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Deadline for abstract submission and registration is November 1, 1992.

Participants:

T. Braciale  
R. Chanock  
I. Chen  
B. Cullen  
E. De Clercq  
G. Elion  
C. Evans

B. Fields  
N. Fraser  
D. Ganem  
E. Gilboa  
D. Hanahan  
M. Hilleman  
P. Howley

W. Joklik  
S. Katz  
B. Larder  
R. Liddington  
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We are looking for candidates who will conduct innovative research identifying novel therapeutic approaches to hyperproliferative and inflammatory diseases of the skin. Expertise in the structure and function of the skin is essential. Candidates will be expected to identify cutaneous markets of disease and to develop animal and tissue culture models for evaluating the efficacy and toxicity of new drugs. A working knowledge of molecular biology and pharmacology is desirable. We are looking for candidates with established records of independent research on the skin as well as for candidates with a Ph.D. and 2-3 years of relevant postdoctoral experience. The level of the positions can be negotiated commensurate with training and experience.

### NEUROPHYSIOLOGY

You will work with the visual sciences group to identify and develop novel therapeutics for glaucoma, optic nerve and the retina. We are looking for someone trained in visual neurophysiology. The candidate is expected to develop animal models that involve quantitating the effect of drugs in the eye using ERG and PERG. A Ph.D. and relevant postdoctoral training is required for the position. You will also be expected to collaborate with other vision scientists trained in similar or related areas such as cellular physiology and electrophysiology. A working knowledge of the pharmacology of neuroprotection and cell death desirable. The level of the position can be negotiated based on training and experience.

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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

# Postdoctoral Opportunities.

Listed below are a few of the excellent opportunities for conducting research that are now available with leading scientists at the National Institutes of Health.

## **Developmental Neurobiology** **P.G. Nelson, MD, PhD**

Neurotransmitter phenotypes in the developing central nervous system are being studied using cell biological, biochemical, histological and molecular biological techniques. Candidates should have previous experience with these techniques and with transgene technology and developmental neurobiology as well. At least three years of postdoctoral experience is required. Laboratory of Developmental Neurobiology (OE-20), NICHD, Building 36, Room 2A21.

## **Molecular Biology** **Henry Levin, PhD**

A new laboratory has been established to study the process of retrotransposition in the fission yeast *Schizosaccharomyces pombe*. Genetics, molecular biology and biochemistry will be used to identify interactions between the yeast cell and the retrovirus-like element Tfl (Transposon of fission yeast 1), a retrotransposon that encodes functional protease, reverse transcriptase, and integrase proteins. Laboratory of Molecular Genetics (OE-20), NICHD, Building 6B, Room 413.

## **Molecular and Cell Biology of Muscle** **Robert Horowitz, PhD**

Large muscle proteins are being studied in order to determine their role in myofibril mechanics and assembly. Candidates are sought to participate in projects focusing on the molecular biology and cellular organization of the myofibrillar proteins titin and nebulin. A background in molecular or cell biology is preferred. Laboratory of Physical Biology (OE-20), NIAMS, Building 6, Room 114.

## **Molecular Neurobiology** **J.S. Hong, PhD**

The regulation of neuropeptides and neurotransmitters in neural systems is being studied at the molecular level and the molecular mechanisms regulating the expression of genes encoding opioid peptides and catecholamine synthesizing enzymes are being elucidated. Candidates should have strong experience in neuropharmacology, neurochemistry or molecular biology and less than three years of postdoctoral experience. Laboratory of

Molecular and Integrative Neurosciences (OE-20), NIEHS, P.O. Box 12233, Building 17, Room 1720, Research Triangle Park, NC 27709.

## **Protein Biochemistry** **Kenneth B. Tomer, PhD**

The reaction of proteins with exogenous substances is analyzed and the protein adducts are being isolated and purified. Candidates should have a broad background in general biochemical techniques and in the use of mass spectrometry for the determination of biomolecules as well as less than five years of postdoctoral experience. Laboratory of Molecular Biophysics (OE-20), NIEHS, P.O. Box 12233, Building 6, Room 603, Research Triangle Park, NC 27709.

## **Tumor Cell Biology** **Frank Michaels, PhD**

The etiopathogenesis of non-Hodgkins B cell lymphoma arising in the context of HIV-1 seropositivity is currently being studied. Experience in tissue culture, cytokine assays and B cell activation parameters is required. Applicants must be US citizens/permanent residents with less than five years of postdoctoral experience. Laboratory of Tumor Cell Biology (OE-20), NCI, Building 37, Room 6D27.

## **Additional Postdoctoral Fellowship Opportunities**

For an on-line listing of additional postdoctoral openings you may access the NIH EDNET Bulletin Board's POSTDOC conference via modem (1,3014922221 or 1,8003582221). The settings for modem access are "7,Even,1". When connected to NIH, type in "vt100" at the connect message, "F5E" at initial, and "AJLI" at account.

Those interested in receiving information on other postdoctoral opportunities in NIH research laboratories, as well as information on clinical training opportunities, may contact the Office of Education, Building 10, Room 1C129. Phone: 301-496-2427.

## **To Apply**

If you hold a PhD, MD, or equivalent degree and would like to be considered for one of these positions, please send a cover letter, *curriculum vitae*, bibliography, and statement of research interests to the address listed with each position. In addition, please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.



# National Institutes Of Health

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## Scientific Graphics and Data Analysis Software

Version 2.0 of Axum, a scientific graphics and data analysis package for personal computers, allows users to automate repetitive graphing and data analysis tasks with extensive batch processing capabilities. For example, scientists can have Axum automatically load new data and update a set of graphs on a regular basis. The batch program can be written automatically by Axum and can even be used to control Axum from other programs. In addition, Axum offers new automatic axes scaling and intelligent tick placement methods that allow users to create publication-quality graphs more efficiently. Axum requires an IBM-compatible computer with a hard disk (5 Mb free), a computer graphics card, and DOS 3.0 or higher. A math coprocessor is recommended but not required. TriMetrix. Circle 87.

## Human cDNA Clones

The National Institute of Neurological Disorders and Stroke has begun to identify the approximately 30,000 genes expressed in the human brain. More than 300 clones from the project are now available. Most of the materials are available as slants of uncharacterized plasmids and about 10% are available as characterized clones. American Type Culture Collection. Circle 88.

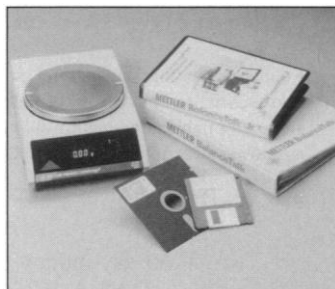
## Benchtop Molecular Weight Determination

KOMPACT MALDI is a new line of desktop systems that offers biotechnologists an accurate method of determining molecular weights of high mass materials. Results are available in minutes, unlike techniques such as gel electrophoresis, which can take hours. The units are fully automatic and feature the latest laser-desorption time-of-flight technique. But, unlike most mass

spectrometers of this type, they are benchtop instruments. Kratos Analytical. Circle 89.

## Weighing Data Software

BalanceTalk Jr. is easy-to-use software for collecting weighing data from any Mettler balance having unidirectional interface.



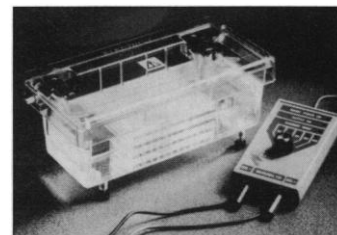
An MS-DOS program, it transfers balance data into almost any other program. It can send data directly to a file, allowing the computer to be used for other tasks while collecting data. Mettler Instrument Corp. Circle 90.

## Magnetic Cell Separation Reagents

Twelve new reagents for magnetic cell separation contain magnetic microbeads conjugated to human and mouse monoclonal antibodies for the enrichment or depletion of cells in suspension. The reagents selective for human cells are specific for CD3, CD4, CD8, CD16, CD19, CD14, and CD33. The mouse antibody-conjugated microbeads are specific for Thy 1.2, L3T4 (CD4), Ly1 (CD5), Ly2 (CD8a), and B220 (CD45R). Separations with the microbeads conjugated directly to monoclonal antibodies require only one staining step and have high specificity. Miltenyi Biotec Inc. Circle 91.

## Histological Clearing Agent

Histoclear II is a histological clearing agent for the production of high-quality tissue slides. It is nontoxic, nonflammable, and biodegradable. It has a greatly reduced citrus odor compared with other citrus-based xylene substitutes. While xylene may leave tissue hard and brittle, Histoclear II leaves tissue flexible. Thus the tissue is easy to cut into thin sections and blade life is prolonged. Histoclear II is miscible in all proportions with ethanol, isopropanol, and t-butanol, all paraffin-based tissue-embedding media, and all permanent mounting materials. National Diagnostics. Circle 92.



system a large sample capacity in a compact area, using minimal amounts of buffer. Blots can be generated in only 20 min using the centrifugal blotting technique. It can be loaded by multi-channel pipettors, making it compatible with 96-well thermal cyclers. The Electro-4 can also be used for sandwich blots and conventional capillary or vacuum blotting. Midwest Scientific. Circle 94.

## Molecular Biology Kits and Reagents

A new range of kits and reagents for molecular biology includes: TOPS, a patented phosphoramidite that enables two oligonucleotides, for example, paired polymerase chain reaction primers, to be made on a single synthesizer column; MULT-E-LINK, which allows up to ten oligonucleotides to be labeled with alkaline phosphatase; TdT-LINK, a kit that adds a 3' amino group to any oligonucleotide; E-LINK, an alkaline phosphatase labeling system for oligonucleotides; and VECTORETTE, a patented system for amplifying unknown pieces of DNA without the need to clone. Cambridge Research Biochemicals. Circle 93.

## Electro-4 Gel System

This horizontal gel system allows up to four agarose gels to be run in the gel tank at the same time, stacked one on top of the other. This arrangement gives the gel

## Literature

*Microplate Management Systems* is a brochure about systems that automate receptor binding assays, enzyme-linked immunosorbent assays, and other microbiological and biotechnological assays performed in 96-well microplates. The system offers robotic workstations to perform all steps in microassay. Zymark Corp. Circle 95.

*PL-LALS Low Angle Light Scattering Detector* is a technical brochure on this instrument. Polymer Laboratories. Circle 96.

*V: The Professional Image Processing System, Version 2.0* describes an image enhancement and analysis package for personal computers. Digital Optics Ltd. Circle 97.

*1992-1993 Biotechnology Catalog* offers instruments, consumables, and reagents that extend the capabilities of the GeneAmp polymerase chain reaction process. Perkin-Elmer. Circle 98.

*There's More to DNA Sequencing Than Meets the Eye* is a brochure on the femtomole DNA Sequencing System. Promega. Circle 99.

*Chromacol 92* is a catalog of vials, caps, seals, and crimpers for all fields of chromatography. Chromacol. Circle 100.

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.

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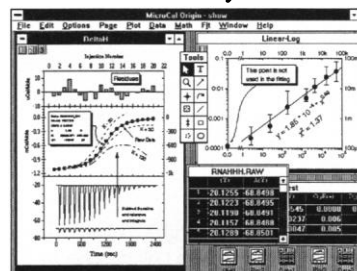
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### AAAS MENTOR AWARD

#### Call for Nominations

This annual award honors individuals who, during their careers demonstrate extraordinary leadership in efforts above and beyond their duties to increase the participation of women of all racial/ethnic groups; African American, American Indian, and Hispanic men; and people with disabilities in science and engineering fields and careers. Until the number and influence of such individuals increase within the faculty, efforts to expand and diversify research interests, to provide role models, and to reflect the diversity of the country within science and engineering education programs and departments will be severely limited.

A prize of \$5000 and a commemorative plaque will be awarded to those who have mentored and guided to the completion of doctoral studies significant numbers of students of these underrepresented groups and/or to those who have affected the climate of a department, college, or institution in such a way as to significantly increase the ethnic diversity of students pursuing and completing doctoral studies.

Such commitment and extraordinary effort may be demonstrated by:

- the number and diversity of such students mentored
- assisting students to present and publish their work, to find financial aid, and to provide career guidance
- providing psychological support, encouragement, and essential strategies for life in the scholarly community
- continued interest in the individual's professional advancement.

Supporting evidence of these accomplishments submitted on behalf of a nominee, must contain:

- a letter of nomination which enumerates the ways in which the person reflects the purpose of this award
- curriculum vitae of nominee
- a list of such students mentored
- a minimum of 5 and maximum of 15 supporting letters from students and colleagues representative of the different spheres in which the candidate demonstrated effort, results, and commitment.

Last year's winners were:

Anthony J. Andreoli, Professor of Biochemistry  
California State University, Los Angeles, CA  
Lafayette Frederick, Professor and Chairman, Department of Botany  
Howard University, Washington, DC

Nominations will be reviewed and award recommendations made by the AAAS Committee on Opportunities in Science. The award will be given at the AAAS Annual Meeting in Boston, February, 1993. Expenses associated with attending this ceremony will be borne by AAAS.

Materials should be sent by October 28, 1992 to: AAAS Mentor Award, c/o Yolanda S. George or Alana J. Wilson, Directorate for Education and Human Resources Programs, AAAS, 1333 H Street NW, Washington, DC 20005, (202) 326-6670, FAX (202) 371-9849.

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## POSITIONS OPEN

### SUNY HEALTH SCIENCE CENTER AT SYRACUSE

#### FACULTY POSITION IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

We invite applications for a tenure-track position. While we expect to make the appointment at the **ASSISTANT PROFESSOR** level, candidates at higher levels also will be considered. Outstanding candidates in all areas of biochemistry and molecular biology are encouraged to apply. Applicants must have a Ph.D. or equivalent degree in biochemistry or related field, postdoctoral experience, demonstrated research productivity and a commitment to excellence in teaching medical and graduate students. Send letter of application (with curriculum vitae and summary of research plans) and have three letters of reference forwarded to: **Dr. Harvey S. Penefsky, Chair, Search Committee, Department of Biochemistry and Molecular Biology, 750 East Adams Street, Syracuse, NY 13210.** Review of applications will begin December 7, 1992 and continue until the position is filled.

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**FACULTY POSITIONS IN PHARMACOLOGY**—Rush Medical College, Department of Pharmacology is seeking applications for **ASSISTANT PROFESSORS**. The candidate should hold a Ph.D. and/or M.D. degree and have several years of postdoctoral experience. The applicant's research should be in areas of vascular or lung cell and molecular biology in which modern techniques are used. In addition to having or developing a funded research program, the candidate will help the department fulfill its responsibilities in medical and graduate education. Candidates should submit curriculum vitae, a statement of research interests and accomplishments, a record of grant funds (if available), and a list of three references. Applications should be sent to: **Dr. A. B. Malik, Professor and Chairman, c/o Barbara Mack, Department of Pharmacology, Rush Medical College, 1653 West Congress Parkway, Chicago, IL 60612.**

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#### CELL AND MOLECULAR BIOLOGY GROUP at WEST VIRGINIA UNIVERSITY

Applications are invited for a tenure-track position at the **ASSISTANT PROFESSOR** level, available 16 August 1992, which was made possible by the Howard Hughes Foundation. Ph.D. and minimum of two years of postdoctoral experience are required. We are interested in teacher-scholars studying contemporary problems in **molecular biology**. The successful applicant will be expected to participate effectively in teaching undergraduate and graduate students and to establish a strong, independent research program. Please submit curriculum vitae, a brief description of current and future research interests, and the names and telephone numbers of three individuals who are willing to provide letters of evaluation to: **Dr. Richard P. Sutter, P.O. Box 6057, Biology Department, West Virginia University, Morgantown, WV 26506.** Applications must be received by December 4, 1992. *WVU is an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

#### PLANT MOLECULAR BIOLOGY Indiana University, Bloomington

The Department of Biology seeks to fill a faculty position in the area of plant molecular biology. The appointment will be made at any level from **ASSISTANT** to **FULL PROFESSOR**. Individuals working on any aspect of plant molecular biology or genetics, including the application of these approaches to problems in developmental, cellular or evolutionary biology, are encouraged to apply. The successful candidate will be expected to conduct a vigorous, independent research program and contribute to teaching. All interested candidates should submit curriculum vitae and a statement of research interests, including future plans. Applicants at the junior level should also arrange for three letters of reference to be sent to: **Dr. Jeff Palmer, Chair, Plant Molecular Biology Search Committee, Department of Biology, Indiana University, Bloomington, IN 47405.**

Applications received before December 1, 1992, will be assured of consideration.

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## POSITIONS OPEN

### ASSISTANT PROFESSORS DEPARTMENT OF PHARMACOLOGY

Our expanding department has six tenure-track positions available for individuals who are taking a molecular and/or cellular approach to modern pharmacological research problems. Successful candidates will receive new laboratory space and handsome start-up funds in a setting that fosters their professional development. Our multidisciplinary graduate programs provide a large pool of graduate students, and appointees will also participate in medical student training. Emory University is located in a wooded, residential area on the outskirts of Atlanta, and has undergone rapid growth in molecular and cellular biomedical research programs. Applicants should send curriculum vitae, three representative reprints, a summary of current research and future plans, and names of at least three references to: **Dr. Ray Dingleline, Chairman, Department of Pharmacology, Emory University School of Medicine, Rollins Research Center, Atlanta, GA 30322-3090.** *Emory University is an Equal Opportunity/Affirmative Action Employer.*

#### MOLECULAR AND CELL BIOLOGY

##### University of California, Berkeley

The Department of Molecular and Cell Biology invites applications for the following tenure-track position, with appointment beginning approximately July 1, 1993. Candidates should have demonstrated excellence, originality, and productivity in research and should have a strong interest in undergraduate and graduate teaching.

**ASSISTANT PROFESSOR:** Research emphasizing developmental biology, with preference for research on higher vertebrates, as approached through molecular, genetic, or embryological methods.

Application should include a cover letter, curriculum vitae, a bibliography, a statement of research objectives and teaching interests, three letters of recommendation, and reprints of three representative publications. The closing date for acceptance of applications is December 1, 1992. This is an announcement of a previously advertised position with a new, later closing date and an extended time for beginning the appointment. Applications should be sent to: **Genetics/Development Search Committee, Department of Molecular and Cell Biology, Room 597 Life Sciences Addition, University of California, Berkeley, CA 94720.**

*The University of California is an Affirmative Action/Equal Opportunity Employer. We especially invite women and under-represented minorities to apply.*

#### MARINE ECOLOGIST

USC Coastal Carolina College is seeking a **VISITING ASSISTANT PROFESSOR** in Marine Ecology. Position (with benefits) beginning January 1993 and ending May 1994. The successful candidate will have expertise in wetlands and/or estuarine ecosystem processes and a desire to teach undergraduates. Responsibilities will include teaching and directing student research projects. The Marine Science Department maintains a high quality undergraduate educational program, highlighted by student independent research and involvement in faculty research programs. Candidates must have a Ph.D. in Marine Science or related field and teaching experience is preferred. The College is located along the South Carolina Grand Strand coast with close access to a variety of beach, estuarine and coastal ocean environments and is developing a field program/station at Wailes Island. Each applicant should submit curriculum vitae, a statement of teaching and research experience, and the names and addresses of three references to: **Human Resources and Affirmative Action Office, USC Coastal Carolina College, P.O. Box 1954, Conway, SC 29526.** Review of applications will begin on October 15, 1992, and will continue until position is filled. *USC Coastal Carolina College is an Equal Opportunity/Affirmative Action Employer.*

Vanderbilt University Endocrinology Division seeks subspecialty board eligible/certified M.D. or M.D./Ph.D. Clinician/investigator for **ASSISTANT/ASSOCIATE PROFESSOR** tenure-track position. Must have record of research productivity and ability to establish/maintain independent research program. Molecular/cell biology of lipid/mineral metabolism or neuroendocrine systems preferred but not required. Send curriculum vitae, research interest summary and three references to: **David N. Orth, M.D., Director, Division of Endocrinology, Room AA4206 MCN, Vanderbilt University Medical Center, Nashville, TN 37222.**



## Director of Scientific Studies

Kabi Pharmacia Ophthalmics, an internationally respected member of the ophthalmics community, has an excellent opportunity for a bright, dynamic professional. In this highly visible position, you'll have a chance to use your imagination by being involved in global research and development of ophthalmic devices.

The Director of Scientific Studies is responsible for a broad spectrum of activities ranging from completion of pre-clinical studies required for IDE submission to project leadership. The successful candidate will have a PhD in biology or a related discipline with a minimum of five years industrial experience. He/she will have demonstrated a high level of creativity, and will have significant accomplishments in e.g., development of in-vitro test models and the study of biocompatibility of devices. A working knowledge of GLP would be useful as would some knowledge of the form and function of the eye. Excellent leadership and communication skills are essential.

We offer an attractive compensation/benefits package and a highly professional environment in Southern California (just east of Pasadena). If you're ready to pursue research with a company dedicated to it, please fax or send a resume. FAX (818) 301-8644, Manager of Human Resources, Kabi Pharmacia Ophthalmics, Inc. 605 E. Huntington Drive, Dept. S-DSS, Monrovia, CA 91016. EOE M/F/D/V.



**Kabi Pharmacia**  
Ophthalmics Inc.

## SCIENTISTS

**CADUS PHARMACEUTICAL CORP.**, a New York City based biopharmaceutical company is dedicated to drug discovery and development. The Company's scientists utilize a new generation of technological tools to identify novel therapeutic agents whose mode of action is aimed at specific Signal Transduction and Transcriptional pathways. Such agents are being sought for the treatment of several major diseases.

### • Research Scientists

Needed to participate in the design, execution, interpretation, and reporting of pharmacologic and physiologic studies. These studies will support the development of low molecular weight drugs designed to influence intracellular signaling. The successful candidate will be challenged with broad responsibilities for developing appropriate in vivo and in vitro models to support drug discovery programs in inflammation, cardiovascular and pulmonary diseases. This position will involve extensive interactions with CADUS chemists and biologists in evaluating and studying lead compounds. Applicants should have a PhD in pharmacology, physiology, biology or a related field and 3-5 years of academic or industrial experience. Experience in small animal physiology and specific cell function assays are required. Excellent oral and written communication skills are essential.

### • Research Associates

With a BS or MS in Chemistry or Biology are needed to assist our team of synthetic chemists and molecular biologists. Excellent oral and written communication skills are required.

CADUS offers an excellent salary and benefits package, incentive stock participation and the opportunity to contribute to a new and exciting area of drug discovery. Please respond to: **CADUS PHARMACEUTICAL CORPORATION**, Ms. Suzanne Wakamoto, 180 Varick Street, 7th Floor, New York, NY 10014. We are an equal opportunity, affirmative action employer.

 **Cadus**

## Marketing Manager

Bio-Rad Laboratories is a multinational leader and innovator in the development and manufacture of high quality products – chemicals and instruments – for life science researchers and clinical diagnostic professionals.

The Clinical Diagnostics Group is looking for a Marketing Manager – DNA Diagnostics. We seek a person to identify and champion technologies and/or products that will lead to commercial successes. You will work with the entire Diagnostic Group as well as with our Life Science Group. An advanced degree in molecular biology coupled with marketing experience and an understanding of both life science technologies and the diagnostics market, combined with the energy to put it all together would be ideal.

We are looking for a truly excellent person to join our team. The task will be challenging, exciting and present real growth opportunities. If you feel that you are ready for this challenge, please send your resume, including salary history to: Bio-Rad Laboratories, Dept. 399, 4000 Alfred Nobel Dr., Hercules, CA 94547. Or FAX: Attn: Bob Hall, 510/724-5024. EOE M/F/D/V.

**BIO-RAD** Bio-Rad Laboratories

## PROTEIN BIOCHEMIST - PhD

Pharmacia P-L Biochemical Inc. a leader in the research, production and marketing of molecular and cell biology products is presently seeking someone to join a multidisciplinary Process Development team responsible for developing, optimizing and validating processes, and transferring technology to pilot/production scale. The successful candidate will develop and implement protein purification methods; evaluate processes, equipment and materials; and develop procedures and process validation protocols. Experience with modern chromatographic methods of protein purification and analysis is essential. Familiarity with molecular biology, fermentation and recombinant DNA-derived proteins is highly desirable. Candidates should have a PhD in biochemistry or related field with at least 2 years experience in purifying proteins.

We offer a competitive salary and comprehensive benefit package. For consideration, send CV/resume and salary requirements in confidence to: **Manager, Human Resources, PHARMACIA P-L BIOCHEMICALS INC., 2202 N. Bartlett Ave, Milwaukee, WI 53202.** Equal Opportunity Employer. M/F/D/V.



**Pharmacia**

Pharmacia P-L Biochemicals





**Public Announcement**

**Regarding New Research and Development Projects on the  
Solid Oxide Fuel Cell (SOFC), Polymer Electrolyte Fuel Cell (PEFC)  
and Dispersed-type Battery Energy Storage Technology**

**Announced by the New Energy and Industrial Technology Development Organization on September 25, 1992**

In order to promote new energy technologies, and New Energy and Industrial Technology Development Organization (NEDO) would like to inform all interested companies and research organizations regarding the research and development projects described below.

***Theme of the Research Project and Outline of the Research Work to be Entrusted***

**1. "Research and Development of Solid Oxide Fuel Cell"**

The objective of the project is to develop SOFC technologies for a future SOFC power generating system. The targets are to study the structure of a planar type SOFC module by enlarging the cell area and stacking and integrating cells, and to develop a module in the tens of kilowatts with the power density of 0.2 W/cm<sup>2</sup> (fuel utilization of 75%), which will be operated by simulated reformed-natural gas by FY 1997. In addition, a study of materials and basic technologies of the SOFC, which enables high efficiency and high reliability modules, and a study of SOFC power generating plant equipment will be conducted.

**2. "Research and Development of Polymer Electrolyte Fuel Cell"**

The objectives of the project are to develop PEFC cell and stack technologies and to evaluate the feasibility of new stationary type and portable type power generating systems. The target is to develop a 1kW class module with the power density of 0.3W/cm<sup>2</sup> which will be operated by hydrogen and air by FY 1995 by conducting R&D on the following issues: materials, structure and fabrication processes for cells, water management, stacking and cooling technology and other issues for realizing a low-cost PEFC. The feasibility study should be performed through the conceptual design of total power generation systems based on the PEFC module developed in this project.

**3. "Research and Development of Dispersed-type Battery Energy Storage Technology"**

The objective of the project is to develop "dispersed-type battery energy storage technology" that can be applied to load leveling apparatus for houses, electric vehicles, and so on, using an ambient temperature secondary lithium battery of 20 to 30kWh class. The development targets are 180kWh/kg and 500 cycles for the high energy density type, and 120kWh/kg and 3500 cycles for the long life type. For this purpose, the following research and development will be conducted: research of elements, research of fabrication technology, research and development of utilization technology such as chargers and energy indicators, and operation technology. A total system study on a dispersed-type battery energy storage system will also be conducted.

***Procedures for Application***

**(1) Qualification Criteria**

All companies or research organizations who meet the following qualification criteria may submit an application to participate in the above projects:

1. The applicant must have previous research and development experience in the field covered by or related to the project and possess the organizational structure, human resources and research facilities required to carry out the project work.
2. The applicant must be in sound financial condition and have the ability to manage its finances and facilities as necessary to smoothly carry out the project work.
3. The applicant must be able to comply with NEDO's instructions, if such are necessary, to fully carry out the project work.
4. The applicant must attend the explanatory meeting held by NEDO as set forth in item (2) below or be represented at the meeting by a responsible agent or a representative who is capable of accurately conveying the contents of the meeting in detail.

**(2) Explanatory Meeting**

An explanatory meeting will be held on the dates shown below in order for NEDO to fully explain the details of each project's research and development work to be entrusted and the application documents to be submitted. Japanese will be the only language used during the meetings.

**Dates and Times:**

1. Research and Development of Solid Oxide Fuel Cell: 13:30, October 8, 1992
2. Research and Development of Polymer Electrolyte Fuel Cell: 15:30, October 8, 1992
3. Research and Development of Dispersed-type Battery Energy Storage Technology: 10:00, October 7, 1992

Place: NEDO's Head Office, Sunshine 60 Building, 28th Floor, Room 28-11, 1-1, Higashi-Ikebukuro 3-chome, Toshima-ku, Tokyo 170

**(3) Remarks**

The results including patents and know-how derived from the projects entrusted shall be exclusively owned by NEDO.

**(4) Further Information**

For further information regarding the research and development work to be entrusted under the above projects, please contact NEDO by telefax as follows:

New Energy and Industrial Technology Development Organization  
Contract Division, Accounting Department  
Sunshine 60 Building, 28th Floor, Room 28-13  
1-1, Higashi-Ikebukuro 3-chome, Toshima-ku, Tokyo 170  
Telefax: 03-5992-1184

## POSITIONS OPEN

### THREE ASSISTANT PROFESSOR POSITIONS DEPARTMENT OF MOLECULAR BIOLOGY PRINCETON UNIVERSITY

The Department of Molecular Biology at Princeton University invites applications for three assistant professorships in any one of the following areas:

1. Cellular and Developmental Aspects of the Immune System.
2. Cell/Structural Biology: cell/cell interaction and signalling; cytoskeletal and chromosome dynamics; cell cycle, protein structure, cell surface.
3. Neurobiology: molecular neurobiology employing genetics and/or cell biology techniques.

Applicants should send curriculum vitae, a summary of research interests, and the names of at least three references to the attention of one of the search fields listed above and addressed to:

Department of Molecular Biology  
Princeton University  
Princeton, NJ 08544

Application deadline is December 1, 1992.

*Princeton University is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR OF PHARMACOLOGY AND TOXICOLOGY**—West Virginia University invites applications for a tenure-track position at the Assistant Professor level. Applicants should have a Ph.D. in toxicology, pharmacology, or related discipline and postdoctoral research experience. Research area of particular interest is toxicology/signal transduction, but other areas of cellular and molecular pharmacology/toxicology will be considered. A background and teaching interest in toxicology are also desirable. Research accomplishments and evidence of ability to develop independent, externally funded research will be prime considerations. The first cycle of review will begin November 2, 1992. Send curriculum vitae, statement of future research plans, and two letters of reference to: **Dr. M. J. Reasor, Department of Pharmacology and Toxicology, West Virginia University, P.O. Box 9223, Morgantown, WV 26506-9223.** *An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

**Biochemistry ASSISTANT PROFESSOR.** The Texas Tech University (TTU) Department of Chemistry and Biochemistry invites applications for a full-time, tenure-track Assistant Professor position. A Ph.D. degree is required; postdoctoral experience is preferred. The successful candidate should have outstanding potential in teaching and research and establish a vigorous research program in an area of biochemistry or molecular biology that complements those of the existing Biochemistry faculty. Research areas of particular interest include, but are not restricted to, plant molecular biology of algae or cyanobacteria, protein structure-function aspects of rational drug design or *in vitro* studies of eukaryotic gene expression. Candidates should submit curriculum vitae and a description of proposed research and arrange for three letters of recommendation to be sent by November 1, 1992 to: **Dr. Robert W. Shaw, Department of Chemistry and Biochemistry, Mail Stop 1061, Texas Tech University, Lubbock, TX 79409-1061.** *TTU is an Equal Employment Opportunity/Affirmative Action/ADA Employer.*

### NEUROBIOLOGIST

The Department of Anatomy and Neurobiology, College of Medicine, The University of Tennessee, Memphis is seeking applications to fill **ASSISTANT** or **ASSOCIATE PROFESSOR** tenure-track positions. Candidates must be pursuing an independent research program in neuroscience and must show strong evidence of research achievement. Candidates will participate in teaching anatomical courses. Rank and salary will be commensurate with qualifications. The Department is the center of a rapidly expanding, multidisciplinary neuroscience program with a highly interactive, productive group of neuroscientists. Please refer to PIN #596 and submit curriculum vitae, statement of research interests, and names of three individuals who can be contacted for letters of reference to: **S. T. Kitai, Chairman, Department of Anatomy and Neurobiology, UT Memphis, 855 Monroe Avenue, Memphis, TN 38163.** Review of applications will begin October 30, 1992, and continue until the positions are filled.

*The University of Tennessee is an Equal Opportunity/Affirmative Action/Title IX/Section 504/ADA Employer.*

## POSITIONS OPEN

### ASSISTANT PROFESSOR HUMAN MICROSCOPIC ANATOMY

Applications are being accepted for a tenure-track faculty position as a Human Microscopic Anatomist in the Department of Anatomy, Northeastern Ohio Universities College of Medicine (NEOUCOM). Earliest starting date for the position is July 1, 1993.

A successful candidate is expected to have a proven record of research and publications with a demonstrated ability or a potential to attract extramural funding. Preference will be given to candidates who use modern cell biology techniques to address problems in the area of skeletal muscle. Teaching responsibilities involve participation in a 14-week Microscopic Anatomy course for medical students. Candidates also have the opportunity to develop a graduate course that relates to their specialty. Salary and start-up funds are competitive.

NEOUCOM, in consortium with Kent State University, The University of Akron, Youngstown State University, and eight teaching hospitals offers a combined B.S./M.D. degree. Basic medical science faculty participate in graduate programs leading to Ph.D.'s in the areas of neuroscience, cell biology, physiology, pharmacology, and biological anthropology through the School of Biomedical Sciences at Kent State University. The Department of Anatomy currently has seven full-time faculty and is expanding.

Applicants are requested to forward curriculum vitae, a statement of research interests, and the names of at least three references by November 15, 1992 to: **Dr. Jon Walro, Ph.D., Chairman, Human Microscopic Anatomy Search Committee, Department of Anatomy, Northeastern Ohio Universities College of Medicine, P.O. Box 95, Rootstown, OH 44272-0095.** *The college is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR GROSS ANATOMY

Applications are being accepted for a tenure-track gross anatomy position in the Department of Anatomy, Northeastern Ohio Universities College of Medicine (NEOUCOM). Earliest starting date for this position is January 1, 1993.

The successful candidate will have a proven record of research and publication, with a demonstrated ability or a potential to attract extramural funding. Prior teaching experience in a medical school gross anatomy course is mandatory. At least one year of postdoctoral experience is highly desirable. Preference will be given workers in the areas of mammalian functional morphology, vertebrate paleontology and biological anthropology. Teaching responsibilities involve participation in a two-term dissection-based gross anatomy course for medical students. Candidates will also have the opportunity to teach graduate courses that relate to their specialty.

NEOUCOM, in consortium with Kent State University, The University of Akron, Youngstown State University and eight teaching hospitals offers a combined B.S./M.D. degree. Basic science faculty participate in graduate programs leading to M.S./Ph.D. degrees in the areas of biological anthropology, neuroscience, cell biology, physiology, and pharmacology through the School of Biomedical Sciences at Kent State University. Current research interests in the Department of Anatomy include Miocene hominoid paleobiology, craniofacial biology, skeletal muscle development, and neuroendocrinology.

Applicants should forward curriculum vitae, statement of research interests, and names of three references by November 15, 1992 to: **Dr. Steven Ward, Chairman, Department of Anatomy, Northeastern Ohio Universities College of Medicine, P.O. Box 95, Rootstown, OH 44272-0095.** *The college is an Equal Opportunity/Affirmative Action Employer.*

**BIOCHEMIST.** Tenure-track position at the **ASSISTANT PROFESSOR** level in ACS-certified program beginning September 1, 1993. A broad background in chemistry with a Ph.D. in chemistry or biochemistry is required. Develop two new laboratory courses in biochemistry and also teach introductory chemistry courses. Research with undergraduates encouraged. Periodic participation in interdisciplinary general education program required. Send résumé, undergraduate and graduate transcripts, and three letters of recommendation by November 6, 1992 to: **Dr. Reggie L. Hudson, Department of Chemistry, Eckerd College, St. Petersburg, FL 33733.** The position is funded, in part, through a major grant from the Howard Hughes Medical Institute. *Eckerd College is an Equal Opportunity Employer.*

## POSITIONS OPEN

### CELL PHYSIOLOGIST

The Department of Anatomy and Physiology in the College of Veterinary Medicine invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level; appointment begins 1 July 1993. Candidates should have an extramurally funded research program or have an established research program with considerable potential for securing funding. Preference will be given to candidates who have a strong interest in professional and graduate instruction, who can contribute to a team-taught cell physiology course for veterinary students, and who are using contemporary approaches to study regulatory mechanisms involved in **immunophysiological or cardiopulmonary** systems. DVM and/or Ph.D. required.

Applications should include curriculum vitae, a statement of research and teaching interest, three letters of recommendation and reprints of three representative publications. Applications will be received until December 1, 1992. Send applications and materials to: **Dr. Jon D. Dunn, Professor and Department Head, Department of Anatomy and Physiology, VMS 228, Kansas State University, Manhattan, KS 66506.** *Kansas State University is an Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITION IN PHYSIOLOGY

The Department of Physiology at the University of Massachusetts Medical School has an opening for an entry level **ASSISTANT PROFESSOR** on the tenure track. Applicants must have completed the M.D. or Ph.D. degree, at least two years of postdoctoral research training, and have a strong background and research interest that focuses on cellular and molecular bases of physiology. Successful applicants will be expected to conduct active independent research programs and participate in teaching medical and graduate students.

Candidates should submit by October 31, 1992, curriculum vitae, a complete list of publications, a brief statement summarizing present and future research interests and objectives, and have three letters of reference sent to:

**H. Maurice Goodman, Ph.D.**  
Professor and Chairman  
Department of Physiology  
University of Massachusetts Medical School  
55 Lake Avenue North  
Worcester, MA 01655

*The University of Massachusetts Medical School is an Affirmative Action/Equal Opportunity Employer. Applications from women, minorities and handicapped persons are especially encouraged.*

### PLANT SYSTEMATIST

A tenure-track position consisting of a half-time faculty position in the Program in Biology and half-time in the Department of Botany is available at Washington State University. The position will be filled at the **ASSISTANT PROFESSOR** level, and the appointment will begin during the Fall 1993. Responsibilities include directing the operation of the Ownbey Herbarium, teaching appropriate courses through Botany and Biology, and maintaining an active research program in plant systematics. The successful candidate will be expected to teach at the undergraduate level in the Program in Biology and contribute to graduate-level courses in plant systematics in the Department of Botany. The area of research expertise of the successful candidate is open but should involve modern approaches to research in plant systematics. Possible research areas include systematics of crop plants and wild relatives, breeding system evolution, molecular evolution, conservation biology, or methods of phylogenetic reconstruction. A Ph.D. in Botany or related discipline is required; postdoctoral experience is desirable. The successful candidate should have a strong commitment to undergraduate and graduate education and herbarium experience. Applicants should send curriculum vitae, a statement of teaching goals and current and long-term research interests, and the names of three references by November 15, 1992 to: **Dr. D.E. Soltis, Chair, Plant Systematist Search Committee, Department of Botany, Washington State University, Pullman, WA 99164-4238.** *WSU is an Equal Employment Opportunity/Affirmative Action Educator & Employer. Protected Group Members are encouraged to apply.*

## HOWARD HUGHES MEDICAL INSTITUTE

# 1993

# PREDOCTORAL FELLOWSHIPS IN BIOLOGICAL SCIENCES

66 Fellowships will be awarded by the Howard Hughes Medical Institute for study toward a Ph.D. or Sc.D. degree in the biological sciences listed below. Awards, based on an international competition, focus on research directed to an understanding of basic biological processes and disease mechanisms. Fellowships may be held at any academic or research institution with appropriate degree programs.

- **Fellowship Terms**
- Full-time study toward the Ph.D. or Sc.D.
  - Up to five years of support possible
  - \$14,000 annual stipend
  - \$12,700 annual cost-of-education allowance

- **Fields of Study**
- |                       |                      |                    |
|-----------------------|----------------------|--------------------|
| • Eligible fields:    |                      |                    |
| biochemistry          | genetics             | pharmacology       |
| biophysics            | immunology           | physiology         |
| biostatistics         | mathematical biology | structural biology |
| cell biology          | microbiology         | virology           |
| developmental biology | molecular biology    |                    |
| epidemiology          | neuroscience         |                    |

- **Eligibility**
- Beginning graduate study (prior study toward an M.P.H. or a medical degree does not rule out eligibility)
    - college seniors
    - first year graduate students
    - medical students and physicians (M.D., D.O., D.D.S., or D.V.M.) not past the first year of a Ph.D. or Sc.D. degree program
  - Not in a funded M.D./Ph.D. program
  - No citizenship requirements: U.S. citizens may study abroad, but others must study in the United States

- **Schedule**
- Application deadline: November 6, 1992
  - Awards announced: early April 1993
  - Fellowships start: June 1993 - January 1994

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### For 1993 Program Announcements, Eligibility Guidelines, and Applications

Hughes Fellowship Program • The Fellowship Office  
National Research Council • 2101 Constitution Avenue, N.W.  
Washington, D.C. 20418 • United States of America  
Telephone (202) 334-2872

The Howard Hughes Medical Institute welcomes applications from all qualified candidates and encourages women and members of minority groups to apply.

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## POSITIONS OPEN

### UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE DEPARTMENT OF PHARMACOLOGY AND THERAPEUTICS

A tenure-track **ASSISTANT PROFESSOR** position is open for applicants having a Ph.D. and/or M.D. degree with at least two years of postgraduate experience. The successful candidate will be expected to develop an independent research program, teach professional and graduate students, and contribute to other academic activities. Position offers a competitive salary and laboratory start-up package. The Department is interested in strengthening research in neuropharmacology with molecular and structural biology approaches although all candidates with strong scientific credentials are encouraged to apply. Application deadline is October 31, 1992. Applications including names of three references should be sent to: **Dr. Fulton T. Crews, Chairman of the Search Committee, University of Florida, Department of Pharmacology, P.O. Box 100267, Gainesville, FL 32610.** The University of Florida is an Equal Opportunity Employer and specifically invites and encourages applications from women and minorities.

### ASSISTANT PROFESSOR OF CELL BIOLOGY

The Department of Cell Biology, University of New Mexico (UNM) School of Medicine, is offering a tenure-track appointment at the level of Assistant Professor to an investigator who is studying molecular mechanisms of replication, gene expression, or pathogenesis of human retroviruses. Candidates are required to hold a Ph.D. in a related field of study and should have two or more years of postdoctoral training. Candidates will be expected to demonstrate evidence of originality and the ability to establish an effective and competitive research program, and possess effective teaching skills for participation in Graduate training programs. The Department of Cell Biology, housed in the UNM Cancer Center, currently consists of 10 full-time faculty working in areas of molecular virology and epidemiology, hematopoietic development and oncogenesis, molecular genetics of bacterial and viral gene expression and DNA replication, RNA processing, and biomolecular structure and function. The Cancer Center is located within the UNM Medical Center, which includes the School of Medicine, Schools of Pharmacy and Nursing, and UNM Hospital. Candidates should send curriculum vitae, a brief description of research plans, and three letters of reference to: **Melinda Guerrero, Search Coordinator, University of New Mexico School of Medicine, Department of Cell Biology, Albuquerque, NM 87131-5226.** Deadline for receipt of applications is 1 December 1992.

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

### EVOLUTIONARY PLANT ECOLOGIST

The Department of Biological Sciences anticipates a full-time tenure-track faculty appointment at the **ASSISTANT PROFESSOR** level open in the area of evolutionary plant ecology beginning September 1993. Outstanding applicants at a more senior level are also encouraged to apply; in all cases salary will be highly competitive. Applicants must have a Ph.D. and extensive postdoctoral experience. Applicants interested in life history evolution, population ecology, reproductive ecology, ecology of riparian plant communities or plant/animal interactions are especially encouraged to apply. The successful candidate will be expected to establish an extramurally funded research program, train graduate students, and participate in undergraduate education. The individual will also be expected to contribute to the expanding research and teaching program at the Department's Pymatuning Laboratory of Ecology. In order to ensure full consideration, applications must be received by December 11, 1992. Applicants should send curriculum vitae, a summary of research interests and goals, and arrange to have at least three letters of reference sent to:

**Dr. William Searcy**  
Plant Ecology Search Committee  
Department of Biological Sciences  
University of Pittsburgh  
Pittsburgh, PA 15260  
Telephone: (412) 624-4266

The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.

## POSITIONS OPEN

### MOLECULAR BIOLOGIST

Tenure-track **ASSISTANT PROFESSOR** position starting August 1993. Ph.D. required. Teaching and postdoctoral research experience desirable. The successful candidate will teach undergraduate courses at all levels including introductory Microbiology, Cellular Biology, and Recombinant DNA Techniques and will participate in University-wide programs. The appointee will join a biology faculty deeply involved in creating a strong research-oriented program for upper class undergraduate students, and will contribute to this effort. Applications are encouraged from candidates in microbiology and molecular biology, incorporating recombinant DNA technology. Forward a letter of application with curriculum vitae and representative publications by October 18, 1992 and arrange to have three letters of recommendation sent as quickly as possible to: **Dr. Randall Fuller, Chair, Department of Biology, Colgate University, Hamilton, NY 13346-1398.** Women and minorities are especially encouraged to apply.

Colgate University is an Equal Opportunity/Affirmative Action Employer.

### UNIVERSITY OF TEXAS AT ARLINGTON

The Department of Biology invites applications for two anticipated tenure-track positions at the **ASSISTANT PROFESSOR** Level: (1) A broadly trained **MICROBIOLOGIST** with research focus on comparative prokaryotic metabolism and diversity/or evolution, and (2) An **AQUATIC ECOLOGIST** applying quantitative methodology to address problems in the ecology of organisms in freshwater habitats. The University of Texas at Arlington is a comprehensive university of 25,000 students located in the Dallas-Fort Worth area. The department awards B.S. degrees in Biology and Microbiology, and M.S. and Ph.D. degrees. Application review will begin 30 October 1992. Applicants should submit curriculum vitae, selected reprints, a statement of research goals, and arrange for letters of recommendation from three referees to be sent to: **Dr. E. D. Brodie, Jr., Chairman, Department of Biology, Box 19498, The University of Texas at Arlington, Arlington, TX 76019.**

An Equal Opportunity/Affirmative Action Employer. Minority and women candidates are encouraged to apply.

### ASSISTANT PROFESSOR/ ASSOCIATE PROFESSOR NEUROBIOLOGY, CELL AND MOLECULAR BIOLOGY

Department of Pathology, Columbia University

The Division of Cell and Molecular Biology in the Department of Pathology invites applications for two tenure-track positions. One position is in Neurobiology and the other field is open. The successful candidate will join an existing group of over 20 established investigators in neurobiology, cell biology, oncogenesis, molecular biology and molecular pathobiology. The department has active postdoctoral and predoctoral training programs and an excellent research-oriented residency program. Applicants must hold either an M.D. or Ph.D. degree and be capable of establishing a strong independent research program. Please send curriculum vitae and names of three references to: **Michael L. Shelanski, M.D., Ph.D., Chair, Department of Pathology, Columbia University, 630 West 168th Street, New York, NY 10032.** Columbia University is an Equal Opportunity/Affirmative Action Employer.

### ASSISTANT or ASSOCIATE PROFESSOR BIOCHEMISTRY/MOLECULAR BIOLOGY

The Department of Biochemistry at The University of Mississippi Medical Center invites applications for a tenure-track position. The department is well equipped and has strong research programs in eukaryotic gene organization and expression, ribosome biogenesis, nucleic acid biophysics, enzymology and protein chemistry. The successful applicant is expected to establish or have an independent, high quality, funded research program and to participate in training of medical, dental and graduate students. Special consideration will be given to candidates in areas that complement current research programs. Send curriculum vitae, an outline of future research plans and the names of three references to: **Dr. Mark Olson, Chair, Department of Biochemistry, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505.** Equal Opportunity Employer, M/F/D/V.

## POSITIONS OPEN

### FACULTY POSITIONS IN CELL, MOLECULAR AND STRUCTURAL BIOLOGY

Applications are invited for tenure-track positions in the Department of Cell, Molecular and Structural Biology at Northwestern University Medical School. **ASSISTANT to FULL PROFESSOR** applicants must have a Ph.D., M.D., or equivalent degree, with research experience in cell, molecular, or structural biology. Applicants will be screened with respect to their ability to carry on vigorous independent research and to participate in the various teaching programs administered by the department. Candidates whose research interests include developmental biology, biochemistry, and structural biology are encouraged to apply, although outstanding applicants with research interests in other areas of molecular and cell biology will be considered. Send complete curriculum vitae and a brief description of research interests to: **Dr. Rex Chisholm, Chairman, Search Committee, Department of Cell, Molecular and Structural Biology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.**

Northwestern University is an Equal Opportunity/Affirmative Action Educator and Employer and invites applications from all qualified individuals. Applications from women and minorities are especially sought.

### BIOCHEMISTRY FACULTY POSITION LOUISIANA STATE UNIVERSITY MEDICAL CENTER (LSUMC)

The Department of Biochemistry and Molecular Biology invites applications for a tenure-track position at the **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** level. The successful candidate is expected to develop and sustain an independent research program. Interest and excellence in teaching and research are expected. The Medical Center includes the Schools of Dentistry, Medicine, Nursing, and Graduate Studies and a Biotechnology Support Unit. Interested individuals should send curriculum vitae with bibliography, short (three page) summary of planned research, and the names and addresses of three references to the following:

**Robert Roskoski, Jr.**  
Head, Department of Biochemistry and  
Molecular Biology  
Louisiana State University Medical Center  
1100 Florida Avenue  
New Orleans, LA 70119-2799

LSUMC is an Equal Opportunity/Affirmative Action Employer.

### DIRECTOR OF ELECTRON MICROSCOPE SUITE

Meharry Medical College seeks a director for its college-wide EM facility. Experience in TEM and SEM techniques required. Opportunity for collaborative work available. Salary is negotiable depending on qualifications and experience. NOTE: Interested faculty may apply. Send curriculum vitae and relevant work experience to: **Dr. James C. Story, Chairman, Department of Anatomy and Cell Biology, Meharry Medical College, 1005 D. B. Todd Boulevard, Nashville, TN 37208.** Meharry is an Affirmative Action/Equal Opportunity Employer.

### REGULATORY POSITION

Terra International, Inc., a major distributor and formulator of agricultural chemicals, is seeking a **MANAGER** for its Label Development Department. An eight- to ten-year work history, established relationships, and a proven track record with the Registration Division at EPA and Cal-EPA are required. A degree in agriculture or related field is a plus.

The position reports to the General Manager, Riverside Product Business Unit and manages the regulatory department. The position is responsible for FIFRA issues, but must stay abreast of OSHA, DOT and other pertinent regulations affecting private labeling. The position is responsible for preparing and submitting scientifically sound regulatory packages to obtain new labels, amendments, and to defend current labels undergoing reregistration, special review or data call-ins.

This Iowa-based position offers an opportunity to build a career in the continually evolving crop protection and fertilizer industries. Terra offers a competitive compensation and benefits package. Send résumé with salary history to: **Box WSI, Suite 215, 1100 Jorie Boulevard, Oak Brook, IL 60521.**

**DEPARTMENT OF PHARMACOLOGICAL AND  
PHYSIOLOGICAL SCIENCE**

Saint Louis University Medical Center

Applications are invited for faculty positions in the **Department of Pharmacological and Physiological Science** at Saint Louis University Medical Center. Positions are tenure track appointments at the **Assistant or Associate Professor** level. We offer an environment rich in senior level scientific experience, start up funds, laboratory space and a record of highly successful and continuing extramural research funding. Preference will be given, but not restricted, to individuals with demonstrated experience in the application of molecular biology to research in the nervous, cardiovascular and endocrine systems. Interested persons should send a curriculum vitae, three letters of reference and a description of research interests and objectives to:

**Dr. Thomas C. Westfall**  
**Professor and William Beaumont Chair**  
**Department of Pharmacological and**  
**Physiological Science**  
**Saint Louis University Medical Center**  
**1402 South Grand Boulevard**  
**St. Louis, MO 63104**

*Saint Louis University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

**PAUL SCHERRER INSTITUT**



The Paul Scherrer Institut in Würenlingen/Villigen, Switzerland, is a Swiss Federal Laboratory for multidisciplinary basic and applied research.

For the radioecology group in the department of radiation hygiene we seek a qualified

**Radioecologist or  
Environmental Toxicologist**

Qualification includes a Ph.D. in ecology, radioecology, environmental toxicology or related fields. A good understanding of ecological principles as they relate to contaminant transport is essential. The successful candidate is expected to be able to design, conduct and analyze relevant field/laboratory experiments on the transport of radionuclides in the environment. Strong candidates will have knowledge in experimental design, statistical analysis, environmental risk assessment and contaminant transport modeling. Postdoctoral, junior and senior level applicants will be considered. The opening is for an initial period of three years.

For more information please contact Dr. Roger Andres, Tel. 0041-56/99 23 47.

A curriculum, reprints of three relevant publications, and the names of three references should be sent to

**PAUL SCHERRER INSTITUT, Würenlingen & Villigen, Personnel Division, ref. code 2302, 5232 Villigen PSI/Switzerland**

## **Microbiology Research Assistant**

The field of pharmaceuticals and health care is more rewarding than ever as new products create a healthier world population. As one of the leaders in this dynamic industry, Pfizer Inc, a Fortune 100 company, is committed to continuing its remarkable growth.

In bringing science to life, our international research-based company uses advanced techniques to generate new products, new areas of revenue and career opportunities that self-directed, talented people will find stimulating and rewarding.

The primary R&D facility of Pfizer Inc is located in a southeastern Connecticut shore community, giving easy access to the well known academic and cultural centers of the Northeast, and offers the attractions of a New England lifestyle.

One of our drug discovery teams is currently seeking a Research Assistant with an MS or BS to perform experiments in bacterial pathogenesis which may lead to the identification of novel antibacterial agents. A strong background in either microbiology or molecular genetics and cell biology is essential since the research will require a broad range of technical skills from these areas. Knowledge of the methods of tissue culture and protein and DNA analysis, including ELISAs, Westerns, radiolabeling, immunoprecipitation, electroporation and Southern, will be important. Some additional experience in cellular immunology would be desirable.

We offer competitive salaries and a full range of benefits including medical and dental insurance, paid holidays and vacations, educational assistance, savings and investment plans, pension plan, relocation assistance and more.

To learn how you can be part of Pfizer's future, send your resume to: **Mr. Kym J. Goddu, Personnel Associate, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340.** We are an equal opportunity employer.



**Central Research**  
Bringing science to life.

## POSITIONS OPEN

**PROFESSOR** with established, funded research program in retrovirology. Position provides a generous support package and is part of an expanding, dynamic biotechnology program. Send curriculum vitae to: **Samuel M. Cohen, M.D., Ph.D., Pathology/Microbiology, University of Nebraska Medical Center, 600 South 42nd Street, Omaha, NE 68198-3135. An Equal Opportunity/Affirmative Action Employer.**

## ASSOCIATE DIRECTOR

The University of Georgia (UGA) is seeking an Associate Director for its Savannah River Ecology Laboratory. The laboratory conducts environmental research and educational programs for the Department of Energy on the Savannah River Site in South Carolina. It has over 30 Ph.D. scientists in residence conducting research. The Associate Director will have primary responsibility for overall management of the scientific programs while working with the Director and Assistant Director for Administration on general laboratory programs.

The position is primarily an administrative one that requires an individual with strong interpersonal skills and experience with management and research. Some professional involvement in laboratory programs is expected, and a record of publication and a Ph.D. in the environmental sciences are required. Major administrative duties of the position include facilitating the development of funded research programs, making budgetary decisions concerning ongoing programs, supervising support personnel, working with other management personnel to achieve multi-program objectives, and helping to meet contractual obligations of the Department of Energy.

The academic rank and salary associated with the position are negotiable. Applicants should submit curriculum vitae, names and addresses of three references, and a statement of their career objectives by December 15, 1992 to: **Dr. Michael H. Smith, Director, Savannah River Ecology Laboratory, Drawer E, Aiken, SC 29802.**

UGA is an Equal Opportunity/Affirmative Action Employer.

## PROVOST

### Maryland Biotechnology Institute University of Maryland System

The Maryland Biotechnology Institute (MBI) invites nominations and applications for the position of Provost. As the chief academic officer, the Provost reports directly to the MBI President and has the primary responsibility for faculty affairs and the development of the Institute's research programs.

The MBI is an independent research institute of the University of Maryland System (UMS) and has 275 faculty and staff. The MBI consists of six research centers which focus on: advanced research in structural biology; marine; agricultural; medical; manufacturing; and public issues in biotechnology. The research centers are located in the Baltimore-Washington area.

Candidates must have an earned doctorate in the life sciences or related discipline and have a sound reputation of research productivity, including the demonstrated ability to develop extramural research grant programs and activities in biotechnology education. Candidates also must have demonstrated a capacity to communicate effectively with faculty and staff and be committed to the development of strong working relationships with the biotechnology industry.

Nominations and applications should be submitted to:

### Provost Search Committee Office of the President Maryland Biotechnology Institute 1123, Microbiology Building College Park, MD 20742

To insure full consideration, application and nominations must be received by November 15, 1992.

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

**CYTOKINES: SIGNAL TRANSDUCTION AND TRANSCRIPTIONAL REGULATION—POSTDOCTORAL POSITION** available now to study regulation in response to many cytokines of a gene that encodes a transcription factor. Projects include activation of the gene, targets of the factor, and its molecular interactions. Molecular biology/biochemistry experience desired. Please send curriculum vitae and names of references to: **Dr. Richard Pine, Public Health Research Institute, 455 First Avenue, New York, NY 10016.**

## POSITIONS OPEN

### ALBERT EINSTEIN COLLEGE OF MEDICINE DEPARTMENT OF MOLECULAR GENETICS TWO FACULTY POSITIONS

Candidates with outstanding academic achievements are being sought to fill two positions at the **ASSISTANT PROFESSOR** or higher level. One position is designated for a **MAMMALIAN DEVELOPMENTAL GENETICIST** or **HUMAN GENETICIST** and the second position is for a **LOWER EUKARYOTIC MOLECULAR GENETICIST**.

Candidates should send curriculum vitae, a research plan, and request three letters of recommendation be sent to: **Dr. Raju Kucherlapati, Department of Molecular Genetics, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. Equal Employment Opportunity.**

### RICE UNIVERSITY Department of Biochemistry & Cell Biology FACULTY POSITIONS

Applications are invited for faculty positions in cell, developmental, and molecular biology, NMR spectroscopy, and computational/theoretical biochemistry beginning Fall 1993. Plant, animal and microbial systems will be considered. Clear evidence of research excellence and teaching potential is essential. Review of applications will commence November 1, 1992, and positions will remain open until filled. Please send curriculum vitae, summary of past research and future research plans, and four letters of reference to:

### Dr. K. S. Matthews, Chair Department of Biochemistry & Cell Biology Rice University Houston, TX 77251

Rice University is an Equal Opportunity/Affirmative Action Employer; women and minority candidates are encouraged to apply.

**FACULTY POSITION.** The Department of Biochemistry of the University of Vermont College of Medicine has available a full-time (12-month appointment) tenure-track position. Rank and salary are negotiable and commensurate with experience and accomplishments. Preference will be given to established investigators with demonstrated expertise in structural biology, such as the use of NMR or X-ray crystallography in the characterization of macromolecules. Applications from other investigators whose interests and skills are compatible with current research programs in the Department are invited, and will be carefully considered. The person selected will be expected to maintain a high quality, externally-funded, independent research program, to participate in the teaching programs of the Department, and to assume appropriate administrative obligations. Please send a résumé, including a description of research interests, career goals, present and past research support, and the names of three references to: **Chair, Search Committee, Department of Biochemistry, Given Building, University of Vermont, College of Medicine, Burlington, VT 05405. The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and people from diverse racial, ethnic and cultural backgrounds are encouraged to apply.** Applications will be accepted until the position is filled.

**POSTDOCTORAL POSITION** to study signal transduction mechanisms controlling the transcription of nitrogen-regulated genes in bacteria. Current research includes: (1) Structure/function analysis of a "two-component system" signal-transducing protein kinase/phosphatase using genetic and biochemical methodologies, (2) Structure/function analysis of a signal transduction protein responsible for regulating the activities of the kinase/phosphatase, (3) Crystallization of wild-type and mutant signal transduction proteins, and (4) Genetic analysis of nitrogen assimilation with the goal of identifying and characterizing additional regulators. Applicants with either a strong background in prokaryotic molecular genetics and molecular biology or a strong background in biochemistry preferred. Send curriculum vitae and the names of references to: **Dr. Alexander J. Ninfa, Department of Biochemistry, Wayne State University of Medicine, 540 East Canfield Avenue, Detroit, MI 48201. FAX: 313-577-2765. Wayne State University is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION IN CYTOKINE SIGNAL TRANSDUCTION** available immediately. Studies will focus on the further molecular characterization of the direct IFN signaling pathway recently described (*Science* 257, p. 777, & 809). These studies will be extended to related signal transduction pathways induced by other cytokines in systems relevant to human disease. Experience in molecular biology and cell biology is sought. Mail (or FAX: 212 305-6021) curriculum vitae and the telephone numbers of three references to: **Dr. Chris Schindler, Department of Medicine, Columbia University, 630 West 168th Street, New York, NY 10032.**

**POSTDOCTORAL POSITIONS.** Targeted homologous recombination and emphysema. Applications are invited from investigators with experience in molecular biology to study targeted homologous recombination in human cells. Work involves targeting recombination to the alpha-1-antitrypsin gene and selecting successful recombinants with the aim of correcting the PiZ gene defect. Send curriculum vitae and names of three references to: **Dr. Edward M. Johnson, Department of Pathology and Brookdale Center for Molecular Biology, Box 1194, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.**

**POSTDOCTORAL POSITION IN MOLECULAR THEORETICAL BIOPHYSICS**—Position available immediately to study molecular mechanisms of radiation damage to DNA. Experience with quantum chemical studies of small molecules and with molecular dynamics simulations of macromolecules, preferably DNA, is necessary. Send curriculum vitae and names of references to: **Dr. Roman Osman, Department of Physiology and Biophysics, Box 1218, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.**

**POSTDOCTORAL POSITION.** Joint project in Departments of Pediatrics and Genetics, Case Western Reserve University to study targeted mutagenesis and knockout mouse models of defective immune responses to bacterial antigens. Expertise in molecular genetics and targeting vector construction essential. Send curriculum vitae and three references to: **Dr. John Schreiber, Department of Pediatrics, Division of Infectious Diseases, Case Western Reserve University/Rainbow Babies and Childrens Hospital, 2074 Abington Road, Cleveland, OH 44106.**

## POSTDOCTORAL POSITION

Ph.D. Molecular Biologist needed to join an ongoing project on cloning of archaeobacterial genes (enzymes stable at >90°) into *E. coli*. Salary from \$24,000, commensurate with experience. Please send a résumé and the names of three references to: **Dr. Alan Russell, Center for Biotechnology and Bioengineering, 1235 Benedum Engineering Hall, The University of Pittsburgh, Pittsburgh, PA 15261.**

## POSTDOCTORAL POSITIONS

Starting February 1993, positions are available to study the characterization of the role of TGF- $\alpha$  and the receptors for TGF- $\beta$  (and related factors) in cell physiology and in mammalian development. Highly qualified individuals interested in growth and differentiation factors, with a background in molecular biology and experience in receptor characterization, post-receptor signaling or experimental manipulation of vertebrate development or cell differentiation, are encouraged to apply.

Please send curriculum vitae and names of references to:

### Rik Derynck, Ph.D. Department of Growth and Development University of California, San Francisco San Francisco, CA 94143-0640

**POSTDOCTORAL POSITION** in transplantation immunology and/or immunogenetics available immediately. This laboratory is primarily involved in studies of murine natural resistance to hemopoietic allografts and its genetic control by the MHC. Previous experience in immunology, molecular biology or a related field required. Send curriculum vitae and a list of three references to: **Dr. Ichiro Nakamura, Department of Pathology, State University of New York at Buffalo, 232 Farber Hall, Buffalo, NY 14214. An Affirmative Action/Equal Opportunity Employer.**





### BIOCHEMICAL GENETICS LABORATORY DIRECTOR

Vivigen Laboratories is seeking an MD or PhD candidate, ABMG certified or board eligible, to direct the Biochemical Genetics Laboratory. The candidate should have experience in human biochemical genetics with emphasis on prenatal screening and diagnosis as well as significant experience in managing a technical production staff.

Vivigen's high quality, state-of-the-art laboratories are located in the city of Santa Fe in Northern New Mexico which offers clear skies, no congestion, spectacular sunsets and a wide variety of social and outdoor activities.

Please send CV to:

David H. Lockwood, PhD.  
Vivigen, Inc.  
2000 Vivigen Way  
Santa Fe, NM 87505

*Vivigen is an equal opportunity employer.*

## Program in Cellular Biochemistry & Biophysics Memorial Sloan-Kettering Cancer Center

Tenure track appointments at the Assistant Member level are available in the Cellular Biochemistry & Biophysics Program in the application of multi-dimensional NMR spectroscopy to the analysis of macromolecular structure, dynamics and interactions in solution.

Candidates should have a successful record of research achievements and the ability to develop an independent research program. Experience in the application of multi-dimensional NMR methods to the analysis of macromolecular structure is required. The NMR core facility due for completion in the second quarter of 1993 will house five, three channel Varian high resolution NMR spectrometers, including three 600 MHz instruments. The computational resources will include Silicon Graphics and SUN work stations and servers. The institution has allocated equipment and operating budgets to maintain the NMR and computing facilities at state-of-the-art level. Attractive start-up packages are available to establish and maintain the successful candidate's laboratory.

Interested applicants should forward their curriculum vitae, bibliography and the names of three references to:



Dr. Dinshaw J. Patel  
Program in Cellular Biochemistry & Biophysics  
Memorial Sloan-Kettering Cancer Center  
Box 557  
1275 York Avenue  
New York, NY 10021

An Equal Opportunity/Affirmative Action Employer

## Software Engineers

We are Bio-Rad Laboratories, a world leader in life science research products, clinical diagnostics and analytical instruments and rated as one of the fastest growing companies in Northern California. We are seeking talented individuals to fill key positions in our growing Genetic Systems Division.

Use your 2+ years experience programming in "C" or "C++" on the Apple Macintosh and knowledge of instrument and machine control to create scientific instruments. Preference will be given to candidates with experience in user interface design, image display and manipulation and scientific programming. BSCS/EE or equivalent, excellent communication skills and the ability to thoroughly document and write code are required.

For consideration, please send your resume to: Bio-Rad Laboratories, 2000 Alfred Nobel Dr., Dept. 395, Hercules, CA 94547. EOE M/F/D/V.

**BIO-RAD**

**Bio-Rad Laboratories**

## COLORADO Biopharmaceutical Leader

**Somatogen**, a biopharmaceutical company currently engaged in the development and manufacture of recombinant human hemoglobin, has exciting opportunities available in our state-of-the-art pharmaceutical production facility. Successful candidates will be self-motivated individuals with a desire to be part of a team involved in cutting edge technology.

**Scientist I (Immunochemist).** Responsibilities involve immunoassay development including RIA, ELISA and western blot, development of novel immunological reagents, and epitope mapping. Requires a Ph.D. with experience in mono/polyclonal antibody production and characterization and immunoassay development. Please indicate Dept. #346.

**Sr. Research Associate.** Responsibilities include amino acid analysis, protein purification and sequencing, peptide mapping and HPLC. Requires a B.S./M.S. with 4 years laboratory experience with a strong background in biochemistry with emphasis on purification and characterization. Please indicate Dept. #378.

A competitive salary and benefits package complements these offers. Interested candidates may submit their resume and cover letter indicating the position desired and department number to:

**SOMATOGEN**

5797 Central Avenue Boulder, CO 80301

**SOMATOGEN**

EOE M/F/H/V

## POSITIONS OPEN

### SOIL MICROBIOLOGIST NEW ZEALAND

Applications are invited from **POSTDOCTORAL SCIENTISTS** with experience in soil microbiology to join the soil science group of the New Zealand Institute for Crop & Food Research Ltd. based just outside Christchurch. This group carries out research into sustainable use of soil research under the mixed cropping rotation (arable/grazed pasture) system of farming under which most field crops are grown in New Zealand. The group has built an international reputation in nutrient cycling under pastures and soil physical properties and fertility under mixed cropping systems. The successful applicant will be a postdoctoral scientist, or expect to hold a Ph.D. in the near future. The appointee will be involved in research into the composition of the microbial biomass in mixed cropping soils and their role in soil fertility buildup under pasture, decomposition of residues under arable and stabilization of aggregate structure in the rhizosphere. Further details on the position, including an application form and job description, may be obtained by contacting: **Dr. Dick Haynes or Dr. Prue Williams, Telephone: (64) (3) 325 2511, FAX: (64) (3) 325 2074.** Applications should quote vacancy no. 92/09, and close at 4:00 pm on 9 October 1992. Written applications, enclosing detailed curriculum vitae and the name and address of two referees, should be sent to: **The Personnel Manager, Crop & Food Research, Private Bag 4704, Christchurch, NEW ZEALAND.** *Crop & Food Research Ltd. promotes a policy of Equal Employment Opportunity.*



### POSTDOCTORAL POSITION CARDIAC PHYSIOLOGY UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

A postdoctoral position is available immediately (December 1, 1992) for research in electrophysiology and excitation-contraction coupling of cardiac muscle. The research will involve the use of patch clamp techniques (whole-cell and single channel) and fluorescent ion-indicators, including imaging, and flash photolysis of caged compound in single, voltage-clamped cardiac cells. Applicants should have a Ph.D. or M.D. and experience in electrophysiology. Interested individuals should send curriculum vitae and names of three references to: **Dr. C. William Balke, Department of Physiology, University of Maryland at Baltimore, 660 West Redwood Street, Room 590, Howard Hall, Baltimore, MD 21201.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITIONS—MIT/Harvard** Postdoctoral Positions available in the area of pharmaceutical protein stability and stabilization. Backgrounds in any of the following areas are desirable: biochemistry, biophysics, and chemical engineering. Send résumés to: **Dr. Robert Langer, Germeshausen Professor of Chemical and Biomedical Engineering, Department of Chemical Engineering, Massachusetts Institute of Technology, E25-342, Cambridge, MA 02139** or **Dr. Alexander Klivanov, Professor of Chemistry, Department of Chemistry, Massachusetts Institute of Technology, 16-209, Cambridge, MA 02139.** *Equal Opportunity Employer.*

**POSTDOCTORAL ASSOCIATE** position is available to examine the mechanisms of P uptake and transport to shoots of southern pine seedlings, and the modifying effects associated with long-term root hypoxia. A Ph.D. in plant physiology and background in microautoradiography, NMR or radioisotope uptake work are desirable. Send cover letter describing research experience, curriculum vitae and names/addresses of three referees to: **Dr. Mary A. Topa, Boyce Thompson Institute for Plant Research, Tower Road, Ithaca, NY 14853-1801.** *Affirmative Action/Equal Opportunity Employer.*

Two **POSTDOCTORAL POSITIONS** are available to: (1) utilize transfection system to study the cell biology of and immune response to trypanosomes, and, (2) study the role of T cell subsets (especially CD8<sup>+</sup> T cells) in immunity and pathogenesis in *Trypanosoma cruzi* infection. Experience in molecular biology and/or immunology required. Send curriculum vitae, brief research summary and the names, addresses and phone numbers of three references to: **Dr. Rick L. Tarleton or Dr. Kojo Mensa-Wilmot, Department of Zoology, University of Georgia, Athens, GA 30602.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately for individual to work in vascular biology laboratory on growth control of arterial smooth muscle cells. Projects will focus on the action of antagonists on cell replication and cell migration. Experience in protein biochemistry, receptor interactions and molecular biology are desirable. Send curriculum vitae and names of three references to: **Dr. Michael Reidy, Department of Pathology SJ-60, University of Washington, Seattle, WA 98195.** Telephone: 206-685-1884.

**POSTDOCTORAL POSITION** available immediately for Ph.D. or M.D. to study lectin cell adhesion molecules and glycoconjugate ligands involved in angiogenesis. Candidates should have training in cell or molecular biology or biochemistry. Send curriculum vitae, reprint of one publication, and names of three referees to: **Dr. Joyce Bischoff, Surgical Research Laboratory, Children's Hospital, Harvard Medical School, 300 Longwood Avenue, Boston, MA 02115.**

**POSTDOCTORAL POSITION** available in molecular neurobiology in neurodegenerative diseases, including Alzheimer's disease, in established multidisciplinary laboratory. Qualifications include a Ph.D. or M.D., and a strong background in biochemistry and molecular biology to explore the molecular basis of these diseases. Submit curriculum vitae and three references to: **Dr. Carol A. Miller, Department of Pathology, USC School of Medicine, 2011 Zonal Avenue, Los Angeles, CA 90033.** FAX: 213-342-1808.



**Agricultural Research Service  
United States  
Department of  
Agriculture**

**MOLECULAR BIOLOGIST, USDA, ARS, Southern Regional Research Center, Environmental Technology Research, New Orleans, Louisiana** is seeking a Molecular Biologist, GS-11/12 (salary \$32,423 to \$38,861). Two year **POSTDOCTORAL POSITION** to develop an expression system to maximize the yield of a fungal acid phosphatase gene. Candidate must have knowledge of (1) molecular biology and skill in the use of recombinant DNA techniques, and (2) transformation of filamentous fungi and gene replacement. Ph.D. is required. For information on the research program and/or position, contact: **Dr. Edward Mullaney at 504-286-4364.** For information on application procedures/forms, contact: **Dawn Engstrom at 301-344-3377.** Applications in response to this advertisement should be marked S-2-036. Announcement is open until the position is filled. Mailing address: **USDA, ARS, SRRC, ATTN: E. Mullaney, P.O. Box 19687, New Orleans, LA 70179.** *An Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available in Fall 1992 at Duke University Medical Center, Section of Genetics to study signal transduction, proline isomerase function, and action of the immunosuppressants CsA, FK506, and rapamycin (*Science*, 253:905-909, 1991; *The New Biologist* 4:1-13, 1992). Experience with molecular biology, yeast genetics, immunology, or transgenic mice helpful. Ph.D. or M.D. required. Send letter of application, curriculum vitae, and have three letters of recommendation forwarded to: **Dr. Joseph Heitman, M.D., Ph.D., Section of Genetics and Department of Pharmacology, Box 3546, Duke University Medical Center, Durham, NC 27710 USA.**

**POSTDOCTORAL ASSOCIATE.** A position is available for an ambitious, integrative electrophysiologist trained in patch clamp technology to join a group studying glutamate receptors. Our work involves multidisciplinary approaches to understanding the roles of NMDA and AMPA receptors in neurologic disorders. Ongoing projects include functional studies of mutant recombinant receptors, and the functional and molecular characterization of native receptors in individual hippocampal neurons, all in the context of comprehending the cellular mechanisms of epileptogenesis and related disorders. Please forward curriculum vitae, names of three references, and a description of current research and professional goals to: **Dr. Ray Dingledine, Department of Pharmacology, Emory University School of Medicine, Rollins Research Center, Atlanta, GA 30322-3090.** *Emory University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study regulation of neuronal gene expression in models of CNS injury. Experience in signal transduction or molecular biology preferred. Salary \$27,000 to \$30,000, including health benefits. Send curriculum vitae, summary of research experience, and names of three references to:

**Dr. Michael Miles  
University of California at San Francisco  
San Francisco General Hospital  
Building 1, Room 101  
San Francisco, CA 94110**

*The University of California is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS in Molecular Endocrinology.** Applicants will participate in NIH-supported studies regarding the molecular regulation of insulin-like growth factor (IGF) and IGF binding protein gene expression and function. Experience with molecular techniques (PCR, RNA analysis, DNA cloning, cell transfection), and/or protein chemistry (purification and characterization) desired. Send curriculum vitae, reprints, references to: **Terry Unterman, M.D., Endocrine Division, Department of Medicine (M/C 787), University of Illinois at Chicago, P.O. Box 6998, Chicago, IL 60680.** *Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS** available for investigating molecular/biochemical and cellular aspects of gap junction structure/function. Applicants can choose to study gap junction roles in either cellular differentiation, carcinogenesis, or toxicology. Projects will include transfection of cells with various gap junction genes and characterizing the underlying mechanisms and function. Candidates must have prior experience in molecular biology techniques and/or protein biochemistry. Submit curriculum vitae and names of three or four references to:

**Dr. James E. Trosko  
Department of Pediatrics/Human Development  
Michigan State University  
East Lansing, MI 48824  
FAX: 517-353-8464**

**POSTDOCTORAL RESEARCH FELLOW** available January 1, 1993 to investigate the molecular basis of long-chain fatty acid transport across biological membranes. This work involves the use of *Escherichia coli* as a model system as many of the components that participate in this process have been defined at the protein and genetic levels. A Ph.D. (or equivalent) is required and experience in recombinant DNA technologies and protein chemistry is preferred. Interested individuals should send curriculum vitae and arrange to have at least two letters of recommendation attesting to their scientific abilities sent to: **Dr. Paul N. Black, Department of Biochemistry, University of Tennessee, College of Medicine, Suite G01 Molecular Sciences Building, Memphis, TN 38163.**

**RESEARCH ASSOCIATE or SENIOR POSTDOCTORAL FELLOW** with Ph.D. in Biochemistry; Microbiology of Pharmacology, experience in Molecular Biological Techniques, interest in the molecular actions of chemotherapeutic agents and mechanisms of drug resistance, required for project to identify genes responsible for resistance to platinum antigens or agents. Please refer all applications to: **Henry Simpkins, M.D., Ph.D., Professor and Chairman, Department of Pathology & Laboratory Medicine, TEMPLE UNIVERSITY SCHOOL OF MEDICINE, 3401 North Broad Street, Room 312-OPD, Philadelphia, PA 19140.** *An Equal Opportunity/Affirmative Action Employer, M/F/D/V.*

**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE.** Available from the Winter of 1992 for a recent graduate with a Ph.D. in molecular biology/cell biology interested in malignant transformation and cellular differentiation. Send curriculum vitae to: **Mark A. Israel, M.D., University of California, San Francisco Brain Tumor Research Center, HSE-722, 3rd and Parnassus Avenues, San Francisco, CA 94143-0520.** *Equal Opportunity/Affirmative Action Employer.*

**SCIENCE** recruitment ads reach thousands of scientists in all disciplines, worldwide. Classified Advertising telephone: 202-326-6555. FAX: 202-682-0816.

## Faculty Positions Department Of Biology

The NYU Department of Biology is undergoing a major program of expansion and development. Three positions are presently available (subject to budgetary approval), in the areas of molecular aspects of development or evolution, genetics and biochemistry. Outstanding candidates in other areas will also be considered. Two appointments will be made at the assistant professor level (tenure-track); one may be made to a tenured position. Candidates will be expected to establish an active, externally-funded research program and to participate in the department's teaching activities. Senior level appointments will be made to distinguished scientists with significant, funded research programs. Excellent start-up packages and newly renovated laboratory space are available. Application letter with curriculum vitae and names and addresses of three references should be sent to: **Chairman of the Search Committee, Department of Biology, New York University, Room 1009, Main Building, Washington Square, New York, New York 10003.** NYU encourages applications from women and members of minority groups.



## Inhalation Scientist

3M, a Fortune 50 Company, is seeking a qualified scientist to supervise the operation of an inhalation laboratory for the Pharmaceuticals Division.

3M Pharmaceuticals is recognized as a global leader in aerosol drug delivery and is committed to expanding this business. The new lab will function in both a research and development capacity as well as conducting GLP studies to support preclinical toxicology of new drugs. This position requires an in-depth working knowledge of applied inhalation toxicology. An advanced degree is not necessarily a prerequisite. Demonstration of initiative, creativity, hands-on inhalation experience, and excellent team participation skills are desirable.

3M offers an excellent salary and benefit package, and is located in the progressive Twin Cities metropolitan area with easy access to beautiful outdoor recreation activities.

No agency responses or telephone inquiries, please.

To be considered for this position, please submit your resume to:

**NAS Reply Service  
Dept. 9MP 22  
One Appletree Square  
Minneapolis, MN 55425**

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## TEST DEVELOPER

### THE CHALLENGE: Educational Testing In Science Fields

If the areas of Biological, Earth and Environmental sciences appeal to your career ambitions, here's a stimulating opportunity with the nation's recognized leader in educational testing and evaluation.

Your responsibilities in meeting the goals of ETS and its clients (including the College Board and federal government) are diverse and challenging. You will write, review and revise test questions, manage item pools in electronic and paper forms and assist in assembling tests, using a computer based system. Work may include a variety of mathematics-related activities, such as statistics and computer science.

To qualify, you must have a Masters degree in one of the specialties of biological sciences. A knowledge of science curriculum in grades 6-14 is preferred. A minimum of 2 years of relevant background, preferably teaching at the upper middle or secondary grade level, is necessary. Familiarity with microcomputers and computer software is highly desirable, as is education or experience in measurement or statistics. And, our candidate will also possess well-developed skills in communication, analytical and abstract reasoning, interpersonal relationships, and organizational ability.

ETS offers a stimulating and professional environment that's conducive to advancement, a competitive salary structure and excellent benefits. Please send resume and salary history to: **MS. P. MARKS**

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### Director Institute of Physical Research and Technology (IPRT) Iowa State University

Iowa State University is seeking candidates to fill the position of Director of the Institute for Physical Research and Technology (IPRT). The Director, who reports to the Provost, is responsible for administering a variety of centers and programs whose broad mission is to promote interdisciplinary research and technology transfer in the physical sciences and engineering. Responsibilities include coordination among the eleven IPRT centers and the Ames Laboratory (a contract agency funded by the U.S. Department of Energy), as well as coordination with programs administered elsewhere within the university. Among the centers administered by IPRT are the Center for Nondestructive Evaluation, the Center for Advanced Technology Development, and the Iowa Center for Emerging Manufacturing Technologies. The Director of IPRT appoints the directors of IPRT centers and consults with the Provost and President with respect to the appointment of the Ames Lab Director; conducts periodic evaluations of all IPRT programs and recommends their continuance or discontinuance; recommends the establishment of new centers; works with federal, state and private entities to secure funding for the centers; and recommends to the Provost strategies for the development of research and technology transfer related to the IPRT missions.

The successful candidate must possess the Ph.D. in a physical science, engineering or related field. Candidates should have at least three years experience in management of a research program that included several principal investigators, as well as experience with a variety of research funding sources and a record of individual research and scholarship equivalent to that of a senior professor.

Persons wishing to be considered for the position or wanting to nominate a candidate should write to:

Chair, IPRT Director Search Committee  
Office of the Provost  
Iowa State University  
107 Beardshear Hall  
Ames, Iowa 50011

Applications should include a letter, a complete curriculum vitae, and the names of five references. Review of applications will begin on October 15, 1992, and the position will be available January 1, 1993, or as soon thereafter as the successful candidate is available. Women and minorities are especially encouraged to apply.

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## POSITIONS OPEN

**POSTDOCTORAL RESEARCH OPPORTUNITY:** Available Now. Join a successful research program pursuing molecular mechanisms of CELL-SPECIFIC GENE EXPRESSION AND CELL GROWTH CONTROL. Transgenic technologies and *in vitro* approaches are currently employed. This position requires a strong background in molecular biology, biochemistry, and/or developmental biology, and a firm commitment to research. Send curriculum vitae and names of three references to: **Dr. Terry Van Dyke, University of Pittsburgh, Biological Sciences, 278 Crawford Hall, Pittsburgh, PA 15260 USA. Equal Opportunity Employer.**

**POSTDOCTORAL/RESEARCH ASSOCIATE.** Position is available to study the neurophysiology of subcortical pathways mediating ocular accommodation and vergence eye movements. Work involves behavioral and electrophysiological (single-unit) studies using trained primates. Excellent research environment. Contact: **Dr. L. Mays, Vision Science Research Center, University of Alabama at Birmingham, Birmingham, AL 35294. Equal Opportunity/Affirmative Action Employer. Telephone: 205-934-1158; FAX: 205-934-5725; INTERNET: optp014@uabdp.dpo.uab.edu**

### INVERTEBRATE HOST-PARASITE RELATIONSHIPS

**POSTDOCTORAL RESEARCH ASSOCIATE** supported by an NIH grant, to study basic cellular and molecular biology of defense molecules induced in invertebrate hosts following exposure to parasites. Experience with basic immunological and biochemical techniques required, experience with molecular cloning methods preferred. Submit curriculum vitae and names and addresses of three references to: **Dr. Eric S. Loker, Department of Biology, University of New Mexico, Albuquerque, NM 87131, USA. The University of New Mexico is an Affirmative Action/Equal Opportunity Employer.**

### POSTDOCTORAL RESEARCH ASSOCIATES

Positions available immediately to study the action of sedative-hypnotics and opioid analgesics. Applicants will join federally funded ongoing research project. Current studies include the use of molecular, pharmacological and biochemical techniques (e.g., receptor bindings, mRNA measurement, *in situ* hybridization, and autoradiography) in GABA<sub>A</sub> receptors. Previous experience in one or more of these techniques is preferred. Send curriculum vitae and two letters of reference to: **Dr. I. K. Ho, Department of Pharmacology and Toxicology, University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505. The University of Mississippi Medical Center is an Equal Opportunity Employer, M/F/D/V.**

**RESEARCH ASSOCIATE** with an M.D. or Ph.D. degree in Histology, or related field, at least two years of experience in histology, pathology, or related research. To carry out studies involving pathological lesions produced by different industrial chemicals, (insecticides, organophosphorus compounds) on various body tissues with more emphasis on the central and peripheral nervous systems.

Publication record evidencing ability to design and conduct research. Project involves animal treatment, tissue sampling and processing, "frozen or fixed" sectioning, staining by regular, special, and immunostaining, and evaluation for histopathological changes in different tissues.

Salary \$23,250, 40 hours, 8:30 a.m. to 5:00 p.m.  
Apply: **Employment Security Commission, 516 North Mangum Street, Durham, NC 27701** or your nearest Job Service Office. **Refer to Job order #3020113. Dot code 090,227-010. Applicants must include Social Security Number and state basis for permanent work authorization in the U.S.**

**ASSOCIATE RESEARCH SCIENTIST.** Position available immediately to conduct research on the molecular mechanisms of atherosclerosis. Applicant should have experience in studies of gene transcription, alternative splicing, transgenesis or site-directed mutagenesis. Send curriculum vitae and references to: **Dr. A. Tall, Division of Molecular Medicine, Department of Medicine, Columbia University, 630 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**BIOCHEMIST:** Full-time, tenure-track position available beginning Fall 1993. Ph.D. in biochemistry or related field required. Successful candidate is expected to teach courses in introductory chemistry and biochemistry. Instructional excellence is high priority and research is strongly encouraged. With an enrollment of 3600 students, Shepherd College, located on the banks of the Potomac River 65 miles from Washington and Baltimore, is a baccalaureate institution in the West Virginia State College System. Applications reviewed beginning December 1, 1992. Send résumé and arrange for at least three letters of recommendation to be sent to: **Dr. Eugene J. Volker, Chairman, Department of Physical Sciences, Shepherd College, Shepherdstown, WV 25443. Affirmative Action/Equal Employment Opportunity Employer.**

### PENN STATE UNIVERSITY BIOLOGY DEPARTMENT

We invite applications for a tenure-track position (appointment to be at any level) starting Fall, 1993. We seek a **DEVELOPMENTAL GENETICIST** whose research includes an evolutionary aspect. Significant research accomplishments and evidence of potential to establish a strong research program will be key considerations. Commitment to excellence in undergraduate and graduate teaching is essential. Send curriculum vitae, statement of research plans, and three letters of reference to: **Dr. Linda Maxson, Department of Biology, Box DG, Penn State University, University Park, PA 16802.** Applicant evaluation begins October 26, 1992 and will continue until the position is filled. *An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.*

The Department of Radiology at the University of California, San Francisco is seeking to fill two positions as **ASSISTANT RESEARCH PHYSICISTS.** The candidates will serve at the UCSF Radiologic Imaging Laboratory in South San Francisco and will participate in the development of Magnetic Resonance Imaging (MRI) pulse sequences, with emphasis in flow measurements. Candidates should have Ph.D. degree in Physics, Chemistry, or Engineering with formal training in NMR and two years of pre- or postdoctoral experience in NMR.

*The University of California is an Equal Opportunity/Affirmative Action Employer. Minority groups, women and handicapped individuals are encouraged to apply.* Send curriculum vitae and three letters of reference to: **David Kramer, Ph.D., Radiologic Imaging Laboratory, 400 Grandview Drive, South San Francisco, CA 94080.**

**RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER (RPSLMC),** The Molecular Cardiology Laboratory of the Cardiovascular Research Laboratories is seeking an individual with the discipline and accuracy of a **MEDICAL TECHNOLOGIST** and the enthusiasm of a researcher to deal with experimental design and constantly changing technology in the field of genetics and molecular biology. The technical supervisor will be responsible for the operation of the research laboratory, development and implementation of new tests for genetic and acquired cardiovascular diseases, and will supervise technical personnel in the performance and reporting of tests, cell cultures and experiments. This individual will participate in the design and performance of protocols for testing and day-to-day experiments. Must have ASCP certification, five to eight years of clinical and research laboratory experience in Cell and Molecular Biology, and computer skills in IBM/MS-DOS personal computer systems. Interested candidates should contact: **Dr. E. Rene Rodriguez, Section of Cardiology, Rush-Presbyterian-St. Luke's Medical Center, 1653 West Congress Parkway, Chicago, IL 60612 or call (312) 942-5254 or (312) 942-4263. RPSLMC is an Equal Opportunity Employer.**

**BIOLOGY POSITION:** Tenure-track position, beginning Fall 1993, with private liberal arts institution. Teaching emphasis in Microbiology and Anatomy/Physiology with kinesiology. Doctorate is preferred. Closing date for applications is December 15, 1992. Send letter of application, résumé, and reference letters to: **Dr. Gary E. Weedman, Vice President for Academic Affairs and Dean, Milligan College, Milligan College, TN 37682.**

## POSITIONS OPEN

**BIODIVERSITY AND TROPICAL FORESTRY STAFF SPECIALIST** (salary \$64,233 to \$83,502). USDA Forest Service, Forest Environment Research, Washington, DC, seeks Ph.D. in Biological Sciences including Ecology, Wildlife Biology, or Tropical Forestry, to provide leadership and coordination of national programs in biodiversity and tropical research. Formulates policies, research program objectives and budgets. Reviews and coordinates research programs of eight regional experiment stations. For vacancy announcement/application materials/additional information call: **Doug Ryan, 202-205-1524.**

### CHEMIST/BIOCHEMIST

Kemin Industries, Inc. a leading manufacturer of animal feed ingredients has an immediate opening in its research and development department for a **RESEARCH MANAGER.** The Research Manager will report directly to the Vice President of R & D, and will have principal responsibility for invention of new products in the area of enzyme additives to animal feeds. Major job functions also include assays, outside oral presentations and animal trials with associated travel and report writing. The successful candidate is required to have an advanced degree in biochemistry or an allied field. Experience in animal nutrition is helpful, but not required. Experience with enzyme kinetics, classical enzyme purification techniques and *in vitro* modeling is desired. Job offer is conditional on passing a medical examination including a drug screen. *Smoking is prohibited in all buildings. Kemin Industries is an Equal Opportunity Employer.* Please forward your résumé to: **Dr. C. E. Nelson, Vice President of Research and Development, P.O. Box 70, Des Moines, IA 50301.**

**MARINE ECOLOGIST** to supervise a staff of five to seven people, made up of ecologists, engineers, and technicians, responsible for evaluating the effects of development on the health and productivity of Texas Estuaries and Coastal Waters. Initiates studies and reviews studies having to do with determining the stability (health) of estuaries. This person represents the Department on large water diversion projects when there are likely to be detrimental impacts to coastal fish and wildlife. Salary not to exceed \$46,000 per year. Position is in Austin, Texas. Contact **512-389-4954** for additional information. Reference **Position Vacancy Announcement #1, Item #1.** Position closes October 13, 1992. *Equal Opportunity Employer.*

**TWO RESEARCH TECHNICIAN** positions available Fall 1992 in newly established laboratory at Duke University Medical Center (DUMC) that studies signal transduction and immunosuppressive drug action in yeast. B.A. or B.S. degree required, prior experience helpful but not essential. Apply to: **Dr. Joseph Heitman, Section of Genetics, Box 3546, 322 CARL Building, DUMC, Durham, NC 27710. Telephone: 919-681-5859.**

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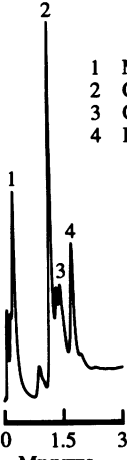
- Ability to critically analyze data and published literature.
- Ability to evaluate and prepare regulatory submissions.
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## IXth INTERNATIONAL CONFERENCE ON AIDS in affiliation with the IVth STD WORLD CONGRESS BERLIN, June 7-11, 1993



**Sponsors:** International AIDS Society, World Health Organization, Berliner Medizinische Gesellschaft and International Union against the Venereal Diseases and the Treponematoses.

**International Steering Committee:** A. Benslimane, M. Bianco, R. Burzynski, F. Deinhardt, K.-O. Habermehl, R. Jarchow, L. Kallings, L. Kaptué, Y. Kouri, A. N. Malaviya, J. Mann, M. H. Merson, P. Piot, G. B. Rossi, J. Ruitenber, Y. Shiokawa, W. Sittitai, P. A. Volberding. Satellite symposia will be held by the World Health Organization, various scientific societies and committees. In addition there will be a non-profit exhibition organized by a nongovernmental organization, and a large-scale industrial exhibition.

### Topics

**Basic Science:** Replication; regulatory proteins; cytokines; pathogenesis; therapy; resistance; animal models; vaccines; diagnosis; animal lentiviruses and other human retroviruses; bacteria and other STD agents.

**Clinical Science and Care:** Course of infection and disease; opportunistic and other infections (diagnosis, therapy and prophylaxis); oncology; organ systems; HIV specific therapies (combination therapy, resistance); care; issues of methodology and quality assurance.

**Epidemiology and Prevention:** Geographic distribution and patterns of spread of HIV and other retroviral infections; distribution, patterns of spread and prevention in populations at risk; prevention (methods and results); methodological issues; role of STDs as cofactors for HIV infection.

**The Social Response:** Behaviour and behaviour change; individual and institutional response; societal response; response of the social sciences; problems and activities of developing countries, NGOs and other groups.

**Chairman:** K.-O. Habermehl, Berlin;

**Congress Secretariat:** Inst. for Clin. & Exper. Virology, Free Univ. of Berlin, Hindenburgdamm 27, D-1000 Berlin 45  
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### Important Date

January 15, 1993: Deadline for submission of abstracts





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420315 **KT5720**

## Protein Kinase A Activators

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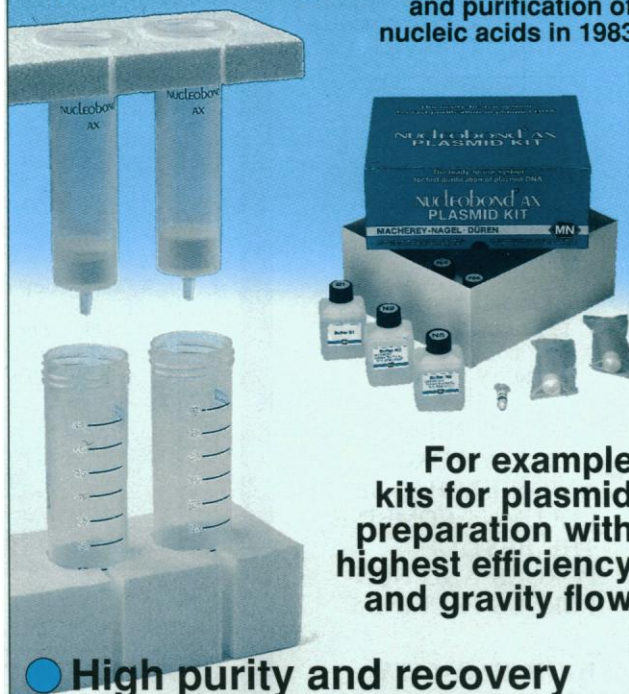
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## POSITIONS OPEN

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Application letter, curriculum vitae, and names of three references to: **Dr. Eliot Spindel, Division of Neuroscience, Oregon Regional Primate Research Center, 505 NW 185th Avenue, Beaverton, OR 97006. Affirmative Action/Equal Opportunity Employer.**

### RESEARCH SCIENTIST-BIOCHEMISTRY

**Energy BioSystems Corporation (EBC)** is a young biotechnology company involved in the development of innovative bioprocess technology for the fossil fuel industry. We are looking for a research scientist to prepare and conduct experiments related to the enzymology of microbial desulfurization. In particular, this position will involve the characterization and development of microemulsion and non-aqueous systems for the biotransformation of petroleum intermediates. This position requires a Ph.D. in Biochemistry (or its equivalent) along with experience with enzyme purification and characterization, and with biocatalysis in non-aqueous and 2-phase systems.

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## ANNOUNCEMENTS

**The Hebrew University of Jerusalem  
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### POSTDOCTORAL FELLOWSHIPS

• The Hebrew University of Jerusalem invites applicants for the Golda Meir and other Postdoctoral Fellowships in Humanities, Social Sciences, Natural and Applied Sciences, Agriculture and Medicine for the 1992-93 academic year.

• Candidates may apply at an early stage of their professional career (not later than three years after completion of their doctoral dissertation).

• The fellowships are tenable for one academic year and may be extended for another year. The fellowship provides a 12-month stipend (with COL adjustments), rent allowance and return ticket to Israel.

• Application forms can be obtained from the **University Grants Office, P.O. Box 1255, Jerusalem 91904, Israel.**

Completed application forms must be returned by December 1, 1992.

### 1993 SUMMER FELLOWSHIPS MOUNT DESERT ISLAND BIOLOGICAL LABORATORY

The Mount Desert Island Biological Laboratory (MDIBL), an internationally renowned marine facility for biomedical and comparative physiological research, invites applications for fellowships in the following categories.

• *Young Investigator Fellowships*, sponsored by an NSF-EPSCoR grant and privately donated fellowship funds, are for scientists with a doctorate and evidence of independent research. Fellowship amount is based on individual needs and can include a stipend, laboratory space, housing, and funds for supplies and travel.

• *Undergraduate Student-Faculty Fellowships* supported by the Pew Charitable Trusts, Burroughs-Wellcome and the Grass Foundation are available for student/faculty pairs with the following qualifications: (1) undergraduate students with a minimum of 1 year of both biology and chemistry; (2) faculty members with Ph.D. actively teaching biology at the undergraduate level. A few individual student or faculty awards may be made. Awardees may work from 1 to 4 months at MDIBL with senior scientists or, in the case of faculty or student/faculty pairs, may choose to work independently. Funding provided for housing, travel, research costs and a stipend; maximum faculty award is \$14,000 with up to \$6,000 stipend; maximum student award is \$7,000 with up to \$2,600 stipend.

Applications may be obtained by calling the office at 207-288-3606 or writing to: MDIBL, P.O. Box 35, Salsbury Cove, ME 04672.

*Young Investigator* applicants write to **Department YIF**. Deadline for completed applications is 8 January 1993.

*Undergraduate Student-Faculty* applicants write to: **Department USEF**. Deadline for completed applications is 7 December 1992.

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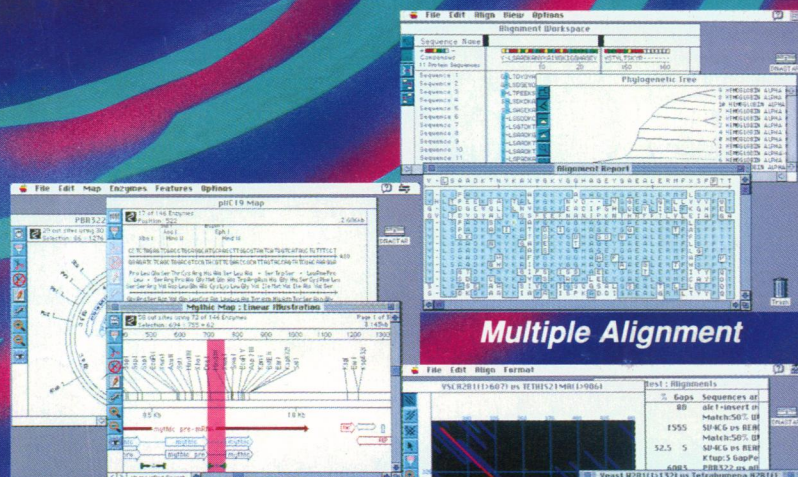
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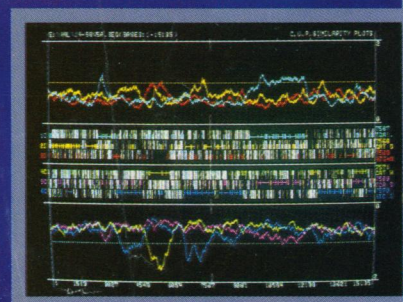
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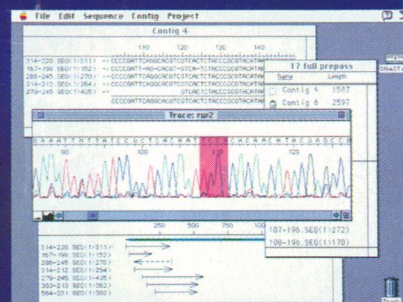
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Restriction Analysis

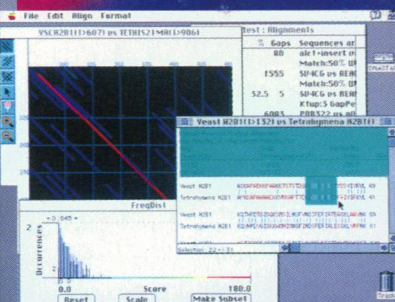


Gene Finding

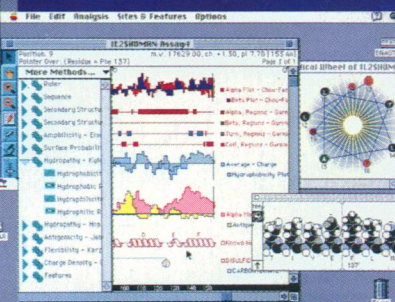


Sequencing

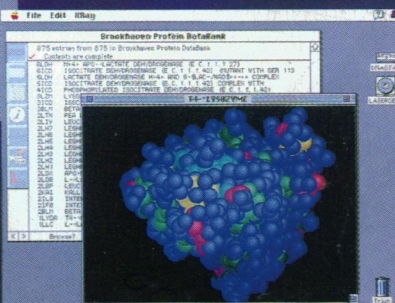
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Similarity & Alignment



Protein Analysis



Protein Structure

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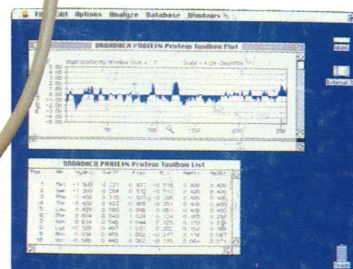
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3T. GTCATAGTC

GTGGTCATAGGTCCAGGAGCGGAATTTGAGGGTGCAAGTTCTGC

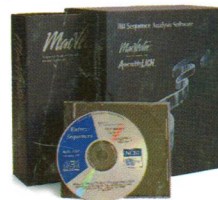
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