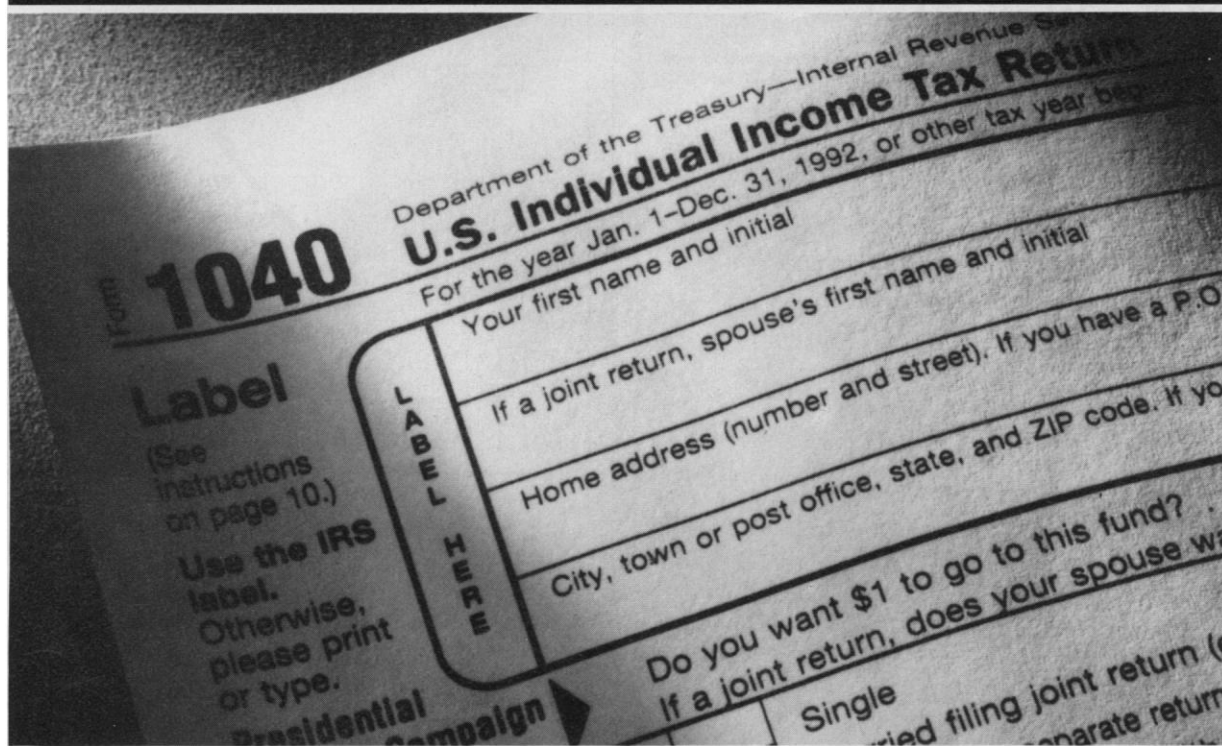


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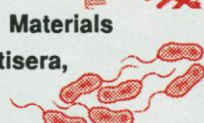
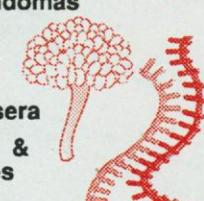
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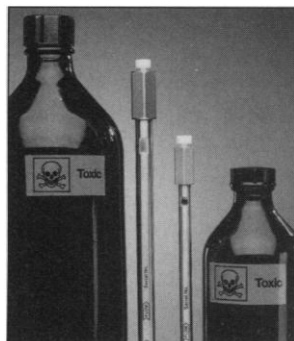
The 3UV Transilluminator allows researchers to switch among the three most commonly used ultraviolet (UV) wavelengths in one unit: shortwave 254 nm, midrange 302 nm, and longwave 365 nm. The unit is especially useful in electrophoresis ethidium bromide-stained gel viewing.



The researcher can view the gel under longwave UV for extended periods of time where no photo damage or nicking occurs and then dial to the midrange UV to increase the fluorescence for photodocumentation work. **UVP. Circle 91.**

## Narrow Bore GPC Columns

PLgel MiniMIX gel permeation chromatography (GPC) columns offer a range of narrow bore sizes for decreased solvent consumption, reduced solvent disposal costs, and reduced risks from use of hazardous solvents. The columns are designed for use at flow rates of 0.2 to 0.3 liter/min, resulting in a reduction in solvent consumption of up to 70% compared with regular columns. The columns are designed for specific applications, such as for general-purpose molecular weight distri-



butions, ultrahigh molecular weight polyethylenes, or low molecular weight oligomers. **Polymer Lab. Circle 92.**

## Cycle Sequencing Kit

With the SequiTherm Cycle Sequencing Kit, template preparation is quick and simple because amplification products, colony-purified plasmids, cosmids, and other double-stranded DNAs can be sequenced without subcloning into single-stranded sequencing vectors. Sequencing is sensitive because the signal is linearly amplified during 30 rounds of DNA synthesis. In many cases, as little as 5 fmol of template DNA is sufficient. Artifacts caused by secondary structure during synthesis and electrophoresis are reduced by the high reaction temperature possible with SequiTherm Thermostable DNA Polymerase and the presence of 7-deaza-dGTP in the reaction mixes. **Epicentre Technologies. Circle 93.**

## Laptop Reagents Cooler

The NALGENE Laptop cooler and Laptop cooler Jr. provide a convenient alternative for keeping polymerase chain reaction reagents, enzymes, and other biochemical reagents cool while they are being used. Both products will maintain enzymes between  $-15^{\circ}\text{C}$  and  $-20^{\circ}\text{C}$  during room temperature use for up to 2 hours. They will also protect enzymes from temperature fluctuations, power outages, and system failures when used in a freezer. Molded of break-resistant polycarbonate and pre-filled with a nontoxic insulating gel, the Laptop cooler holds 32 1.5-ml microtubes. The Laptop cooler Jr. holds 12 1.5-ml micro-

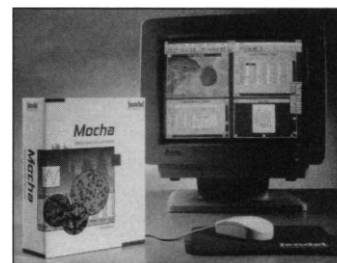
tubes. Individual holes can be modified to hold 0.5-ml tubes by inserting adapters included with each cooler. **Nalge Co.—A Subsidiary of Sybron Corp. Circle 94.**

## DNA Extractor Kit

The Wako DNA Extractor Kit features a new extraction procedure for DNA purification from biological fluids and biopharmaceutical samples. The procedure makes use of sodium iodide as a chaotropic agent, an anionic detergent, and isopropanol to coprecipitate nucleic acids with a polysaccharide carrier, glycogen. Unlike traditional procedures for the detection and measurement of DNA in fluids that make use of proteinase K digestion in the presence of SDS followed by organic solvent extractions, the new procedure involves no toxic solvents such as phenol and chloroform. **Wako BioProducts, Wako Chemicals USA. Circle 95.**

## Image Analysis Software

Mocha, a new image analysis system for Windows 3.1, features integrated image processing and measurement, image annotation tools, a scientific data worksheet with transform language, and data plotting. Mocha supports analysis of both color and monochrome images from frame grabbers, scanners, and disk and can import image files in a variety of formats. Mocha does not require a frame grabber to process stored images. Researchers are therefore able to acquire images from core facility instruments, scanners, or off-site systems and use their own personal computers for image analysis. This feature can be particularly convenient for working with scanned images of electrophore-



sis gels or from instruments that save images in standard digital formats. The program runs on IBM-compatible personal computers (386 or higher) and requires 4 megabytes of random access memory, at least 10 megabytes of free disk space, a bi-directional printer port, one 256-color video graphics array monitor with a minimum 640 by 480 pixel resolution, and a Microsoft-compatible mouse. **Jandel Scientific. Circle 96.**

## Literature

1993-94 *Scientific Supplies Catalog* features a complete line of supplies and services for mass spectrometers, gas chromatographs, vacuum systems, and accessories for related instruments. **Scientific Instrument Services. Circle 97.**

*A Users Guide to Gel Permeation Chromatography* demystifies this process for the separation of molecules based on their hydrodynamic volume or effective molecular size in solution. **Phenomenex. Circle 98.**

*Articulated ArmRest* is a technical data sheet that describes an accessory to a line of vibration isolation tables that allows users to delicately manipulate instruments in comfort without agitating the isolated surface. **Technical Manufacturing Corp. Circle 99.**

*Your Guide for Evolving Cell Culture Needs* highlights a broad range of reagents and includes information on growth factors and cytokines as well as applications and references. **Intergen. Circle 100.**

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Abstract deadline, July 12, 1993.  
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For additional information, contact: Judy Kass, Project Director, American Association for the Advancement of Science, 1333 H Street, NW, Washington, DC, 20005, telephone (202) 326-6667 or fax (202) 371-9849.

Deadline for nominations is 1 August 1993.

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**NEUROLOGIST/NEUROSCIENTIST.** The Department of Neurology and Neurological Sciences at Stanford University School of Medicine is searching for a faculty member at the **ASSISTANT PROFESSOR** level in the University Faculty Line. The successful candidate will be a board certified or eligible neurologist who can participate in the clinical and teaching programs of the department, and who can also develop an independently funded program of basic research in neuroscience. The research interests of current faculty include cellular and clinical neurophysiology, epilepsy, stroke, neurochemistry and neuroimmunology. *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.* Applications and nominations should be directed to: **Les Dorfman, M.D., Professor and Acting Chairman, Department of Neurology and Neurological Sciences, Room H3160, Stanford University Medical Center, Stanford, CA 94305-5235.**

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Applicants should send curriculum vitae, a statement of teaching and research interests and the names of three references to: **Professor Catherine Koshland, School of Public Health, University of California, Berkeley, CA 94720**, by the closing date of July 1, 1993. Anticipated appointment date is July 1, 1994.

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## POSITIONS OPEN

### ANATOMIST

The Department of Anatomy in the Faculty of Medicine at the University of British Columbia (UBC) invites applications for a tenure-track faculty position. Appointment will be at the **ASSISTANT PROFESSOR** level.

Candidates must have a Ph.D., M.D., or equivalent with at least two years of postdoctoral experience. Applicants must have an independent research program and will be expected to qualify for research support from external granting agencies. Current research programs of the Department are focused in the areas of Cellular and Developmental Biology, Neurobiology, Muscle Biology, and Cancer Biology. We are particularly interested in individuals who employ molecular biological approaches in research areas complementary to those of the department. Applicants must be qualified to teach Anatomy to medical and dental students and to participate in graduate student teaching. Salary is dependent on qualifications and experience. The anticipated starting date is July 1, 1994, or sooner. The deadline for application is August 31, 1993, or until such time as a suitable candidate is identified.

Applications, including curriculum vitae, selected reprints, a statement of research interests, and the names of three academic referees should be sent to: **Dr. J. T. Emerman, Chair, Search Committee, Department of Anatomy, The University of British Columbia, 2177 Wesbrook Mall, Vancouver, B.C., Canada V6T 1Z3.** *In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. UBC welcomes all qualified applicants, especially women, aboriginal people, visible minorities and persons with disabilities.*

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Send curriculum vitae, short synopsis of research interests, a list of publications, summary of current research support, and names of three references including addresses and telephone numbers by June 4, 1993, to: **Dr. Judith Campisi, c/o Lawrence Berkeley Laboratory, Staffing Office, One Cyclotron Road, Building 90/1042, Berkeley, CA 94720. An Equal Opportunity Employer.**

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## POSITIONS OPEN

**VERTEBRATE PHYSIOLOGY.** University of Central Oklahoma. **ASSISTANT PROFESSOR.** Full-time appointment effective August 23, 1993. Requires Ph.D. in Vertebrate Physiology or related field. Previous higher-ed teaching experience preferred. Demonstrated commitment to teaching excellence expected. Teach Human Physiology, Comparative Animal Physiology, Mammalian and/or Physiological Ecology and non-majors' General Biology. Develop active research program in ecological or environmental microbiology; direct Master's research. Salary and rank commensurate with degrees and experience. Submit application letter, résumé, official transcripts and three letters of recommendation to: **Dr. G. Kay Owens, Dean, College of Math & Science, University of Central Oklahoma, Edmond, OK 73034. POSTMARKED APPLICATION DEADLINE: May 28, 1993. Affirmative Action/Equal Opportunity Employer.**

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Applicants are invited to send curriculum vitae to:

**Anthony P. Monaco, M.D., Professor of Surgery  
Chair, Search Committee  
New England Deaconess Hospital  
194 Pilgrim Road  
Boston, MA 02215**

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**BIOLOGY: ASSISTANT PROFESSOR, TENURE-TRACK.** Ph.D. plus teaching experience. To teach undergraduate courses (such as General Biology, Microbiology, and Genetics) and one graduate course in a related area. One-quarter release time granted to develop a funded research program and involve students in the effort. Starting date: late August 1993. Screening will begin immediately and continue until the position is filled. Send application letter, curriculum vitae, statement of teaching philosophy, copy of transcript and three letters of recommendation to: **Neal Osborn, Ph.D., Chair, Biology Search and Screen Committee, University of Southern Colorado, 2200 Bonforte Boulevard, Pueblo, CO 81001; Telephone: (719) 549-2270, FAX: (719) 549-2732. Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### AUDITORY RESEARCH SCIENTIST

The Division of Pediatric Otolaryngology of The Children's Hospital of Philadelphia is seeking a scientist with interests in auditory development or recovery, with research experience using molecular, biochemical, anatomical or physiological techniques. A tenure-track appointment is anticipated at the **ASSISTANT or ASSOCIATE PROFESSOR** level at the University of Pennsylvania School of Medicine. Interested persons should submit curriculum vitae, names of three references and a one-page summary of research goals to: **Roger R. Marsh, Ph.D., Pediatric Otolaryngology, Children's Hospital of Philadelphia, 3400 Civic Center Boulevard, Philadelphia, PA 19104. The University of Pennsylvania is an Equal Opportunity, Affirmative Action Employer.**

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### PROGRAM DIRECTOR

The Texas Water Commission (TWC) will appoint a Director for the Corpus Christi Bay National Estuary Program. The Director will oversee the development of a Comprehensive Conservation and Management Plan, and must be able to successfully coordinate program activities among local, state, and federal entities with research and regulatory interests in the study area. The project duration is five years. **Minimum Qualifications:** Must have extensive experience in environmental planning and natural resources management. Must possess technical writing, public speaking, supervisory and management skills, and experience and knowledge of federal grant programs. B.S. degree in biological/environmental sciences or planning or relevant field required, M.S. or Ph.D. in relevant field preferred. Salary: \$4,500 per month. Send résumé and 3 references by June 1, 1993, to: **Terri Buchanan, Environmental Assessments Division, TWC, P.O. Box 13087, Austin, TX 78711-3087. Equal Employment Opportunity/Affirmative Action/ADA Employer.**

## POSITIONS OPEN

### DIRECTOR CENTER FOR CLINICAL NUTRITION UNIVERSITY OF WISCONSIN-MADISON

The Medical School of the University of Wisconsin-Madison is expanding its efforts in nutrition education and nutrition research through the formation of a new Center for Clinical Nutrition. The successful applicant for the position of Director will have a strong interest in nutrition education within the Medical School curriculum, an active basic and/or clinical research program, leadership qualities, a desire to participate in clinical practice, and a desire to coordinate and expand existing clinical nutrition activities on the Madison campus. Research experience in the nutritional aspects of cardiovascular disease, obesity, cancer, or aging is particularly relevant, but all areas will be considered. The successful applicant will be appointed in the Medical School and in the Department of Nutritional Sciences at UW-Madison, at the associate or full professor level. Early- and mid-career physician-scientists with appropriate interests and accomplishments are encouraged to apply. *Applications from women and minorities are especially encouraged.*

Apply by letter with curriculum vitae and names of three references to: **J. W. Suttie, Chair, Search Committee, c/o Margie Martin, 1205 Medical Sciences Center, 1300 University Avenue, Madison, WI 53706.** The deadline for applications is June 30, 1993. Unless confidentiality is requested in writing, information regarding applicants must be released upon request. Finalists cannot be guaranteed confidentiality. *The UW-Madison is an Affirmative Action/Equal Opportunity Employer.*

### BIOLOGY DEPARTMENT HEAD

Utah State University is reopening its search for a Biology Department Head. The successful candidate must have a Ph.D. in a relevant field, leadership abilities, a record of accomplishment in academic teaching and research, and must be tenurable at the full professor level. This person is expected to provide intellectual and administrative leadership for 47 faculty with diverse research interests in the ecological, organismal, and molecular aspects of biology. The department has major teaching responsibilities for 500 undergraduate majors and 80 graduate students. The Department Head will be responsible for faculty/staff personnel affairs, budget management, and coordination of research programs with other campus units including the Utah Agricultural Experiment Station, Extension Services, Ecology Center, and Biotechnology Center. Candidates must submit curriculum vitae, a statement of career goals, and names, addresses, and telephone numbers of at least three individuals who will serve as references to: **Dr. Jon Takemoto, Chair, Search Committee, Department of Biology, Utah State University, Logan, UT 84322-5305. Telephone: (801) 750-1770, FAX: (801) 750-1575.** Screening of applicants will begin August 15, 1993, and will continue until a final candidate is identified. *Utah State University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

### THE HEBREW UNIVERSITY HADASSAH MEDICAL SCHOOL Jerusalem, Israel FACULTY POSITIONS

Applications for the following positions are invited:

I. Tenure-track faculty positions in basic medical sciences with preference to candidates who utilize modern molecule/cellular approach in microbiology, human genetics, biochemistry, cell biology, developmental biology, or pharmaceutical sciences.

II. A tenure-track position in physiology with a preference to a candidate who utilizes a cellular/molecular approach in either cardiovascular, renal, pulmonary or digestive system physiology.

III. Ph.D. or M.D. degree and postdoctoral training are required. Excellence in research and teaching will be of prime importance in the decisions of the search committee. Candidates are expected to develop independent research. Curriculum vitae, list of publications, 3 to 5 selected reprints, research plans and three letters of recommendation addressed to: **Dean Prof. O. Abramsky, should reach the office of: Dean, (P.O.B. 1172, 91010 Jerusalem, Israel) not later than September 30, 1993.**

## Call For Abstracts

# First Year Clinical Residents Are Invited To Attend The Research Festival At The National Institutes Of Health.

The NIH Research Festival is the annual scientific meeting for physicians and scientists on the intramural campus in Bethesda, Maryland. Last fall in nearly 70 symposia, workshops, and poster sessions, over 600 papers were presented by NIH scientists working in the basic and clinical biomedical sciences. The major symposia and workshops included, among others, Dopamine: Molecules, Membranes, Movement and Mind; Transgenic Animals in the Study and Treatment of Human Disease; The Extracellular Matrix in Development and Pathology; Structural Biology; Signal Transduction and Cell Growth Regulation, Image Processing—Molecular, Cellular, and Clinical Aspects; Genome Mapping and Sequencing, Transgenic Systems, Chromatin Structure and Gene Expression; Homeobox Genes in Development; and Genetic Approaches to Cancer Treatment.

As part of this year's program the NIH will recognize the contributions of young physician scientists in training—

the academicians of the next century. Residents who are currently in their first postgraduate year of US clinical training in a categorical specialty (second year beginning July 1993), will be invited to participate in the NIH Research Festival from Sunday, September 19, 1993 through Tuesday, September 21, 1993. Residents will have an opportunity to present their work in poster sessions at the meeting, and expenses will be covered. In addition, five residents who have distinguished themselves by exemplary contributions will receive the Research Award for Clinical Trainees.

The NIH is calling for abstracts from residents who wish to participate. Abstracts may be of research in any biomedical discipline completed during residency or as a medical or graduate student. One 5" by 7" abstract per candidate will be accepted. Please submit abstracts on a 3 1/2" diskette and include a printed copy. Label the diskette with the resident's name, type of computer and word processing program. The

abstract should be accompanied by a cover letter describing training and career plans, *curriculum vitae*, bibliography, and three letters of recommendation from those familiar with the resident's professional development.

The NIH will also recognize residents currently in their first year of training who are interested in academic medicine and have distinguished themselves clinically but perhaps have not participated in a research program. This year, medical or pediatric residents with a special interest in Allergy and Immunology or Infectious Diseases are invited to apply. Except for submitting an abstract, the application process is the same as above. Applicants should send their materials to Dr. Michael Fordis, Director of the NIH Office of Education, Residents Award Program, Building 10, Room 1C129, Bethesda, MD 20892. Phone: 301-496-2427. Deadline for receipt is June 25, 1993.



## National Institutes Of Health

9000 Rockville Pike, Bethesda, MD 20892

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## INDIANA UNIVERSITY

### BIOLOGICAL REGULATION BY PROTEIN MODIFICATION

Indiana Molecular Biology Symposium VII  
Presented by the  
Indiana Institute for Molecular and Cellular Biology  
October 21-24, 1993

#### Structure of the CAMP Dependent Protein Kinase

Susan Taylor, University of California, San Diego

#### Enzyme Regulation

Peter Roach, David Barford, Simon J. Pilakis, David LaPorte

#### Kinases and Substrates in Cell Regulation

Anna DePaoli-Roach, James L. Maller, Mark Goebel

#### Regulation of Transcription/Translation

Andrew Wright, Roger Kornberg, Beverly Errede, Ron Wek

#### Signal Transduction

Alexandra Newton, Nicholas Tonks, John D. Scott, Ernie G. Peralta

#### Neurobiology/Behavior

Joseph Farley, Arthur Brown, Mary Kennedy, Ching Kung

Sponsored in part by the  
Indiana Business Modernization and  
Technology Corporation

Registration Information: Rhea Freeman, Indiana Institute  
for Molecular and Cellular Biology, Jordan Hall 322A,  
Indiana University, Bloomington, IN 47405.  
Phone: 812-855-4183.

## FORMULATION / DELIVERY SCIENTIST

*Miles Inc. has an opening for a Senior Research Scientist with experience in formulation and delivery of mammalian glycoproteins.*

#### Responsibilities include:

- ◆ Protein stability estimation via biophysical techniques, viz. FTIR, DSC, CD, etc.
- ◆ Evaluation of novel delivery modalities for drug targeting (e.g. nasal, oral, etc.)
- ◆ Implementation of drug delivery options under CGMP environment.

A Ph.D. in an appropriate discipline with a minimum of 4 years of experience in formulation/delivery of proteins is required. Miles Inc. offers attractive compensation and generous benefits. Send resume and salary history to JoAnn McHugh, Miles Inc., 4th & Parker Sts., P.O. Box 1986, Berkeley, CA 94701

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Pharmaceutical Division  
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## MOLECULAR BIOLOGIST/IMMUNOLOGIST

Ph.D. or M.D. needed with experience in DNA cloning, sequencing, in vivo and in vitro footprinting, and identification and characterization of transcription factors important for regulating T cell development with knowledge of thymic development and selection, and MHC class I and T cell receptor gene regulation in particular  $\gamma\delta$  TCR. Experience in cell cloning, mammalian gene expression and transgenic mice are required.

Salary commensurate with experience (\$28,000 - \$36,000).

Qualified and interested candidates should send curriculum vitae and names and addresses of three references to:

**John E. Coligan, Ph.D.**  
Chief, Biological Resources Branch  
NIAID, NIH  
Building 4, Room 413  
9000 Rockville Pike  
Bethesda, MD 20892  
(301) 496-3213 phone  
(301) 402-0284 fax



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### LADY DAVIS INSTITUTE FOR MEDICAL RESEARCH



### RESEARCH OPPORTUNITIES IN ONCOLOGY

Research opportunities are available for predoctoral and postdoctoral training in the areas of biochemistry and molecular biology of cancer, endocrinology and hematopoiesis. The newly expanded Lady Davis Institute has approximately 100,000 sq. ft.

#### RESEARCH INTERESTS

##### GERALD BATIST, M.D. (McGILL)

##### DEPTS. OF ONCOLOGY AND MEDICINE

Elucidation of glutathione S transferase related detoxification pathways in chemotherapy resistance; pre-clinical and early phase clinical trials.

##### JOHN HISCOTT, Ph.D. (NEW YORK)

##### DEPTS. OF MICROBIOLOGY & IMMUNOLOGY AND ONCOLOGY

Transcriptional control of cytokine and oncogene expression, human retrovirus leukemogenesis and pathogenesis.

##### STEPHEN KARP, M.D. (McGILL)

##### DEPTS. OF ONCOLOGY AND SURGERY

Tumour immunology and gene therapy of cancer.

##### SHULAMIT KATZAV, Ph.D. (REHOVOT)

##### DEPTS. OF ONCOLOGY AND MEDICINE

The role of vav, a novel human oncogene, in transformation and signal transduction in hematopoietic cells.

##### ANTONIS KOROMILAS, Ph.D. (ARISTOTELIAN)

##### DEPT. OF ONCOLOGY

The role of the interferon inducible p68 kinase in cell growth, differentiation and tumorigenesis.

##### WILSON MILLER, M.D. (CORNELL) Ph.D. (ROCKEFELLER)

##### DEPT. OF ONCOLOGY

Molecular mechanisms of retinoid induced tumor differentiation in acute promyelocytic leukemia and other malignancies.

##### LAWRENCE PANASCI, M.D. (GEORGETOWN)

##### DEPT. OF ONCOLOGY

Molecular mechanisms of nitrogen mustard/chloroethylnitrosourea drug resistance.

##### MICHAEL POLLAK, M.D. (McGILL)

##### DEPTS. OF ONCOLOGY AND MEDICINE

Peptide growth factors and malignancy; non-cytotoxic cancer therapies.

##### SIU POK YEE, Ph.D. (McMASTER)

##### DEPT. OF ONCOLOGY

Regulation of the myoD gene family during mouse embryogenesis.

3755

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#### Dr. John Hiscott

Molecular Oncology  
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for Medical Research

3755 Côte Ste. Catherine Road

Montréal (Québec)

CANADA H3T 1E2



# **ANNOUNCEMENT: AVAILABILITY OF GRANTS FOR BASIC GLYCOSCIENCE STUDIES**

**Mizutani Foundation for Glycoscience** announces the availability of research grants for basic researches in glycoscience. The suggested proposals for this year are the studies of glycoconjugates; namely, their biochemistry, organic chemistry, biophysics, molecular biology, immunology, and medical significance.

Mizutani Foundation for Glycoscience is a non-profit, private organization devoted for the advancement of glycoscience. The foundation was established on October 1, 1992 with the funds donated by Mr. Masakane Mizutani, Chairman of Seikagaku (Biochemical) Corporation, Tokyo, Japan.

Note 1: For the current year (4/93–3/94) the research “year” is effective only from October 93 through March 94, a 6-month period in total.

**Qualification:** An applicant must (a) have a Ph.D. or M.D. degree, or their equivalent, in a field related to the proposed study, (b) be a member of a research institute where he or she can carry out the proposed project, and (c) have a documented capability to do independent research in the field of glycoscience.

**Grant:** As much as 10,000,000 yen (including overhead) may be requested for a research proposal per annum. As a rule, the grant will be approved for one (1) year, but certain proposals, depending on the merit of ongoing research, may be granted a further one year extension, provided application for such extension is made before the end of the ongoing funding period.

Please see Note 1 above for definition of current year.

The total money available for the grant is approximately 100,000,000 yen per annum. However, the cash to be allocated for new research proposals and the number of proposals to be funded may vary each year.

The approved grant will be awarded to the research institution to which the principal investigator is affiliated. No budget will be included in the grant for the stipend of the principal investigator or collaborators. There are certain other regulations as specified in the application form.

**Selection:** The research proposals will be reviewed and evaluated by the committee of specialists appointed by the foundation for the originality, scientific merit, and feasibility. The potentiality of the principal investigator and the research environment will also be considered.

**Application form:** The official application form may be obtained by sending a letter or fax (in English, no phone call please) to **the North American office of Mizutani Foundation for Glycoscience:** Department of Biochemistry, Meharry Medical College, 1005 David Todd Jr. Blvd., Nashville, TN 37208, USA (Fax: 615-327-6442).

**Deadline:** The deadline for application is June 30, 1993 at **the Tokyo office of Mizutani Foundation for Glycoscience:** Sen-i Kaikan, Suite 5F, 3-1-11 Nihonbashi-honcho, Chuo-ku, Tokyo 103, Japan (Fax: 03-3246-1265).

## POSITIONS OPEN

The University of Wisconsin Medical School is seeking candidates for the position of **ASSOCIATE DEAN**. This position will serve as a senior faculty advisor to the Dean and will have responsibilities within the areas of multicultural issues and initiatives, student affairs, academic programs, budget development, and long-range planning, including the development of multicultural programs and curriculum for students, and programs to enhance recruitment and retention of minority faculty, staff and students.

The successful candidate will possess proven leadership ability, creativity, and a commitment to advancement of cultural diversity. Candidates must have academic credentials to qualify for the rank of associate professor or full professor on the tenure track or the Clinical Health Science (CHS) track, in an academic department of the Medical School. Approximately 50 to 80 percent of the time will be devoted to Medical School administration. Faculty rank and salary will be commensurate with experience and qualifications. *Applications from minorities and women are especially encouraged.*

Applicants should send a letter of application, detailed curriculum vitae, and names, addresses and telephone numbers of three references to: **Carl J. Getto, M.D., Chair, Associate Dean Search and Screen Committee, University of Wisconsin Medical School, Room 1205 Medical Sciences Center, 1300 University Avenue, Madison, WI 53706.** The deadline for application is July 30, 1993.

Unless confidentiality is requested in writing, information regarding applicants must be released upon request. Finalists cannot be guaranteed confidentiality. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

**BIOLOGICAL SCIENCE FACULTY:** Full-time, academic year (9-month), tenure-track position commencing August 15, 1993. The person hired will be responsible for teaching Animal Physiology and should be capable of teaching Introductory Zoology. In addition, the person should have the interest and background to teach at least two of the following: Embryology, Ichthyology, Invertebrate Zoology, Entomology, Aquatic Entomology, Pathophysiology, and/or Genetics. Candidates must have a Ph.D. in one of the biological sciences and be committed to teaching in a quality undergraduate program. Demonstrated ability and interest in undergraduate teaching, advising, and in directing and guiding undergraduate research is essential.

Submit a letter of application, detailed curriculum vitae, and three letters of reference to: **Office of Employee Relations, Administration Building, LAKE SUPERIOR STATE UNIVERSITY, Sault Ste. Marie, MI 49783.**

**APPLICATION DEADLINE: MAY 28, 1993**

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

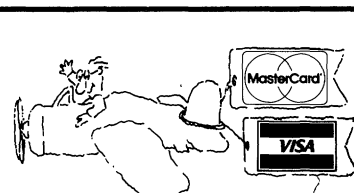
**NMR SPECTROSCOPY.** The University of Massachusetts at Amherst invites applications for a tenure-track **FACULTY POSITION** in NMR spectroscopy. Appointments will be considered at any level and in any of three departments: Biochemistry and Molecular Biology, Chemistry, or Polymer Science and Engineering, depending on the interests of the candidate. It is anticipated that the successful candidate will develop an active research program in the application of NMR methods to problems of structure and dynamics of macromolecules of natural or synthetic origin. Vigorous participation in the teaching activities of the chemical sciences community on campus is also expected. Salary is commensurate with qualifications and experience. Please send a résumé, a brief statement of teaching and research interests, and three letters of recommendation to: **David A. Tirrell, Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA 01003.** The deadline for receipt of applications is July 1, 1993; however, the search will continue until an appointment is made. All appointments are subject to final budgetary approval. *The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### FACULTY POSITION Department of Physiology and Biophysics University of Mississippi Medical Center

Applications are invited for tenure-track positions in the Department of Physiology and Biophysics. Candidates must have a Ph.D. or an M.D. and postdoctoral training and are expected to maintain an independent research program with a strong commitment to teaching. Special consideration will be given to candidates with a background in molecular and/or cellular physiology, regulation of extracellular matrix, or an interest in renal tubular transport or vascular smooth muscle mechanisms. Faculty rank and salary will be commensurate with credentials. Interested applicants should send curriculum vitae, an indication of past and current research funding, a statement of research interests and the names of at least three references to: **Dr. John Hall, Department of Physiology and Biophysics, University of Mississippi Medical Center, Jackson, MS 39216.** *Equal Opportunity Employer, M/F/D/V.*

**BIOLOGIST** with botany interest and experience in the context of environmental science. Ph.D. applicants are invited for a tenure-track **FACULTY POSITION** to begin August 21, 1993. The successful candidate will be expected to participate in undergraduate and master's-level instruction, while developing and carrying on research interests to the degree in keeping with other standard academic involvements. Applicants should submit a résumé, including teaching and research experience, and the names of three references to be received by June 17, 1993, to: **Dr. G. Albright, Department of Biology, University of Detroit Mercy, P.O. Box 19900, Detroit, MI 48219-0900.** *An Equal Opportunity/Affirmative Action Employer.*



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## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study molecular cardiovascular physiology. Candidates must have a Ph.D. in physiology, pharmacology, or related area, and a firm commitment to research. Background in molecular biology desired but not necessary. Projects include: (1) studies involving *in vivo* hemodynamic (macro- and microcirculatory) analysis of transgenic animals, or (2) gene therapy involving the arterial wall and/or heart. Send curriculum vitae, summary of research interests and three references to: **Dr. R. Wayne Barbee, Division of Research, Alton Ochsner Medical Foundation, 1520 Jefferson Highway, New Orleans, LA 70121.** *Ochsner is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITIONS: MOLECULAR BIOLOGY OF CANCER

Two funded positions are available to qualified Ph.D. or M.D. candidates to study tumor suppressor genes in sporadic and inherited testis cancer (**D. Hogg**) and molecular events leading to melanoma (**N. Lassam**). Send résumé and letters of reference to: **Dr. David Hogg, The Toronto Hospital, EC3-306, 200 Elizabeth Street, Toronto, Ontario, M5G 2C4, FAX: 416-340-3267;** or **Dr. Norman Lassam, Medical Sciences Building, Room 7366, University of Toronto, Ontario, M4S 1A8, FAX: 416-978-8765.**

### POSTDOCTORAL POSITION SOUTHWESTERN OHIO

Immediate opening to conduct molecular and biochemical studies on the biology of an obligate intracellular parasite. Ph.D. in biology or microbiology, and expertise in molecular biology and/or biochemistry of parasites required. No experience required. *Must have proof of legal authority to work indefinitely in the United States.* Send résumé in duplicate (no calls) to: **J. Davies (JO #230900), Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

### POSTDOCTORAL POSITION CELL/MOLECULAR BIOLOGY

An opening is available July 1, 1993, for a three-year research, postdoctoral cell/molecular biologist to study cell sorting and membrane protein trafficking defects in human renal epithelia during normal and abnormal development. A strong background in cell culture, biochemistry, and molecular biology is required. Send curriculum vitae, a brief description of research experience, and names, addresses, and telephone numbers of three references to:

**Dr. Patricia D. Wilson  
The Johns Hopkins School of Medicine  
Division of Nephrology  
Ross 958, 720 Rutland Avenue  
Baltimore, MD 21205**

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**POSTDOCTORAL ASSOCIATE** in Neurology. Available in January 1994 to study neuromodulation involving amino acids and monoamines in the spinal cord. At least two years of postdoctoral experience in the analysis of drug and transmitter responses on neurons, the molecular biology of transmitter receptors and whole-cell and isolated patch-clamp techniques is necessary. Send curriculum vitae and the names of three references to: **Dr. Robert A. Davidoff, Department of Neurology, University of Miami School of Medicine, Post Office Box 16960, Miami, FL 33101.**

*An Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL POSITION YALE MEDICAL SCHOOL

Position available to study structure, function, and transcription of human spliceosomal and nucleolar small nuclear RNA's. Please send curriculum vitae and names of three references to: **Dr. Alan M. Weiner, Department of Molecular Biophysics and Biochemistry, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510 USA.**

# BIOTECH '93: Nationwide Network of Biotechnology Job Fairs

## 1993 Schedule:

January 25 – Cambridge, MA  
 May 13 – Burlingame, CA  
 June 29 & 30 – La Jolla, CA  
 August 5 – Gaithersburg, MD  
 September 8 & 9 – Cambridge, MA  
 October 7 – Parsippany, NJ  
 November 4 – San Francisco, CA

Make every effort to attend biotechnology's largest and most effective career events. The job search process has become more effective for job candidates and employers alike. With the introduction of Biotech '93, job fairs exclusively for biotechnology professionals, job applicants can interview decision makers for hundreds of positions nationwide at one time and in one place. You conduct an entire job search in a few hours, saving you time, effort, and money.

Don't pass up this opportunity! Interview for hundreds of positions with the nation's top biotech, biopharmaceutical and

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| ◆ Ariad Pharmaceuticals                               | ◆ Creative Biomolecules, Inc.        | ◆ Intergen/Bioprocess Technologies |
| ◆ Atlantic Sciences                                   | ◆ Cytodiagnostics                    | ◆ Lifescan/A Johnson & Johnson Co. |
| ◆ Baxter Healthcare                                   | ◆ Endogen                            | ◆ Neoprobe                         |
| ◆ Biocircuits   | ◆ Enzytech                           | ◆ Pel-Freez Biologics              |
| ◆ Biogen, Inc.  | ◆ Food and Drug Administration       | ◆ Quintiles Pacific                |
| ◆ Cambridge Biotech Corp.                             | ◆ Genencor International, Inc.       | ◆ Sero Laboratories                |
|   | ◆ Genentech                          | ◆ XOMA                             |

For information on attending BIOTECH '93, call the **24-Hour Lendman Infoline 804-473-2480**

In order to have your background information distributed to all participating companies, send resume/CV to:  
**The Lendman Group • Biotech '93, 5500 Greenwich Road, Virginia Beach, VA 23462.**

Complete and return with copy of resume/CV. Your background information will be sent to participating companies.

Name: \_\_\_\_\_ Address: \_\_\_\_\_

Phone: Home \_\_\_\_\_ Work \_\_\_\_\_

Highest Degree: \_\_\_\_\_ University: \_\_\_\_\_ Year: \_\_\_\_\_

Association Memberships: \_\_\_\_\_

Willing to Relocate? ☐ Yes ☐ No Preferred Locations: \_\_\_\_\_

Current or Last Employer: \_\_\_\_\_ Income Requirement: \$ \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Dates: From: \_\_\_\_\_ To: \_\_\_\_\_

Identify key areas of your experience (circle the appropriate responses): Give cumulative number of years biotech experience: \_\_\_\_\_

### Preclinical Research

Chemistry: Organic Inorganic Protein Bio Medicinal Analytical Lipid Peptide Carbohydrate Synthetic Chemistry Other - Specify \_\_\_\_\_

Biology: Metabolism Pharmacokinetic Cell Biology Nutrition Molecular Biology Pharmacology Immunology Pathology Toxicology Physiology

Biology Genetics Microbiology Virology Enzymology Histology Neuroscience Other - Specify \_\_\_\_\_

### Manufacturing

Fermentation Development Process Development Formulations Development QA/QC Operations Manufacturing Engineering Biotech Production

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### Administration

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Job Fairs you plan to attend: May 13 June 29 & 30 August 5 September 8 & 9 October 7 November 4

## NIH Post-Doctoral Position

### Anti-V $\beta$ Reagents In Rhesus Models of Autoimmune and Retroviral Diseases

The Laboratory of Molecular Biology has developed novel immunotoxins directed at components of the rhesus T cell receptor complex which induce profound peripheral T cell depletion *in vivo*. The aim of this project is to investigate rhesus models of autoimmune diseases which exhibit unique V $\beta$  (or V $\alpha$ ) restrictions, identify these restrictions and quantify the effects of depleting the involved subset on the disease process. The role of preferential V $\beta$  susceptibility in SIVmac infection is also of interest. Junior or Senior positions are available and diverse backgrounds will be considered. Please forward curriculum vitae and the names of three references to:

**Dr. David M. Neville Jr.**  
Section on Biophysical Chemistry  
Laboratory of Molecular Biology  
National Institute of Mental Health  
Bldg. 36 Room 1B08  
9000 Rockville Pike  
Bethesda, Maryland 20892.



Inquiries by FAX will be accepted at 301-402-0245.

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## PHARMACOKINETICIST / PHARMACOLOGIST

Athena Neurosciences, Inc., is a rapidly growing research-based company committed to the discovery and development of new products for the diagnosis & treatment of neurological diseases.

We are seeking a Pharmacokineticist/Pharmacologist to join our team of drug discovery & preclinical scientists. Duties include: Conducting preclinical studies of drug absorption, distribution, metabolism and excretion; supporting drug discovery by evaluating correlations between pharmacokinetics & pharmacodynamics; managing external collaborations and contract research in the field; supervise / oversee a small group of research associates.

The successful individual will possess a Ph.D. in Pharmacology, Biochemistry, Pharmaceutical Science or related discipline; minimum of 3 years of pharmaceutical company experience in pharmacokinetics or drug metabolism. Thorough understanding of GLPs is desired.

Athena Neurosciences offers an innovative and exciting professional, scientific environment in addition to competitive salaries, benefits and equity participation. Please reference ad #SCI507 when sending your CV to: Athena Neurosciences, Inc., Attn: Human Resources, 800F Gateway Boulevard, South San Francisco, CA 94080. EOE.



## MARINE SCIENTIST—TWO POSITIONS

The West Coast National Undersea Research Center, at the University of Alaska Fairbanks, is a recently established center for NOAA's National Undersea Research Program. The Center's mission is to promote, facilitate, and support quality undersea research along the West Coast of the United States including the western Arctic plus Antarctica.

**SCIENCE DIRECTOR:** The Science Director will be responsible for the direction and coordination of the undersea science program for the U.S. West Coast including the western Arctic plus Antarctica. Duties include (a) develop effective communication with research community, (b) develop and implement programmatic research themes, (c) prepare annual announcement of research opportunities and coordinate proposal review, (d) assist with preparation of the Center's annual report and proposal to NOAA, and (e) some supervision of Center staff. The Science Director will report to the Center Director. The Science Director will have the opportunity to maintain an independent research program.

**STAFF SCIENTIST:** The Staff Scientist's duties will be to interact and correspond with scientists interested in undersea research, particularly in the region of Oregon and Washington. The Staff Scientist will represent the Center at selected professional meetings and workshops. Also, the Staff Scientist will assist the Director and Science Director in: a) preparing the annual announcement of research opportunities, b) conducting peer reviews of research proposals received, c) writing the annual Center proposal to NOAA, d) expediting submission of reports from principal investigators, and drafting the annual report to NURP. The Staff Scientist will have the opportunity to maintain an independent research program.

Both positions are 12-month per year appointments. Required qualifications include an advanced degree (Ph.D. preferred) in Oceanography, Fisheries, or Marine Sciences and research experience with manned submersibles and ROVs or other undersea technology. Review of applications will begin **June 7, 1993**, and continue until the position is filled. Submit resume and names and addresses of three references to: **Director, West Coast National Undersea Research Center, School of Fisheries and Ocean Sciences, University of Alaska Fairbanks, Fairbanks, AK 99775-1090.**

*The University of Alaska is an AA/EO employer and educational institution.*

**Affymax Research Institute** is an innovative venture dedicated to the development of new technologies which will accelerate the process of drug discovery. Affymax offers a creative and stimulating environment for talented people.

## Staff Scientist – Antibody Display and Engineering

Currently we have a position open for a Staff Scientist to lead a group engineering antibodies using phage display libraries. The projects involve the construction of antibody-phage as libraries and as single clones from hybridomas. One goal is to improve antibody catalysis through various types of antibody library engineering combined with library screening or selection tools. The antibody engineering program is part of team including chemists, molecular biologists and a hybridoma laboratory. We have strong collaborative links with leading academic and industrial groups in the fields of antibody catalysis and engineering.

**Qualifications:** PhD with a strong background in molecular biology and several years experience in antibody phage display libraries. Postdoctoral experience is preferred.

Positions are also available for Research Assistant and Associates (BS & MS level) with similar experience to support this program.

Affymax offers many of the benefits of a world class academic environment and the potential to develop new therapeutics. Please refer to **Job Code PS117** and send your resume to: **Affymax Research Institute, Human Resources Dept., 4001 Miranda Avenue, Palo Alto, CA 94304.** Equal Opportunity Employer.

**affymax**





# Research And Postdoctoral Opportunities In The Biomedical Sciences.

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

## **Molecular Biology and Protein Biochemistry** **B. J. Song, PhD**

**Senior Staff (assistant professor equivalent) or Staff Fellow** position is available to study the biochemical and genetic mechanisms of key metabolic enzymes affected by alcohol and other pathological states. Enzymes being studied include ethanol-inducible cytochrome P450 and thiamine dependent enzymes involved in glucose (cerebral energy) metabolism. Previous experience in protein biochemistry or molecular/cell biology preferred. Laboratory of Clinical Studies (OE-33), NIAAA, 12501 Washington Avenue, Room 31, Rockville, MD 20852.

## **Molecular Epidemiology** **Scott R. Diehl, PhD**

**Senior Staff (assistant professor equivalent) or Staff Fellow** positions to assist in the development and adaptation of molecular biology techniques to the study of oral and craniofacial diseases. Gene mapping will include such conditions as periodontal diseases, cleft lip/palate, and oral cancer. Molecular Epidemiology and Disease Indicators Branch (OE-33), NIDR, 5333 Westbard Avenue, Westwood Building, Room 718, Bethesda, MD 20892.

## **Cellular and Developmental Biology** **Paul E. Love, MD, PhD and Heiner Westphal, MD**

Transgenic and gene targeting methods are being used to study thymocyte development with special emphasis on the role of receptor mediated signal transduction. In addition, these mice are serving as models for investigating the mechanisms of tumor-induced immune defects in humans. Applicants should have a background in immunology and/or molecular biology and less than five years of postdoctoral experience. Laboratory of Mammalian Genes and Development (OE-33), NICHD, Building 6B, Room 215.

## **Immunotoxin Therapeutics** **David FitzGerald, PhD and Ira Pastan, MD**

Immunotoxins are being developed for treating cancer and other diseases, offering an opportunity for both basic and applied research. Current projects include: clinical testing of existing immunotoxins; improving existing immunotoxins; developing new recombinant immunotoxins using molecular biology techniques; and studying the basic science of toxin action. Laboratory of Molecular Biology (OE-33), NCI, Building 37, Room 4E16.

## **Laryngeal Neurophysiology and Anatomy** **Christy L. Ludlow, PhD**

Studies aimed at the pathophysiology and treatment of idiopathic speech and voice disorders focus on laryngeal anatomy and physiology, biomechanical modeling, speech physiology, and brain activity during speech. Neuroanatomical studies will permit identification of inter-neurons in a sensorimotor pathway. Additional opportunities are available to conduct both human and basic neurophysiological and anatomical studies. Voice, Speech, Language and Laryngology Branch (OE-33), NIDCD, Building 10, Room 5D38.

## **Neurobiology and Neurophysiology** **Chris McBain, PhD**

The role of voltage and ligand gated ion channels in the regulation of neuronal excitability is being studied. Techniques used include whole cell patch clamp recordings from CA3 pyramidal neurons and interneurons in the hippocampal slice and identified acutely dissociated neurons. In addition, the properties of voltage gated potassium channels will be studied in transfected cell lines. Background in neurophysiology with knowledge of electrophysiological techniques is required. Laboratory of Cellular and Molecular Neurophysiology (OE-33), NICHD, Building 49, Room 5A78.

## **Molecular Toxicology** **Masahiko Negishi, PhD**

The structural basis for the substrate specificity of mammalian P450 is being studied using site-directed mutagenesis, heterologous expression, and biochemical and spectral analysis of P450 mutants. Candidates with an interest in the study of enzymes containing prosthetic groups, and experience in structural biology, biochemistry, chemistry, molecular biology, or pharmacology, are encouraged to apply. Less than five years of postdoctoral experience is required. Laboratory of Reproductive and Developmental Toxicology (OE-33), NIEHS, P.O. Box 12233, Building 17, Room 1723, Research Triangle Park, NC 27709.

## **Additional Postdoctoral Fellowship Opportunities**

For an on-line listing of additional postdoctoral openings you may access the NIH EDNET Bulletin Board's POSTDOC conference by Internet (cu.nih.gov) or via modem (1,3014022221) 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 "AJL1" at account.

The Postdoctoral Research Fellowship Opportunities catalog may be requested from the address below. An electronic version of the catalog may be accessed via the network-based (Internet) Gopher Information System. To access the NIH Gopher server, Gopher client software (available via anonymous ftp "boombox.micro.umn.edu") must be running on your computer and configured to point to "gopher.nih.gov", port "70". Select NIH Information to reveal the NIH Office of Education directory. Those interested in receiving information on other postdoctoral opportunities, clinical training opportunities, or accessing Gopher may contact the Office of Education, Building 10, Room 1C129. Phone: 301-496-2427.

## **To Apply**

If you hold a graduate doctoral degree (e.g., PhD, MD/PhD) or a professional degree (e.g., MD, DO, DDS, or DVM) accompanied by previous laboratory research experience, 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

9000 Rockville Pike, Bethesda, MD 20892  
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# **28 May 1993**

## **AIDS Issue**

This first-time special issue on development in AIDS research focuses on the scientific and social issues of HIV vaccine development as well as the mechanisms of cell killing by HIV. Also, AIDS-related topics will be covered in SCIENCE's News and Perspectives sections.

By including your recruitment ad in this special edition, you'll be accomplishing several things. First, your ad will be a part of this issue that will be of special interest to scientists involved in the massive AIDS research effort. Next, your ad will reach over 12,000 scientists attending the Ninth International Conference on AIDS, as well as the 4,000 attendees of the ASBMB meeting. Advertisers from outside the U.S. should take advantage of our special International Career Opportunities bannered advertising pages. Consider this a must-run SCIENCE issue.

### **Bonus Distribution:**

Ninth International Conference on AIDS,  
7–11 June 1993, Berlin, Germany

ASBMB (American Society for Biochemistry and Molecular Biology) meeting,  
30 May–3 June 1993, San Diego, CA

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**U.S.: Debbie Cummings at 202-326-6541**

**Europe: AnneMarie Vis at +44 223 302 067**

# **SCIENCE**

## Arctic Research Consortium of the United States, Inc.

The Arctic Research Consortium of the United States (ARCUS) is seeking a highly qualified individual to serve as its President and Chief Executive Officer. ARCUS is a national non-profit corporation, consisting of member institutions involved in arctic research and education. ARCUS provides leadership in and promotion and facilitation of these activities.

The President provides leadership for the Consortium, is responsible to its Board of Directors, manages the affairs of ARCUS, and supervises its staff. The President recommends and implements the programs and policies established by the Board of Directors; develops and administers ARCUS programs and activities; represents the corporation in contract, grant, and financial negotiations with government and private funding and banking entities; and interacts with the arctic research community to assess and advance its needs and priorities. The President represents ARCUS interests and concerns to other groups and organizations to ensure that quality programs and services exist to meet the needs of the arctic research and education community.

Applicants are required to have a Ph.D. or its equivalent. Applicants should also have at least five years of experience in the design and conduct of research in the Arctic and at least five years of experience in the design and management of interdisciplinary research. Demonstrated excellence in the ability to communicate and function effectively with diverse constituencies within the scientific and education community, the policy making community, and the general public is highly desirable. Successful experience in the preparation, negotiation, and management of grants and contracts, as well as in direct responsibility for fiscal management, is a must.

Salary will be negotiated. ARCUS offers a competitive benefits package. ARCUS is currently based in Fairbanks, Alaska.

Send applications, including curriculum vitae and four references, for receipt by 15 May 1993, to:

President Search Committee

Dr. Mark F. Meier, Chair  
ARCUS, Inc.

600 University Avenue, Suite B  
Fairbanks, AK 99709

ARCUS is an Equal Opportunity, Affirmative Action Employer and invites and encourages applications and nominations from women and under-represented minorities.

# Infectious Diseases Research

Pfizer, a U.S. based multinational pharmaceutical company, has several immediate openings in its expanding Central Research Division Laboratories located in Groton, Connecticut.

## PhD Molecular Biology

Play a key role in using molecular approaches to address significant problems related to bacterial resistance mechanisms, pathogen-specific diseases, and host-pathogen interactions. PhD and 2 years post-doctoral experience are required. Supervisory experience, the ability to communicate as well as to operate successfully in a multidisciplinary environment, and the desire to identify and pursue approaches that would contribute significantly to antibiotic discovery efforts are essential. Background in bacterial physiology and/or biochemistry is desired.

## BS/MS Molecular Biologist

Play a key role in our expanded efforts in applying modern molecular approaches to the identification of new antimicrobial targets and the characterization of current antibiotic resistance mechanisms. MS or BS with 3-5 years experience using state-of-the-art molecular biology techniques is required.

## BS/MS Microbiology

Play an important role in evaluating new antibiotic leads generated from our Discovery program. Responsibilities will include running our *in vitro* and *in vivo* screens and taking part in the implementation of new molecular technologies for the evaluation of antimicrobial agents. BS plus 2 years experience working in a microbiology laboratory is the minimum requirement.

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In addition to a stimulating research environment, we offer a competitive compensation and benefits package, including generous relocation assistance to this southeastern Connecticut shoreline community. Qualified applicants may send a resume and cover letter, a description of your experience, and names of three references, to: **Ms. Ellen Buller, Employee Resources Supervisor, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340.** We are an equal opportunity employer.



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**KEENAN CHAIR IN  
NEPHROLOGY RESEARCH—  
ST. MICHAEL'S HOSPITAL  
UNIVERSITY OF TORONTO**

St. Michael's Hospital, a fully affiliated teaching hospital of the University of Toronto and the Department of Medicine at the University of Toronto, seek to appoint an established investigator in the area of Nephrology Research. The successful candidate will be expected to continue a major independent research program in one of the following areas:

1. Molecular immunology (transplantation)
2. Biology of fluid and electrolyte or acid-base transport
3. Cellular and molecular biology of the vascular endothelium
4. Molecular biology of signal transduction

Individuals with either a Ph.D., M.D. or both will be considered. Candidates will be expected to have established a successful career in investigative nephrology, with proven ability to attract external agency peer-reviewed operating grant funds and to supervise research trainees.

It is expected that the successful candidate will be appointed as a Professor in the Department of Medicine (Division of Nephrology) at the University of Toronto, and as a staff member in the Division of Nephrology at St. Michael's Hospital, and will be the incumbent of an endowed chair—the Keenan Chair in Medicine. Appropriate laboratory space will be identified, and financial support for laboratory facilities will be made available to the successful candidate. The successful candidate will also have the opportunity to interact in a collaborative manner with other scientists at the University of Toronto. The anticipated appointment date is on or about September 1, 1993.

The University of Toronto encourages applications from qualified women and men, members of visible minorities, aboriginal peoples and persons with disabilities. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

Interested applicants should forward a cover letter, curriculum vitae, and a list of three referees as soon as possible, but no later than July 1, 1993, to the attention of:

Mr. Alan Dilworth  
Chair, Keenan Search Committee  
St. Michael's Hospital,  
Research Institute,  
30 Bond Street,  
Toronto, Ontario,  
M5B 1W8



## Chair

### Department of Biochemistry and Biophysics

The University of Pennsylvania School of Medicine is initiating a search for Chair of the Department of Biochemistry and Biophysics. The Search Committee is looking for a leader of national stature who has the ability to catalyze the development of new initiatives in molecular and structural biology at Penn. We seek a candidate who can provide academic leadership in the disciplines of Biochemistry and Molecular Biology and who can build outstanding education and research programs. This Search is supported by a major institutional commitment to this key basic science department.

The University is an equal opportunity, affirmative action employer. Women and minority candidates are encouraged to apply.

Please send your curriculum vitae together with the names of three references to:

Neal Nathanson, M.D.  
Chair, Biochemistry and Biophysics  
Search Committee  
Chair, Department of Microbiology  
208 Johnson Pavilion  
36th Street and Hamilton Walk  
Philadelphia, PA 19104-6076



## RESEARCH SCIENTIST

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Located in San Diego, California, one of America's most attractive centers for biomedical research and education, Viagene offers competitive salaries and an excellent benefits package, including a stock option plan.

Please forward your CV to: **Attn: Human Resources, Viagene, Inc., 11075 Roselle Street, San Diego, CA 92121. EOE M/F/D/V.**



VIAGENE, INC.

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Manage all fermentation operations, maintain corporate strain collection and manage strain development program, and develop quality improvement program for fermentation including end product oriented quality assurance. Five years' experience in fermentation including up to 5,000 liter scale and Ph. D. or equivalent experience in microbial physiology or related area. Prefer experience or training in biochemistry, analytical techniques, fermentation or process engineering, molecular biology or expression of recombinant proteins; independent, self-starting individual with solid practical background in fermentation engineering, microbiology, recombinant protein production, and quality control; demonstrated leadership and team building experience; prior management of fermentation facility and operations; experience with computerized fermentation process development and related analytical equipment; and evidence of excellent communication and organizational skills.

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Maintain company-wide microbial strain collection and perform Q.C. testing to ensure identity and quality of strains as well as development and implementation of end product based Q.C. program for fermentation. M.S./Ph.D. or equivalent in microbiology with 3 years' industrial lab experience and strong background in biochemistry. Prefer independent, self-starter with background in microbiological preservation and cultivation; experience in molecular biology and/or enzyme biochemistry; communication skills; and supervisory management experience.

We offer a competitive salary, comprehensive benefits, and a challenging, high-growth environment in our modern Midwestern facilities. To apply, forward a resume to:  
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Promega





National Institutes of Health

# Loan Repayment Program for AIDS Research

► Almost everyone in the biomedical research community is familiar with the National Institutes of Health (NIH) and the number of grants and contracts we award to researchers throughout the country. Did you know that in this fiscal year close to 15% of our \$1 billion HIV/AIDS budget is devoted to HIV/AIDS research activities conducted at NIH's 306 acre campus in suburban Maryland? Located close to the center of Washington, D.C., the NIH employs more than 4,000 doctoral level scientists (Ph.D.'s, M.D.'s, D.D.S.'s, D.M.D.'s, D.O.'s, and D.V.M.'s), and our 500-bed clinical center is home to more than half of the research beds in the country.

► Did you also know that the NIH offers the only Federally sponsored, research-based loan repayment program? NIH's Loan Repayment Program for AIDS Research (LRP) enables physicians and scientists to receive repayment of their educational loans—up to \$20,000 per year—when they join our HIV/AIDS research team for a minimum service period of only two years. Other LRP benefits include reimbursement for Federal, State and local tax liabilities, and all LRP benefits are made in addition to attractive Federal salaries and associated benefits. Positions may be in basic, clinical, laboratory or

subspecialty research programs at more than eighteen NIH institutes.

► The NIH provides exceptional training opportunities in basic and clinical research. The following are some examples of the HIV/AIDS research projects in which our LRP participants are engaged: *a molecular analysis of the viral burden in blood and lymphoid tissue of HIV-infected individuals on antiretroviral agents; a longitudinal study of the neurological dysfunction and neuroimmunological profile in HIV-infected, asymptomatic individuals; the design and synthesis of synthetic peptide polymers for the production of anti-HIV vaccines; and a randomized trial of a sustained-released intraocular drug delivery system for ganciclovir therapy of cytomegalovirus.*

► The LRP may be just the program you are seeking to help manage your educational debt burden. Telephone the LRP InfoLine, 24-hours a day toll-free, at 800-528-7689, to obtain our recently updated *Applicant Information Bulletin*, a summary of our HIV/AIDS research accomplishments and plans, and a *User's Guide to the NIH EDNET*, an electronic bulletin board listing NIH's postdoctoral training opportunities.

This program is administered without regard to race, color, national origin, handicap, age, sex, or religion.

## Kernforschungszentrum Karlsruhe GmbH (KfK)

Das KfK ist eine von der Bundesrepublik Deutschland und dem Land Baden-Württemberg gemeinsam getragene, überwiegend anwendungsorientierte Großforschungseinrichtung mit etwa 3,700 Mitarbeitern, davon über 1,200 Wissenschaftler und Techniker. Es finanziert sich aus institutionellen Zuwendungen des Bundes und des Landes und eingeworbenen Drittmitteln. Forschungsschwerpunkte sind Umwelt-, Energie-, Mikrosystemtechnik und Grundlagenforschung.

Im Vorstand des KfK ist die Position des

## Vorstandsmitglieds

für den Bereich Neue Technologien, insbesondere Mikrosystemtechnik, und Grundlagenforschung wieder zu besetzen. Diese Aufgaben verlangen eine Persönlichkeit aus dem Bereich der Angewandten Natur- und Ingenieurwissenschaften, die eine überzeugende wissenschaftliche Qualifikation besitzt und in verantwortlicher Position im Forschungsmanagement gearbeitet hat. Erwünscht sind Erfahrungen in der Zusammenarbeit von Wissenschaft und Industrie.

Bitte senden Sie Ihre Bewerbung oder Interessebekundung bis zum 31. Mai 1993 an den

**Vorsitzenden des Aufsichtsrats der Kernforschungszentrum Karlsruhe GmbH (KfK)**  
**c/o Bundesministerium für Forschung und Technologie**  
**Herrn Ministerialdirektor Dr. J. Rembser**  
**-persönlich-**  
**Postfach 200706**  
**D-5300 Bonn 2**  
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# Upjohn

## RESEARCH OPPORTUNITIES

The Upjohn Company brings high-quality, innovative pharmaceutical products to customers worldwide. Excellent career opportunities are available at our Kalamazoo, Michigan headquarters for the following research professionals:

### POSTDOCTORAL PROGRAM – ADHESION BIOLOGY

Selected candidate will study the role of adhesion receptors involved in interactions between leukocytes, platelets and endothelium. You will also explore the structural basis of selectin-mediated adhesive interactions using a broad range of molecular techniques. Applicants should possess a Ph.D. in biochemistry, biophysics or cell biology. Molecular biology skills would be advantageous. **Refer to Position Code #159.**

### RESEARCH ASSOCIATES

Applicants for the following programs should possess a BS/MS degree in Molecular Biology, Virology, Biochemistry or related discipline.

**ANTIVIRAL PROGRAM** – Investigate the molecular targets for antiviral drug discovery and evaluate lead antivirals in cell culture models of viral infection. Using recombinant DNA methods, identify and study critical viral and/or cellular products involved in viral pathogenesis. Elucidate molecular mechanisms of antiviral drug resistance. **Refer to Position Code #158.**

**RECOMBINANT PROTEINS** – Use recombinant DNA methods, molecular genetics and cell culture to engineer and optimize the production of recombinant polypeptides (including antibodies and cell adhesion molecules) in various systems such as E.coli, insect and mammalian cells. Structure and function relationship analysis of protein(s) involved in protein secretion/translocation of E.coli. **Refer to Position Code #158.**

Selected candidates will enjoy an excellent salary and benefits package, as well as a stimulating, multi-disciplinary research environment. For consideration, please forward your resume (refer to the appropriate Position Code in your cover letter) and salary history to: **THE UPJOHN COMPANY, Corporate Recruiting, 7000 Portage Road, Kalamazoo, MI 49001.** An Equal Opportunity Employer.

## SR. SCIENTIST

Sandoz Agro, Inc., is a worldwide leader in the development of environmentally sound biological and chemical products for agricultural crop protection. We currently have a position available at our corporate headquarters located in the NW Chicagoland area.

### METABOLISM SCIENTIST

We are seeking a candidate with a B.S., M.S. or Ph.D. in Chemistry, Biochemistry or related field for a scientist position in the Metabolism/Pharmacokinetics laboratory. The qualified candidate will be knowledgeable in TLC, HPLC and GC with 2-8 years' experience in the investigation of the fate and metabolism of <sup>14</sup>C-radiolabelled chemicals in animals and other substrates. An understanding of IR, NMR and MS spectra is preferred as well as good communication and problem-solving skills. Knowledge or experience of FIFRA and GLP regulations is desirable. \* Must be willing to work with laboratory animals. **Dept. PEL-05**

If you are interested in applying for the above position with Sandoz Agro, Inc., please forward your resume, with salary history to: Human Resources, Sandoz Agro, Inc., 1300 E. Touhy Ave., Des Plaines, IL 60018. Please note Department Code on resume.

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Candidates should have a PhD and relevant teaching experience, as well as the ability to participate in or to direct research. Previous experience in a University, industrial or research milieu is necessary, and international experience a decisive advantage. Preference will be given to those candidates who have knowledge of written and spoken French.

Successful candidates will join established teams for curriculum design, teaching and research activities in a modern well-equipped environment.

Applications will be accepted for both full-time and part-time posts.

Candidates should send a letter of application together with curriculum vitae and the names of two referees to:

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**Tel: (33). 1.45.92.66.10—Fax: (33).1.45.92.66.99**

**Applications should reach ESIEE by June 1st 1993.**

**Successful candidates will be informed of their appointment by 23rd July 1993.**



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Group Leaders will have advanced degrees (PhD preferred) in chemistry, biochemistry or life sciences and supervisory experience in the industrial sector.

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To apply, send your CV or resume to: Bio-Rad Laboratories, Attn: Paul Krueger, Dept. 143, 3726 E. Miraloma Blvd., Anaheim, CA 92806. EOE M/F/D/V.

# BIO-RAD

Bio-Rad Laboratories

# INTELLIGENT SYSTEMS MANAGER

The Oak Ridge National Laboratory (ORNL), a recognized leader in multidisciplinary research and development, is seeking a Group Leader for the Intelligent Systems Section in the Engineering Physics and Mathematics Division. The section's research activities concentrate on a broad spectrum of challenging areas ranging from intelligent interfaces between humans and complex systems to autonomous mobile robots, intelligent information processing, as well as biomedical applications of advanced pattern recognition systems.

Responsibilities of the group leader include providing technical leadership and management for an expanding group of five scientists and engineers performing research and development in the areas of high-performance computing for robotics and intelligent systems, computer vision and sensor integration, sensory-motor control, machine learning and pattern recognition.

The position requires a PhD in computer science, applied mathematics, electrical engineering, or related interdisciplinary field such as robotics with at least 8 years experience in one of the following areas: computer vision, pattern recognition, sensor-based robotics or applications of machine learning. The successful candidate should have an excellent publication/citation record and demonstrated technical management skills. An important aspect of the position will be developing and executing research and development projects with an interdisciplinary group of creative PhD scientists and engineers.

ORNL is a multi-purpose research facility managed by Martin Marietta Energy Systems, Inc., for the US Department of Energy. ORNL offers a competitive compensation and benefits package, including relocation. For immediate consideration, send your resume to:

J.K. Johnson  
Oak Ridge National Laboratory  
Dept. SCI-507  
P.O. Box 2008  
Oak Ridge, TN 37831-6216

ORNL is an equal opportunity employer committed to building and maintaining a diverse workforce.



National Cancer Institute  
National Institutes of Health, Public Health Service

## CANCER PREVENTION FELLOWSHIP PROGRAM

The Division of Cancer Prevention and Control (DCPC) is accepting applications for the Cancer Prevention Fellowship Program (CPFP). The purpose of this program is to train individuals from a multiplicity of health science disciplines in the field of cancer prevention and control. The program provides for: Master of Public Health training (at accredited university programs); Participation in the DCPC Cancer Prevention and Control Academic Summer Course (open to all physicians and scientists interested in learning the principles and practice of cancer prevention and control); Working at NCI directly with individual preceptors on cancer prevention and control projects; Field assignments in cancer prevention and control programs at other institutions. Funding permitting, as many as ten Fellows will be accepted for up to three years of training, beginning July 1, 1994. Benefits include selected relocation and travel expenses, paid federal holidays, and participatory health insurance.

### ELIGIBILITY

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

### OR

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

### PLUS

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

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

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

\*\*\*Further Inquiries: Mrs. Barbara Redding, (301) 496-8640

DEADLINE FOR RECEIPT OF APPLICATIONS: SEPTEMBER 1, 1993



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## POSITIONS OPEN

### POSTDOCTORAL POSITION IN CELLULAR NEUROSCIENCE

Ongoing active research program seeks a postdoctoral student with interest in combining physiological and/or molecular biological approaches with ultrastructural immunocytochemical analysis of neuronal function. Current research focuses on dopamine and opioid peptides in relation to central autonomic regulation, neuropsychiatric disorders, and drug abuse. Advanced training in intracellular physiology, molecular biology, or pharmacology will be most complementary to the advanced training provided in electron microscopic immunocytochemistry. Please send curriculum vitae to: **Virginia M. Pickel, Ph.D., Department of Neurology and Neuroscience, Cornell University Medical College, 411 East 69th Street—KB410, New York, NY 10021. Equal Opportunity Employer/Affirmative Action/M/F/H/V.**

**POSTDOCTORAL POSITION** available for at least 2 years starting July 1, 1993, to carry out cellular and chemical studies on the role of iron in the mechanism of oxidation damage caused by the antitumor agents bleomycin and andriamycin in tumor and heart cells. **Prof. David H. Petering, Department of Chemistry, University of Wisconsin—Milwaukee, Milwaukee, WI 53201. Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available summer/fall 1993 to investigate modulation of NMDA receptor activity in the vertebrate visual system. Experience with some electrophysiological techniques is desirable. Send curriculum vitae and names of three references to: **Dr. Elizabeth Debski, T.H. Morgan School of Biological Sciences, University of Kentucky, Lexington, KY 40506. FAX: (606) 257-1717. Equal Opportunity/Affirmative Action Employer.**

A **POSTDOCTORAL POSITION** is available for research in a neurophysiology laboratory studying interactions between cardiovascular and pain regulatory systems. Some teaching opportunities in physiology are available, although research will be the primary responsibility. Please send curriculum vitae and references to: **Dr. Cindy Thurston, Department of Biomedical Sciences, UCOM 6000, University of South Alabama, Mobile, AL 36688-0002. USA is an Affirmative Action/Equal Opportunity Employer.**

### POSTDOCTORAL POSITION IN MITOCHONDRIAL MOLECULAR BIOLOGY

A postdoctoral position is available beginning May 1993 to study the initiation of protein synthesis in animal mitochondria. This project seeks to investigate the features on mitochondrial mRNA's important for initiation complex formation and to identify and clone the initiation factors required for protein synthesis in animal mitochondria. Interested persons with backgrounds in biochemistry or molecular biology are invited to apply. Forward curriculum vitae and two letters of recommendation to: **Dr. Linda L. Sprenull, Department of Chemistry CB# 3290, University of North Carolina, Chapel Hill, NC 27599. The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available for studies of sphingolipid function in yeast, including roles in proton transport, osmotic stress and heat tolerance. Experience in membrane biochemistry or molecular biology desirable. Send curriculum vitae and the names of three references to: **Dr. Robert Dickson or Dr. Robert Lester, Department of Biochemistry, University of Kentucky Medical Center, Lexington, KY 40536-0084.**

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**POSTDOCTORAL POSITION** available immediately for up to 3 years to study functional domains of G-protein coupled receptors. Site-directed mutagenesis and eukaryotic cell line expression will be performed in coordination with a multi-laboratory, interdisciplinary approach incorporating molecular modeling, pharmacology and protein chemistry. Strong molecular biology background essential. Send curriculum vitae, publications and three references to: **Dr. Stuart C. Sealfon, Fishberg Center of Neurobiology, Box 1065, The Mount Sinai Medical Center of New York, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** are available to study the effects of human immunodeficiency virus (HIV) on the cytoskeleton and motile behavior during HIV-induced cell fusion. This will be a collaborative research effort in the laboratory of **Dr. Ronald C. Kennedy** at the Center for AIDS Research, Southwest Foundation for Biomedical Research, San Antonio, Texas, with **Dr. David R. Soll** of the University of Iowa. Candidates are expected to have a Ph.D. or M.D. and training in molecular cytology. Annual salaries range between \$23,691 and \$33,280, commensurate with relevant experience. Interested individuals should send curriculum vitae and the names, addresses and telephone numbers of three references by June 1, 1993, to: **Personnel Manager (322), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78228-0147.** This information will be reviewed by both Drs. Soll and Kennedy.

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**POSTDOCTORAL POSITIONS** available to study signalling mechanisms in mammalian ventricular cells. Investigations will focus on the regulatory roles of inositol phosphates, diacylglycerols, calmodulin kinases and protein kinase C. Techniques include fluorescence, digital imaging and photorelease of caged compounds. One position requires a strong background in physiology/biophysics and the other in enzymology/protein chemistry. Submit curriculum vitae and names of references to: **Dr. J. W. Walker, Department of Physiology, University of Wisconsin, Madison, WI 53706.**

### POSTDOCTORAL POSITION YALE MEDICAL SCHOOL

Position available to study recombination in mammalian cells, with emphasis on characterization of sequences and regulatory elements involved in immunoglobulin class switch recombination and somatic hypermutation. Please send curriculum vitae and names of three references to: **Dr. Nancy Maizels, Department of Molecular Biophysics and Biochemistry, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.**

### POSTDOCTORAL POSITION NEUROIMMUNOLOGY

Position available immediately for a Ph.D., D.V.M. or M.D. with background in immunology or neurology, to study the interaction of lymphocytes and central nervous tissue. This program will provide collaborative opportunities with a multidisciplinary team involved in immunology, virology and molecular biology. Please send curriculum vitae and the names of three references to: **Roel C. van der Veen, Ph.D., USC School of Medicine, Department of Neurology, MCH 142, 2025 Zonal Avenue, Los Angeles, CA 90033.**

*The University of Southern California is an Equal Opportunity/Affirmative Action Employer and especially seeks women and minority candidates.*

**POSTDOCTORAL POSITION** studying sprouting and strengthening of spinal cord synapses after partial deafferentation. Single-axon staining and automated electrophysiology and axonal reconstruction, computer modeling. Responsibilities: learn and conduct all aspects of research, manage laboratory, some independent research. Send curriculum vitae, two publications, and list of three references to: **Paul Brown, Physiology Department, West Virginia University Health Sciences Center, Morgantown, WV 26506.**

### POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY

Study of mammalian cellular and HIV DNA replication proteins with respect to mechanism of action, response to antiviral agents and cellular regulation. Viral proteins are generated by expression in bacteria. Procedures involve preparation of model DNA and RNA substrates, monoclonal antibody production, polymerase chain reaction and active site photolabelling. Submit complete curriculum vitae and three references to: **Dr. Robert A. Bambara, Department of Biochemistry, Box 607, University of Rochester Medical Center, Rochester, NY 14642.**

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS PROSTATE CARCINOGENESIS

Positions are available for recent Ph.D. or M.D. graduates interested in studying prostate carcinogenesis. Funded projects involve the cellular and molecular biology of cellular adhesion, extracellular matrix proteins, and metalloproteinases. Experience in molecular biology or protein biochemistry is desired. Newly remodeled laboratories are available for research with opportunities with the Department of Pathology and the Division of Cancer Biology in the Department of Radiation Oncology. The position is available immediately. Review of applications will begin on May 7, 1993, and will continue until the position is filled. Submit curriculum vitae and names of three references to: **Ray B. Nagle, M.D., Ph.D., University of Arizona Health Sciences Center, Department of Pathology, 1501 North Campbell, Tucson, AZ 85724. Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

**EUKARYOTIC GENE REGULATION—POSTDOCTORAL POSITION** starting summer 1993 to study biochemical interactions between general transcription factors and the Zta transactivator protein of Epstein-Barr virus. Applicants should have a working knowledge of transcriptional regulation, an interest in virus-cell interactions and laboratory experience in protein purification, protein-DNA biochemistry and molecular biology. Please send a description of prior experience, curriculum vitae and names of three references to: **Dr. Paul Lieberman, Roche Institute of Molecular Biology, Nutley, NJ 07110-1199.**

**POSTDOCTORAL POSITION** in molecular endocrinology/developmental biology is available spring 1993 to study the placental/decidual prolactin gene family. See recent references for background information [*J. Biol. Chem.* 268:3136-42; 3298-305, 1993]. Experience in molecular biology and protein chemistry preferred. Send curriculum vitae and names of three references to: **Dr. Michael J. Soares, Department of Physiology, University of Kansas Medical Center, Kansas City, KS 66103. Telephone: (913) 588-5691; FAX: (913) 588-5677. The University of Kansas Medical Center is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available immediately to work on NIH-funded grant to study mucosal immunity as related to enhancement of the immunogenicity of enteric viral vaccines and recombinant proteins in a pig challenge model. Experience in immunology is required with training in molecular virology desirable. Send curriculum vitae and 3 letters of recommendation to: **Dr. Linda Saif, Food Animal Health Research Program, OARDC, The Ohio State University, Wooster, OH 44691.**

### TULANE MEDICAL CENTER TULANE REGIONAL PRIMATE RESEARCH CENTER DEPARTMENT OF PARASITOLOGY

**POSTDOCTORAL ASSOCIATE** is sought to join a multidisciplinary group working on Lyme disease. The task is the molecular cloning of newly identified antigens of *Borrelia burgdorferi*. These antigens are vaccine candidates. Please send curriculum vitae and names of three references by May 21, 1993, to: **Dr. Mario T. Philipp, Head, Department of Parasitology, Tulane Regional Primate Research Center, Covington, LA 70433. Tulane University is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL FELLOW COMPUTATIONAL NEUROSCIENCE EMORY UNIVERSITY

Applications are invited for a postdoctoral fellow to develop massively parallel algorithms for the simulation of neuronal development including morphogenesis, bioelectrical activity and ionic fluxes in dendritic arbors. Applicants should have a Ph.D. in computational physics or neuroscience and research interests in biological pattern formation. Direct experience of massively parallel computers (e.g. the Connection Machine CM2) would be highly desirable. Please send curriculum vitae and three letters of recommendation to: **Professor H.G.E. Hentschel, Department of Physics, Rollins Research Center, 1510 Clifton Road, Atlanta, GA 30322. Application deadline is July 15, 1993. Emory University is an Equal Opportunity/Affirmative Action Employer.**



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### BIOCHEMICAL TOXICOLOGY/METABOLISM SCIENTIST

The Agricultural Group of Monsanto Company has an immediate opening for a Biochemist/Toxicologist in the Environmental Health Laboratory. This position in the Biochemical Toxicology and Metabolism Group will be responsible for the conduct of biochemical toxicology, pharmacokinetic and metabolism studies to support product registration and defense. The successful candidate should possess a Ph.D. in pharmacology, toxicology, biochemistry or related discipline with a minimum of three years post-doctoral experience. Experience as a study director/principal investigator and knowledge of GLP for toxicology studies is highly desired.

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## Post-Doctoral Position

This position involves the study of neuronal cytoskeleton structure and function. Areas of research include cytoskeleton abnormalities in neurodegeneration and the role of phosphorylation in neuronal skeleton structure-function relationship. Applicants must have a strong background in biochemistry/protein chemistry. This position is available immediately and offers an academic appointment at Harvard Medical School.

Please send curriculum vitae and names of three references to: R.K. Sihag, Ph.D., Laboratories for Molecular Neuroscience, McLean Hospital, 115 Mill Street, Belmont, MA 02178-9106. Fax: (617) 855-3299.

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The successful candidate should have a minimum BS or MS in a relevant medical or biologic science with 5+ years industrial experience in drug regulatory affairs including proven experience in negotiating with FDA reviewers. Experience with quality assurance and establishment of documentation systems is also required. Experience with biologics in addition to drugs is highly desirable. Strong communication, negotiation and supervisory skills are essential.

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**NEEDS  
PHYSICAL OCEANOGRAPHERS  
MARINE BIOLOGISTS**

THE RESEARCH INSTITUTE OF THE KFUPM HAS POSITIONS AVAILABLE FOR MARINE SCIENTISTS TO PARTICIPATE IN ONGOING RESEARCH PROJECTS IN ITS WATER RESOURCES AND ENVIRONMENT DIVISION. THESE PROJECTS ARE FIELD ORIENTED AND INVOLVE THE EVALUATION OF IMPACTS OF OIL FACILITIES ON THE MARINE ENVIRONMENT OF THE ARABIAN GULF. APPLICANTS SHOULD HAVE A STRONG FIELD ORIENTATION AND THE ABILITY TO WRITE WELL. EXPERIENCE IN IMPACT ASSESSMENT PREPARATION AND PROJECT MANAGEMENT WILL BE HELPFUL. THE FOLLOWING SPECIFIC POSITIONS ARE AVAILABLE; HOWEVER, APPLICANTS WITH OTHER BACKGROUND ARE ENCOURAGED TO APPLY:

**PHYSICAL OCEANOGRAPHERS** - PH.D. OR M.S. REQUIRED. APPLICANT SHOULD HAVE EXPERIENCE IN THE COLLECTION AND ANALYSIS OF OCEANOGRAPHIC AND METEOROLOGICAL DATA. TRANSPORT MODELING EXPERIENCE USEFUL BUT EMPHASIS WILL BE ON FIELD DATA COLLECTION AND ITS EVALUATION.

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**Proposal Writers**

The AAAS Education and Human Resources Directorate is looking for people to serve on a consultant basis as proposal writers for science, mathematics, and technology (SMT) education projects. People with experience in general SMT education and community outreach programs (especially those that foster equal access to SMT fields for minorities, women, and people with disabilities) are encouraged to apply. In addition to consultant fees, AAAS will provide on-site visits for writers to meet with staff and organize time-tables. Please send résumés or curriculum vitae, and samples of *funded* proposals to:

**Yolanda George  
AAAS  
1333 H Street, N.W.  
Washington, DC 20005**

**UNIVERSITÄT FÜR BODENKULTUR WIEN**

An der Universität für Bodenkultur Wien ist die Planstelle eines **Ordentlichen Universitätsprofessors bzw. einer Ordentlichen Universitätsprofessorin für Waldbodenkunde, Waldernährung und Standortlehre (Nachfolge Prof. Krapfenbauer)** ab 1. Oktober 1994 zu besetzen. Die Planstelle ist dem Institut für Waldökologie, Fachgruppe Wald- und Holzwissenschaften, zugeordnet.

Voraussetzungen für die Bewerbung sind:

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*Die Universität für Bodenkultur Wien strebt eine Erhöhung des Frauenanteils in ihrem Personalstand an und lädt daher fachlich einschlägig qualifizierte Wissenschaftlerinnen ausdrücklich ein, sich zu bewerben.*

Bewerbungsschreiben, die insbesondere auch auf die Zukunftsperspektiven einer allfälligen Tätigkeit an der Universität eingehen sollen, sind mit Lebenslauf, Verzeichnis der wissenschaftlichen Veröffentlichungen, Sonderdrucken von 3-5 Schlussarbeiten sowie allfälligen Referenzen und Empfehlungsschreiben bis spätestens 14. Mai 1993

an den Rektor der Universität für Bodenkultur Wien, Gregor Mendelstraße 33, A-1180 Wien (Fax: (0) (222) 36-916-59 oder 34-24-24), zu richten.

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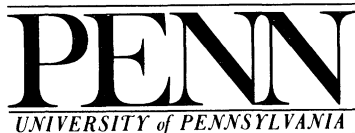
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Stanley Baum, M.D.  
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Participate in a team oriented research project assessing the carbon dynamics of terrestrial ecosystems, including the effects of land use and potential climate change. The current research focus is to quantify the effects of land use on the carbon dynamics of forest vegetation and soil at the country level. Research results will be published/presented in scientific journals/meetings. **Candidates must meet minimum qualifications which include** a Ph.D. in ecology, forestry, soils, range science, biogeography, or related field (a MS with 3 years of specifically related experience may substitute). In addition, the position requires demonstrated, broad-based experience in: (1) satellite imagery analysis, data base availability, and management; (2) GIS application of vegetation, soil, and land-use assessments; (3) the creative application of remote sensing and GIS in regional or global scale analysis; (4) the UNIX operating system environment; (5) C and/or FORTRAN programming; (6) providing scientific leadership to research projects; (7) publishing in the scientific literature and public speaking. Preferred candidates will possess: (1) experience in modeling the ecological processes and properties of carbon dynamics in terrestrial ecosystems; and (2) experience with PCI and GRASS or ARC/INFO software. Occasional travel will be required.

Send cover letter that **specifically addresses your qualifications for each of the minimum preferred requirements**, a resume, a list of scientific publications and presentations, and the names and telephone numbers of at least three professional references by May 28 to:

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The National Institutes of Health (NIH) invites nominations and applications for the position of Director, Division of Intramural Research (DIR), National Center for Human Genome Research (NCHGR), National Institutes of Health. This is a Civil Service position in the Senior Executive Service (SES), with a salary range of \$92,900 to \$115,700 per annum. The person selected may also be eligible for Physician's Comparability Allowance of up to \$20,000 per year. A recruitment bonus of up to 25 percent of base pay may be available to a non-federal candidate selected for this position, subject to individual approval. A relocation bonus of up to 25 percent may be available to a permanent federal employee who must relocate to accept this position, subject to individual approval. A one year probationary period must be served if the individual selected is not currently in the Senior Executive Service. Members of the Commissioned Corps of the U.S. Public Health Service and SES reinstatement eligibles will be considered.

The Director of the Division of Intramural Research Program, National Center for Human Genome Research, National Institutes of Health (NIH) serves under the general direction of the Director, NCHGR as the principal advisor on all matters relating to all aspects of human genome research. The Director, Division of Intramural Research (DIR), directs a program of multidisciplinary fundamental and clinical research for the National Center for Human Genome Research. The Director, DIR, serves as the principal advisor to the Institute Director on biomedical and scientific affairs involving the intramural research programs conducted by basic and clinical research investigators in the field of human genetics. The Director, DIR, develops and recommends policies for the execution of the intramural research programs, determines their ongoing effectiveness, and recommends or develops new or revised research programs. In collaboration with senior officials, the Director, DIR participates in the design and implementation of overall Center management policies including program planning, budget formulation, and resource allocation.

For more information contact Mary Glynn at (301) 402-1094. The following forms are required: Application for Federal Employment (SF-171) accompanied by a current curriculum vitae and bibliography. These must be submitted to:

Mary Glynn  
National Institutes of Health  
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9000 Rockville Pike  
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**ANATOMY:** Dr. J. P. Long, Interim Head, Bowen Science Building.

**BIOCHEMISTRY:** Alan G. Goodridge, Professor and Head, Bowen Science Building.

**DERMATOLOGY:** John S. Strauss, M.D., Professor and Head; or Kenzo Sato, M.D., Professor, 2 Boyd Tower, General Hospital. A postdoctoral research associate for the study of electrophysiology of cultured cells.

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**PEDIATRICS:** Dr. Frank H. Morriss, M.D., Professor and Head.

**PHARMACOLOGY:** Dr. P. Michael Conn, Chairman and Head, Bowen Science Building. Openings in all areas of pharmacology and toxicology.

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**PSYCHIATRY:** Postdoctoral associate positions are available in neuroscience, genetics, epidemiology, general hospital psychiatry, and child psychiatry. Robert G. Robinson, M.D., Professor and Head, 2887 John Pappajohn Pavilion.

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PHYSIOLOGY AND BIOPHYSICS**

The University of Cincinnati College of Medicine announces the opening of the Chair of the Department of Physiology and Biophysics. The College of Medicine ranks among the top 30 colleges of medicine nationally in grant holdings and has significant interdisciplinary areas of distinction particularly in cell and molecular biology and cardiovascular research. The Department has a long history of excellence in education, training and basic research and the 15 full-time faculty are well supported by extramural grants.

We seek qualified candidates with demonstrated abilities in research, leadership and administration and a strong commitment to teaching. Increased support and growth within the department are expected. Applications from outstanding individuals in any area of physiology and biophysics are welcomed. Individuals able to take advantage of the University's significant investments in the transgenic and gene targeting technologies are particularly encouraged to apply. Applications and nominations are welcomed. Interested individuals should submit a curriculum vitae and the names of three references to:

Jeffrey Robbins,  
Chair, Search Committee  
Dept. of Pharmacology  
& Cell Biophysics  
University of Cincinnati  
Cincinnati, OH 45267-0575



The University of Cincinnati is an Affirmative Action/Equal Opportunity Employer. Women, minorities, disabled persons, Vietnam era and disabled veterans are encouraged to apply. The UC Medical Center is a smoke-free work environment.



## LECTURERS WITH MORE THAN A DEGREE OF INTEREST IN PSYCHOLOGY

### LECTURER IN PSYCHOLOGY (THREE POSITIONS) (CONTINUING/LIMITED TENURE)

Applicants should have a PhD or equivalent qualification in Psychology and demonstrated research and teaching interests in one of the Department's four research foci: cognitive neuro science; quantitative - applied; clinical science, developmental - social.

You will be expected to conduct research, teach in undergraduate and postgraduate programmes and contribute to research supervision at the postgraduate level.

Applicants who do not meet selection criteria for a continuing appointment may be considered for a limited tenure appointment.

Salary: \$41,000 - \$48,688 p.a.

Further information: Professor Roger Wales  
(613) 344 6378.

Applications close: 14 May 1993

Reference numbers: B5120000; B5120310; B5121190.

Applications should be sent, in duplicate, quoting three referees (including facsimile numbers) to the Director, Personnel Services, The University of Melbourne, Parkville, Victoria, 3052.

*The University of Melbourne is an equal opportunity employer and has a smoke free work-place policy.*



**THE UNIVERSITY OF MELBOURNE**  
MORE THAN A DEGREE

National Institute of Arthritis and  
Musculoskeletal and Skin Diseases  
National Institutes of Health

## RESEARCH POSITION

A research position is available at the National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Public Health Service: an investigator whose program will compliment ongoing research on the mechanisms of signal transduction in immune cells. This position is for an individual experienced in protein biochemistry, biophysics and molecular genetic techniques. Salary is \$42,000 to \$56,000 per year, depending on experience. Send CV, several reprints, summary of research interests, and names of three references to:

**Dr. Henry Metzger**  
NIAMS, NIH  
Building 10, Room 9N228  
9000 Rockville Pike  
Bethesda, MD 20892



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## Supervising Professional Environmental Scientist

The Department of Research of the South Florida Water Management District seeks a senior-level scientist to participate in and provide strong scientific leadership to research on the Lake Okeechobee, Kissimmee River, or estuarine ecosystems. M.S. in science with six years of experience, including two years supervision of a professional staff, required; Ph.D. in limnology or related aquatic science discipline and a proven publication record are preferred.

The District offers competitive salaries, excellent benefits, a smoke-free work place, and a sub-tropical environment. New hires will be required to successfully complete a pre-placement drug test. For consideration send your resume INCLUDING YOUR SOCIAL SECURITY NUMBER to: L.M. Starr, Human Resources Division, South Florida Water Management District, P.O. Box 24680, West Palm Beach, FL 33416-4680, or call Dr. Nicholas G. Aumen for further details at (407)687-6601. Equal Opportunity Employer M/F/D/V.

**South Florida Water  
Management District**

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### FACULTY POSITION Molecular Immunologist

The Department of Microbiology of the University of Iowa College of Medicine is seeking applicants for a tenure track position at the level of Assistant Professor in the area of Molecular Immunology.

Applicants must have a Ph.D. and/or M.D. degree, postdoctoral experience and a strong record of research accomplishment. Candidates are being sought who are capable of establishing an extramurally funded research program and who have an aptitude for teaching and training graduate students. Those with a special interest in immunoparasitology may be given preference. Women and minorities are especially encouraged to apply.

The University of Iowa College of Medicine is one of the major medical centers in the USA for both research and training. The University has strong programs in immunology, molecular biology and parasitology. The Department of Microbiology consists of 28 faculty who lead research programs in virology, immunology, pathogenic bacteriology, microbial genetics and microbial physiology and who are major participants in various interdisciplinary programs including a new one in immunology. All of the current immunologists within the Department work in molecular immunology. The Department is under new leadership and will move into newly renovated facilities; the selected candidate will receive a generous start-up package.

Applicants should send their curriculum vitae, statement of research interest and the names and addresses of at least three references, to Dr. Michael A. Apicella, Professor and Head, Department of Microbiology, University of Iowa College of Medicine, 3403 Bowen Science Building, Iowa City, IA 52242-1109. The University of Iowa is an Affirmative Action/Equal Opportunity Employer.

## University of Colorado Health Sciences Center Chair, Department of Microbiology

The University of Colorado Health Sciences Center invites applications and nominations for the Chair of the Department of Microbiology. The Department of Microbiology has been recently established at the University of Colorado Health Sciences Center as an independent entity. In this regard, the School of Medicine has committed a substantial investment of new resources to facilitate the success of the Chairperson in expanding the research and teaching roles of the faculty of this Department. Candidates for the position of Chairperson who are pursuing research related to molecular events in microbial pathogenesis or in molecular genetics are of particular interest to the Department. Serious consideration will, however, be given to all individuals demonstrating excellent credentials in research, teaching, and administration in the field of microbiology.

Letters of application or nomination should be sent to:

Robert T. Schooley, M.D.  
Head, Infectious Disease Division  
University of Colorado Health Sciences Center  
B-168  
4200 East Ninth Avenue  
Denver, CO 80262.  
Telephone: 303-270-6753  
FAX: 303-270-8681.

Applications should include a curriculum vitae, list of publications, a summary of academic experience, and a list of references. The deadline for the receipt of applications is June 1, 1993.

The University of Colorado Health Sciences Center is committed to Equal Employment Opportunity and Affirmative Action.

## POSITIONS OPEN

### RESEARCH ASSOCIATE AND POSTDOCTORAL FELLOW POSITIONS INSTITUTE FOR TOXICOLOGY UNIVERSITY OF SOUTHERN CALIFORNIA

Applications are invited for laboratories investigating the biology and health effects of oxidants and antioxidants. Positions available with:

**Enrique Cadenas**—biochemistry of oxidant injury; quinone biochemistry.

**Gino Cortopassi**—genetic effects of oxidative damage; human mitochondrial and nuclear mutagenesis.

**Henry Jay Forman**—signal transduction during oxidative stress; molecular regulation of glutathione biosynthesis.

**Alex Sevanian**—membrane peroxidation; phospholipases.

Send cover letter, curriculum vitae, addresses and telephone numbers of two references to: **Miyu Yasui, Institute for Toxicology, School of Pharmacy, University of Southern California, 1985 Zonal Avenue, Los Angeles, CA 90033.** USC is an Affirmative Action/Equal Opportunity Employer.

### SANDOZ POSTDOCTORAL FELLOWSHIP IN MOLECULAR TOXICOLOGY

The Division of Pathology and Toxicology of the American Health Foundation has an opening for one or two years for a postdoctoral fellow to study molecular effects of pharmaceuticals in relation to their potential hazard to humans. The division has a broad-based program on chemical safety assessment involving research on peroxisome proliferators, antioxidants, antiestrogens and quinoline antibiotics. The laboratory utilizes *in vivo*, *in vitro*, biochemical and molecular techniques in these studies. The stipend for the fellowship is \$25,000 or greater depending upon qualifications. Candidate should be a highly qualified recent graduate with experience in molecular techniques. Inquiries should be addressed to: **Dr. Gary M. Williams, Director of Medical Sciences, American Health Foundation, One Dana Road, Valhalla, NY 10595.** Equal Opportunity Employer. M/F/H/V/ADA.

### POSTDOCTORAL FELLOWSHIPS

Postdoctoral positions are available for individuals interested in the study of the molecular mechanisms of nuclear hormone receptors with special emphasis on vitamin A and "orphan" receptors and their potential ligands. Other projects will include investigation of the roles of these receptors during development and in the adult.

Qualified individuals should possess an M.D. or Ph.D. in an appropriate life science and have less than three years of previous postdoctoral experience. A background in molecular biology, protein biochemistry, and/or HPLC analysis is preferred. Send curriculum vitae and three letters of recommendation to: **Dr. David Mangelsdorf, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9050.**

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A POSTDOCTORAL FELLOW is sought to study neutrophil function, including aspects of signal transduction and enzyme activation. A recent Ph.D. or M.D. with experience in molecular biology is preferred. Some familiarity with techniques of protein analysis and purification is also desired. Position available after July 1, 1993. Send curriculum vitae and names of 3 references to: **Dr. Stephen E. Malawista, Section of Rheumatology, Yale University School of Medicine, New Haven, CT 06510.**

SCIENCE welcomes placement of line classified ads by FAX. Please include name and telephone number for our confirmation call when transmitting ad to:

FAX NUMBER: 202-682-0816

## POSITIONS OPEN

### POSTDOCTORAL FELLOW Mechanisms of MAP kinase signaling

Postdoctoral position available immediately for a highly motivated individual to identify and characterize upstream regulators of MEK kinase (see *Science* 260, 315). The position requires extensive experience in molecular biology; expertise in enzymology and/or yeast molecular biology is also preferred. Send curriculum vitae and three letters of recommendation to: **Kendall J. Blumer, Ph.D., Department of Cell Biology and Physiology, Box 8228, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110; FAX: (314) 362-7463.**

### POSTDOCTORAL FELLOW MEMBRANE STRUCTURE/FUNCTION

Postdoctoral position supported by three-year NIH grant to study the effect of omega-3 fatty acids on membrane structure/function. Interdisciplinary project will investigate the potential role of membrane-bound omega-3 fatty acids as anti-cancer agents. Experience in either immunology or membrane biophysics is preferred. Send curriculum vitae and names of three references to: **Dr. William Stillwell, Department of Biology, Indiana University, 723 West Michigan, Indianapolis, IN 46202-5132. Telephone: 317-274-0580; FAX: 317-274-2846.**

### POSTDOCTORAL FELLOWSHIP IN EXPERIMENTAL CEREBRAL ISCHEMIA

The Center for Imaging and Pharmaceutical Research at the Massachusetts General Hospital/Harvard Medical School has a research position available immediately in the neuroimaging of cerebrovascular and neurotransmitter perturbations in cerebral ischemia. Skills required: microsurgery, knowledge of neurochemistry, *in vivo* microdialysis and/or immunocytochemistry. Send curriculum vitae and three references to: **Dr. Eng Lo, MGH-CIPR, Building 149, 149 13th Street, Charlestown, MA 02129.** Equal Opportunity Employer.

**POSTDOCTORAL FELLOWSHIP.** A Ph.D. in molecular biology/cell biology is required for studying substratum-induced signal transduction mechanisms in the regeneration/differentiation of oligodendrocytes, the CNS myelinating cells. Previous experience within field desirable. Send curriculum vitae and names of three references to: **Dr. Sara Szuchet, Department of Neurology, MC2030, University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.** The University of Chicago is an Equal Opportunity Employer.

**POSTDOCTORAL FELLOWSHIPS** available (U.S. citizens/permanent residents) to address issues of signaling specificity for G-protein coupled receptors and cytokine signaling systems. Research efforts involve a multifaceted approach utilizing tools of molecular biology, protein chemistry and cell biology to identify determinants of signaling specificity and to define the receptor's microenvironment. Interactive research environment in a charming coastal area. Send curriculum vitae and three letters of reference to: **Stephen M. Lanier, Ph.D., Department of Pharmacology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.** An Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL FELLOW POSITION

Postdoctoral fellowship position available at the Weis Center for Research in the laboratory of **Dr. Kenneth M. Baker** to study the molecular and biochemical regulation of cardiac cellular growth, including angiotensin-receptor signal pathways. Ph.D. or M.D./Ph.D. candidate with molecular background preferable.

Send curriculum vitae and the names and addresses of three references to: **Geisinger Human Resources (KMB), 100 North Academy Avenue, Danville, PA 17822-1529.** Equal Opportunity Employer, M/F/H/V.

**POSTDOCTORAL FELLOW:** Cell Biology/Cellular Biophysics. Position available immediately to study architecture and dynamics of cytoskeleton in living cells. Ph.D. required. Experience in protein biochemistry, digital fluorescence microscopy, FRAP desired. Send curriculum vitae and 3 references to: **Dr. Kate Luby-Phelps, Department of Physiology, University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9040. FAX: (214) 648-8685.** We are an Equal Opportunity Institution.

## POSITIONS OPEN

**NMR POSTDOCTORAL POSITION** at the Keck NMR Laboratory. Studies of macromolecules by multidimensional and multinuclear NMR spectroscopy and computational methods. The laboratory is equipped with a new 600 MHz spectrometer configured for biomolecular research. The computation environment consists of SGI work stations and a Departmental Cray YMP EL. Send your résumé and three letters of reference to: **Dr. Xiaolian Gao, Department of Chemistry, University of Houston, Houston, TX 77204-5641.**

### POSTDOCTORAL RESEARCH POSITIONS

To study signal transduction by adhesion receptors in lymphocyte activation and function, and the biochemistry of adhesion. Background in cellular biochemistry, protein biochemistry or cellular/molecular immunology is desirable. Those interested should send curriculum vitae and the names and telephone numbers of references to: **Dr. Adrienne Brian, La Jolla Cancer Research Foundation, 10901 North Torrey Pines Road, La Jolla, CA 92037.**

A POSTDOCTORAL RESEARCH ASSOCIATE position is available for NIH-funded research for a recent Ph.D. graduate to study molecular mechanisms of cell cycle control, G1 check points including p53, and how these may be manipulated to influence cell death processes in neoplastic cells. Applicants should have a strong background in molecular biology techniques including cloning, PCR sequencing, directed mutagenesis, engineering constructs under inducible promoters, use of retroviral vectors, transfection techniques. Send curriculum vitae with names of 3 references to: **Dr. J. Houghton, Department of Molecular Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101.** Equal Opportunity/Affirmative Action Employer.

**RESEARCH POSITIONS** available to join an interactive research team studying mechanisms of carcinogenesis and terminal differentiation in mammalian cells. Current areas of research interest: (1) Defining the molecular basis of chemical-viral carcinogenesis; (2) Cloning and characterization of genes mediating transformation progression; (3) Characterization of novel genes associated with terminal cell differentiation in human melanoma cells; and (4) Development of monoclonal antibodies specific for human tumor-associated antigens. Background in molecular biology and/or immunology required. Send curriculum vitae and names of three references to: **Dr. P. B. Fisher, Departments of Pathology and Urology, Columbia University, College of Physicians and Surgeons, PH STEM-10, 630 West 168th Street, New York, NY 10032. FAX: (212) 305-8177.** Equal Opportunity Employer.

**POSTDOCTORAL RESEARCH POSITIONS** available immediately to perform and supervise *in vitro* and *in vivo* studies evaluating Nitric Oxide Synthase Inhibitors in animal models of sepsis and multiple organ failure syndrome. Applicants with a Ph.D. or M.D. and experience in small animal surgery, molecular biology and immunology or medicinal chemistry will be considered. Exceptionally qualified Master's candidates are also welcome. Successful applicant will interact with basic science faculty of York College and provide liaison with clinical faculty at York Hospital. Starting salary of \$30,000 with full benefits plan is provided. Please send curriculum vitae and a cover letter with references to: **Susan Evans, Department of Surgery, York Hospital, 1001 South George Street, York, PA 17405, or for further information call (717) 771-2202.**

**RESEARCH ASSOCIATE—NEW YORK.** The Division of Gastroenterology of the Brookdale Hospital Medical Center seeks a Research Associate possessing a Ph.D. degree with expertise in gastrointestinal physiology, gastrointestinal motility, neural and peptidergic control of gastrointestinal function to operate the clinical motility laboratory and to lead the research in the division. Responsibilities also include teaching fellows. Submit curriculum vitae and names of three references to: **Hulya Levendoglu, M.D., Chief, Division of Gastroenterology, The Brookdale Hospital Medical Center, Linden Boulevard at Brookdale Plaza, Brooklyn, NY 11212.** Equal Opportunity Employer.

## Molecular Biologist Computing Specialist

Monsanto Corporate Research, located in St. Louis, MO, is looking for a Molecular Biologist Computing Specialist. Preferably with a Ph.D. in Molecular Biology or Genetics and a demonstrated interest in computational biological/genetics work.

We have a sophisticated plasmid database and experimental planning tool, gene sequence analysis packages and other related databases which are used to advance scientific leads. The successful candidate will be able to demonstrate excellent leadership skills in the advancement of scientific leads using computational analysis.

This position requires an advanced degree in Molecular Biology/Genetics, with strong computer analysis skills, and a proven scientific track record. Excellent interpersonal skills and the ability to work in a team environment is also required.

Responsibilities include working with other scientists using computational models in an effort to reduce product discovery time. This person must be a self-starter and interested in championing computational work in research. We offer challenging work in a fast-paced environment.

We offer a competitive salary and benefits package for the successful candidate. If interested, send a CV with salary history to:

**MONSANTO CORPORATE RESEARCH;  
800 North Lindbergh; Mail Zone 02H; St. Louis,  
MO 63141.** Equal Opportunity Employer M/F/D/V.

# Monsanto

## EXECUTIVE POSITION U.S. FOOD AND DRUG ADMINISTRATION

The U.S. Food and Drug Administration is seeking an experienced executive to serve as the Director of the Office of Device Evaluation within the FDA's Center for Devices and Radiological Health, located in Rockville, Maryland. As a key member of the Centers' senior staff, the Office Director develops and directs programs to evaluate the safety and effectiveness of products developed by the innovative and technically dynamic medical device industry. The person selected for the position will direct the work of approximately 260 scientific, technical and support employees engaged in the evaluation of new medical devices proposed for marketing or clinical trials. This is a highly visible position requiring an individual who possesses exceptional interpersonal skills and the ability to deal effectively with the regulated industry, members of the medical and research communities, consumer groups, and the United States Congress.

Candidates should have an M.D. or D.D.S.; or a Ph.D. or equivalent experience in a physical science or engineering. Extensive clinical, research, or regulatory experience with medical device technology is desirable.

The Director is a member of the Federal Senior Executive Service with a salary range of \$92,900 to \$107,300; physicians may also be eligible for a comparability allowance of up to \$20,000 per year. A recruitment bonus and relocation expenses may be paid.

If you wish further information regarding this position and how to apply, please call James Keady, FDA Division of Human Resources Management, at (301) 443-1755. Applications will be accepted until June 11, 1993.

This position may also be filled by current or former Commissioned Officers of the U.S. Public Health Service.

FDA is an Equal Opportunity Employer and is Smoke-Free.

## CHIEF COMPARATIVE PATHOLOGY SERVICES

The University of Chicago, Department of Pathology and The Committee on Comparative Medicine and Pathology (CCMP) is seeking a board certified or board eligible veterinary pathologist for a tenure track position within the Pritzker School of Medicine. The CCMP is a newly created independent academic unit with authorization for 8-12 faculty positions holding D.V.M. degrees. A primary appointment is made in the Dept. of Pathology with a secondary appointment in the CCMP.

The successful candidate will have a proven research record and will devote 75% effort establishing independent research and training programs. Suitable laboratory and office space will be provided by CCMP, along with start up funds to complement pending or existing grant support. Preferred areas of research include, but are not limited to: virology, molecular pathophysiology, basic mechanisms of disease (animal model systems), and molecular immunology.

The appointee will be Chief, Pathology Services for The Animal Resources Center, which occupies approximately 90,000 sq ft of animal space devoted to the care and use of a wide range of laboratory animal species. The use of barrier maintained rodents with increasing use of transgenics are the predominant population. Grants of over \$35M annually support animal related research projects.

This is a unique opportunity for a scientist interested in leading a program of comparative pathology within a major medical center. Opportunities for collaborative and independent research are extraordinary and the intellectual environment extremely supportive of this program. The rank and salary will be commensurate with credentials. The starting date is negotiable.

Interested candidates should send a C.V., three reprints of refereed articles, names of three references with telephone numbers, and a letter of intent expressing career goals to: Albert M. Jonas, D.V.M., (ACVP), Acting Chair CCMP, The University of Chicago, 5841 S. Maryland Ave., MC 1030, Chicago, IL 60637.



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This Scientist will work on designs and supervise experiments aimed at *Bacillus thuringiensis* strain improvements and fermentation for development of microbial insecticides.

Requires a PhD in Microbiology with a strong background in microbial physiology and genetics preferred. Would consider an MS in Microbiology/Bioengineering with several years of experience. Should have at least five years' experience in microbial research and two years of fermentation process development. Will supervise two Scientists.

For consideration, please send resume to:

**Sandoz Agro, Inc.  
Human Resources Dept.  
975 California Avenue  
Palo Alto, CA 94304-1104**



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## POSITIONS OPEN

**RESEARCH ASSOCIATE** for college in northwest Ohio. To conduct research on mouse carcinogenesis by studying oncogene activation and tumor suppressor gene inhibition. Specifically, this will include study of the fundamental mechanisms of chemical carcinogenesis in rodents and human beings; analysis of tumor susceptibility genes; and research on inactivation of tumor suppressor genes in the carcinogenesis of tumor cell lines. Must have Ph.D. (or ABD) in Molecular Biology. Academic program must have included one graduate-level course each in the following areas: Fundamentals of Oncology, Pathology, and Biostatistics. Must be conversant with such molecular biology research techniques as cell and tissue culture; DNA transfection and transformation; Southern, Northern, and Western blotting; polymerase chain reactions; DNA and RNA sequencing; oligonucleotide synthesis; CAT assay, gel motility shift assay, and DNA footprinting; and immunoprecipitation. These skills may be evidenced by academic letters of reference or employer testimonials. Forty hours per week, 8:00 a.m. to 5:00 p.m.; \$25,000 per year. *Must have proof of legal authority to work indefinitely in the United States.* Send résumé and course transcript in duplicate to: J. Davies, JO# 1328037, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.

## RESEARCH ASSOCIATE POSITION IN NEUROSCIENCE

The University of Ottawa, in collaboration with Fisons Pharmaceuticals, has a research associate position available immediately to study mechanisms of neuronal injury in cerebral ischemia. The position requires expertise in neurochemistry relating to protein kinases, or other aspects of cell signalling. Salary is competitive and commensurate with experience. Send curriculum vitae, names of three references and a statement of research interests to: Dr. A. Buchan, Clinical Studies Building, 1053 Carling Avenue, Ottawa, Ontario, CANADA K1Y 4E9. Telephone: (613) 761-5127; FAX: (613) 761-5189.

## FLOW CYTOMETRY SPECIALIST

**RESEARCHER**, full-time flow cytometry specialist position available immediately at the Southern Illinois University (SIU) School of Medicine. This laboratory will be equipped with a state-of-the-art flow cytometer having cell sorting capability. Experience in flow or imaging systems and sterile cell sorting and familiarity with computers required. The selected candidates will have a Bachelor's degree in the biological or biophysical sciences, or electromechanical engineering or equivalent experience. Minimum qualifications are a Master's degree in biology, biophysics or electromechanical engineering, or a Bachelor's degree in biology, biophysics or electromechanical engineering and a minimum of two years of experience. Salary commensurate with experience. Please send curriculum vitae, summary of professional experience and two or more professional references to: Edward J. Moticka, Ph.D., Associate Dean for Research and Academic Affairs, Southern Illinois University School of Medicine, P.O. Box 19230, Springfield, IL 62794-9230. Closing date for position is June 7, 1993. *SIU is an Equal Employment Opportunity/Affirmative Action Employer.*

## VISION SCIENTIST VISUAL PSYCHOPHYSICS AND COMPUTATIONAL VISION

The University of Missouri-St. Louis School of Optometry seeks a vision scientist to teach professional and graduate-level courses in visual psychophysics and to develop an active research program in the areas of visual psychophysics and computational vision. Applicants are expected to be willing to generate external support for their research. Rank/salary/appointment date negotiable. Letter, résumé, and three letters of reference by May 31, 1993, to: Dr. Jerry L. Christensen, Dean, School of Optometry, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121. *Equal Opportunity/Affirmative Action Employer, compliant with the Americans with Disabilities Act of 1990.*

## POSITIONS OPEN

**ORCHID BIOLOGIST.** Permanent position. Requires a Ph.D., field research experience, and a dynamic individual willing to contribute to an exciting orchid program. Although orchid floristics is preferred, aspects of orchid ecology and propagation will also be considered. Candidate will be part of an expanding orchid research center in a small tropical botanical garden that specializes in epiphytes. He/she would be expected to develop a research program in orchid biology, attract research interns, interface with the public on orchid conservation, and participate in the many facets of the program at the botanical gardens. Send curriculum vitae, statement of research interests, and three (3) letters of reference to: Dr. Meg Lowman, Director of Research, The Marie Selby Botanical Gardens, 811 South Palm Avenue, Sarasota, FL 34239; Telephone: (813) 955-7553; FAX: (813) 951-1474.

## STAFF SCIENTIST

The Lawrence Berkeley Laboratory (LBL) seeks a staff scientist to work in collaboration with the Chemical Dynamics Participation Research Team to develop, build and run experiments in gas phase chemical dynamics and spectroscopy at the LBL Advanced Light Source Chemical Dynamics beamline. Position will have responsibility to specify, design and oversee two experimental end stations from construction phase through day-to-day operation, modification and maintenance. Act as alternate spokesperson for the team. Assist in supervision of graduate students and operation of chemical dynamics research group.

To qualify, candidate must have demonstrated background in all phases of chemical dynamics research methods, including crossed-beam scattering techniques, electron impact ionization, MPI and ion imaging techniques, UV and VUV laser systems, and molecular beam sources. Ph.D. in chemical physics with 1 to 2 years of postdoctoral experience or equivalent required.

Please send résumé and three references to: Lawrence Berkeley Laboratory, Staffing Office, Job #G/1295, One Cyclotron Road, Building 90-1042, Berkeley, CA 94720. LBL is an Equal Opportunity Employer.

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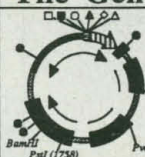
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## ANNOUNCEMENTS

**INTERNSHIPS/APPLIED RESEARCH PROGRAM**—Projects available at U.S. Army Environmental Hygiene Agency (near Baltimore) for recent degree recipients (last 3 years preferred) to assist in areas including analytical support in the field of environmental and industrial hygiene chemistry and air pollution science/engineering fields. Degree in chemistry, engineering, and related areas preferred. Contact: Internship/Applied Research Program/USAEHA, Attention: C. Sheldon, Science/Engineering Education Division, Oak Ridge Institute for Science and Education, P.O. Box 117, Oak Ridge, TN 37831-0117, Telephone: (615) 576-3456.

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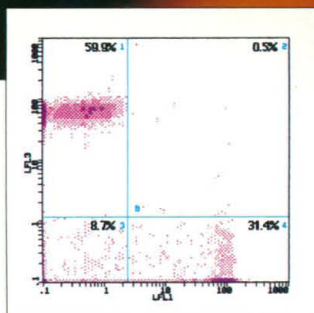
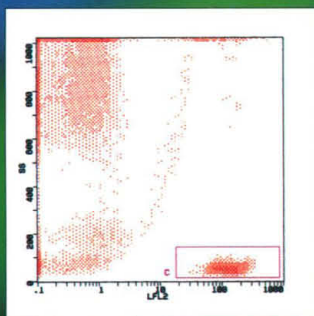
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- Minimal compensation required for two color analysis with FITC labels
- Economical cost

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