with a Ph.D. in biology, biochemistry, biophysics, or radiation biology. The successful candidate will be familiar with gel electrophoresis, other separation techniques, and preparation of DNA samples. The appointment, administered through the National Research Council, is for 2 years with an option for a third year. The stipend is a minimum of \$36,000 per year. Position is available immediately. For further information, contact: **Dr. Michael A. Xapsos, Code 4615, Naval Research Laboratory, Washington, DC 20375-5000.** Telephone: 202-767-3938.

*An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL FELLOWSHIP POSITION IN CARDIAC CELLULAR ELECTROPHYSIOLOGY.** Available immediately in Mayo Foundation. M.D. or Ph.D. degree required. Experience of the patch clamp technique is preferred. For further information, please contact: **Yoshihisa Kurachi, M.D., Ph.D., Division of Cardiovascular Diseases, Mayo Clinic, Rochester, MN 55905.** Telephone: 507-284-1834. FAX: 507-284-9111. *Mayo Foundation is an Affirmative Action and Equal Opportunity Educator and Employer.*

# Senior Scientists

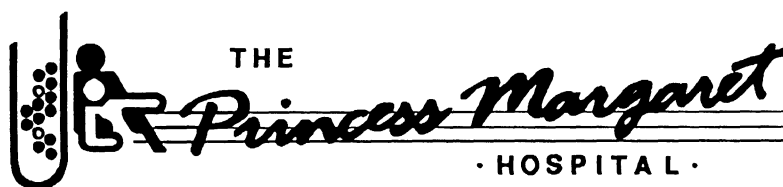
## Cellular and Molecular Biology

The Ontario Cancer Institute/Princess Margaret Hospital is one of North America's largest cancer research and treatment centres, and houses the Department of Medical Biophysics of the University of Toronto. The institute invites applications for senior scientist positions in its Division of Cellular and Molecular Biology. Current programs in this group include: cellular and molecular aspects of haemopoiesis, immunology, differentiation, oncogenesis, leukemia/lymphoma and gene regulation.

New members should be eligible for academic appointments in the Department of Medical Biophysics of the University of Toronto, a graduate department that emphasizes strong multidisciplinary research. Preference will be given to individuals with research interests in fields such as: molecular biology, oncogenes, regulation of cell cycle, developmental biology and signal transduction.

In accordance with Canadian Immigration requirements, first consideration will be given to Canadian citizens and permanent residents. In accordance with the Employment Equity Policy of the University of Toronto and the Ontario Cancer Institute/Princess Margaret Hospital, applications are invited from all qualified women and men.

Interested persons should send their curriculum vitae, statement of research interests, and names of three references, to: **Tak W. Mak, Ontario Cancer Institute/Princess Margaret Hospital, 500 Sherbourne Street, Toronto, Ontario M4X 1K9.**



## RESEARCH ASSOCIATE MOLECULAR AND CELLULAR BIOLOGY

**Amgen** is a leader in the applications of molecular and cellular biology to the development of human therapeutics. Our successes in the development of Epogen® (recombinant human erythropoietin) and Neupogen® (recombinant human granulocyte colony stimulating factor) have placed us firmly at the forefront of the biotechnology industry. As a result of these successes and our continuing commitment to research, we are actively seeking a Research Associate for our Inflammatory Cell Research Program.

The objectives of this program are to isolate and characterize protein factors and corresponding genes involved in migration and activation of phagocytes. Minimum qualifications include a BS or MS in an appropriate field with two years of laboratory experience in molecular and cellular biology. Experience in basic recombinant DNA methodologies and/or cell culture techniques is highly desirable.

**Amgen** offers a stimulating and challenging environment on the leading edge of biotechnology as well as an attractive location among the Santa Monica coastal mountains. Our compensation and relocation packages reflect Amgen's commitment to attract and retain the best scientific talent possible. If you have the necessary skills and would like to be a part of a company that places its highest priority on its human resources, please send a resume or CV, in confidence, to:

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# AMGEN



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A background in macromolecular crystallography and experience in the experimental aspects of structure solution, refinement and molecular graphics is required.

#### Computational Chemistry

Training and experience in quantum mechanics, macromolecular simulations, quantitative molecular modeling, force field development, or other computer assisted design methodologies is required. Scientific programming skills are expected.

The successful candidate for each position must be willing to interact closely with colleagues in a wide range of scientific disciplines.

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Human Resources Reference - BV

11025 North Torrey Pines Road, La Jolla, CA 92037

### Public Health Service National Institutes of Health

National Cancer Institute, Division of Cancer Treatment, Clinical Oncology Program, Radiation Oncology Branch

**Position Title:** Radiation Oncologist, Photodynamic Therapy Specialist

**Job Description:** The position will entail clinical trials with photodynamic treatment in conjunction with the Surgery Branch, NCI. In addition laboratory efforts, both chemical and biologic, toward a wider use and understanding of photodynamic sensitizers is a key component of this position.

**Qualifications:** M.D. who is B.E. or B.C. in Radiation Oncology with experience in both academic radiation oncology and specifically photodynamic therapy. The applicant should have a broad background in the basic sciences.

**Salary:** Dependent upon qualifications.

**Location:** Building 10, NIH, Bethesda, MD. If interested please send cover letter to: **Eli Glatstein, M.D., Chief, Radiation Oncology Branch, National Cancer Institute, B-10, B3B69, 9000 Rockville Pike, Bethesda, Maryland 20892.**

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## ASSOCIATE DIRECTOR CURATORIAL

The Royal Ontario Museum is seeking applications for the position of Associate Director, Curatorial (ADC), which became vacant on the appointment of the former ADC as Director of the Museum. The ADC is responsible for the management, administration and financial control of the curatorial and research activities and related services at the Museum. Reporting to the ADC are nineteen curatorial departments responsible for Earth Sciences, Life Sciences and various Art and Archaeology subject areas, as well as the Library and Archives and a Collections Management department (covering Registration, Conservation and Photography). The ADC is responsible for approximately 180 staff and a total budget of over \$9 million.

The primary responsibility of the position is to provide leadership for curatorial excellence within the Museum which will ensure the preservation, conservation and integrity of presentation to the public of the Museum's collections; the quality of collections related research; and structured curatorial input into the programme of gallery development, temporary exhibitions, and other public programmes.

The successful candidate will hold a Ph.D. degree or the equivalent and will have demonstrated high scholarly achievement in one of the academic subject areas covered by the Museum. He or she will also have demonstrated superior managerial, communication and problem-solving skills obtained through progressively more responsible positions.

The ADC reports to the Director and normally is Acting Director in the absence of the Director. The position requires considerable independent judgment and action within the ADC's area of responsibility, as well as close liaison and participation with other senior staff and department heads in order to ensure the success of the Museum's many objectives. The ADC has frequent contact with Museum trustees, members and volunteers, as well as various government agencies.

The position is a term appointment for five years made by the Board of Trustees on the recommendation of the Director, and renewable by mutual consent. A qualified candidate could be granted a curatorial position in the Museum at the end of the term of office as ADC.

The salary for this position will be comparable to similar levels of responsibility in Ontario Universities and other public institutions and the appointment will be effective at as early a date as can be mutually agreed.

Applications should be sent to Dr. John McNeill, Director, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada, M5S 2C6, no later than August 31, 1991.

In accordance with Canadian Immigration regulations, this advertisement is directed primarily to Canadian citizens and permanent residents of Canada; others who are interested in the position are invited to write indicating their interest.

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## Food Microbiologist

Responsibilities for this position include initiating and executing programs to assist in the quality assurance development of aseptic beverages and new food products. These programs will encompass spoilage organism identification, HACCP program development and the evaluation of the latest rapid methods.

The ideal candidate must have at least a Master's degree in microbiology or food microbiology with a minimum of three years of relevant industrial experience.

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## POSITIONS OPEN

**POSTDOCTORAL FELLOW.** In Frederick, Maryland. Forty hours per week, 8:30 a.m. to 5:00 p.m.; salary: \$30,472 per year. To conduct research in molecular biology of ETS genes to develop methodologies for the large-scale production of recombinant proteins for structural studies. This entails the construction of various expression vectors, identification of relevant proteins, development of protocols to purify 10- to 100-milligram quantities of such proteins. Experience in development of oxidation techniques dealing with the conversion of alkanolamines and B-hydroxynitrosamines to the corresponding ketones, research on the physical-chemical properties of carcinogen-modified DNA. Knowledge and skill in organic chemistry, biology of ETS proteins, gas chromatography, liquid column chromatography, gel filtration chromatography, high-pressure liquid chromatography, ultraviolet spectroscopy, nuclear magnetic resonance, and mass spectroscopy. Ph.D. or equivalent qualification in biological science and 1 year of laboratory experience in purification of ETS recombinant proteins from micrograms to milligrams required. Mail résumé and copy of ad to: **D.E.E.D., 1100 North Eutaw Street, Room 212, Baltimore, MD 21201. J.O. #9048004.**

### COMPUTATIONAL CHEMISTRY/QSAR POSTDOCTORAL ASSOCIATE POSITION

The University of Minnesota seeks a postdoctoral associate to develop quantitative structure-activity relationships (QSAR) of drugs, industrial chemicals, and toxic agents.

Minimum qualifications: A Ph.D. degree in medicinal chemistry or chemical/biological sciences with substantial course work in structural chemistry and computer science. Ph.D. degree must be completed by starting date of appointment.

Desired qualifications: (i) familiarity with modern techniques of QSAR evident from peer-reviewed publications, (ii) two or more years of experience in university or industrial setting working in computational chemistry or QSAR, and (iii) experience in obtaining external grant support. The latest state-of-the-art hardware and software are available.

Salary is negotiable. To apply, send an application letter, current résumé, and the names, addresses, and telephone number of three references. Applications must be postmarked by 1 August 1991. Send applications to: **QSAR Search Committee, Natural Resources Research Institute, University of Minnesota, 5013 Miller Trunk Highway, Duluth, MN 55811.**

*The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status, or sexual orientation.*

**POSTDOCTORAL RESEARCH ASSOCIATE.** In Soil Ecology and Nutrient Cycling. To work on large-scale, multidisciplinary study of nitrogen cycling and biological process in high and low chemical input agricultural systems, in relation to groundwater contamination with nitrates. Research will involve biological N-transformations, uptake, and export. Duties are field sampling, laboratory analyses, and data analysis.

Qualifications: Ph.D. in relevant subject. Experience in nutrient cycling and analyses with knowledge of soil ecology. Two-year appointment from 30 July 1991 with potential renewal. Salary competitive. Send letter, transcripts, and three references to: **Dr. J. M. Blair, Entomology Department, Ohio State University, 1735 Neil Avenue, Columbus, OH 43210, telephone: 614-292-0372, by 24 July 1991.**

### U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE (ARS)

**POSTDOCTORAL RESEARCH ASSOCIATE, NUTRITION AND IMMUNE STATUS.** Two-year appointment. Western Human Nutrition Research Center (WHNRC), San Francisco, California, seeks candidate with a recent Ph.D. in immunology/nutrition/biochemistry/related fields to study regulation of immune status by dietary fats and other nutrients in humans. Experience in immunological assays, tissue culture, and eicosanoids desirable. Salary: \$33,605 to \$40,278 plus benefits. Call 415-556-4381 or send résumé to: **Dr. D. S. Kelley, WHNRC, Box 29997, Presidio of San Francisco, CA 94129. ARS is an Equal Opportunity Employer.**

## POSITIONS OPEN

Immediate opening. **POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE.** A position for a molecular biologist with experience in developing recombinant and chimeric antibodies is now open. Responsibilities will include production and testing of novel fusion proteins and development of immunotoxins for cancer therapy. Salary commensurate with experience. Contact: **Dr. M. Rosenblum, Ph.D., Chief, Immunopharmacology Section, Department of Clinical Immunology and Biological Therapy, M. D. Anderson Cancer Center, 1515 Holcombe Boulevard, Box 041, Houston, TX 77030. Equal Opportunity Employer.**

**ANTICIPATED POSTDOCTORAL RESEARCHER OR RESEARCH ASSOCIATE.** Position available for 1 to 3 years. Postdoctoral researcher: Ph.D. required. Research associate: M.S. required. Experience in benthic/estuarine ecology. Responsibilities: conduct independent research and participate in ongoing projects on bioturbation, fishing feeding, and responses to pollutants. Anticipated hire date is 1 September 1991, pending final approval. Send letter of application, curriculum vitae, and three letters of reference to: **Dr. John W. Fleeger, Department of Zoology and Physiology, Louisiana State University (LSU), Baton Rouge, LA 70803-1725. Telephone: 504-388-1132; FAX: 504-388-1763. Application deadline is 15 August 1991. LSU is an Equal Opportunity Employer.**

The Fred Hutchinson Cancer Research Center is seeking an M.D. or Ph.D. for an appointment at the **ASSISTANT MEMBER** level in human immunogenetics. This individual must have a strong background in human immunogenetics and be capable of providing leadership in the development and implementation of state-of-the-art molecular methods for analysis of HLA genes. Applicants must have the ability to conduct independent research. Candidates should send curriculum vitae, a concise statement of their research plans, three letters of reference, and letter of application to: **Clinical Research Division New Appointments Committee, Human Immunogenetics Search, M246, Fred Hutchinson Cancer Research Center, 1124 Columbia, Seattle, WA 98104. Smoke-free environment. An Equal Opportunity Employer.**

**SENIOR RESEARCH BIOCHEMIST.** Elucidation of structure of drug metabolites. Determination of molecular weight and structures of proteins and polypeptides. Develop and implement analytical methods to determine drug candidates and their metabolites in body fluids. Liquid chromatography in combination with atmospheric pressure ionization mass spectrometry. Determination of minute amounts of drugs and their metabolites with human and animal body fluids. Protein mapping and sequencing applying mass spectrometry and capillary electrophoresis. Preclinical biotransformation studies. Requires Ph.D. in analytical chemistry and 2 years of postdoctoral experience in atmospheric pressure ionization MS/MS as applied to qualitative and quantitative analysis of xenobiotics and in metabolites in body fluids. Use of supercritical fluid chromatography in conjunction with double focusing mass spectrometry and application of capillary electrophoresis-atmospheric pressure ionization mass spectrometry for characterization of peptides. Forty hours per week; \$54,000 per year. Send résumé or curriculum vitae to: **Philadelphia Job Bank, 444 North 3rd Street, Philadelphia, PA 19123, JO #4382511, with proof of legal authority to work in the United States.**

**RESEARCH SCIENTIST.** Forty hours per week; salary: \$45,000 per year. Conduct research into biofilm formation, techniques for monitoring the formation of biological deposits in paper mills, and factors affecting the growth of filamentous organisms. Modeling industrial systems and the use of techniques, including electron microscopy, to monitor the development of biofilms and the efficacy of chemical removal and/or prevention of biofouling. Supervise customer service laboratory personnel. Requirements: Ph.D. in biological sciences; must have 1 year of experience in job offered or 1 year of experience as research associate. Must have expertise in bacterial biofilms in industrial environments, filamentous growth of bacteria, modeling of industrial systems, biocide efficacy studies, and electron microscopy as evidenced by published materials and invited presentations. Send résumé to: **Job Service of Florida, 1307 North Monroe Street, Tallahassee, FL 32303. Job Order # FL-0455002. Must show legal proof of right to work permanently in the United States.**

## POSITIONS OPEN

**ASSOCIATE STAFF SCIENTIST.** By 5 August 1991, please send résumé to: **Employment Security Department, Employment Service Division, Job # 253372-D, Olympia, WA 98504.** Job description: Conducts independent research in purification of murine and human hematopoietic stem cells using dual laser multiparameter flow cytometry, and the identification, purification and molecular cloning of cytokines affecting differentiation and self renewal of puripotent stem cells as assessed by in vitro and in vivo assays. Requirements: Must have Ph.D. in experimental hematology. Must have 2 years of scientific research experience in purification and analysis of hematopoietic stem cells, including utilization of dual laser multiparameter flow cytometry, and development of screening assays for cytokines. Must have published three articles in related subjects in refereed scientific journals. *Must have proof of legal authority to work in the United States.* Salary range: \$38,000 to \$42,000 per year, depending on experience. Forty hours per week, 9:00 a.m. to 5:00 p.m., Monday through Friday. Position is in Seattle, Washington. *Equal Opportunity Employer.*

**SENIOR RESEARCH ASSOCIATE.** A position for a molecular biologist is immediately available to investigate the molecular mechanism involved in cell to cell communication and intracellular  $Ca^{2+}$  regulation of the myometrium during pregnancy and labor. Interested persons having a Ph.D. in biochemistry or molecular biology and at last 3 years of postdoctoral research experience in cloning and gene expression in mammalian system are encouraged to apply. Preference will be given to candidates having expertise in cDNA cloning; sequencing; Northern, Western, and Southern blotting; polymerase chain reaction, fusion protein vectors construction; and designing of primers and cDNA probes. Previous expertise in studies of the gap junctions and  $N^{+}$  and  $Ca^{2+}$  pumps in relation to myometrial activity is required. Send curriculum vitae to: **Robert E. Garfield, Ph.D., The University of Texas Medical Branch (UTMB), Department of Obstetrics and Gynecology, 301 University Boulevard, E-87, Galveston, TX 77550. UTMB is an Equal Opportunity/M/F/V/H/Affirmative Action Employer. UTMB hires only individuals authorized to work in the United States.**

### SENIOR AND INTERMEDIATE LEVEL STAFF ENVIRONMENTAL SCIENTISTS

Vermont-based consulting firm involved in international development work, seeks senior and intermediate level environmental scientists for home-office technical support of projects in watershed management, environmental impact assessments, agriculture, forestry, and other resource management. Minimum M.S./M.A., Ph.D. preferred, in environmental or natural resources fields with 5 to 10 years of professional experience. Overseas development experience an asset. Primary skills in EIA, resources inventories, and field research. Knowledge of French or Spanish helpful. Some short-term overseas travel required. Willingness and ability to develop domestic work desirable. Applicants should send curriculum vitae to: **Associates in Rural Development (ARD), Inc., Department E1, P.O. Box 1397, Burlington, VT 05402. ARD is an Equal Opportunity Employer.**

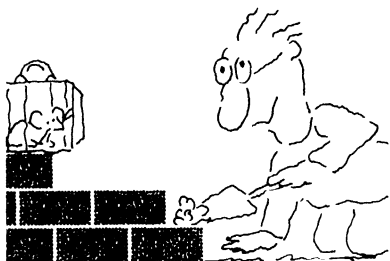
**RESEARCH MICROBIOLOGIST.** Forty hours per week, 9:00 a.m. to 5:00 p.m.; salary: \$28,000 per year. Conduct culture screening and optimization experiments with anaerobic bacteria to produce hydrogen from synthesis gas. Develop cultures of methanotrophic bacteria to convert methane into methanol. Define optimal cultures of anaerobic bacteria to produce acetic acid from waste gases. Bacterial physiology experiments to maximize the performance of various microorganisms. Preparation of research reports and proposals. Minimum requirements: Ph.D. with major or specialty in microbiology, 2 years of experience in anaerobic bacteria, including bacterial physiology, manipulation of conditions to maximize culture performance, operation of fermentation systems, culture screening and isolation, authorship of two articles on bacterial physiology and anaerobic fermentation that have been published in microbiology journals. Send résumé to: **The Employment Security Division, P.O. Box 1205, Fayetteville, AR 72702, Job Order #538699. Must have proof of legal authority to work in the United States.**

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# GENOME SEQUENCING CONFERENCE III

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Hyatt Regency, Hilton Head, South Carolina

**Abstract deadline August 2, 1991**

The third annual Genome Sequencing Conference is an international conference devoted to discussion of the most current analyses and approaches to understanding the human genome. Innovative research by U.S., European and Japanese groups will be presented and discussed. Presentations will detail discoveries from the human genome and model organisms including mouse, *Drosophila*, *C. elegans*, yeast, plants, *E. coli*, *M. capricolum* and a number of viruses. State-of-the-art technologies and new computational approaches will also be covered. Poster sessions, workshops and discussion groups will provide a forum for researchers to present their latest data. Early registration is encouraged.

**Co-chairs:** J. Craig Venter (NIH) and Leroy Hood (CalTech)

**Participants to include:** M. Adams, F. Blattner, D. Botstein, J. Bowie, C. Cantor, C. T. Caskey, E. Chen, A. Efstratiadis, C. Fields, R. Gesteland, R. Gibbs, W. Gilbert, H. Goodman, D. Hartl, M. Hunkapiller, R. Keller, B. Koop, M. Lalande, D. Lipman, A. Martin-Gallardo, W. R. McCombie, R. Moyzis, W. Nierman, D. R. Sibson, T. Smith, J. Sulston, E. Uberbacher, J. Watson, D. Yandell

### For further information contact:

Susan Wallace, Genome Sequencing Conference III,  
P. O. Box 541, Rockville, Maryland 20848, (301) 480-0634  
(301) 480-8588 FAX, E-mail: [swallace@loglady.ninds.nih.gov](mailto:swallace@loglady.ninds.nih.gov)

## Keystone Symposia

### 1992 Meetings

**Intermediate Biomarkers of Precancer and their Application in Chemoprevention**  
October 3-7, 1991, Keystone, Colorado

**Inflammation, Growth Regulatory Molecules and Atherosclerosis**  
January 13-19, 1992, Keystone, Colorado

**Molecular Biology of the Endothelial Cell**  
January 13-19, 1992, Keystone, Colorado

**Transcription Regulation in Development, Differentiation and Disease**  
January 13-20, 1992, Tamarron, Colorado

**Molecular and Cellular Biology of Host-Parasite Interactions**  
January 15-20, 1992, Park City, Utah

**Bone Marrow Transplantation**  
January 19-26, 1992; Keystone, Colorado

**Molecular Mechanisms in DNA Replication & Recombination**  
January 25 - February 1, 1992, Taos, New Mexico

**Negative Growth Control**  
January 26 - February 2, 1992; Keystone, Colorado

**Positive Growth Control**  
January 26 - February 2, 1992, Keystone, Colorado

**Nutrition & Central Nervous System Function**  
February 2-6, 1992, Lake Tahoe, California

**Cytokines in Growth, Development and Pathogenesis**  
February 1-8, 1992; Taos, New Mexico

**Melanoma and Biology of the Neural Crest**  
February 1-8, 1992, Taos, New Mexico

**Steroid/Thyroid Receptor Gene Super Family**  
February 21-27, 1992; Tamarron, Colorado

**Hematopoiesis**  
February 27 - March 5, 1992, Tamarron, Colorado

**Cell Biology of Virus Entry, Replication and Pathogenesis**  
February 28 - March 5, 1992, Taos, New Mexico

**Recognition of Endotoxin in Biologic Systems**  
March 1-7, 1992; Lake Tahoe, California

**Antigen Presentation Functions of the MHC**  
March 5-11, 1992, Taos, New Mexico

**Breast and Prostate Cancer**  
March 7-13, 1992, Lake Tahoe, California

**Strategies in Chemoprevention of Hormone-Dependent Cancers**  
March 10-13, 1992, Lake Tahoe, California

**Metal Ion/Molecular Biology Interface**  
March 13-19, 1992, Lake Tahoe, California

**Glycobiology**  
March 21-27, 1992, Park City, Utah

**Prevention and Treatment of AIDS**  
March 27 - April 3, 1992, Keystone, Colorado

**Critical Research Directions in Pediatric HIV Infection**  
March 27-31, 1992, Frisco, Colorado

**Fundamental Mechanisms of Transcription**  
March 28 - April 3, 1992; Copper Mountain, Colorado

**Advances in Understanding Neurodegenerative Disorders**  
March 28 - April 4, 1992; Big Sky, Montana

**Synapse Formation and Function: The Neuromuscular Junction and the Central Nervous System**  
March 28 - April 4, 1992; Big Sky, Montana

**Molecular Biology of Human Genetic Disease**  
April 3-10, 1992; Copper Mountain, Colorado

**Gene Transfer, Replacement and Augmentation**  
April 3-9, 1992; Copper Mountain, Colorado

**Growth and Differentiation Factors in Vertebrate Development**  
April 3-10, 1992; Keystone, Colorado

**Tissue Engineering**  
April 3-10, 1992; Keystone, Colorado

**Integrins: Cell Adhesion and Transmembrane Communication in Development and Disease**  
April 3-10, 1992, Keystone, Colorado

**Crop Improvement via Biotechnology: An International Perspective**  
April 10-16, 1992, Keystone, Colorado

☐ Registration in any meeting in a shaded group qualifies for attendance in any meeting in that group

For more information please contact

**Keystone Symposia**  
Drawer 1630, Dept 5  
Silverthorne, CO 80498  
Phone: (303) 262-1230 • Fax (303) 262-1525

## POSITIONS OPEN

### STAFF SCIENTIST

Perform the following functions in relation to freeze-dried red cells: Develop biophysical and biochemical techniques to evaluate the membrane viscoelasticity and geometry with the use of rheological techniques including laser diffractometry, filterometry, viscometry, and cell transit analyzer. Test the aggregation behavior with the use of light transmission method. Test the effects of drugs on the rheological properties. Monitor the efficiency of the lyophilization process to preserve the integrity and physiological function. Statistical analysis of data and preparation of papers for publication in scientific journals. Requirements: Ph.D. in pharmacology (rheology). Special knowledge in and/or ability to use: Theory and experimental techniques in blood rheology, characterization of red cell membrane properties, methods for assessing oxidative stress in red cells, rheological techniques including laser diffractometry, filterometry, viscometry, cell transit analyzer, and light transmission method. Salary: \$55,000 per year. Job/interview site: Pasadena, California. Send this ad and résumé to: **Job #TC11211; P.O. Box 9570, Sacramento, CA 95823-0570** no later than 19 July 1991.

### SENIOR RESEARCH ASSOCIATE SECTION LEADER, PERMANENT POSITION ACADEMIC APPOINTMENT POSSIBLE

Experienced biochemist with glycoconjugate interest in cell biology at UHS/The Chicago Medical School, Heather M. Bligh Cancer Biology Research Laboratory. Bench-work-oriented individual with meticulous working habits for in-depth investigations of role of human carcinoma cell membrane glycoconjugates in primary tumor establishment. Technical help available. Especially outstanding salary and benefits in view of the importance of the academic task, not grant-dependent. Send curriculum vitae, details of bench-work expertise, and bibliography to: **Box 538, Lake Bluff, IL 60044. Equal Opportunity Employer, M/F.**

**RESEARCH ASSISTANT.** Full time, to develop and manage monoclonal antibody production facility. Experience in animal tissue culture, production of hybridomas, and antibody selection techniques mandatory. Ability to develop ELISA assays required. Management skills are critical. Interest in developing collaborative interaction with faculty important. Send letter of interest, curriculum vitae, transcript of all academic records, and three letters of reference to: **Dr. Russel Meints, Center for Gene Research and Biotechnology, 3096 Cordley Hall, Oregon State University (OSU), Corvallis, OR 97331-2906.** Application deadline is 31 July 1991. 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.

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To apply, please send within the next 2 weeks curriculum vitae with publication list, two letters of reference, and a note indicating your scientific and personal interests and expectations from the course to: **Hypertension Summer School, German Institute for High Blood Pressure Research, Wielandstraße 26, D-6900 Heidelberg, Germany. Telephone: +49-6221-45099. FAX: +49-6221-402485.** Course fee, including materials and accommodation, is 250.00 German marks. A number of educational grants are available and students in need are encouraged to apply informally. The summer school is supported by an educational grant from The Parke-Davis Conference Series.

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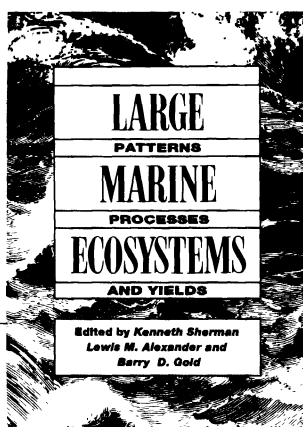
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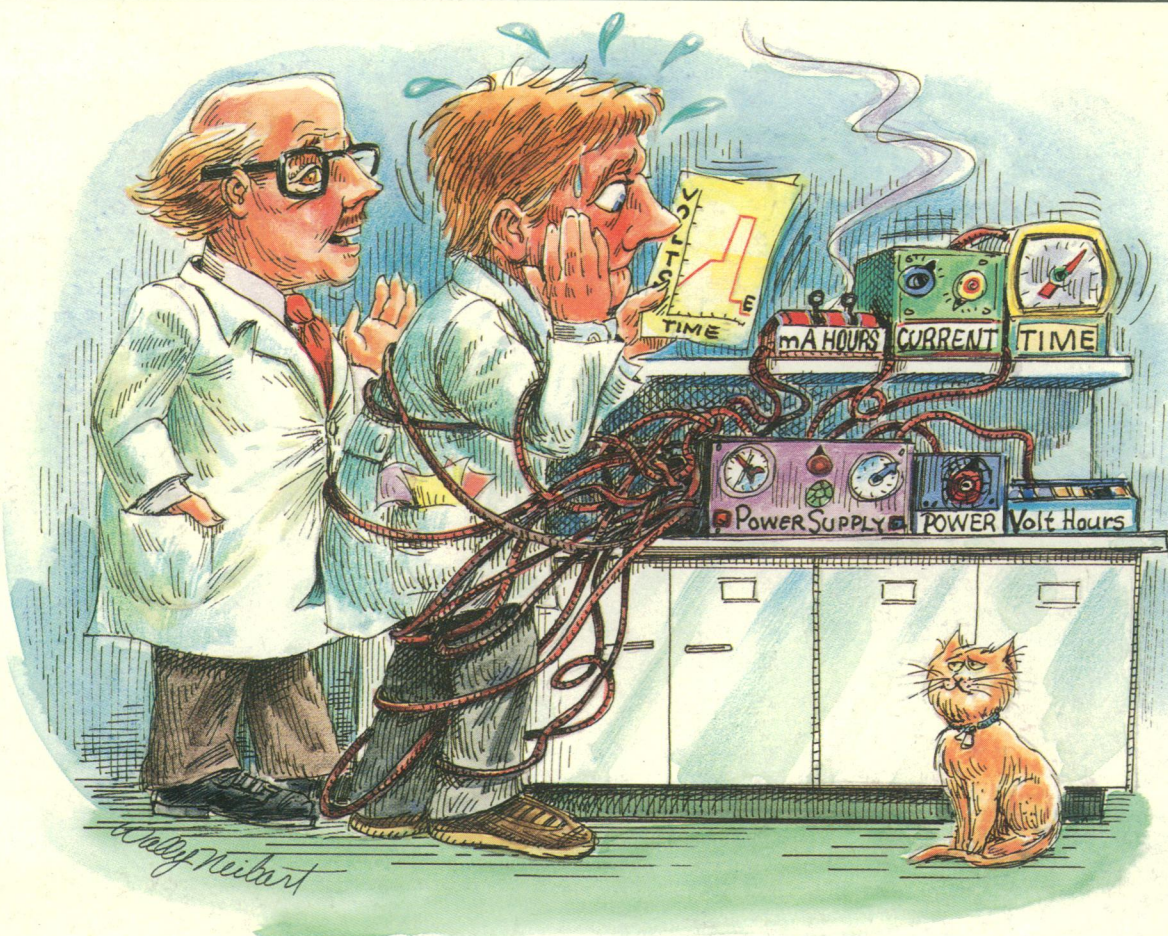
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