



## Analyzer for Kinetic Metabolic Studies

The upgraded Attofluor digital fluorescence microscopy workstation provides image acquisition, processing, and archiving for the measurement of high-speed cell metabolic kinetics such as calcium, pH, cyclic AMP, and other processes. Available as an integrated turnkey system or as individual components, the workstation consists of the Zeiss Axiovert microscope, with high light throughput for exceptional fluorescence transmission, and the Attofluor digital fluorescence system. Carl Zeiss. Circle 86.

## Streptavidin Microparticles

Power-Bind Streptavidin Microparticles (SA-MP) are stable microparticles with streptavidin covalently bound to the surface in a highly active form that allows scientists to bind difficult ligands to the microparticle surface. Biotinylated compounds remain stably bound to Power-Bind SA-MP after simple incubation in buffer. Standard protocols are available to biotinylate a wide range of analytes including proteins, nucleic acids, and haptens. Seradyn. Circle 87.

## PC-Based Human Physiology System

The eight-channel MacPacq Interface (model 70200) comes with all the amplifiers, electrodes, and transducers needed to run human physiology experiments from a Macintosh computer. Experiments include ECG, pulse, pneumograph, GSR, ENG (eye movement), EEG, EMG, and nerve conduction. The system

includes software to set up, view, and analyze recorded data. The system can sample up to 10,000 times per second and display data on the screen or save it to a disk. Lafayette Instrument. Circle 88.

## Primer Analysis Software

OLIGO version 4.1 primer analysis software selects optimized polymerase chain reaction (PCR) primer pairs from any DNA/RNA sequence file and establishes optimal PCR experimental conditions in seconds. Multifunctional searches select highly specific PCR primers that are free of dimer, hairpin, homooligomer, and sequence repeat structures. OLIGO also automatically searches for sequencing primers and hybridization probes and calculates optimal annealing temperature, PCR product composition, and extinction coefficients. Versions are available for IBM-compatible and Macintosh computers. National Biosciences. Circle 89.

## Fast Magnetic Purification of Templates

Fast Magnetic Purification (FMP) for M13 templates facilitates the preparation of DNA templates prior to sequencing. FMP is a patented technology that provides a simple protocol for purification of DNA from multiple samples of phage supernatant. Twelve templates can be purified in 40 min, providing sufficient DNA for two sequencing reactions from each template preparation. No centrifugation is required, and the format is suited to automation. The FMP technology incorporates uncoated, non-derivatized magnetic particles that act as a

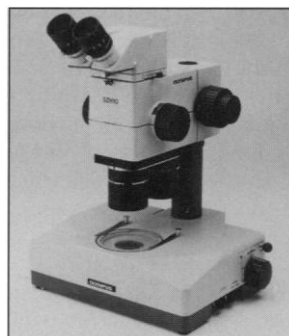
solid phase around which the precipitate forms. A magnetic separator is used to separate precipitate from supernatant between stages—removal of the magnetic field enables rapid resuspension of the pellet. Amersham International. Circle 90.

## Spectral Imaging System

The FT 1000 spectral imaging system is a new generation of fluorescence microscopes. The FT 1000 converts a standard laser-scan confocal microscope into a multichannel imaging spectrometer. Performing high-speed spectral analyses on individual pixels of the sample being scanned, the FT 1000 separately images multiple, simultaneously present fluorescent probes. The system can thus resolve and image up to eight spectral parameters. Cell Robotics. Circle 91.

## Zoom Stereomicroscope

The Olympus SZH-10 is a new generation stereo research microscope with a 10:1 zoom ratio. The magnification range with  $\times 1$  ob-



jective and  $\times 10$  wide-field high eyepoint eyepieces is from  $\times 7$  to  $\times 70$ . The wide choice of prime objectives and eyepieces provides a total magnification range from

$\times 3.5$  to  $\times 420$ . A new lens design featuring ultra-low-dispersion glass for the zoom lens assembly provides heightened image contrasts while minimizing color shifts. For photomicrography, this new objective permits faithful color reproduction for both transmitted light and reflected light uses. Olympus Corp. Circle 92.

## Literature

*Fitting, Tubing, and Valve Handbook* features more than 60 pages of these devices and includes a chemical resistance chart to ensure that tubing and fittings are compatible with materials being pumped. Cole-Parmer Instrument Co. Circle 93.

*ChemGARD: A High Performance Chemical Fume Hood From the World Leaders in Containment Equipment* is an eight-page brochure detailing this instrument. Baker Co. Circle 94.

*Dionex AI-450 Chromatography Workstation* describes the system's capabilities, including a newly updated Windows 3.1-based software package for automating a variety of chromatography instruments. Dionex Corp. Circle 95.

*Protein Analysis* is a brochure describing a line of electrophoresis and related instruments. Biometra. Circle 96.

*HPLC Columns* is a 44-page catalog that gives application and technical information on a line of columns. Hamilton Co. Circle 97.

*Sickle-Cell Anemia and Thalassemia Primer* is a 219-page paperback with clinical and scientific information on various hemoglobinopathies. Isolab. Circle 98.

*A User's Guide to Insect Cell Culture and Baculovirology in Baculovirus Expression Vector System (BEVS) Applications* describes how to optimize BEVS applications using both serum-supplemented and serum-free insect culture media. GIBCO BRL. Circle 99.

*BenchTop/PBM: High Performance MS Library Search for Any GC/MS System* describes a software system for personal computers. Palisade Corp. Circle 100.

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

# Science

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## POSITIONS OPEN

### ASSISTANT PROFESSOR BIOLOGICAL NMR SPECTROSCOPIST

The Department of Chemistry and Biochemistry invites applications for an Assistant Professor, Step I-III, beginning Fall 1993, dependent on availability of funding. Salary range: \$35,900 to \$38,800, 9-month basis. Candidates must have a Ph.D. or equivalent in Chemistry, Biology, or related field, a demonstrated record of research excellence, outstanding potential for independent research in the application of NMR spectroscopy to RNA structure and function, and a commitment to and talent for teaching at the undergraduate and graduate levels. Postdoctoral experience preferred. We are interested in candidates whose research centers on the application of NMR spectroscopy to the study of RNA structure and function, including RNA-protein interactions. This person will be affiliated with The Center for the Molecular Biology of RNA, funded by the Lucille P. Markey Charitable Trust. Research facilities include a state-of-the-art 500 MHz NMR spectrometer and ancillary computational facilities.

Curriculum vitae, summary of research and teaching interests, reprints, and confidential letters of recommendation from three references must be sent to: **Biological NMR Search Committee, Department of Chemistry and Biochemistry, University of California, Santa Cruz, CA 95064. Please refer to Provision #269-923 in your reply.** Closing date for the receipt of completed application materials is December 1, 1992.

*UCSC is an Equal Opportunity/Affirmative Action Employer. We especially welcome applications from qualified women and minority candidates.*

**ASSISTANT PROFESSOR, IMMUNOBIOLOGY OF INFECTIOUS DISEASES AND VIRAL OR BACTERIAL PATHOGENS, UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL.** Applications are invited for a tenure-track position to complement existing strength in molecular and cellular immunology, immunopathology, virology, bacteriology, microbial pathogenesis, and cellular and molecular genetics. A doctoral degree and relevant postdoctoral experience are required. The candidate will be expected to lead a vibrant and independent research program, and will participate in graduate/medical teaching. Preference will be given to applicants who reply by December 1, 1992. *Minority and female candidates are asked to voluntarily identify themselves.* Interested candidates should submit curriculum vitae, description of current and future research goals, representative reprints and names/addresses of three references to: **Dr. Jenny Ting, Chair, Search Committee, Department of Microbiology and Immunology, CB# 7290, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7290. The University of North Carolina is an Affirmative Action/Equal Opportunity Employer.**

**BOTANIST: PLANT PHYSIOLOGY/DEVELOPMENT.** Two-year VISITING ASSISTANT PROFESSOR position at Kenyon College. Teaching duties include plant biology, plant physiology, and introductory or non-majors courses. Ph.D., research program that will involve undergraduates, and evidence of excellence in teaching sought. Consideration will be given to all types of plant research utilizing tools of plant physiology, development, molecular biology and/or physiological ecology. Interested individuals should submit curriculum vitae, graduate and undergraduate transcripts, three letters of reference, and a cover letter describing teaching and research interests: **Search Committee, Biology Department, Kenyon College, Gambier, OH 43022.** Review of applications will start on January 15, 1993. *Kenyon College, an Equal Opportunity Employer, encourages women and minorities to apply.*

**CELL BIOLOGIST at the INSTRUCTOR or ASSISTANT PROFESSOR level.** Candidates with postdoctoral experience and ability to perform independent research preferred. The Department of Otolaryngology supports a strong multidisciplinary basic research program investigating laryngeal function, vocal fold cell biology and laser-tissue interactions. Please send curriculum vitae and three letters of recommendation to:

**Robert H. Ossoff, D.M.D., M.D.**  
 Chairman, Department of Otolaryngology  
 Vanderbilt University, S-2100 MCN  
 Nashville, TN 37232-2559

*Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### FACULTY POSITION IN MOLECULAR PLANT DEVELOPMENT

The Department of Biology at Penn State University invites applications for a tenure-track **ASSISTANT PROFESSORSHIP** starting fall, 1993. We seek a person working in molecular and genetic plant development; areas of interest include, but are not limited to, developmental genetics of model systems, molecular analyses of development with large-scale DNA techniques (RFLP, RAPD, YAC cloning) and analysis of transcriptional regulation. Significant research accomplishments and evidence of potential to establish an independent research program are key considerations. Commitment to excellence in teaching is essential. Send curriculum vitae, statement of research plans, and three letters of reference to: **Search Committee, Department of Biology, Box PD, 208 Mueller Lab, Penn State University, PA 16802-5301.** Evaluations begin November 12 and will continue until the position is filled. *An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.*

The Department of Biology, Villanova University, invites applications for a full-time non-tenure-track position at the rank of **ASSISTANT PROFESSOR.** The appointment will commence with the Spring Semester, 1993 and have the possibility of renewal. The successful candidate will hold the doctoral degree and have appropriate teaching experience. The individual will participate in the teaching of a two-semester Human Anatomy and Physiology course for nursing students and other courses in the appointee's area of expertise. Applicants should send complete curriculum vitae including a statement of teaching experience, a list of publications and transcripts of both undergraduate and graduate work. In addition, applicants should arrange to have three letters of recommendation sent. All materials should be addressed to: **Search Committee, Department of Biology, Villanova University, Villanova, PA 19085.** The search will begin upon appearance of this ad and continue until the position is filled. *Villanova University is an Augustinian-related Roman Catholic institution and is an Affirmative Action/Equal Opportunity Employer.*

### DEVELOPMENTAL BIOLOGIST

**ASSISTANT PROFESSOR.** The Department of Zoology at the University of Georgia is expanding its tenure-track faculty in cellular/developmental biology. We are now searching for a colleague with broad interests in biology, addressing significant problems in developmental biology at the cellular/molecular level. Candidates should have a record of research productivity, and will be expected to develop a strong independent research program. To apply, send curriculum vitae, description of research and teaching interests, and at least four letters of recommendation to: **Marcus Fechheimer, Chair of Search Committee, Department of Zoology, University of Georgia, Athens, GA 30602.** Applications received by December 1, 1992 are assured of consideration. *The University of Georgia is an Equal Opportunity/Affirmative Action Employer.*

### UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

A tenure-track **ASSISTANT PROFESSOR** position in Molecular Bacterial Pathogenesis and Physiology is available for the Spring of 1993. Candidates should hold a Ph.D., D.V.M., or M.D. degree and have at least two years of postdoctoral research experience. The successful applicant will receive good start-up support, line item 12-month salary, and will be expected to establish an independent research program in molecular aspects of bacterial pathogenesis and physiology. Preference will be given to applicants with demonstrated expertise and productivity in studies involving bacteria of clinical importance. The successful applicant will also be expected to participate in research with other molecular biology faculty and demonstrate proficiency in the teaching of pathogenic mechanisms and microbial physiology to medical, dental and graduate students. Applicants should send curriculum vitae, a statement on research interests, and names of three references to: **Dr. Gordon D. Ross, Chairman, Department of Microbiology and Immunology, University of Louisville, Louisville, KY 40292** by January 8, 1993. *The University of Louisville is an Equal Opportunity Educator and Employer that specifically encourages applications from women and minorities.*

## POSITIONS OPEN

### ASSISTANT PROFESSOR OF BIOCHEMISTRY

Applications are invited for a tenure-track position beginning September 1, 1993 for persons able to teach courses in biochemistry and microbiology or molecular biology (including laboratory); ability to teach introductory-level courses in biology, chemistry or environmental science highly desirable. Ph.D. preferred; ABD considered. Graduate emphasis in biochemistry, microbiology, molecular biology or related area expected. Teaching experience desirable. Rank and salary dependent upon qualifications and experience. Support of the institutional mission statement is expected. Central College is on the 3 x 3 modified quarter system; faculty normally teach seven courses per year with no more than three in a term. Central College is a private liberal arts college, affiliated with the Reformed Church in America, with study abroad programs in eight locations. Send résumé, transcripts, and three letters of recommendation to: **W. H. Bearce, Dean of the College, Central College, Pella, IA 50219.** Women and minority applications encouraged. Affirmative Action/Equal Opportunity Employer. Review of applications will begin November 15, 1992.

**EMORY UNIVERSITY, ANALYTICAL CHEMISTRY FACULTY POSITION.** The Department of Chemistry at Emory University invites applications and nominations for a tenure-track position in Analytical Chemistry at the **ASSISTANT PROFESSOR** level. An appointment at a higher level will be considered for an established investigator. A Ph.D. in chemistry is required. Applicants should send curriculum vitae and an outline of research plans, and arrange for three letters of recommendation to be sent to: **Professor Joseph B. Justice, Analytical Search Committee Chair, Department of Chemistry, Emory University, Atlanta, GA 30322.** Completed applications will be considered beginning November 15, 1992. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

**POULTRY NUTRITIONIST.** The Department of Poultry Science has a 12-month, tenure-track **ASSISTANT PROFESSOR** position for an individual with a Ph.D. in nutritional sciences with a strong background in physiological biochemistry. Postdoctoral training is desired as well as an interest in working with poultry. Individuals with a commitment to research and teaching should submit curriculum vitae, transcripts, statement of research interests, and names of three individuals to be contacted as references to: **Dr. C.R. Creger, Department of Poultry Science, Texas A&M University, College Station, TX 77843-2472.**

Whittier College Department of Biology is seeking a tenure-track **ASSISTANT PROFESSOR** with interests including, but not limited to, evolutionary plant ecology, plant systematics, and/or plant genetics. Teaching responsibilities include lower-division courses in general biology and upper-division courses in plant ecology, evolutionary biology, plant taxonomy, and plant genetics. Strong commitment to teaching in a liberal arts environment essential. The candidate will also be expected to maintain a research program in an area of particular interest, and to involve advanced undergraduates in that program. Send curriculum vitae, a statement of professional goals, and three letters of recommendation by December 1, 1992, to: **Professor A. Warren Hanson, Chair, Department of Biology, Whittier College, P.O. Box 634, Whittier, CA 90608.** *Whittier College is an Affirmative Action/Equal Opportunity Educator and Employer.*

The Department of Chemistry at the University of Virginia is seeking an outstanding individual for a position in **ORGANIC CHEMISTRY.** This appointment is expected to be made at the **ASSISTANT PROFESSOR** level (tenure-track), though exceptional senior applications will be considered. All areas of organic chemistry will be considered, including organometallic chemistry. Candidates with a commitment to excellence in research and teaching are encouraged to send curriculum vitae containing a list of publications, a concise outline of research plans, and arrange to have three letters of recommendation sent to:

**Timothy L. Macdonald  
Department of Chemistry  
University of Virginia  
McCormick Road  
Charlottesville, VA 22901**

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

## POSITIONS OPEN

### FACULTY POSITION IN MICROBIOLOGY.

As part of our expanding program, the Department of Biological Sciences invites applications for a full-time, tenure-track position at the **ASSISTANT PROFESSOR** rank. Primary consideration will be given to an individual, working in an area of microbial gene regulation, whose research plans will complement current microbiology faculty research interests, which include microbial ecology, microbial genetics, microbial physiology, and animal virology. Applicants must have the Ph.D., postdoctoral research experience, and a commitment to both research and teaching. The successful candidate is expected to develop an extramurally funded research program and to engage undergraduate and graduate students in research. Competitive start-up funds will be provided. Review of applications will begin 4 January 1993 and continue until the position is filled. Send letter of application, curriculum vitae, reprints, statement of research goals, and three letters of reference to: **Dr. H. Bernard Hartman, Chairman (MICRO), Department of Biological Sciences, Duquesne University, Pittsburgh, PA 15282.** *Duquesne University, an Affirmative Action/Equal Opportunity Employer, strongly encourages applications from women and minority candidates.*

### DEVELOPMENTAL NEUROPHYSIOLOGY/ NEUROPHARMACOLOGY

**ASSISTANT PROFESSOR**, tenure-track, to establish a program in developmental neurophysiology/neuropharmacology. Projects should include studying effects of toxic insults or early (neurochemical behavioral) drug exposure and CNS dysfunction. Send curriculum vitae and research plans to: **Dr. William Rayburn, Professor and Chief, Maternal-Fetal Medicine Section, Department of Obstetrics and Gynecology, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, OK 73190.** FAX: 405/271-8547. Application deadline is November 30, 1992. *The University of Oklahoma is an Equal Opportunity Employer.*

### ASSISTANT PROFESSOR EUKARYOTIC BIOCHEMISTRY

**Johns Hopkins University**

The Department of Biochemistry invites applications for a tenure-track position at the Assistant Professor level available starting July 1, 1993. Outstanding candidates with strong experimental backgrounds in any area of eukaryotic biochemistry are encouraged to apply. We are particularly interested in applicants with expertise in (1) receptors; (2) molecular aspects of nutrition; or (3) metabolic regulation. The successful candidate will be expected to develop a vigorous basic research program and to have a firm commitment to the training of graduate students. Applicants should submit, prior to November 30, 1992, curriculum vitae, reprints of key publications, and a statement of future research plans (one to three pages), as well as arrange for three letters of recommendation to be sent to: **Dr. Roger McMacken, Chairman, Department of Biochemistry, The Johns Hopkins University, School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205.** *The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR OF ANATOMY

Applications are invited for a full-time, tenure-track position currently available at the Assistant Professor level in the Department of Anatomy. Applicants must have a Ph.D., M.D., or equivalent degree with at least two years of postdoctoral experience. We are seeking a faculty member who will establish an externally funded research program using cellular and molecular approaches to developmental biology and who would augment current faculty research programs in this area. Applicants should be qualified to teach one of the basic health-related courses offered by the Department. The successful candidate will be expected to participate in the Departmental Graduate Program. Candidates with a preference for teaching Gross Human Anatomy are particularly encouraged to apply. Candidates should send curriculum vitae, a statement of current and future research plans, and three letters of recommendation to: **Chair, Faculty Recruitment Committee, Department of Anatomy, University of Iowa, Iowa City, IA 52242.**

*The University of Iowa is an Equal Employment Opportunity and Affirmative Action Employer. Women and minorities are encouraged to apply.*

## POSITIONS OPEN

### AUSTIN COLLEGE TWO ASSISTANT PROFESSORS VERTEBRATE PHYSIOLOGIST, AQUATIC ECOLOGIST

Applications invited for two tenure-track positions, Assistant Professor level, beginning Fall 1993. Ph.D. required.

1) **VERTEBRATE PHYSIOLOGIST** to teach anatomy and physiology, freshman cell biology and advanced courses in physiology (human or comparative).

2) **AQUATIC ECOLOGIST** with expertise in invertebrate biology to teach courses in introductory organismal biology and advanced courses in ecology and invertebrate biology. Both individuals will also participate in college-wide programs and develop research programs involving undergraduates. Strong commitment to undergraduate teaching essential. Send curriculum vitae, statement of teaching goals, transcripts and three letters of reference to: **David Jordan, Vice President for Academic Affairs, Austin College, P.O. Box 1177, Sherman, TX 75091-1177.** Review of applications to begin December 1, 1992. *Equal Opportunity Employer.*

### NEW OPPORTUNITIES FOR MOLECULAR GENETICISTS

The Center For Human Genetics at Boston University School of Medicine (BUSM) now offers new positions for Ph.D. molecular geneticists at the **ASSISTANT** or **ASSOCIATE PROFESSOR** rank. Established investigators preferred with expertise in gene mapping, cloning, in situ hybridization, sequencing, immunogenetics, cancer genetics, or use of novel techniques applicable to complex genomes. Interaction with over 30 Molecular Biologists/Geneticists. Send curriculum vitae to: **Aubrey Milunsky, M.D., D.Sc., Director, Center for Human Genetics, Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118.** *BUSM is an Equal Opportunity/Affirmative Action Employer.*

The recently formed Department of Microbiology and Molecular Genetics at The University of Texas Medical School at Houston, invites applications at the **ASSISTANT PROFESSOR** level to fill one or more tenure-track faculty positions. Areas of interest include but are not restricted to the following: prokaryotic and lower eukaryotic genetics, physiology, molecular biology, cell signalling, development, structure and function; viral gene expression and replication control; and transcriptional analyses and RNA processing. Candidates are expected to have the Ph.D. and/or M.D. degree, and postdoctoral research experience. Emphasis will be placed upon the ability of the candidate to develop a strong, highly visible, independent and nationally competitive research program. Successful applicants will be expected to teach medical students and graduate students. Please send curriculum vitae and statement of teaching and research interests as well as the names of four referees to: **Dr. Samuel Kaplan, Microbiology and Molecular Genetics, The University of Texas Medical School at Houston, P.O. Box 20708, Houston, TX 77225.** For full consideration please respond by December 15, 1992.

*The University of Texas Health Science Center is an Equal Opportunity Employer. Women and Minorities are encouraged to apply.*

### UNIVERSITY OF CALIFORNIA, SAN FRANCISCO (UCSF) DEPARTMENT OF PSYCHIATRY ASSISTANT PROFESSORS

The Department of Psychiatry at UCSF is seeking one or two Assistant Professors with established skills in laboratory research in areas of neuroscience that are relevant to psychiatric problems. In combination with M.D./Ph.D. and/or postdoctoral training in a laboratory science, candidates must be board eligible (or certified) in psychiatry. These positions will be in State-funded salary lines. Joint appointment in the UCSF Neurosciences Program will be offered, if appropriate. The positions will be available on July 1, 1993 and applications should be received by January 1, 1993. Please send curriculum vitae and brief statement of research interest to: **Samuel Barondes, M.D., Chair, Department of Psychiatry, University of California, San Francisco, 401 Parnassus Avenue, San Francisco, CA 94143-0984.** *UCSF is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*



**Public Announcement  
Regarding New Research and Development Projects  
on Deep-seated Geothermal Resources**

**Announced by the New Energy and Industrial Technology Development Organization on October 15, 1992**

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

***Theme of the Research and Development Projects and Outline of the Research and Development Work to be Entrusted***

**(1) "Deep-seated Geothermal Resources Survey"**

The objective of the project is to delineate deep-seated geothermal resources by drilling through an exploited geothermal reservoir, and to explore the capability of harnessing deep geothermal energy.

**(2) "Development of Drilling Technology"**

The objective of the project is to develop the drilling technology to reach deep-seated geothermal reservoirs.

The targets are as follows: 1) Drilling equipment and materials suitable for high-temperature and hard formations including: i) drilling bits, ii) drilling mud, and iii) cement slurry; and 2) Downhole motor for high-inclination directional geothermal wells.

**(3) "Development of Production Technology"**

The objective of the project is to develop the geothermal fluids production technology from deep-seated geothermal reservoirs. The targets are as follows: 1) PTSD (Pressure, Temperature, Spinner and Density) logging technology; 2) Geothermal reservoir monitoring technology including: i) PTC (Pressure, Temperature and Chemical Components) monitoring system, ii) gravity monitoring system, iii) tracer monitoring system, and iv) scale monitoring system; and 3) Cooling logging technology.

***Procedures for Application***

**(1) Qualification Criteria**

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

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

**(2) Explanatory Meeting**

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

**Date:**

Friday, October 30, 1992

**Times:**

14:00-15:30 "Deep-seated Geothermal Resources Survey"

15:30-17:00 "Development of Drilling Technology" and "Development of Production Technology"

**Place:**

NEDO's Head Office

Sunshine 60 Building, 28th Floor, Room 28-11

1-1, Higashi-Ikebukuro 3-Chome

Toshima-ku, Tokyo 170

**(3) Remarks**

1. The results including patents and know-how derived from the projects entrusted shall be exclusively owned by NEDO.
2. In accordance with the procedures and documents explained at the above meeting, the applicant must submit the application to NEDO's Contract Division by 17:30 on December 15, 1992.

**(4) Further Information**

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

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

## POSITIONS OPEN

### CARDIOVASCULAR FACULTY POSITION

The Cardiovascular Research Center, Division of Cardiology, and the Department of Physiology at Thomas Jefferson University invite applications for a faculty position at the **ASSISTANT PROFESSOR** level with a primary appointment at the Department of Medicine/Cardiology and a secondary appointment at the Department of Physiology. The successful candidate should have a Ph.D. or M.D. and at least two years of postdoctoral experience. The Center is seeking individuals with a strong record of achievement using modern approaches to vascular biology. Researchers using molecular or cellular approaches to study endothelial cells or extracellular matrix are especially encouraged to apply. Excellent laboratory facilities and competitive salary will be provided. The candidate is expected to develop a vigorous, independent research program and to participate in multidisciplinary research programs in vascular biology. Send curriculum vitae, statement of research plans, and have three letters of recommendation sent to: **Andrew Zalewski, M.D., Division of Cardiology, Thomas Jefferson University, 1025 Walnut Street, Philadelphia, PA 19107.**

**PLANT GENETICIST**—The Department of Botany at the University of Vermont seeks applicants with exceptional records of research accomplishment for a tenure-track appointment as **ASSISTANT PROFESSOR**. The successful candidate will be expected to develop a competitive research program in modern plant molecular genetics, and contribute to courses in the strong undergraduate and graduate teaching programs of the Department. This position offers excellent opportunities for diverse interactions with an expanding group of geneticists and molecular biologists in several departments. Applicants with postdoctoral experience should forward curriculum vitae, statements of teaching and research interests, in addition to three letters of reference to: **Genetics Search Committee, Department of Botany, Life Science Building, University of Vermont, Burlington, VT 05405-0086.** *Women and representatives of diverse racial, ethnic and cultural groups are strongly encouraged to apply.* Review will begin December 15, 1992. *Affirmative Action/Equal Opportunity Employer and Educator.*

### FACULTY POSITION IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

The Department of Biochemistry and Molecular Biology at the University of Texas M.D. Anderson Cancer Center invites applications for tenure-track positions at the **ASSISTANT PROFESSOR** level. The department contains a group of highly interactive cell and molecular biologists and has active graduate and postgraduate training programs. Individuals working in the areas of cell and developmental biology of mammalian and non-mammalian systems are especially encouraged to apply. Applicants should have a Ph.D. or M.D. and a proven record of accomplishments as a postdoctoral fellow or faculty member. Please send curriculum vitae with statements of future research plans and three letters of reference to:

**Dr. Eric N. Olson**  
The University of Texas  
M. D. Anderson Cancer Center  
Department of Biochemistry and  
Molecular Biology (Box 117)  
1515 Holcombe Boulevard  
Houston, Texas 77030

*Equal Opportunity/Affirmative Action Employer. Smoke-free environment.*

The Department of Chemistry at California State University (CSU) San Marcos has an opening at the **ASSISTANT PROFESSOR** level in **BIOCHEMISTRY**. Candidates must have a Ph.D. in Chemistry/Biochemistry and postdoctoral experience is preferred. Position contingent upon approval. Applicants should submit a letter of application, curriculum vitae, three letters of recommendation, a one-page statement of teaching philosophy, and a two-page outline of future research plans to: **Chemistry Search Committee, California State University San Marcos, San Marcos, CA 92096.** *CSU San Marcos is an Affirmative Action/Equal Opportunity Employer. The University has a strong commitment to the principle of diversity and, in that spirit, seeks a broad spectrum of candidates including women, members of minority groups and people with disabilities.*

## POSITIONS OPEN

**INORGANIC CHEMIST**—The Chemistry Department of Williams College invites applications for an anticipated position in inorganic chemistry for Fall 1993. The position would be a regular, renewable appointment at the **ASSISTANT PROFESSOR** level. Candidates should have a Ph.D. (postdoctoral experience is preferred) and a strong commitment to teaching at the undergraduate level and developing a productive research program. The teaching assignments will include inorganic chemistry and instrumental methods of analysis. Additional assignments will be from other courses in the curriculum consistent with the individual's background and interests and the needs of the Department. A semester teaching load normally includes complete responsibility for one course, including the laboratory, and supervision of student research projects. Appointment at the senior level is possible under exceptional circumstances. Williams College is a highly selective, coeducational liberal arts institution of approximately 260 faculty and 2000 undergraduates, located in northwestern Massachusetts. The Chemistry Department, with nine faculty members and 25 to 35 majors each year, is accredited by the ACS and has excellent facilities for teaching and research. Send résumé, undergraduate and graduate transcripts, description of research projects for undergraduates, and three letters of recommendation to: **Dr. Charles M. Lovett, Jr., Chairman, Department of Chemistry, Williams College, Williamstown, MA 01267,** by 30 November 1992. *As an Affirmative Action/Equal Opportunity Employer, Williams College is especially interested in identifying minority and women candidates.*

**ASSISTANT PROFESSOR OF CHEMISTRY, Macromolecular Crystallographer**—A tenure-track assistant professorship to begin Fall 1993 is available in the Department of Chemistry, University of Houston. The candidate should have a strong record of research in the structural determination and functional interpretation of biomolecular structures. This position is associated with the Institute for Molecular Design and will offer access to crystallographic facilities that include a new FAST area detector, an AFC5R diffractometer, two PS390/VAX computer graphics display systems and a CRAY Y-MP EL supercomputer. Send curriculum vitae, research plans and three letters of recommendation to: **Professor Kurt L. Krause, Department of Biochemistry, University of Houston, Houston, TX 77204-5934.** *Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR, NEUROBIOLOGY

The Department of Biological Sciences, University of Illinois at Chicago (UIC), has a tenure-track position at the assistant professor level for the Fall of 1993. We seek a neurobiologist using cellular and/or molecular approaches to problems that may involve: neurophysiology and behavior, neurodevelopment, neurogenetics, or intercellular communication. The candidate will be expected to develop a strong research program and contribute to teaching undergraduate and graduate students in the neurobiology program. Consideration of candidates will begin on 19 October 1992. Application deadline is 27 November 1992. Send curriculum vitae, a brief statement of research plans and three letters of reference to:

**Neurobiologist Search Committee**  
c/o Dr. Sidney B. Simpson, Jr., Head  
Department of Biological Sciences (M/C 066)  
The University of Illinois at Chicago  
Box 4348  
Chicago, IL 60680

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

**ASSISTANT PROFESSORS.** The Department of Physiology invites applications for two assistant professor positions (tenure-track). Ph.D. degree or equivalent with three years of postdoctoral training. Candidates who plan to develop an independent research program in cellular, molecular or biophysical aspects of cell signaling systems or membrane biology are especially encouraged to apply. However, excellent candidates in all areas of cell physiology will be given serious consideration. Applicants should submit curriculum vitae and a brief statement of research plans and have three letters of reference sent to: **James T. Stull, Ph.D., Department of Physiology, The University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9040.** *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**Tenure-track ASSISTANT PROFESSOR position in Department of Nutritional Sciences, Rutgers, The State University of New Jersey,** to begin January 1993. Assistant Professor to serve as Director of Didactic Program in Dietetics, conduct research in human nutrition, and teach in the dietetics program. Preference given to candidates with clinical nutrition experience; Ph.D. in nutrition or related field and R.D. required. Strong publication record and 2 to 3 years of postdoctoral experience preferred. Candidate will be expected to attract outside funding and develop a national reputation as a research scholar. Research programs should provide opportunities for training of graduate students. Applications due by November 20, 1992, or until position is filled. Send letter of application, curriculum vitae, statement of research and teaching interests, and three letters of recommendation to: **Dr. Adria R. Sherman, Chair, Department of Nutritional Sciences, Cook College, Rutgers, The State University of New Jersey, P.O. Box 231, New Brunswick, NJ 08903-0231.** Telephone: 908-932-9379; FAX: 908-932-6837. *Equal Opportunity/Affirmative Action Employer.*

### ANATOMY AND CELL BIOLOGY

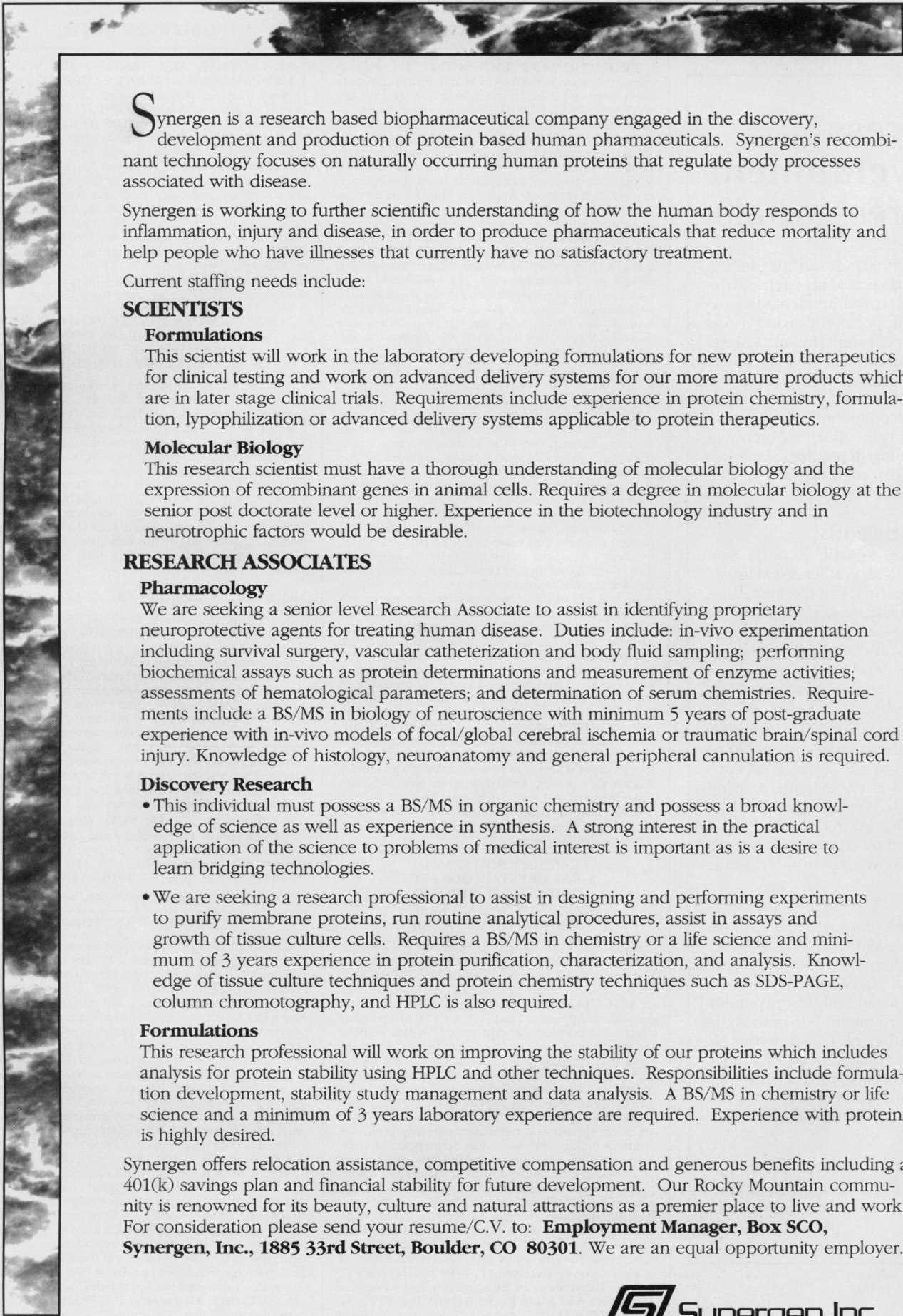
Two tenure-track positions are available at the **ASSISTANT or ASSOCIATE PROFESSOR** level in the Department of Anatomy and Cell Biology at the University of Virginia. Research is stressed, and candidates are expected to maintain independent programs of investigation and to participate in graduate education. The department seeks candidates whose research will complement existing programs in cellular, developmental, and reproductive biology. Individuals applying molecular approaches to these areas are of particular interest. Teaching is in medical Gross Anatomy, and training will be provided if necessary. Opportunities for productive collegial interactions include interdisciplinary programs in developmental biology, molecular biology, reproduction, neuroscience, cancer, diabetes, and vascular biology. Appointments are effective July 1 and October 1, 1993. Candidates should send curriculum vitae and names of three references to: **Dr. Charles J. Flickinger, Department of Anatomy and Cell Biology, Box 439, Health Sciences Center, University of Virginia, Charlottesville, VA 22908.** *An Equal Opportunity/Affirmative Action Employer.*

**CELL BIOLOGIST: ASSISTANT or ASSOCIATE PROFESSOR,** tenure-track position to begin August 1993. We seek a colleague with broad expertise in plant or animal cell biology. Teaching responsibilities will complement the needs of the department, and will include a course in Cell Biology. Applicants must establish vigorous research and graduate programs. Ph.D. required; postdoctoral experience highly desirable. Send curriculum vitae, statement of teaching and research interests, representative reprints and three letters of reference to: **Dr. Omer Larson, Cell Biologist Search Committee, Department of Biology, University of North Dakota, Grand Forks, ND 58202-8238.** Review of applicants will begin 16 November 1992. *An Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS Cornell University Medical College Department of Pharmacology

Candidates are sought for three tenure-track positions at the level of **ASSISTANT or ASSOCIATE PROFESSOR**. Candidates with interests in a wide range of areas will be considered, including molecular pharmacology, neuropharmacology, clinical pharmacology, drug metabolism, drug/receptor interactions; and signal transduction mechanisms. The responsibilities of this position include development of an active, independent research program and participation in both medical and graduate student teaching programs in the department. Applicants should send curriculum vitae, a summary of proposed research, and should arrange to have letters sent from at least three scientists who can evaluate the candidate's accomplishments. Cornell University Medical College is a part of the New York Hospital-Cornell Medical Center and adjacent to Memorial Sloan Kettering Cancer Center and Rockefeller University. Applications should be sent to: **Chair, Pharmacology Search Committee, c/o Room E-409, Pharmacology Department, Cornell University Medical College, 1300 York Avenue, New York, NY 10021.** *Equal Opportunity/Affirmative Action Employer/M/F/H/V.*





Synergen is a research based biopharmaceutical company engaged in the discovery, development and production of protein based human pharmaceuticals. Synergen's recombinant technology focuses on naturally occurring human proteins that regulate body processes associated with disease.

Synergen is working to further scientific understanding of how the human body responds to inflammation, injury and disease, in order to produce pharmaceuticals that reduce mortality and help people who have illnesses that currently have no satisfactory treatment.

Current staffing needs include:

## **SCIENTISTS**

### **Formulations**

This scientist will work in the laboratory developing formulations for new protein therapeutics for clinical testing and work on advanced delivery systems for our more mature products which are in later stage clinical trials. Requirements include experience in protein chemistry, formulation, lyophilization or advanced delivery systems applicable to protein therapeutics.

### **Molecular Biology**

This research scientist must have a thorough understanding of molecular biology and the expression of recombinant genes in animal cells. Requires a degree in molecular biology at the senior post doctorate level or higher. Experience in the biotechnology industry and in neurotrophic factors would be desirable.

## **RESEARCH ASSOCIATES**

### **Pharmacology**

We are seeking a senior level Research Associate to assist in identifying proprietary neuroprotective agents for treating human disease. Duties include: in-vivo experimentation including survival surgery, vascular catheterization and body fluid sampling; performing biochemical assays such as protein determinations and measurement of enzyme activities; assessments of hematological parameters; and determination of serum chemistries. Requirements include a BS/MS in biology of neuroscience with minimum 5 years of post-graduate experience with in-vivo models of focal/global cerebral ischemia or traumatic brain/spinal cord injury. Knowledge of histology, neuroanatomy and general peripheral cannulation is required.

### **Discovery Research**

- This individual must possess a BS/MS in organic chemistry and possess a broad knowledge of science as well as experience in synthesis. A strong interest in the practical application of the science to problems of medical interest is important as is a desire to learn bridging technologies.
- We are seeking a research professional to assist in designing and performing experiments to purify membrane proteins, run routine analytical procedures, assist in assays and growth of tissue culture cells. Requires a BS/MS in chemistry or a life science and minimum of 3 years experience in protein purification, characterization, and analysis. Knowledge of tissue culture techniques and protein chemistry techniques such as SDS-PAGE, column chromatography, and HPLC is also required.

### **Formulations**

This research professional will work on improving the stability of our proteins which includes analysis for protein stability using HPLC and other techniques. Responsibilities include formulation development, stability study management and data analysis. A BS/MS in chemistry or life science and a minimum of 3 years laboratory experience are required. Experience with proteins is highly desired.

Synergen offers relocation assistance, competitive compensation and generous benefits including a 401(k) savings plan and financial stability for future development. Our Rocky Mountain community is renowned for its beauty, culture and natural attractions as a premier place to live and work. For consideration please send your resume/C.V. to: **Employment Manager, Box SCO, Synergen, Inc., 1885 33rd Street, Boulder, CO 80301.** We are an equal opportunity employer.



# Process Development Professionals

Celtrix Pharmaceuticals, Inc., a biopharmaceutical research and development corporation, has two exceptional opportunities in its Process Development department. The selected scientists will be responsible for designing and developing processes for the recovery and purification of recombinant proteins produced by cell culture and fermentation. This will require experience in scaling up processes to the pilot plant production level.

## Senior Scientist

In addition to a Ph.D. in the biochemical field, you'll need at least 7 years' experience in the area of recovery, purification, protein folding and process scale-up. A knowledge of GMP would also be beneficial to this senior-level role.

## Scientist

Your 3 years' experience in purifying recombinant proteins should be supported by a Ph.D. in biochemistry, chemical engineering or a related field. We will also consider those with a Master's or Bachelor's degree and the appropriate experience. A knowledge of GMP desirable.

As a Celtrix employee, you will enjoy an excellent salary and benefits package along with the opportunity to make a significant impact in a stimulating and highly reputable R&D environment. For immediate consideration, please send your resume to: Human Resources, Celtrix Pharmaceuticals, 3055 Patrick Henry Drive, Santa Clara, CA 95054-1815. An equal opportunity employer.



## POSITIONS OPEN

**EVOLUTIONARY BIOLOGIST.** The Department of Biology, University of Miami, invites applicants for a tenure-track faculty position at the level of **ASSISTANT PROFESSOR**. We are looking for an organismal evolutionary biologist who uses modern molecular techniques (DNA sequencing, PCR). The successful candidate is expected to develop a vigorous, externally-funded research program, and to participate in teaching at the undergraduate and graduate levels. Postdoctoral experience is preferred. Applicants should send curriculum vitae, appropriate reprints, summary of research interests, and arrange to have four letters of reference sent to: **Evolution Search, Dr. Michael S. Gaines, Chairman, Department of Biology, P.O. Box 249118, University of Miami, Coral Gables, FL 33124**, by 15 December 1992. *The University of Miami is an Equal Opportunity/Affirmative Action Employer and a smoke/drug-free workplace. We do not discriminate on the basis of race, religion, color, sex, age, national origin or disability. We encourage applications from females, veterans, the disabled and minority group applicants.*

### ASSISTANT/ASSOCIATE PROFESSORS NEUROSCIENCES

#### CASE WESTERN RESERVE UNIVERSITY

The Department of Neurosciences at Case Western Reserve University School of Medicine has two tenure-track openings for junior faculty to be appointed at either the assistant or associate professor level. Candidates at the entry level should have at least two years of postdoctoral research experience and be ready to start their own independent research programs. Teaching duties primarily involve lecturing on neurosciences to graduate and medical students. One position is for a person studying neuronal interactions in the vertebrate CNS, with the goal of understanding how neural circuits control behavior. Applications from individuals using *in vitro* preparations and multidisciplinary approaches are particularly encouraged. The other position is for a person studying biochemical mechanisms of signal transduction in the nervous system. For example, the regulation of second messenger systems, posttranslational modification of proteins, and modulation of gene expression. The department includes 11 primary faculty and will expand to 15 years over the next several years. Also, more than 15 neuroscientists from other departments play an active role in research and teaching. Interested candidates should submit curriculum vitae and a brief summary of research plans by January 1, 1993 and should arrange for four letters of reference to be sent to: **Dr. Story Landis, Search Committee, Department of Neurosciences, Case Western Reserve University Medical School, 10900 Euclid Avenue, Cleveland, OH 44106-4975**. *Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITION IN X-RAY CRYSTALLOGRAPHY/ STRUCTURAL BIOLOGY WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

Applications are invited for a tenure-track faculty position in the Department of Biochemistry and Molecular Biophysics at the level of **ASSISTANT PROFESSOR**, although highly qualified individuals at the levels of **ASSOCIATE** or **FULL PROFESSOR** will also be considered. Applicants must have a Ph.D. or equivalent degree and postdoctoral experience. We will consider individuals with demonstrated creativity and productivity in macromolecular structural analysis by x-ray crystallographic methods. We are especially interested in candidates whose work exemplifies the combination of structural data with other approaches for the elucidation of molecular mechanisms. In addition to departmental affiliation, the position includes membership in the Division of Biology and Biomedical Sciences, which oversees a number of excellent multidisciplinary graduate programs. The Department of Biochemistry and Molecular Biophysics has recently added several faculty in the area of Molecular Biophysics with interests in the structures and functional energetics of proteins, nucleic acids, and protein-lipid systems. Interested candidates should send curriculum vitae, a summary of research interests and future research plans and have three letters of reference sent by **December 1, 1992** to: **Dr. Gary K. Ackers, Department of Biochemistry and Molecular Biophysics, 660 South Euclid Avenue, Box 8231, St. Louis, MO 63110**. *Washington University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**MOLECULAR MECHANISMS OF VASCULAR DISEASES. ASSISTANT PROFESSOR of pathology.** The Department of Pathology of The University of Chicago is seeking an M.D./Ph.D., Ph.D. or M.D. as Assistant Professor, tenure-track for the Program in Vascular Pathobiology. Candidates (who may be completing postdoctoral work) should have a solid basic science background that is, or can be, applied to the cardiovascular system. Examples include many aspects of cell and molecular biology, molecular genetics, lipoproteins, cell physiology, growth control, transgenics, etc. Send a letter of application, curriculum vitae and a statement of research interests to: **Peter F. Davies, Ph.D., Chairman, Search Committee, The University of Chicago, Department of Pathology, MC-60679, 5841 South Maryland Avenue, Chicago, IL 60637**. *An Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR IMMUNOLOGY SECTION DEPARTMENT OF MEDICINE BAYLOR COLLEGE OF MEDICINE

Applications are invited for a tenure-track faculty position in the Immunology Section, Department of Medicine, Baylor College of Medicine. Candidates must have an M.D. or M.D./Ph.D., molecular and cellular research expertise, and demonstrated scholarly accomplishment which will enable them to pursue/continue an independent research career. The position provides a support package and protected research time. Applicants should send curriculum vitae, statement of research interests, and names of three references to: **Search Committee, c/o David P. Huston, M.D., Immunology Section, Department of Medicine, Baylor College of Medicine, 6565 Fannin, M.S. F-501, Houston, TX 77030**.

### MOLECULAR BIOLOGY FACULTY POSITION

A full-time, tenure-track, faculty position, **ASSISTANT** or **ASSOCIATE PROFESSOR**, is open in the Department of Microbiology and Immunology with appointment in the School of Medicine. We are looking for an energetic and experienced person (Ph.D. or M.D.) with research funding. Those with research programs in molecular virology will be given special consideration. Funded research programs in the department include: virology, molecular and immunoparasitology, immunogenetics, molecular genetics, tumor biology and microbial pathogenesis, which offer opportunities for collaborations. Space and start-up funds will be provided. Please send curriculum vitae, names of at least three references, and a statement of research interests and goals to:

**Richard L. Crowell, Ph.D., Chairman  
Department of Microbiology and Immunology  
Hahnemann University  
Broad and Vine, M.S. 410  
Philadelphia, PA 19102-1192**

*Affirmative Action/Equal Opportunity Employer.*

### ENVIRONMENTAL STUDIES

Gettysburg College invites applications for a tenure-track position in Environmental Studies to commence with the 1993-94 academic year. An appointment at the **ASSOCIATE PROFESSOR** level is possible for a candidate with strong qualifications. Candidates should have a Ph.D. in one of the Natural Sciences, a broad base of experience in Environmental Studies, proven teaching ability, and research promise. Teaching responsibilities will include an introductory course in Environmental Science, additional courses in her/his area of expertise, the advising of students, and the supervision of internships and independent study projects. In addition, the successful applicant will head the Environmental Studies program, participate in writing grant proposals and serve on the Environmental Studies Committee which oversees the program's budget and curriculum. Gettysburg College is rated as a highly selective liberal arts college and is located one and one-half hours from the Washington/Baltimore area. *Gettysburg College is an Equal Opportunity/Affirmative Action Employer; women and minorities are encouraged to apply.* Submit a letter of application, curriculum vitae, and the names and addresses of three references (at least one of whom can speak for the candidate's teaching effectiveness) to: **Dr. A. Ralph Cavaliere, Chair, Environmental Studies Search Committee, Gettysburg College, Gettysburg, PA 17325**. Review of completed applications will begin December 11, 1992, and continue until the position is filled.



## IMMUNOLOGIST

The R.W. Johnson Pharmaceutical Research Institute is currently seeking an experienced Cellular Immunologist to work in a multi-disciplinary group focusing on the discovery of novel anti-inflammatory therapies at the Toronto, Ontario, Canada site. The successful candidate will be involved in the generation of antigen specific assays in both human and murine systems to study the effects of antagonists of cell adhesion and signal transduction inhibitors on the stimulation of specific immune responses. An additional challenge will be to transform complex immunological assays to simple, automated screening systems for large scale chemical screening.

The successful candidate will have at least two years' Postdoctoral training in cellular immunology with expertise in setting various cellular assays for studying signal transduction. Knowledge in molecular biology would be an asset. Applicants must possess strong communication and interpersonal skills and have an impressive publishing record.

Please forward your curriculum vitae and references to: **Human Resources Manager, R.W. Johnson Pharmaceutical Research Institute, 19 Green Belt Drive, Don Mills, Ontario M3C 1L9 Canada.**

MIT

## FACULTY POSITIONS

The Department of Earth, Atmospheric and Planetary Sciences at the Massachusetts Institute of Technology invites applicants for the following two positions:

### Geophysics

In the area of Solid-Earth Geophysics, priority will be given to qualified applicants whose research is focused on understanding earthquakes and/or earth structure by seismological methods. The level of the appointment is open, but junior candidates are especially encouraged to apply. Candidates must have demonstrated their potential for scientific leadership through publications in research journals, and they must be committed to teaching at both the graduate and undergraduate levels.

### Meteorology

In Meteorology, we seek applications from scientists working in any area of atmospheric science, though we are particularly interested in candidates with strengths in synoptic meteorology and global data analysis, or those with an expertise in the application of numerical modeling to the understanding of physical process in the atmosphere and in the development and testing of advanced physical parameterizations in large-scale numerical models. The level of the appointment is open, but junior candidates are especially encouraged to apply. Existing faculty specialize in large scale and mesoscale dynamics, climate and climate modeling, tropical meteorology, and physical and chemical oceanography. Facilities available include permanent 10-cm and transportable 5-cm Doppler radars, anq extensive synoptic laboratory and data archive, and numerous computing systems. The Center for Meteorology and Physical Oceanography serves as the focus of research in these subjects within the department and the Center for Global Change is coordinating a major new initiative in global climate studies. The successful applicant would be expected to share in the teaching responsibilities in the department.

Interested individuals should send curriculum vitae and names of three references to:

**Professor Thomas H. Jordan, Head, Department of Earth, Atmospheric, and Planetary Sciences, MIT, Bldg. 54-918, 77 Mass. Avenue, Cambridge, MA 02139-4307.** Special consideration will be given to qualified minority and female applicants.

MIT is an Equal Opportunity/Affirmative Action Employer  
MIT is a non-smoking environment

Massachusetts Institute of Technology

## FACULTY POSITION

The Division of Occupational and Environmental Medicine, University of Pittsburgh Graduate School of Public Health is seeking highly qualified candidates for the position of Assistant Professor of Environmental and Occupational Health. The Division is the focus of clinical occupational medicine activities for the Center for Environmental and Occupational Health and Toxicology, a vigorous and expanding interdisciplinary research center dedicated to extending the horizons of basic knowledge in environmental and occupational health. The Division also administers a fully accredited Occupational Medicine Residency program and participates in the graduate M.P.H., M.S. and Ph.D. curricula of the Department of Environmental and Occupational Health.

The ideal candidate will be a board eligible or certified occupational physician, but board eligibility or certification in other relevant disciplines with clinical and research experience relevant to occupational medicine will also be considered. This position is in the tenure track, and the successful candidate will have demonstrated potential to develop an independent research activity with a strong laboratory component. Research expertise in occupational and environmental pulmonary disease, biomarkers of exposure, and intermediate markers of disease are of particular interest.

In addition to developing and maintaining an independent research career, the selected individual will participate in Departmental teaching activities and clinical activities in occupational and environmental medicine.

The position is available immediately. Applicants will be reviewed until position is filled. Salary is commensurate with experience. Interested applicants are encouraged to send a letter and current curriculum vitae to:

**David J. Tollerud, MD, MPH, Director, Occupational and Environmental Medicine, University of Pittsburgh, 130 DeSoto Street, Pittsburgh, PA 15261.**

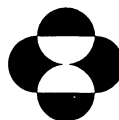
**THE UNIVERSITY OF PITTSBURGH IS AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER**

## SR. RESEARCH SCIENTIST (Biochemistry/Enzymology)

The selected individual will join a team of individuals in the Department of Immunology Research studying the mechanism of action of immunosuppressive drugs, including FK-506 and CsA. This project involves collaborative efforts with numerous scientists in other departments at Merck using biochemical, enzymological, cell biological, molecular, medicinal chemistry, genetic, NMR, and crystallographic techniques.

We seek a very strong Ph.D. level candidate with a minimum of 3 years relevant postdoctoral experience and broad knowledge in the areas of enzymology and protein biochemistry. Experience in mammalian cell biology would be helpful. Preference will be given to individuals having experience in at least one of the following areas: signal transduction in mammalian cells, mammalian cell biology, or immunology. The successful individual should be able to work in a team setting, have good communication skills, and have a strong desire to publish in competitive journals.

Merck Research Laboratories is located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. For consideration please send your resume with the names of 3 references to **Susan F. Marsella, AD#126, Merck & Co., Inc. R80-A3, P.O. Box 2000, Rahway, NJ 07065.** EEO/AA/VH Employer



**MERCK**  
Research Laboratories



## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR.** The Department of Physiology of the Texas College of Osteopathic Medicine (TCOM) invites applications for a tenure-track position. Applicants must have two or more years of postdoctoral training and be capable of establishing an independent externally funded research program. Current grant funding is required for Associate Professor rank. Preference will be given to applicants with demonstrated experience in cardiac electrophysiology or cardiac molecular biology, but all applicants with expertise in cardiovascular physiology will be considered. In addition to research, responsibilities will include medical and graduate student instruction.

TCOM is a State-supported medical school housed in new, well-equipped facilities, and is affiliated with the University of North Texas. TCOM is in the process of being established as a health science center. Submit letter of application stating career goals, curriculum vitae, and three letters of recommendation to: **H. Fred Downey, Ph.D., Search Committee Chairman, Department of Physiology, Texas College of Osteopathic Medicine, 3500 Camp Bowie Boulevard, Fort Worth, TX 76107.** Deadline for application: January 1, 1993.

*Texas College of Osteopathic Medicine is an Equal Opportunity/Affirmative Action Employer and Educator.*

### FACULTY POSITIONS

University of California, Berkeley (UCB)  
Department of Nutritional Sciences

Two 9-month tenure-track faculty positions available July 1, 1993: **ASSOCIATE** or **FULL PROFESSOR** in **Nutritional Biochemistry** and **ASSISTANT PROFESSOR** in **Human Nutrition**. Responsible for establishing a research program in nutrition focusing on cellular or molecular aspects of nutrient functions, metabolic regulation, or human nutrition and physiology. Teaching assignments will be compatible with the candidate's background.

Ph.D., or equivalent, in Nutrition or a related biological science required. Send curriculum vitae with publications list, statement of research and teaching interests, and name and address of three referees to: **Dr. Barry Shane, Department of Nutritional Sciences, UCB, Berkeley, CA 94720** by January 1, 1993. Applications submitted after the deadline will not be considered.

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

### UNIVERSITY OF CALIFORNIA, SAN FRANCISCO (UCSF)

Molecular Pathogenesis  
of Oral Infectious Diseases

The Department of Stomatology in the School of Dentistry is seeking a molecular biologist/microbiologist with interest in molecular pathogenesis in the regular ranks with tenure at the **ASSOCIATE** or **FULL PROFESSOR** level. Qualifications should include the Ph.D., D.D.S. or M.D. degree, or their equivalent; advanced training with evidence of productivity in research and a commitment to teaching.

Duties will include predoctoral and graduate courses and the development of a successful research program in the area of molecular pathogenesis of mucosal infectious diseases. Salary commensurate with qualifications and experience. Nominations and applications with three letters of recommendation, current curriculum vitae and a short summary of research plans should be sent by January 15, 1993 to: **Susan J. Fisher, Ph.D., Chair, Division of Oral Biology, HSW 604; University of California San Francisco; San Francisco, CA 94143-0512.** UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply. Position open until filled.

### ASSOCIATE EDITOR

The Proceedings of the National Academy of Sciences, a multidisciplinary semi-monthly scientific journal, is seeking an Associate Editor. Requires an M.S. (Ph.D. preferred) or equivalent in a biological or physical science and at least five years of related experience. Excellent English skills are required; some editorial experience is desirable. Please send letter of application, including salary expectations, and curriculum vitae in confidence to: **NRC/PNAS, 2139-207 (FZ), 2101 Constitutional Avenue, N.W., Washington, DC 20418.** Non-smoking work environment. Equal Opportunity Employer.



## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR** at the University of Wisconsin-Madison. The Department of Human Oncology and the University of Wisconsin Comprehensive Cancer Center invite applications for an assistant professor or tenured associate professor in the general area of molecular oncology. Areas of interest include, but are not limited to, cell cycle control, oncogene/suppressor genes, eukaryote gene regulation, signal transduction, and molecular pharmacology. This position will involve both research and graduate student education. Applications should include curriculum vitae, copies of two recent publications, and a brief description of current and future research objectives. Applications should be mailed to: **Michael N. Gould, Ph.D., K4/332 CSC, 600 Highland Avenue, Madison, WI 53792.** The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.

### RESEARCH ASSOCIATE/ ASSISTANT PROFESSOR

University of Texas Health Science Center  
San Antonio, Texas

Research position to study proteins of cell membranes during stress and injury. Ph.D. with experience in protein techniques and nucleic acid biology is required. Active research group, stimulating academic environment, excellent living conditions. Salary and rank according to qualifications. *The University of Texas Health Science Center at San Antonio is an Equal Employment Opportunity/Affirmative Action Employer.* Send curriculum vitae and names of three referees to: **M.A. Venkatachalam, Professor of Pathology, University of Texas, Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7750.**

**DEAN, COLLEGE OF SCIENCE AND TECHNOLOGY:** Christopher Newport University invites candidacies for the position of dean of the College of Science and Technology. Write: **Mrs. Betty Odell, Office of the Provost, Christopher Newport University, Newport News, VA 23606-2998** for a detailed position announcement. *Affirmative Action/Equal Opportunity Employer.*

### PROJECT DIRECTOR

The Division of Public Health Sciences of the Fred Hutchinson Cancer Research Center invites applications for the position of Project Director for the clinical coordinating center for the Women's Health Initiative (WHI). This is a senior position at the Associate or Full Member (Professor) level.

The WHI is a large multicenter disease prevention trial with an associated observational study, spanning a project period of fifteen years. The clinical trial emphasizes heart disease, cancer, and fracture prevention by means of partial factorial design that involves hormone replacement, dietary modification and chemoprevention approaches. Candidates should have Ph.D. or M.D. degrees with training and extensive expertise in public health-related areas, and should have both clinical trials and managerial experience. Academic appointment at the University of Washington is anticipated, depending on interests and qualifications. Please send a letter of interest, curriculum vitae, and names of four references by not later than December 1, 1992 to:

**Ross Prentice  
Director, Division of Public Health Sciences  
Fred Hutchinson Cancer Research Center  
1124 Columbia Street MP-665  
Seattle, WA 98104**

*The University of Washington and the Fred Hutchinson Cancer Research Center are Equal Opportunity/Affirmative Action Employers.*

### SENIOR SCIENTIFIC EDITOR

The J. David Gladstone Institutes, a private, basic biomedical research organization affiliated with UC, San Francisco which supports two institutes, one focusing on cardiovascular disease, and the other on HIV and other retroviruses is seeking a Senior Scientific Editor. Responsibilities primarily involve comprehensive editing of scientific manuscripts, abstracts, grant applications, etc. Also writing various materials including newsletters, and annual reports. Requirements: 3 plus years scientific/medical editing/writing. Degree in scientific field preferred. Send curriculum vitae, salary history and list of three references to: **Editor Position—Human Resources; The J. David Gladstone Institutes; P.O. Box 419100; San Francisco, CA 94141-9100.**

## POSITIONS OPEN

**CHIEF, HEMATOLOGY-ONCOLOGY DIVISION.** A position is now available as Chief, Hematology-Oncology Section, San Francisco VA Medical Center, with appointment at the **ASSOCIATE PROFESSOR** or **PROFESSOR** of Medicine level at the University of California, San Francisco (UCSF). This is a leadership opportunity for an oncologist or hematologist with a national reputation as a biomedical investigator, credentials to lead a strong clinical program, and an interest in training. The San Francisco VA is a UCSF teaching hospital, and opportunities exist for participation in graduate programs in the basic sciences at UCSF. Send curriculum vitae to: **Gordon J. Strewler, M.D., Chair, Search Committee, DVA Medical Center (111N), 4150 Clement Street, San Francisco, CA 94121.** The University of California and the VA are Equal Opportunity/Affirmative Action Employers. Women and minorities are encouraged to apply.



### RESEARCH DIRECTOR/ ADMINISTRATOR

**NATIONAL DISEASE RESEARCH INTERCHANGE (NDRI)** is seeking a **Research Director/Administrator** to coordinate research resource programs of this nonprofit organization. Individual would interact with scientists in many fields of disease research to design protocols for procurement and delivery of human tissue and biomaterial derivatives for use in discovery of new treatments and cures for diseases including cancer, diabetes, neurological disorders, etc. Individual should have a Ph.D. in biomedical sciences and/or M.D., experience in writing proposals, familiarity with NIH procedures, excellent organizational and administrative skills and computer knowledge. A high level of enthusiasm for development and operation of cutting edge research resources and ability to be open and flexible are crucial. Applicants should submit letter of interest and curriculum vitae by November 15, 1992 to: **NDRI, Attention: Sally Strickler, 2401E Walnut Street, Suite 408, Philadelphia, PA 19103** or FAX: 215/557-7154.

**CHAIR, DEPARTMENT OF BIOLOGICAL SCIENCES.** Mississippi State University, a Land Grant Institution of nearly 14,000 students, seeks applications from individuals with a distinguished career in any area of the biological sciences who are qualified for appointment at the Full Professor level. Ph.D. required. The successful candidate will provide academic leadership to a department of 22 faculty, 40 graduate students, and 639 undergraduate majors offering the B.S., M.S., and Ph.D. degrees. The department also administers pre-health professions undergraduate programs. Prior administrative experience is desirable. Good interpersonal and human resource management skills are essential. Applicants should submit curriculum vitae, a description of their research program, teaching philosophy, and long-term goals, and arrange for three letters of recommendation to be sent to: **Dr. Kenneth L. Brown, Head, Department of Chemistry, Box CH, Mississippi State, MS 39762.** Screening of applications will begin December 15, 1992 and continue until the position is filled; the anticipated starting date is July 1, 1993. Mississippi State University is an Affirmative Action/Equal Opportunity Employer.

The Maryland Psychiatric Research Center (MPRC), University of Maryland School of Medicine, invites applications for a full-time **FACULTY POSITION** in an expanding Neuroscience Program. Preference will be given to individuals in the areas of behavioral neuropharmacology or growth factor research. Ph.D. and a minimum of two years of postdoctoral experience required. The successful candidate will be expected to develop a vigorous, independently funded research program. Generous start-up funds will be provided. Send curriculum vitae, a brief summary of current and future research interests and the names of three references to: **Dr. Robert Schwarcz, MPRC, P.O. Box 21247, Baltimore, MD 21228.** Equal Opportunity/Affirmative Action Employer.

# Organic Chemistry

Amgen is an innovative leader in the discovery, development and marketing of human therapeutics. Our advanced research in biotechnology has resulted in such breakthrough products as EPOGEN® (recombinant human Erythropoietin) and NEUPOGEN® (recombinant human G-CSF). The success of these products has opened the way to new and expanded projects, resulting in a thriving environment for Research Scientists and Research Associates.

## Research Scientist

We seek a Research Associate or a Research Scientist to synthesize oligonucleotide analogs for evaluation as potential therapeutics. The challenging position requires a strong background in modern synthetic methods as well as the practice of techniques in the solid-phase organic synthesis of oligonucleotides. The position requires at least a Master's in Organic Chemistry with 6+ years of lab experience. A Ph.D. in Chemistry with postdoctoral experience in natural products/nucleoside/nucleotide chemistry is preferred. The ability to work independently within a research team environment is essential. Please respond to **Job Code #S-405**.

## Research Associate

We seek a Research Associate who can work independently and has a strong background in modern synthetic methods used in Bioconjugate Chemistry. The successful candidate will have a B.S. or M.S. in Organic Chemistry and 2+ years of laboratory experience. Must also have a broad knowledge of chromatographic and spectral methods. Experience handling proteins desirable. Ability to take initiative and communicate effectively are essential. Please respond to **Job Code #S-502**.

Amgen offers a very competitive compensation and benefits package in addition to a stimulating work environment. If you have the necessary qualifications and would like to be part of an organization that places its highest value on the contributions of its people, send your resume to: **Amgen Inc., Staffing Dept. (Mail Code 10-1-A-411), (indicating Job Code number), Amgen Center, Thousand Oaks, CA 91320-1789**. Amgen is an equal opportunity employer.

**AMGEN®**

Principals only, please.

## WASHINGTON UNIVERSITY DEPARTMENT OF ANATOMY AND NEUROBIOLOGY FACULTY POSITIONS IN NEUROSCIENCE

Tenure track faculty positions are available in the Department of Anatomy and Neurobiology at Washington University School of Medicine. Currently, we seek individuals taking innovative approaches to important questions in molecular, cellular, or developmental neuroscience. We are also strongly interested in those whose work links cellular with systems or computational approaches to brain function. The Department already houses more than a dozen active research labs in neurobiology, and it is part of a much larger interdepartmental Program in Neuroscience. Both the Department and the Program offer numerous opportunities for scientific interactions and collaborations. Our focus is on appointments at the Assistant Professor level, but appointments at a more senior level (Associate Professor or Professor) will also be considered.

Applicants should send a curriculum vitae, brief description of research interests, and names of references to: **Dr. David Van Essen, Head, Department of Anatomy and Neurobiology, Box 8108, Washington University Medical School, St. Louis, MO, 63110, USA.**

*Washington University is an Affirmative Action/Equal Opportunity Employer. Applications from minorities and women are encouraged.*

## Research Scientist Immunology

Genetic Therapy, Inc., a leading biotechnology company, is working with researchers at the National Institutes of Health and academic medical centers to develop retroviral mediated and other gene transfer technologies applicable to human gene therapy. The Immunology Department's Cancer Gene Therapy Program is currently seeking scientists specializing in tumor immunology, tumor cell biology and development of *in vivo* tumor models. This position requires a Ph.D. and at least four years postgraduate experience. GTI offers a stimulating and challenging research environment with competitive salaries and benefits. Please send a resume along with the names and addresses of two references to:



Genetic Therapy, Inc.  
Human Resources -  
CGT-RS1  
19 Firstfield Road  
Gaithersburg, MD 20878

GTI is an equal opportunity employer.

## POSTDOCTORAL FELLOWSHIPS IN VECTOR BIOLOGY

The Center for Insect Science, through a grant from the John D. and Catherine T. MacArthur Foundation, is offering five fellowships to study various aspects of vector biology.

The Center for Insect Science includes over 80 scientists in the Departments of Biochemistry, Ecology and Evolutionary Biology, Entomology, Internal Medicine, Microbiology and Immunology, Molecular and Cellular Biology, Neurobiology, Pathology, Pharmaceutical Science and Veterinary Science at the University of Arizona in Tucson, the Department of Zoology at Arizona State University in Tempe, the Department of Biology at Northern Arizona University, and several USDA-ARS facilities located throughout the state.

Appointments are for two years, depending on availability of funds and satisfactory performance. In addition to a stipend, fellows receive funds to support their research and are expected to develop independent and collaborative projects.

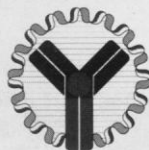
Applicants should send an introductory cover letter with statement of research interests, curriculum vitae, evidence of academic background and degrees earned, and three letters of recommendation to: **Dr. Henry Hagedorn, Director, Center for Insect Science, 430 Forbes Building, University of Arizona, Tucson, AZ 85721**. The review of applications will begin November 9, 1992 and continue until positions are filled. *Applications from women and members of minority groups are encouraged. The University of Arizona is an Affirmative Action/Equal Opportunity Employer.*

# IMMUNOLOGISTS

ImClone Systems, a biopharmaceutical company located in New York City, currently has positions available for Immunologists.

Successful candidates will have a Ph.D. in cellular immunology with expertise in T-cell cloning and molecular biology of T-cell receptor. We also are seeking B.S. or M.S. candidates with experience in monoclonal antibodies, cancer, hematopoiesis or inflammation.

ImClone Systems offers a competitive salary and comprehensive benefits. Please send your CV, including salary requirements and references, to Human Resources:



ImClone Systems, Inc.  
180 Varick Street  
New York, NY 10014.

Equal Opportunity Employer M/F

## UNIVERSITY OF CALIFORNIA, SANTA CRUZ ASSISTANT/ASSOCIATE PROFESSOR IN MOLECULAR BIOLOGY (RNA)

The Biology Department, University of California, Santa Cruz, invites applications for a faculty position in Molecular Biology beginning Fall, 1993, contingent on availability of funding. We are seeking an individual whose research centers on the structure and function of RNA. This person will be associated with the Lucille P. Markey Center for the Molecular Biology of RNA, and will have research space in the recently completed Sinsheimer Laboratories. Candidates will be considered at the Assistant and Associate level, commensurate with experience. Candidates should have a Ph.D., postdoctoral research experience and university teaching experience or demonstrated potential for university teaching. The successful candidate will be expected to mount a vigorous externally funded research program, and contribute to teaching at the graduate and undergraduate levels. Salary range is \$38,800-48,300 for 9 months. Applicants should send curriculum vitae, a brief description of research and teaching interests, publications, and three letters of recommendation. Please refer to position #231-901 in your application. Send applications and letters of recommendation prior to the closing date of December 1, 1992, to:

**RNA Molecular Biologist  
Search Committee  
Department of Biology  
Sinsheimer Laboratories  
University of California  
Santa Cruz, CA 95064**

*The University of California is an Equal Opportunity/Affirmative Action/IRCA Employer. Women and minorities are encouraged to apply.*

## POSITIONS OPEN

### MANAGER OF QUALITY ASSURANCE/ QUALITY CONTROL

Atrix Laboratories, Inc., is a growing pharmaceutical company developing products for animal and human healthcare. We are seeking qualified applicants for the position of Manager, Quality Assurance and Quality Control. The successful candidate will be responsible for designing and implementing a comprehensive QA/QC program which will assure compliance with Good Laboratory Practices and current Good Manufacturing Practices. The ideal candidate will have five to ten years of pharmaceutical industry experience in the development and manufacturing of sterile medical devices and products. He or she will also have working knowledge of Total Quality Management, extending from research and development to manufacturing. Good oral and written communication skills, and the ability to work within multifunctional project teams, are essential. We offer a stimulating working environment, a competitive salary and attractive benefits. Please send resumes with references and salary history to: Dr. Charles P. Cox, Atrix Laboratories, Inc., 2579 Midpoint Drive, Fort Collins, CO 80525. Atrix Laboratories, Inc. is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and members of minorities.

### FACULTY POSITION FOR SPRING SEMESTER 1993 EAST CAMPUS

#### ENVIRONMENTAL TECHNOLOGY IN- STRUCTOR: (Extended Search—Modified An- nouncement.)

**REQUIREMENTS:** A minimum of a Bachelor's degree in Environmental Engineering, Environmental Science or related education and three (3) years of directly related occupational experience are required. Teaching experience required. Must be able to teach in the following areas: water treatment and distribution; wastewater treatment and collection; hydraulics; mechanical maintenance; and related science courses. Experience in curriculum development and cooperative education. Demonstrated understanding of the multi-cultural needs of a southwestern community college student body.

**Preferences:** Graduate work in environmental sciences. Experience in distribution and collection systems, cross-connection control, toxic and hazardous materials and solid waste. Ability to teach courses in toxic and hazardous materials and solids waste. Experience in grant writing. *Applicants must qualify for a regular Arizona community college teaching certificate.* For an application and complete job announcement, call or write: Pima County Community College District, Employment/Human Resources, P.O. Box 3010, Tucson, AZ 85702-3010, Telephone: (602) 884-6624, FAX: (602) 884-6290.

*Pima Community College is committed to multicultural diversity and is an Equal Opportunity/Affirmative Action Employer. Women, minorities, and other protected classes are encouraged to apply.*

### FACULTY POSITIONS IN BIOCHEMICAL ENGINEERING AT DUKE UNIVERSITY

Applications are being accepted for tenure-track faculty positions in the Center for Biochemical Engineering at Duke University. Both senior and junior academic levels will be considered. The Center is an interdisciplinary research program that offers M.S. and Ph.D. degrees. The optimum candidate would have research interests that integrate biological processes with engineering principles and a strong academic background in either chemical, pharmaceutical, cellular, or microbial engineering. In addition to maintaining a vigorous research program, this person would be expected to develop and expand course offerings in biochemical processing and design. We are especially interested in individuals whose research naturally links with existing efforts in the Biomedical Engineering Department (e.g., bio-materials, -sensors, -surfaces, -membranes). Curriculum vitae including a list of publications, current research funding, and a brief description of proposed research activities should be sent to: Dr. Stephen Smith, Chair, Search Committee, Box 90281, Department of Biomedical Engineering, Duke University, Durham, NC 27708-0281.

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

## POSITIONS OPEN

**MOLECULAR BIOLOGIST.** Fayetteville State University (FSU) is a constituent institution of the 16-campus UNC system. This state-supported coeducational institution has an enrollment of nearly 4,000 and offers Associate of Arts, undergraduate and graduate degrees. Research programs are conducted in Genetics, Radiation Biology, Parasitology, Physiology, Ecology, Botany, and Developmental Biology. This tenure-track position is available beginning August 1993. Faculty rank and salary are contingent on qualifications. Ph.D. in Biology with specialization in Molecular Biology, and two years of college teaching experience required. The candidate will be responsible for teaching undergraduate and graduate level courses in Molecular Biology, Radiation Biology and Biochemical Genetics. To apply: submit a letter of interest, resume, and names, addresses and telephone numbers of three references by December 15, 1992 to: Dr. Pinapaka Murthy, Chair, Department of Natural Sciences, FSU, 1200 Murchison Road, Fayetteville, NC 28301-4298. FSU is an Affirmative Action/Equal Opportunity Employer.

Harvard Medical School/Brigham and Women's Hospital Department of Anesthesia invites applications for a **TENURE-TRACK POSITION.**

This position calls for an independent investigator with a Doctoral degree who has a proven record of excellence, originality and productivity. The recruited investigator will establish an independent program focusing on the role of leukocytes in the cellular and molecular mechanisms of ischemia-reperfusion injury.

Qualified candidates should send curriculum vitae, a description of current research and the names and addresses of three references to: Simon Gelman, M.D., Ph.D., Anesthesiologist-in-Chief, Harvard Medical School, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115.

*Harvard Medical School/Brigham and Women's Hospital are Equal Opportunity Employers.*

### SUMMER FACULTY POSITIONS IN THE SPACE LIFE SCIENCES TRAINING PROGRAM (SLSTP) A NASA PROJECT

Four Project Counselor positions are open in the SLSTP to be held at the Kennedy Space Center, Florida. Project Counselors will be involved in the implementation of the 7-week-long program (starting mid-June 1993) activities for undergraduate science and engineering students. An applicant must have a minimum of an M.S. degree (Ph.D. preferred) and experience in teaching and research with undergraduates in the sciences. For further information and an application packet (all application materials must be postmarked by December 31, 1992) contact:

**SLSTP Program Director  
Florida A&M University  
106 Honor House  
Tallahassee, FL 32307  
Telephone: (904) 599-3623/3636**

### SENIOR FACULTY POSITION IN MASS SPECTROMETRY

Washington University in St. Louis invites applications for a senior faculty position in **Mass Spectrometry**. The appointment is sponsored jointly by the Faculty of Arts and Sciences and the School of Medicine. It is anticipated that the successful candidate will hold a primary tenured Professorship in the Department of Chemistry and a joint appointment in the Department of Molecular Biology and Pharmacology. Applicants should forward curriculum vitae and documentation of advanced scholarship and leadership in the field to: **Professor Joseph J.H. Ackerman, Department of Chemistry, Campus Box 1134, Washington University, One Brookings Drive, St. Louis, MO 63130-4899.** Application deadline is **December 1, 1992.** *Applications from women and minorities are encouraged. Washington University is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available to carry out the cloning of genes associated with antibiotic biosynthesis in *Streptomyces*. Previous experience with molecular biology required; previous experience with *Streptomyces* highly desirable. Send curriculum vitae and the names and telephone numbers of three references to: **Professor Ronald Parry, Department of Chemistry, Rice University, P.O. Box 1892, Houston, TX 77251.**



# RESEARCH SCIENTIST

## Pharmacokinetics and Drug Metabolism

Sphinx Pharmaceuticals Corporation is a rapidly growing company dedicated to the discovery and development of novel therapeutics for human disease based on interactions with key intracellular enzymes involved in signal transduction pathways.

We currently have an opening for a Research Scientist in our Drug Metabolism group. The successful candidate should have a Ph.D. in pharmacokinetics, biochemistry, or a related field with at least 3 years experience conducting *in vitro* and *in vivo* drug metabolism studies. Experience with isolated perfused organ models is desirable.

Sphinx Pharmaceuticals offers competitive compensation and comprehensive health benefits as well as an attractive relocation policy. We are located in the Research Triangle area of North Carolina which offers excellent living conditions and outstanding schools. For confidential consideration, please forward your curriculum vitae, list of publications and names of three references to: **SPHINX PHARMACEUTICALS CORPORATION, Position #209, P.O. Box 52330, Durham, NC 27717.** An Equal Opportunity Employer.

## SPHINX PHARMACEUTICALS CORPORATION

### Associate Publisher/ Publisher

#### Chemistry Programs

A leading STM publishing division of John Wiley & Sons, Inc. is seeking an Associate Publisher/Publisher to manage and expand its polymer, organic, inorganic, physical and analytical chemistry programs.

The successful candidate will have a PhD in Chemistry or related discipline and management level experience with profit/loss responsibility in scientific publishing. Strong product acquisition and development capabilities and experience in electronic media are required.

Qualified candidates must be able to lead editors in developing concepts for and commissioning products within the framework of the strategic plan, negotiate contracts and maintain effective working relationships with scientific authors and outside editorial boards. Excellent communication and analytical skills are essential. Frequent travel will be required.

This New York based position offers an opportunity to build a career within a major division of John Wiley & Sons, Inc., a U.S. based global publisher of scientific and technical information. Competitive compensation and comprehensive benefits package. Interested applicants should send resume with salary history to: **Lynne Salisbury, Human Resources Department, John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158-0012.** Equal Opportunity Employer MF/DV



# WILEY

An der *Technischen Universität München*, Fakultät für Chemie, Biologie und Geowissenschaften ist zum 01. 10. 1993 der

LEHRSTUHL FÜR BIOCHEMIE  
(NACHFOLGE PROF. SIMON, BesGr C4)  
zu besetzen.

Zu den Aufgaben gehört neben der Vertretung des Faches in Forschung und Lehre insbesondere die Ausbildung von Biologen und Chemikern in Biochemie.

Die Bewerber sollten eine Chemie- bzw. Biochemie-Ausbildung haben und in der Forschung aktuelle biochemische Fragestellungen bevorzugt aus dem Bereich der chemischen Struktur biologischer Systeme (Strukturbiologie) bearbeiten. Es wird Kooperation mit den anderen Lehrstühlen im Institut für Organische Chemie und Mitarbeit im Schwerpunkt Biologische Chemie der Fakultät erwartet.

Einstellungsvoraussetzungen sind abgeschlossenes Hochschulstudium, pädagogische Eignung, Promotion und Habilitation oder eine gleichwertige Voraussetzung.

Die Bewerberin/der Bewerber darf das 52. Lebensjahr im Zeitpunkt der Ernennung noch nicht vollendet haben.

Die Technische Universität strebt eine Erhöhung des Anteiles von Frauen in Forschung und Lehre an und fordert deshalb qualifizierte Wissenschaftlerinnen auf, sich zu bewerben. Schwerbehinderte werden bei gleicher Eignung bevorzugt.

Bewerbungen sind mit den üblichen Unterlagen (Lebenslauf, Zeugnisse, Urkunden, Schriftenverzeichnis) bis 01. 11. 1992 einzureichen an das Dekanat der Fakultät für Chemie, Biologie und Geowissenschaften

der Technischen Universität München  
Lichtenbergstraße 4, 8046 Garching

### ASSISTANT PROFESSOR THE SALK INSTITUTE

The Salk Institute is seeking candidates to undertake independent research in the area of growth control in yeast or animal cells in the Molecular Biology and Virology Laboratory (MBVL) of the Armand Hammer Center for Cancer Biology. Current areas of research in MBVL include: mechanisms of growth control and cell transformation (W. Eckhart); molecular analysis of neuroendocrine function (R. Evans); growth control and oncogenesis (T. Hunter); mammalian transcription factors (K. Jones); chromosome structure and function in *Drosophila* (G. Karpen); sexual differentiation in *Drosophila* (M. McKeown); protein tyrosine kinases (B. Sefton); oncogenes and gene transfer (I. Verma); transformation of hematopoietic cells (M. Vogt) and genome remodeling in mammalian cells (G. Wahl). The Salk Institute offers a highly interactive environment, with a number of research groups working in areas of molecular biology and neuroscience. Interested individuals may submit an application to: **MBVL Search Committee, The Salk Institute, P.O. Box 85800, San Diego, CA, 92186.**

Please include a curriculum vitae, a description of present and future scientific endeavors, and names of references.

*The Salk Institute is an equal opportunity employer.*

## Biology Laboratory Supervisor

The Department of Biological and Physical Sciences, Division of Arts and Sciences, anticipates an opening for a non-tenure track laboratory supervisor in Biology commencing August 17, 1993. The responsibilities include: instruction in the laboratory (under the direction of the principal instructors) in Anatomy, Physiology, Microbiology, and Introductory Biology; preparation for laboratory experiments; direct supervision of hourly student laboratory help; inventory and maintenance of supplies in cooperation with the principal course instructors; assisting in the preparation of budgets for the laboratories, and operating within the scope of the approved budget; and other necessary duties associated with the laboratories.

Desired qualifications include a Master's degree in a biological science (qualified holders of the Bachelor's degree may also be considered) and laboratory teaching experience preferably in Anatomy, Physiology, and Microbiology. The salary is anticipated to be in the mid-twenties commensurate with experience for twelve months plus fringe benefits.

Send resume, names, addresses and telephone numbers of three individuals whom we may contact for references and undergraduate and graduate transcripts by December 15, 1992, to:

**Dr. Robert R. Roales**  
Indiana University Kokomo  
2300 S. Washington Street  
P.O. Box 9003  
Kokomo, Indiana 46904-9003  
Telephone: (317) 455-9371  
Fax: (317) 455-9226  
Indiana University is an Equal Opportunity/  
Affirmative Action Employer



## CHRISTOPHER NEWPORT UNIVERSITY BIOLOGY, CHEMISTRY & ENVIRONMENTAL SCIENCE NEWPORT NEWS, VIRGINIA

Tenure-track positions in Biology and Environmental Science: Fall 1993.

Successful applicants will teach in one or more of the following areas: 1) environmental analysis, 2) human anatomy and physiology, or 3) comparative animal physiology. All faculty are expected to teach introductory biology or chemistry courses. Successful applicants will develop and conduct research programs that can involve students. Our department of 15 teaching and research faculty is seeking additional faculty to participate in high quality undergraduate teaching that involves personal attention to students, research that involves these students, and in the planned implementation of a master's program in environmental science. Accordingly, CNU is seeking outstanding teachers who are publishing scholars in their disciplines and who have strong potential to contribute to the rapidly developing scientific and technological community of southeastern Virginia.

Effective English language skills and a Ph.D. in an appropriate area are required.

CNU hires only U.S. citizens and aliens lawfully authorized to work in the U.S. Appointments will be as Assistant Professor. Salary is competitive.

Send a detailed resume, graduate transcripts, and three letters of reference to David A. Bankes, Department of Biology, Chemistry and Environmental Science, Christopher Newport University, Newport News, VA 23606. All materials must be received by February 1, 1993.

CNU has a vigorous and effective commitment to affirmative action; applications from women and minorities are, therefore, especially encouraged. AA/EEO

## POSITIONS OPEN

### NMR FACULTY POSITION CHEMISTRY DEPARTMENT, EMORY UNIVERSITY

We seek a spectroscopist interested in biological applications of NMR spectroscopy with emphasis on the study of the structure and properties of proteins, although talented individuals with other NMR research interest will be considered. Appointment is approved only at the junior level (tenure-track ASSISTANT PROFESSOR), although appointment at higher rank might be possible in the case of an unusually qualified applicant. The Ph.D. is required. Facilities are available for both computational and experimental methods, including 600 and 500 MHz spectrometers and a new supercomputer center. Teaching duties at the undergraduate/graduate level will include NMR spectroscopy and other general courses, e.g. physical chemistry, dependent on the candidate selected. Junior candidates should show promise of developing an independent, externally funded, original and well-recognized research program. Senior candidates should already have established an excellent research program. In addition to submitting statements of research interests, curriculum vitae, and publication lists, all candidates should arrange for three letters of reference to be submitted to: Professor Luigi G. Marzilli, NMR Search Committee, Department of Chemistry, Emory University, Atlanta, GA 30322. Although all applicants will be considered until the position is filled, applicants are urged to submit their materials to arrive before November 20th. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

### PLANT MORPHOLOGY/ULTRASTRUCTURE

The Department of Botany, Miami University, invites applications and nominations for a TENURE-TRACK POSITION in Plant Morphology/Ultrastructure to begin August 1993. Desirable areas of specialization include, but are not limited to, plant development or plant evolution. Strong potential in research and a commitment to both undergraduate and graduate teaching, including directing M.S. and Ph.D. students, are required. Qualifications: Ph.D. in an appropriate discipline and expertise in electron microscopy. Candidates should have the personality and motivation necessary to work effectively with faculty and students of a broadly based Botany Department and an interdepartmental Electron Microscope Facility. Preference will be given to candidates with postdoctoral experience and a proven record of scholarly productivity. Curriculum vitae, one-page statements of (1) teaching interests and philosophy and (2) research goals, and three letters of recommendation should be sent to: Dr. David A. Francko, Chair, Department of Botany, Miami University, Oxford, OH 45056, FAX: (513) 529-4243. The deadline for completed applications is November 5, 1992. *MIAMI UNIVERSITY OFFERS EQUAL OPPORTUNITY IN EMPLOYMENT AND EDUCATION.*



United States  
Department of  
Agriculture

**POSTDOCTORAL POSITION** in weed management expert systems, Morris, Minnesota. Research emphasis on weed seed bank dynamics and/or within-field variability of weed populations. Experience required in modeling, ecophysiological and demographic techniques. Salary: \$32,423 per year. Refer to No. 2N066. Contact: Dr. Frank Forcella, USDA Agricultural Research Service, Morris, MN 56267; Telephone: 612-589-3411; FAX: 612-589-3787. *USDA-ARS is an Equal Opportunity Employer.*

**POSTDOCTORAL TRAINING IN FERTILIZATION AND EARLY DEVELOPMENT, UNIVERSITY OF CALIFORNIA, DAVIS.** Fellowships in NIH-sponsored, multi-department training grant starting anytime through August 1, 1993. Research areas: Cell biology and biochemistry of gametes and fertilization (Wallis Clark, David Katz, Jerry Hedrick, Stanley Meizel, James Overstreet); Cell biology and morphology of early development (Gary Anderson, Allen Enders, Richard Nuccitelli, Barry King, Lynn Wiley). Trainees must be U.S. citizens or permanent visa holders. Write: Dr. Stanley Meizel, Department of Cell Biology and Human Anatomy, School of Medicine, University of California, Davis, CA 95616-8643. *University of California is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available in MOLECULAR PATHOGENESIS of the protozoan parasite *Toxoplasma gondii*. Project to identify molecular markers that predict reactivation and virulence of toxoplasmosis in AIDS patients (see *Nature* 359:82-85). Send curriculum vitae and three letters of reference to: Dr. L. David Sibley, Department of Molecular Microbiology, Box 8230, Washington University School of Medicine, 660 South Euclid Ave., St. Louis, MO 63110. *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately to work on a multidisciplinary approach to the Ah receptor, a novel ligand binding transcriptional activator (see Burbach, K. et al., *Proc. Natl. Acad. Sci.* 89:8185-8189, September 1992). Send curriculum vitae and names of two or three references to: Dr. Alan Poland, McArdle Laboratory for Cancer Research, University of Wisconsin-Madison, Madison, WI 53706. FAX: 608-262-2824. *Affirmative Action/Equal Opportunity Employer.*

Lovelace Medical Foundation has an NIH-funded **POSTDOCTORAL POSITION** available for two to three years beginning immediately to examine the mechanisms of cigarette smoke induced immunosuppression. A background in immunology with emphasis on molecular biology and glycoprotein purification is desirable. Send curriculum vitae to: Judy Coalsen, Lovelace Medical Foundation, 2441 Ridgecrest Drive S.E., Albuquerque, NM 87108. *Lovelace Medical Foundation is an Affirmative Action/Equal Employment Opportunity Employer.*

### POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY

Position available immediately to study novel growth factors involved in neurotransmitter plasticity in the central nervous system. Candidate must have previous experience in molecular cloning/recombinant technology. Send curriculum vitae and names of three references to: Dr. Lorraine Iacovitti, Institute for Neuroscience, Department of Neurology, Mail Stop 423, Hahnemann University, Philadelphia, PA 19102.

### POSTDOCTORAL POSITION UNIVERSITY OF FLORIDA

A postdoctoral position is available to collaborate on studies examining the effects of fatty acids and/or low partial pressures of oxygen on the structure and function of lung endothelial cells *in vitro* and on their susceptibility to subsequent oxidant stress. The position is for one or two years beginning December 1992. Background in biochemistry, cell biology, and/or free radical biology is desired. Send curriculum vitae and names and telephone/FAX numbers of three references to: Dr. Edward R. Block, J. Hillis Miller Health Center, University of Florida, Box 100225, Gainesville, FL 32610-0225. FAX: 904-374-6069.

**POSTDOCTORAL POSITION** available immediately, to study allergic reactions to latex. Candidate should have a recent Ph.D. and skill in immunology or biochemistry. Work will involve the immunochemical characterization of latex allergens from medical products. Send curriculum vitae and names of three references to: Dr. Dennis Ownby, Allergy Research Laboratory, Henry Ford Hospital, 2799 West Grand Boulevard, CFP 413, Detroit, MI 48202. Telephone: 313-876-2659, FAX: 313-876-2094.

### DUKE UNIVERSITY MEDICAL CENTER

**POSTDOCTORAL FELLOWSHIPS** are available in the Division of Dermatology, Duke University Medical Center in the areas of: (1) Molecular mechanism of human autoimmune diseases (2) Characterization of dermal extracellular matrix-epithelial cell interactions (3) Regulation of collagen biosynthesis (4) Characterization of molecular defects in inherited connective tissue diseases. Only U.S. Citizens, permanent residents, and non-citizen nationals are eligible for this program. Salary negotiable. Send curriculum vitae and names of three references to: Dr. Russell Hall, Box 3135, Duke University Medical Center, Durham, NC 27710. *Duke University is an Equal Opportunity Employer.*



## Luciferase As a Real-Time Reporter of Gene Expression

Friday, November 13, 1992

Sponsored by: NSF Center for Biological Timing  
and Promega Corporation

The ability to measure luminescence from living cells impels the use of luciferase as a real-time transducer of genetic events. This one day symposium presents the state-of-the-art in using the firefly luciferase reporter gene combined with photon imaging technology to reveal temporal and spatial regulation of gene expression in living systems.

The keynote lectures will be televised via satellite to interested sites within the United States: (1:00pm-3:30pm EST, 10:00am-12:30pm PST)  
Chairperson: Dr. Margaret Shupnik, University of Virginia

**The Application of Photon Counting Imaging for Biological Studies**  
Dr. Robert Wick, Hamamatsu Corporation

**Firefly and Other Beetle Luciferases for Novel Reporter Gene Technology**  
Dr. Keith Wood, Promega Corporation

**Monitoring Viral (HIV) Gene Expression in Mammalian Cells**  
Dr. Michael White, Department of Biochemistry, University of Oxford

**Dynamic Monitoring of Gene Expression in Higher Plants**  
Dr. Steve Kay, Ctr. for Biological Timing and the Department of Biology, University of Virginia

On site demonstrations of luminescence analysis will be presented using luminometry and photon counting imaging (9:30am-11:30am EST).

For more information, please contact:

Dr. David Hudson  
NSF Center for Biological Timing  
Gilmer Hall  
University of Virginia  
Charlottesville, VA 22901  
Phone: (804) 982-5225 Fax: (804) 982-5221  
E-Mail: clock@virginia.edu



Additional information will also be posted on the BioTiming Bulletin Board, on internet (telnet minerva.acc.virginia.edu, login:biotiming).

### DIRECTOR LAW OF THE SEA INSTITUTE UNIVERSITY OF HAWAII

Applications are invited for the position of DIRECTOR OF THE LAW OF THE SEA INSTITUTE, and non-tenure track associate or full professor teaching appointment to the William S. Richardson School of Law.

The Law of the Sea Institute (LSI) is a private, non-profit, multidisciplinary institute under the sponsorship of the University of Hawaii. It is incorporated as a non-profit corporation under the laws of the State of Hawaii and holds tax exempt status under section 501(c)(3) of the Internal Revenue Code. It provides a forum for the study and discussion of the laws, policies, decisions, and organizational arrangements related to the use of the world's oceans. It encourages and facilitates communication and research among those interested and involved, publicly or privately, in marine affairs. It seeks contributions from all regions of the world and all relevant disciplines, including the social sciences, the marine sciences, and industry.

The Director is responsible for the LSI annual conferences and periodic workshops held at both domestic and overseas sites, for the publications program of LSI proceedings and occasional papers, for fund raising, for administration of the Law of the Sea Institute personnel and office, and for associated development activities.

**MINIMUM QUALIFICATIONS:** Applicants must have a JD, PhD, or equivalent advanced (post-baccalaureate) professional or academic degree in any of the disciplines related to marine affairs and at least 5 years administrative experience in academic, government, or public or private non-profit organizations. Applicants should be able to demonstrate substantial expertise in aspects of marine affairs, particularly on current law of the sea issues and problems, sufficient to qualify for teaching such courses as part of a non-tenure track appointment in the William S. Richardson School of Law. Applicants should send a curriculum vitae, a statement specifically linking educational background, career development, and prior experience to the role of Director of LSI, and the names, addresses, phone and fax numbers of three referees to:

Dean Jeremy T. Harrison  
William S. Richardson School of Law  
University of Hawaii  
2515 Dole Street  
Honolulu, Hawaii 96822

Salary negotiable, depending upon qualifications; closing date is December 31, 1992. Position is subject to the availability of funds. The University of Hawaii is an affirmative action/equal opportunity employer.



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### Research Scientist II/ Senior Research Associate

This individual will participate in studies with a focus on monoclonal antibody-directed cancer therapy. The incumbent will characterize, construct and modify antibody genes and express and characterize gene products. This position will be filled at the Research Scientist II or Senior Research Associate level.

**Research Scientist II**—Candidates must have a four-year college curriculum with a major concentration in Microbiology or Cell Biology and Immunology plus four years of experience in molecular genetics, molecular immunology and heterologous gene expression; OR a Master's degree in one of the above disciplines plus two years of experience in molecular genetics, molecular immunology and heterologous gene expression; OR a Ph.D. in Microbiology, Immunology or Cell Biology.

**Senior Research Associate**—Candidates must have a four-year college curriculum with a major concentration in Microbiology, Immunology or Cell Biology plus six years of experience in molecular genetics, molecular immunology and heterologous gene expression; OR a Master's degree in one of the above disciplines plus four years of experience in molecular genetics, molecular immunology and heterologous gene expression; OR a Ph.D. in one of the above disciplines plus one year of experience in molecular genetics, molecular immunology and heterologous gene expression.

All candidates selected for interview will take an on-site writing assessment. Other factors to be considered include a strong background in immunology, interest in radioimmune therapy for cancer and monoclonal antibody-directed cancer therapy.

In addition to the advantages of our stimulating and challenging atmosphere, Burroughs Wellcome Co. offers one of the best compensation and benefits packages in the industry, including comprehensive health and dental plans, life and disability coverage, tuition reimbursement, relocation benefits, pension and investment savings plan, fitness facilities and more. To apply, please send your resume, indicating Pos. #64144-29, in your cover letter, by November 2, 1992, to: Burroughs Wellcome Co., Recruiting and Staffing, 3030 Cornwallis Road, Research Triangle Park, NC 27709.

For information on other job opportunities with Burroughs Wellcome Co., call our Job Information Line at (919) 248-8347.



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At Syva, R & D is serious business. As part of health care leader Syntex, we are a medical diagnostics company maintaining a strong commitment to scientific achievement and opportunity. Consider the following opportunities in our new Evergreen/San Jose, California facility:

## Senior Immunochemist

We are seeking an innovative and independent Immunologist/Biochemist to develop immunoassays for monitoring emerging therapeutic technologies. The successful candidate will have strong skills in Biochemistry and Protein Chemistry as well as an understanding of Immunomodulation and will perform all aspects of assay development, including identification of suitable anti-bodies, optimization of the assay to maximize clinical utility and transfer to production.

Background required for this position includes a PhD or equivalent experience in Immunology and/or Biochemistry. Knowledge in diagnostics development, organic chemistry and clinical chemistry are helpful. Excellent laboratory and analytical skills are needed.

## Immunochemist

We are looking for a bench oriented chemist who has the organizational skills to lead a team in a matrix management environment. The position will involve development and evaluation of product improvements of immunoassays for therapeutic drugs and drugs of abuse. The ideal candidate will be expected to serve as the technical advisor for other chemists in addition to having responsibilities for product development and transfer to production.

We require an MS plus 3-5 years of experience in Biochemistry and/or Immunology or equivalent. Strong analytical skills and thorough knowledge in diagnostics development essential in addition to good team skills. Clinical chemistry and organic chemistry experience preferred.

We offer an excellent salary and benefits package, along with a wonderful work environment. Please send your resume with salary history, indicating position of interest, to: Syva, c/o Syntex Corporate Employment, Dept. MSS21016, 3401 Hillview Avenue, Suite A2-130, Palo Alto, CA 94303. Principals only, please. Syva is an equal opportunity employer committed to the values of a diversified workforce.



## POSITIONS OPEN

### POSTDOCTORAL POSITION YALE MEDICAL SCHOOL

Position available to study somatic hypermutation in mammalian B cells, using molecular approaches that include analysis of test constructs in transfection experiments and in transgenic mice. 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** available, with funding for three years, in a project investigating mutations in the target enzyme as a mechanism of clinical resistance to an anticancer drug. Techniques of molecular biology and enzymology, including steady state and transient state kinetics, are being used to determine which mutations of the enzyme confer the greatest resistance while maintaining efficient catalytic activity. The possible presence of such mutations in tumor cells of patients relapsing during treatment with the drug is being investigated. Ph.D. in biochemistry, cell biology or a closely related discipline required, and experience in directed mutagenesis, PCR and related techniques an advantage. Salary as for NIH fellowships. Removal expenses reimbursed up to \$1,500, and professional development funds of \$1,000 annually. Send curriculum vitae with names of three references to: **Raymond L. Blakley, Ph.D., D.Sc., Department of Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. Affirmative Action/Equal Opportunity Employer.**

### POSTDOCTORAL ASSOCIATE

Immediate position available for a recent Ph.D. or M.D. for projects involving characterization of human homologues of the AKT oncogene (*Science* 254:271, 1991; PNAS October 1992), human gene mapping and the molecular analysis of human tumors. Strong background in molecular cloning preferred. Submit curriculum vitae and the names of three references to: **Joseph R. Testa, Ph.D., c/o Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. Equal Opportunity Employer.**

**TWO POSTDOCTORAL POSITIONS** in the **PLANT MOLECULAR BIOLOGY LAB, USDA/ARS.** Contact: **Dr. A. C. Smigocki, Telephone: (301) 504-5848**, for molecular biologist position to participate in the analysis of genes modulated by a plant hormone. Responsibilities will include screening of genomic libraries, DNA sequencing, promoter analysis, and plant transformation. Background in molecular biology and recombinant techniques required. In **Dr. Mark Tucker's lab, Telephone (301) 504-6091**, the new hire will participate in a project to study hormonal and tissue-specific regulation of cellulase gene expression in abscission. Preliminary analysis of a bean cellulase promoter has begun using a transient assay (particle gun bombardment) and stably transformed transgenic tomato. Salary is \$32,423 plus benefits (GS-11). Send curriculum vitae and three letters of recommendation to: **Ann Smigocki or Mark Tucker, Plant Molecular Biology Lab, USDA, Building 006, Room 118, 10300 Baltimore Avenue, Beltsville, MD 20705-2350. ARS is an Equal Opportunity Employer.**

**POSTDOCTORAL TRAINING PROGRAM IN NEUROBIOLOGY.** Columbia University. Emphasis is placed on the analysis of the cellular and molecular basis of neural development, behavior, and behavioral plasticity. Training faculty include: Richard Axel, Craig Bailey, David R. Colman, Jane Dodd, Michael Gershon, Claude Ghez, Daniel Goldberg, James Goldman, Lloyd Greene, Robert Hawkins, Thomas Jessell, Eric Kandel, John Koester, Irving Kupfermann, Ronald Liem, Amy MacDermott, John Martin, Carol Mason, Frederick R. Maxfield, Stephen Rayport, Lorna Role, Taube Rothman, Samuel Schacher, James Schwartz, Michael Shelanski, Steven Siegelbaum, Gary Struhl, and Andrew Tomlinson. Applicants for this NIMH-sponsored program must have the M.D., Ph.D., or D.V.M. degree and be either U.S. citizens or have permanent residency status. Send curriculum vitae, a letter describing research interests, and three letters of reference to: **Admissions Committee, Postdoctoral Training Program, Center for Neurobiology and Behavior, 722 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS

Two postdoctoral positions are available immediately to study liver cell differentiation and hepatocarcinogenesis using *in vitro* cell culture systems. This laboratory is involved in research that utilizes primary hepatocyte cultures, immortalized and transformed hepatocyte cell lines and cell lines from hepatocellular tumors. Specific research areas include (1) regulation of liver-specific gene expression, (2) alteration of growth control by growth factors and integrins, and (3) examination of the effects of hepatitis B virus gene expression on growth control and gene expression in liver. Experience with molecular biology techniques is required. Experience with primary hepatocyte preparation or HBV would be ideal but is not required. Please send curriculum vitae and the names and addresses of three references to: **Dr. Harriet C. Isom, Department of Microbiology and Immunology, The Milton S. Hershey Medical Center, The Pennsylvania State University College of Medicine, Hershey, PA 17033. The Pennsylvania State University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.**



**POSTDOCTORAL POSITIONS IN STRUCTURAL BIOLOGY.** Two postdoctoral positions are available in the laboratory of Dr. Brian Johnston. NIH-supported research focuses on the following areas: \* **DNA triplexes.** \* **The structure of recombination intermediates.** \* **Development of peptide and nucleic acid-based anti-HIV agents.** Techniques include chemical and enzymatic probing, physical measurements, computer modeling, oligonucleotide and peptide synthesis, and standard molecular biology procedures. Recent publications include: *PNAS* 89, 3526-3530 (1992); *Biochemistry* 31, 320-327 (1992); *Biochemistry* 30, 5257-5263 (1991); *Nucl. Acids Res.* October 25, 1992 (in press). SRI (formerly Stanford Research Institute), is a nonprofit research institute located near Stanford University. Our department, the Cell and Molecular Biology Laboratory is expanding. Successful postdoctoral fellows who wish to continue at SRI may be considered for regular staff positions. Qualified candidates for this position send curriculum vitae and names of three references to: **Dr. Brian Johnston, SRI International 205-19, 333 Ravenswood Avenue, Menlo Park, CA 94025. Equal Opportunity Employer.**

**POSTDOCTORAL POSITION, BIOCHEMISTRY/BIOPHYSICS** available for NIH-funded research on protein folding in two-chain  $\alpha$ -helical coiled coils. Experience in biochemistry/biophysics preferred. Send curriculum vitae with names and addresses of two references to: **Professor A. Holtzer, Campus Box 1134, Washington University, One Brookings Drive, St. Louis, MO 63130. Equal Opportunity/Affirmative Action Employer.**

**HUMAN GENOME POSTDOCTORAL FELLOWSHIPS** available to conduct research related to the U.S. Department of Energy's Human Genome Program. Research areas include biology, chemistry, physics, mathematics, engineering, and computer and information science. Stipend is \$37,500. A doctoral degree received after May 1, 1990, is required as is U.S. citizenship or PRA status. Deadline is February 1, 1993. Contact: **Human Genome Postdoctoral Fellowships, Science/Engineering Education Division, Oak Ridge Institute for Science and Education, P.O. Box 117, Oak Ridge, TN 37831-0117, Telephone: (615) 576-9975.**

**POSTDOCTORAL RESEARCH POSITION.** Available immediately to study the molecular events associated with tumor progression in leukemias and lymphomas. Studies will include use of available transgenic mouse models as well as patient material. Candidate must have Ph.D. with a strong background in molecular methodologies including Northern, Southern, and Western blotting, DNA sequencing and library generation. Send curriculum vitae and names of three references to: **Dr. Timothy McDonnell, Department of Molecular Pathology, The University of Texas, M.D. Anderson Cancer Center, 1515 Holcombe Boulevard-Box 89, Houston, TX 77030. Equal Opportunity/Affirmative Action Employer. Smoke-free environment.**

# IMMUNOLOGIST

## Department of Pathology

The Department of Pathology at the University of Chicago seeks to recruit an outstanding experimental immunologist. We are committed to developing a strong program in molecular immunology. We are seeking an outstanding individual to join seven full-time basic immunologists whose expertise encompasses both cellular and molecular immunology. Existing related programs in the Department of Pathology include: molecular and cell biological aspects of antigen presentation; tumor immunology; T lymphocyte activation and regulation; and transplantation. The level of appointment, which is on the tenure track, will depend on the experience and qualifications of the applicant who is expected to demonstrate both significant accomplishments and outstanding promise. The start date for the proposed appointment will not be earlier than July 1, 1993. Please send current curriculum vitae, bibliography and a brief statement indicating research interests and the names of three referees to:

Jeffrey Bluestone, Ph.D.  
Professor, Department of Pathology  
MC 1089  
THE UNIVERSITY OF CHICAGO  
5841 S. Maryland Avenue  
Chicago, IL 60637



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### Macromolecular Crystallography Faculty Position Florida State University Program in Structural Biology and Institute of Molecular Biophysics

The Program in Structural Biology at Florida State University invites applications for a full-time tenure track faculty position in Macromolecular Crystallography. Rank and salary are open and will be commensurate with experience. Academic appointment will be within the Department of Biological Science or Department of Chemistry. The candidate should have demonstrated expertise in the study of macromolecular structure and a well developed plan for independent research.

Florida State University has made a strong commitment to Structural Biology. Funding is provided by grants from the Lucille P. Markey Foundation and the State of Florida, and the University is renovating the 50,000 sq. ft. Institute of Molecular Biophysics to develop new laboratories designed and equipped for the study of the structure and activity of macromolecular systems. Over the next four years, the program will expand through the addition of seven new faculty members with research interests in Structural Biology. Extensive new instrumentation will be acquired or developed to provide these faculty with state of the art facilities. In coordination with the National High Magnetic Field Laboratory, the Supercomputer Computational Research Institute and Center for Materials Research and Technology, unique facilities are available for NMR, computational biology and materials synthesis and research.

A curriculum vitae, brief research plan, and a list of at least three references should be sent to:

Lee Makowski  
Director  
Structural Biology Program and  
Institute of Molecular Biophysics  
Florida State University  
Tallahassee, Florida 32306-3015

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Agouron Pharmaceuticals, Inc., a recognized pioneer and leader in the field of rational drug design, is located in San Diego, California in the midst of a dynamic and challenging environment of academic and industrial research centers. We are seeking talented Ph.D. scientists to join our multidisciplinary team in the following areas:

### Protein Crystallography-Code 1

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

### Computational Chemistry-Code 2

A background in computer assisted structure based drug design is highly desirable. Expertise in one or more of the following areas is essential: quantum chemistry, molecular modeling, protein simulations or closely related computational areas. Post-doctoral research experience is a plus.

### Pharmacology-Code 3

A background in pharmacokinetic and drug metabolism studies together with a broad knowledge of *in vivo* efficacy models is required to participate in the development of novel anticancer and antiviral agents.

### Cellular Immunology-Code 4

A broad background in cellular immunology together with expertise in *in vitro* assays of lymphocyte function is required to participate in the development of novel immunosuppressive agents.

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

We offer competitive salaries and benefits in a superb location. Please send résumés (coded to the position for which you are applying) and the names of references in confidence to:

Human Resources  
AGOURON PHARMACEUTICALS, INC.  
3565 General Atomics Court, San Diego, California 92121

## POSITIONS OPEN

**POSTDOCTORAL FELLOWSHIPS IN ROOT BIOLOGY.** Two postdoctoral positions are available immediately with the Advanced Root Biology Group at Penn State University. This is a unit of the DOE/NSF/USDA Collaborative Research in Plant Biology Program, funded by the National Science Foundation. Areas of research include root growth and development, root ecology, root biochemistry and molecular biology, and root/microorganism interactions. Send curriculum vitae and letters of reference to: **Dr. Hector E. Flores, 315 Wartik, Biotechnology Institute, The Pennsylvania State University, PA 16802 (Telephone: 814-865-2955; FAX: 814-863-1357).** *The Pennsylvania State University is an Equal Opportunity Employer and encourages women and minority applicants.*

### POSTDOCTORAL FELLOWSHIP

The Oregon Regional Primate Research Center (ORPRC) announces the availability of a 2-year postdoctoral fellowship (\$18,600 first year salary, plus fringe benefits), as well as a \$5,000 allowance per year to support research in the laboratory of a Center scientist. Approximately 21 ORPRC staff scientists conduct research in the areas of Reproductive Science, Neuroscience, and the Pathobiology of Metabolic and Infectious Diseases. Research approaches range from molecular and cell biology to whole animal physiology. *Applicants must be U.S. citizens or have permanent residency status in the U.S.* An application in conjunction with a staff scientist must be submitted by April 1, 1993.

For a complete list of scientists, research programs, and other information concerning ORPRC please contact:

Office of the Director  
Oregon Regional Primate Research Center  
505 N.W. 185th Avenue  
Beaverton, Oregon 97006

*The Oregon Regional Primate Research Center is an Equal Opportunity Employer who does not discriminate on the basis of race, religion, color, sex, age, national origin or disability.*

### POSTDOCTORAL FELLOWSHIPS IN ENDOCRINOLOGY

Position available in interdisciplinary program supported by NIH Training Grant. Research training for U.S. citizens, permanent residents, and non-citizen nationals provided in the following areas: Renal function during pregnancy (C. Baylis, Ph.D., Physiology); Birth defects and embryonic death with advancing age (R. Butcher, Ph.D., Obstetrics & Gynecology); Insulin and estrogen-dependent transcriptional regulation (M. Evans, Ph.D., Biochemistry); Neuroendocrine control of LH secretion (R. Goodman, Ph.D., Physiology); Neuroendocrine control of thyroid blood flow and hormone secretion (G. Hedge, Ph.D., Physiology); Hormonal factors affecting cardiovascular cell ion transport in growth and hypertension (H. Overbeck, M.D., Ph.D., Medicine); Autoimmune cytotoxic T cells in insulin-dependent diabetes (J. Sheil, Ph.D., Microbiology/Immunology); GH gene regulation/hormone control of breast cancer growth (J. Strobl, Ph.D., Pharmacology). *Women and minorities are particularly encouraged to apply.* Application information and more detailed descriptions of these research programs are available on request from the program director:

Dr. Robert L. Goodman, Professor  
Department of Physiology  
West Virginia University Health Sciences Center  
PO Box 9229  
Morgantown, WV 26506-9229  
*Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL FELLOW POSITION

Position available immediately in the laboratory of Dr. Harold A. Singer at the Weis Center for Research to study the role(s) of protein kinase C isozymes and calcium/calmodulin-dependent protein kinase II in regulating smooth muscle function. Applicants should have experience with biochemical and/or molecular approaches applied to the study of one or more of the following: protein kinases, contractile and/or cytoskeletal protein regulation, signalling pathways involved in regulating cell growth.

Send curriculum vitae and the name and addresses of three references to: **Geisinger Human Resources Department (HS), 100 North Academy Avenue, Danville, PA 17822-1529.**

## POSITIONS OPEN

**POSTDOCTORAL or RESEARCH ASSISTANT** position available for candidates with strong background in cell biology and cultivation of protozoa. Eligible candidates should have a Ph.D. degree and not more than three years of postdoctoral research experience. Salary will depend upon experience. Send curriculum vitae and names of three references to: **Dr. Walter T. Hughes, Department of Infectious Diseases, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38105.** *St. Jude is an Affirmative Action/Equal Opportunity Employer.*

### RESEARCH ASSOCIATE, MICROBIOLOGY

A postdoctoral research associate position is available immediately to conduct biochemical/molecular/electrochemical studies of microbial degradation of paints and coatings applied to metal surfaces and bioremediation of paint blasting wastes. Qualifications include a Ph.D. and experience in microbiology, enzymology, and/or prokaryotic molecular biology. The position is guaranteed for one year, with strong possibility of renewal. *U.S. citizenship or permanent residency required.* Vacation, sick leave, and health benefits are available. Salary is commensurate with experience. Send curriculum vitae and names of three references by October 30, 1992 to the attention of: **Mr. William Cooper, Assistant Director, Center of Marine Biotechnology, University of Maryland System, 600 East Lombard Street, Baltimore, MD 21202.** *The University of Maryland System is an Equal Opportunity/Affirmative Action Employer.*

### DIVISION OF BIOLOGICAL SCIENCES UNIVERSITY OF KANSAS

**NEUROBIOLOGIST** to start August 17, 1993. Applicants must have a Ph.D. in Cell/Molecular/Neurophysiology or related area and postdoctoral research experience. Preference will be given to those applicants with experience in ion channels, using molecular/cellular approaches. Successful candidates will be expected to maintain a strong, independent research program and participate in the teaching of undergraduate and graduate students. Applications will be reviewed starting December 1, 1992, and thereafter until the position is filled. Applicants should send curriculum vitae, an outline of current and future research plans, and the names of three references to: **Dr. Jerome M. Yochim, Department of Physiology and Cell Biology, University of Kansas, Lawrence, KS 66045.** *The University of Kansas is an Equal Opportunity/Affirmative Action Employer.*

### UNIVERSITY OF MARYLAND

**ASSISTANT/ASSOCIATE RESEARCH SCIENTIST**—Duties: Coordinate and conduct ecotoxicological research as part of the Multiscale Experimental Ecosystem Research Center (MEERC), a newly created U.S. EPA exploratory research center within the University of Maryland Center for Environmental and Estuarine Studies. Required: Ph.D. in biological/environmental science with research emphasis in aquatic toxicology, particularly the effects of contaminants at the organismal and population level. Preferred: Experience in the use of microcosms and/or mesocosms. Rank/salary: Commensurate with experience. Send: curriculum vitae, names, addresses, and telephone numbers of three references to: **Dr. Jay W. Gooch, UMCEES, Chesapeake Biological Laboratory, P.O. Box 38, Solomons, MD 20688-0038 (Omnet: J.GOOCH).** Deadline: October 30, 1992 or until a suitable candidate is selected. *Affirmative Action/Equal Opportunity Employer.*

### PRINCIPAL INVESTIGATOR

The Guthrie Research Institute (GRI) is recruiting a scientist to lead an active research program in **cellular signalling mechanisms** at the molecular level. GRI offers an attractive start-up package, excellent facilities, competitive salary, and continued endowment-based support to an investigator interested in working in an active and collegial research environment. GRI is part of the Guthrie Healthcare System (GHS), an active clinical, teaching and research center serving the twin tier regions of Pennsylvania and New York. Existing laboratories are involved in the study of receptor expression and signal transduction, TNF tumor resistance, integrin action and gene regulation, and HIV entry/fusion mechanisms. Please send curriculum vitae, summary of research interests and the names of three references to: **Chair, Search Committee, Guthrie Foundation, Guthrie Square, Sayre, PA 18840-1692.** *GHS is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**SENIOR RESEARCH ASSOCIATE—BIOORGANIC CHEMISTRY:** Ph.D.-level scientist with three years of experience will conduct research and help manage research group. Projects include radiochemistry, organic synthesis, protein expression and purification, molecular cloning and polypeptide NMR. Send curriculum vitae to: **Professor Glenn D. Prestwich, Department of Chemistry, State University of New York (SUNY), Stony Brook, NY 11794-3400.** *SUNY at Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.*

### ICHTHYOLOGIST

The Academy of Natural Sciences of Philadelphia seeks an outstanding ichthyologist for the career-track position **ASSISTANT CURATOR OF ICHTHYOLOGY.** Requirements: (1) Ph.D. in biology or related discipline; (2) demonstrated research skills in systematics or evolutionary biology of fishes; (3) ability to establish and maintain independent research program; (4) willingness to share curatorial responsibilities for ichthyology collections; (5) ability to attract grant support for research program; (6) willingness to participate in public education and museum programs. This position includes opportunities for adjunct appointment and graduate students at the University of Pennsylvania.

Send curriculum vitae, letter summarizing research interests, reprints, and names and addresses of three references no later than 15 January 1993 to: **Ichthyology Search Committee, c/o Margaret Fischer, The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103-1195.**

*The Academy of Natural Sciences is an Equal Opportunity/Affirmative Action Employer.*

CSU San Marcos, the newest campus of the California State University system, is planning a major expansion of its **BIOLOGY PROGRAM.** The program has a strong cell and molecular biology, and mechanism of action focus. We seek candidates with a commitment to excellence in teaching (major and general education) and research. Positions are in Cell/Ecology/Physiology; rank is open; and one senior appointment will be made. The senior appointment will serve as the lead faculty for the emerging program and must have a broad range of experience in program development, teaching, research, and a vision and leadership qualities for shaping a biology program for the 21st century. Send application letter, curriculum vitae, statement of research/teaching interests, and three recommendation letters to: **Chair of Biology Search Committee, CSU San Marcos, San Marcos, CA 92096.** Application should be postmarked by December 1, 1992 for initial screening; applications will be accepted until position is filled. Positions subject to final authorization. *CSU San Marcos is an Affirmative Action/Equal Opportunity Employer. The University has a strong commitment to the principle of diversity and, in that spirit, seeks a broad spectrum of candidates including women, members of minority groups and people with disabilities.*

### DEVELOPMENTAL AND ORGANISMAL BIOLOGISTS ST. OLAF COLLEGE

The Department of Biology at St. Olaf College invites applications for two tenure-track positions. Qualifications for both positions include a Ph.D., postdoctoral or comparable research experience, demonstrated interest and ability in teaching, and a desire to participate in research with undergraduates.

The **DEVELOPMENTAL BIOLOGIST** will teach an advanced course in developmental biology, an introductory course for majors emphasizing cell biology and genetics, and other courses as needed by the department. The **starting date** for this position is **January 1, 1993** and the **deadline** for applications is **November 6, 1992.**

The **ORGANISMAL BIOLOGIST** will teach an advanced course in plant taxonomy/morphology, an introductory course for majors emphasizing organismal biology, courses in environmental studies, and other courses as needed by the department. The **starting date** for this position is **September 1, 1993** and the **deadline** for applications is **November 13, 1992.**

Send curriculum vitae, undergraduate and graduate transcripts, a statement of teaching and research interests, and three letters of recommendation to: **Kathleen Fishbeck, Chair, Department of Biology, St. Olaf College, Northfield, MN 55057.** *St. Olaf College is a co-educational liberal arts college of the Evangelical Lutheran Church of America. St. Olaf is an Equal Opportunity Employer.*

### **MICROBIOLOGY/GENETICS** **Indiana University Kokomo**

The Department of Biological & Physical Sciences invites applications for a tenure-track position at the Assistant Professor level commencing August 1993. Responsibilities include teaching, at the undergraduate level, Microbiology (both lecture and lab) for nursing and allied health students, and, on an alternating year basis, upper level courses in Microbiology, Genetics and an additional course for biology majors. Although teaching is a prime responsibility, research and service are also required. Publication is expected.

Desired qualifications include an earned doctorate, and a strong commitment to undergraduate teaching, research and publication. Preference will be given to individuals with a strong emphasis in Microbiology. Salary is competitive and includes an excellent fringe benefits package. Although the review process will commence November 16, applications will be accepted until the position is filled.

Send resume, copies of undergraduate and graduate transcripts, and the names, addresses and telephone numbers of at least three references to:

**Dr. Robert Roales**  
**Chairperson, Department of Biological & Physical Sciences**  
**Indiana University Kokomo**  
**P.O. Box 9003**  
**Kokomo, IN 46904-9003**

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### **POST DOCTORAL FELLOWSHIPS**

The Evans Department of Medicine, Boston University Medical Center, solicits applications for its fellowship program from outstanding individuals holding an M.D. and/or Ph.D. The program is dedicated to excellence in biomolecular medicine and basic science. Areas of special expertise include

**CELL PHYSIOLOGY**  
**CLINICAL SCIENCE**  
**DEVELOPMENTAL BIOLOGY**  
**GENE REGULATION**  
**IMMUNOLOGY**  
**MOLECULAR GENETICS**  
**TUMOR BIOLOGY**  
**VASCULAR BIOLOGY**

Appointments will be for three years. Competitive stipends, generous supply and travel allowance, and health insurance will be provided. Applications are due December 15, 1992 and may be obtained from

**Dr. John Murphy**  
**Department of Medicine**  
**Boston University Medical Center**  
**88 E. Newton Street**  
**Boston, MA 02118**

Awards will be announced February 1, 1993. Start date is flexible for any time after July 1, 1993, and can be coordinated with receipt of Ph.D. or completion of clinical training in medical subspecialty.

### **FACULTY POSITION** **PHARMACOLOGY/MEDICINAL** **BIOCHEMISTRY/BIOLOGICAL** **SCIENCES** **DEPARTMENT OF** **PHARMACEUTICAL SCIENCES** **SCHOOL OF PHARMACY** **UNIVERSITY OF MONTANA**

Applications are invited for a tenure-track position in pharmacology, medicinal biochemistry or a related area at the level of assistant or associate professor. A Ph.D. degree and postdoctoral experience is required. A degree in pharmacy and/or experience in teaching and research in a pharmacy school setting is desirable, but not essential. The successful candidate must demonstrate high potential to establish an independent, extramurally funded research program which is supportive of graduate education. The candidate must be able to contribute to an interdisciplinary Ph.D. program involving pharmacology together with the biological sciences and biochemistry. The department will have 10 research active faculty and has identified research focus areas in diabetes, cardiovascular and neurological disorders. Screening of applications will begin December 15, 1992 and will continue until the position has been filled.

Applications should include a curriculum vitae, statement of research and funding plans, and the names, addresses and phone numbers of three references should be sent to:

**Vernon R. Grund, Ph.D.**  
**Chairman, Department of Pharmaceutical Sciences**  
**School of Pharmacy & Allied Health Sciences**  
**University of Montana**  
**Missoula, Montana 59812-1075**  
**(406) 243-4972/4765**

The University of Montana is located in Missoula, a cosmopolitan Rocky Mountain community of 70,000. The city has often been singled out in national publications for its high quality of life. Abundant recreational opportunities in surrounding state and national forests and nearby Glacier National Park complement a thriving intellectual atmosphere. The School of Pharmacy offers a B.S. in Pharmacy, as well as a graduate degree in the pharmaceutical sciences, and provides an environment conducive to teaching and research with small class size and a new, modern building. *The University of Montana is an Equal Opportunity/Affirmative Action Employer*

## **Cell Biologists**

**Synaptic Pharmaceutical Corporation** is a rapidly growing biotechnology company involved in the discovery and cloning of neurotransmitter receptors and other sites of drug action. By pioneering advances in the basic neurosciences we are creating a pathway to the next generation of neuro-psychiatric treatments. The following positions are currently available in our Molecular and Cell Biology Program:

### **Cell Biology Group Leader:**

The successful candidate will be responsible for the operation of our cell biology laboratory using recombinant cell culture expression systems. The ideal candidate would have experience in laboratory management and the supervision of technical personnel as well as familiarity with second messenger systems, mass cell culture techniques, expression vectors, transfection technologies, and cell culture quality control procedures. A Ph.D. and industrial experience is required.

### **Senior Cell Culture Associate:**

Responsibilities include the continuous culture of mammalian cell lines for pharmacological assay as well as laboratory management. A BS or MS in the biological sciences and 1-3 years experience in mammalian cell culture are required.

**Synaptic Pharmaceutical Corporation** occupies well-equipped, modern laboratories in a suburban environment 10 miles from the George Washington Bridge. We offer a stimulating multi-disciplinary environment, competitive salaries and benefits.

For consideration, please submit your Curriculum Vitae to:

**Human Resources Manager, Dept. 137**  
**Synaptic Pharmaceutical Corporation**  
**215 College Road, Paramus, New Jersey 07652**

**Synaptic**  
**Pharmaceutical Corporation**

## **SCIENTISTS/SR. SCIENTISTS**

Macronex, a newly-emerging biopharmaceutical discovery and development company located in the Research Triangle area of North Carolina, is positioning itself to be a world leader in the development of human therapeutics based on the physiological regulation of macrophages and monocytes. We are currently expanding our research programs and have openings available for Scientists/Sr. Scientists in our macrophage/cell biology group.

Successful candidates will have a Ph.D. degree with a minimum of 3+ years experience in cell biology or immunology with direct experience in working with human monocytes or macrophages. Experience in bioassays of monocyte/macrophage function is required and experience in immunoassay development and/or the measurement of monokines is highly desirable. We seek energetic, highly-motivated individuals who possess excellent interpersonal skills. Selected individuals will be part of a group of 9-10 scientists focused on understanding the mechanisms of macrophage activation and regulation and will be supported by teams of molecular biologists, protein and peptide chemists, and medicinal chemists. **Position #106.**

We offer competitive salaries and benefits including employee stock participation. The Research Triangle provides a progressive area offering a high quality, affordable lifestyle. Interested candidates should send their resume and CV, referencing **Position #106**, with the names, addresses, and phone numbers of three references to: **Macronex, Inc., Suite 700, 120 Southcenter Court, Morrisville, NC 27560.**

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## Director - National Institute For Global Environmental Change

*University of California*

Applications and nominations are invited for the position of Director of the National Institute for Global Environmental Change (NIGEC). NIGEC's mission is to foster multidisciplinary research on global environmental and climate change focusing particularly on the Department of Energy's (DOE) research within the Federally-funded U.S. Global Change Research Program. The NIGEC office reports to the University of California, Office of the President and is responsible for administration and coordination of the global change research supported by NIGEC at five regional centers located at Harvard University (Northeastern), Indiana University (Midwestern), University of Alabama-Tuscaloosa (Southeastern), Tulane University (Southcentral), and the University of California Davis/Irvine (Western).

The Director will provide leadership and international visibility for the Institute, direct administration of the Institute affairs and staff, provide liaison to the DOE and to Congress, and promote planning, coordination, and integration of NIGEC-supported research within and among the regional centers. The University of California will provide the appropriate research environment to encourage the Director to foster a multidisciplinary research program. The Director is assisted by a Scientific Advisory Committee and National Technical Advisory Committee.

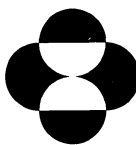
The successful candidate shall be or become a full faculty member of the University of California at the time he or she assumes the appointment. The position will be available on January 1, 1993. Nominations and applications should be submitted by December 1, 1992, to: Associate Vice President, Academic Affairs, Screening Committee E-92, UCOP, 300 Lakeside Drive, 9th Floor, Oakland, CA 94612-3550. EOE/AA

## MUSCLE BIOCHEMIST

The Department of Pharmacology at Merck Research Labs at West Point is seeking applicants for a staff scientist position in a laboratory studying the biochemical pharmacology of heart muscle. Duties will include purification, characterization, and manipulation of DNA and proteins, enzymatic assays, physiologic recording from skinned muscle fibers.

Applicants must have a BS/MS degree in biochemistry/biophysics or equivalent and at least 3-5 years of muscle research experience using chromatography, electrophoresis, immunoblotting, and basic procedures in molecular biology.

Excellent salary and benefit programs accompany this position at our modern research facilities located 25 miles northwest of Philadelphia. Please send curriculum vitae with cover letter to **Personnel Manager, AD# D-24, MRL Human Resources WP42-2, Merck Research Laboratories, P.O. Box 4, West Point, PA 19486.** EEO/AA/VH/Employer



# MERCK

Research Laboratories



Developmental Therapeutics Branch  
Division of AIDS  
National Institute of Allergy and Infectious Diseases

City of Hope



### THIRD INTERNATIONAL SYMPOSIUM ON CATALYTIC RNAs (RIBOZYMES) AND TARGETED GENE THERAPY FOR THE TREATMENT OF HIV INFECTION

**December 6-11, 1992 San Diego Princess Resort Hotel**

Catalytic RNAs (ribozymes) are a new class of potential therapeutic entities that cleave target RNA molecules in a highly specific manner. Several human diseases, ranging from HIV/AIDS to human leukemia, are being explored as candidates for ribozyme-mediated RNA destruction. This symposium will distill and disseminate current data on the rapid progress made in this field and the universal application of ribozyme as a therapeutic modality to a variety of human disease. Sessions will include RNA catalytic motifs, secondary/tertiary structure, modification, applications to HIV and other human diseases, and delivery to cells. Equal time will be devoted to targeted gene therapy/delivery with specific focus on HIV infection. This segment will include ribozyme gene delivery, potential antiviral genes/molecules and their delivery in vitro and in vivo, recently emerging viral vectors and non-viral transfer strategies, hematopoietic stem cell isolation and culturing, tissue targeting strategies, and model diseases amenable to gene therapy applications.

The intent of the symposium is to attract a diverse blend of individuals from the scientific, medical, and pharmaceutical communities, and to provide a unique venue in which basic science developments and innovative advances in molecular medicine are presented and discussed. This should, in turn, create a stimulating and exciting atmosphere for scientific interaction, discussion, debate, and collaboration. Partial speaker list includes:

D. Baltimore, USA  
M. Been, USA  
M. Blaes, USA  
C. Bordigan, Italy  
R. Cedergren, Canada  
R. Collins, Canada  
F. Eckstein, Germany

T. Friedman, USA  
W. Gerlach, Australia  
P. Greenberg, USA  
G. Hadlaczky, Hungary  
L. Huang, USA  
J. Heeney, The Netherlands  
G. Joyce, USA

G. Nabel, USA  
E. Ohtsuka, Japan  
A. Riggs, USA  
J. Sodroski, USA  
R. Symons, Australia  
K. Taira, Japan  
I. Weissman, USA

**For additional information and registration material please contact  
Ms. Marla Hollander at 301-468-6555.**

Sponsored by the City of Hope, National Medical Center, and the National Cooperative Drug Groups for the Treatment of HIV Infection.

### FACULTY POSITIONS IN MOLECULAR AND STRUCTURAL BIOLOGY

Applications are invited for two tenure-track faculty positions at the Assistant or Associate Professor level in the Department of Biochemistry of The Medical College of Wisconsin. Although applications are welcome in any area of contemporary biochemistry, particular emphasis is placed on individuals with expertise in (1) **X-ray crystallography or a related area of structural biology** and (2) **molecular approaches to gene regulation and/or development**. Successful applicants will join a well-funded department and will complement existing molecular, structural, and mechanistically oriented programs by establishing an independent research group. The appointments will also require participation in the department's graduate and medical education programs. In addition to start-up funds, the positions offer ready access to state-of-the-art protein and nucleic acid, X-ray diffraction, graphics, and computing facilities.

The positions will be available on or after 1 July 1993. By 1 December 1992 applicants should send curriculum vitae, recent reprints, statement of research interests and names of three references to:

Molecular and Structural Biology  
Search Committees  
Department of Biochemistry  
Medical College of Wisconsin  
8701 Watertown Plank Road  
Milwaukee, Wisconsin 53226



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## PHARMACOLOGISTS/ MOLECULAR - CELL BIOLOGISTS Neuroscience Research

As part of its ongoing commitment to the discovery of new drugs for central nervous system disorders related to nerve cell death, the Neuroscience Research Division at Abbott has two openings at the Ph.D. level in the areas of neurodegeneration and ischemia. You will be part of a focused multidisciplinary drug discovery team, and will contribute to the delineation of project goals, their implementation and new lead discovery.

A **minimum** requirement of 2 years postdoctoral experience in pharmacology, neuroscience or related disciplines is essential. Both the ability to work independently as demonstrated by a proven record of publications and the willingness to work within a collaborative, team-oriented environment is essential.

For the **ischemia position**, the individual will be responsible for the investigation, development and implementation on *in vitro* pharmacological test procedures

and should have practical experience in the neurodegeneration/ischemia area. Work related experience in the molecular mechanisms of stroke-related cell death would be advantageous. **Reply to Job# JFK.**

For the **neurodegeneration position**, research experience and interest in the area of neuroimmunology and/or cytokine pharmacology would be an advantage. **Reply to Job# CML.**

Abbott provides an excellent salary and benefits package including profit sharing and a stock retirement plan. We are located in an attractive suburban setting, approximately 30 miles north of Chicago. For confidential consideration, please forward a resume (indicating appropriate Job#) and salary history to: **Patricia Handy, Corporate Staffing, Abbott Laboratories, One Abbott Park Rd., Abbott Park, IL 60064.** Abbott is an Affirmative Action Employer/Smoke-Free Environment.

*See us at the Neuroscience Meeting.*

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## Sr. Program Officers & Program Officer U.S. Land & Wildlife Program

World Wildlife Fund (WWF-US), is a private non-profit organization working worldwide to preserve and protect the diversity and abundance of life on earth. The U.S. Land & Wildlife program works to promote efforts to protect important natural areas & wildlife populations in the U.S., and currently seeks to fill 3 positions.

**SR. PROGRAM OFFICER/SCIENTIST** (Dept. 254/F) provides technical assistance and conducts research involving application of conservation biology to environmental and natural resource management policies; and maintains current knowledge of national policies and Leg. & Exec. Branch initiatives affecting conservation and management of biodiversity, protected species, and natural resources. Qualified applicants should possess master's degree (Ph.D. preferred) or equiv. experience in field of ecology, natural resource management, policy, biology or related field, and have at least 5 yrs' experience in U.S. natural resource policy work.

**SR. PROGRAM OFFICER** (Dept. 253/F) conducts research and provides technical assistance in environmental policy and resource management. Projects include conducting complex research with emphasis on public lands and endangered species; providing technical assistance to public and private organizations; and work with sr. management in developing proposals. Qualified applicants will possess master's degree or equiv. exp. in the field of natural resource policy or management, ecology, law, biology, or related field and have at least 5 yrs' experience in U.S. natural resource policy work including familiarity with endangered species or public lands management policies.

**PROGRAM OFFICER FOR MARINE CONSERVATION** (Dept. 252/F) conducts research and provides technical assistance in marine conservation policy work of U.S. Land & Wildlife Program, & assists Director with development, supervision, & coordination of program's activities in marine conservation policy, with special emphasis on marine fisheries. Projects include marine conservation policy research, participation in coordinated advocacy campaigns, policy analysis, and report writing. Qualified applicants should possess bachelor's or master's degree in marine policy, marine resources management, marine biology, or related field, and have at least 3 yrs' experience in marine conservation policy, fisheries management, or marine resources management.

Send cover letter and resume to: **WWF, Attn: Human Resources Dept.** (refer to appropriate Dept. #), by mail to: **1250 24th Street, NW, Washington, DC 20037** or by Fax: 202-293-9211.



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*Please submit a CV, a photo and a hand written letter to **PUBLIVAL/10003**, 27 Route des Gardes 92190 MEUDON (FRANCE).*

## POSITIONS OPEN



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

Psychiatric Genetics Research Program, Department of Psychiatry, Medical College of Virginia/Virginia Commonwealth University (MCV/VCU), Richmond, recruiting full-time **RESEARCH SCIENTIST** interested in applying methods of linkage analysis in humans to neuropsychiatric diseases—especially schizophrenia. Will join active, well-funded research team with strong emphasis on quantitative genetic methods. Responsibilities include supervision of genome-wide search for genes for schizophrenia in large samples of multiplex families. Candidate encouraged to establish own research program in molecular genetics of neuropsychiatric disorders. M.D. or Ph.D. and advanced research training in molecular genetics/gene mapping required. Experience in culturally diverse setting highly preferred. Tenure/non-tenure-track position depending upon credentials/career aspirations. Send curriculum vitae and references by December 15, 1992 to: **Dr. K. Kendler, MCV Box 710, Richmond, VA 23298-0710. MCV/VCU is an Equal Employment Opportunity/Affirmative Action Employer. Women, minorities, persons with disabilities encouraged to apply.**

**RESEARCH ASSOCIATE**. The University of Nebraska Medical Center's Department of Ophthalmology is looking for a researcher with some expertise in the areas of proliferative diabetic retinopathy and proliferative vitreoretinopathy and an understanding of the effect of growth factors on these processes. A background in immunocytochemistry is preferred. Must have a graduate degree equivalent to an M.D. or a Ph.D. Position available from January 1, 1993 through December 31, 1993. Salary \$26,000 plus benefits, 40 hours per week. Send curriculum vitae to: **David M. Chacko, M.D., Ph.D., Assistant Professor and Director of Retina Service, University of Nebraska Medical Center, 600 South 42nd Street, Omaha, NE 68198-5540. Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.**

**SCIENTIST, SENIOR APPLICATIONS**. Apply electrophysiology and pharmacology knowledge to the design and implementation of scientific experiments that will aid in the customer analysis of the Cytosensor Microphysiometer; perform novel experiments for the applications development of the Cytosensor Microphysiometer; teach prospective customers and in-house personnel. Ph.D. degree in Physiology or Pharmacology. Two years of experience in electrophysiology research. Research experience must include: electrophysiological assessment of nerve and excitable cells using high-resistance microelectrodes and patch clamping for study of ion channels; biochemical assays including radioimmunoassay, kinase assays, protein phosphorylation, radiolabeled ion flux assay, affinity purification of compounds and immunoprecipitation with monoclonal antibodies; primary and secondary cell culture including neuronal, muscle, and non-excitable cells; *in vivo* techniques; also requires teaching/training experience/background in areas of physiology and pharmacology. Salary \$4,279 per month; 40 hours per week. Place of employment and interview: Menlo Park, California. If offered employment, must show legal right to work in United States. Clip ad and send with résumé to: **Job No. DN8559, P.O. Box 9560, Sacramento, CA 95823-0560** not later than November 1, 1992. *Equal Opportunity Employer.*

## POSITIONS OPEN

### IMMUNOHISTOCHEMIST

**BIOQUAL, Inc.** is seeking to fill two Ph.D.-level positions. The positions require the individuals to evaluate tissue specimens from SIV-inoculated monkeys. The work includes immunohistochemical preparation, examination of tissue sections and incubation of tissue sections with ribonucleotide probes for *in situ* hybridization histochemistry for detection and quantitation of viral antigens and RNA in infected animals as well as immune/inflammatory markers in tissue. Eligible applicants should have relevant experience and background. Submit curriculum vitae, cover letter and salary requirements to: **Martha O'Neill, Human Resources Manager, BIOQUAL, Inc., 9600 Medical Center Drive, Rockville, MD 20850. Equal Opportunity Employer.**

**RESEARCH SCIENTIST** position available immediately for studying metabolism of chemical carcinogens and carcinogen-DNA formation (*in vitro* and *in vivo*). Ph.D. in biochemistry, bioorganic chemistry, biochemical toxicology or related field required. Experience in isolation, chromatographic separation and characterization of xenobiotic-DNA adducts by modern spectroscopic techniques desirable. The position provides an opportunity for developing a program of candidate's interest. Please send résumé and names of three references to: **Dr. H. Sikka, Director, Division of Environmental Toxicology and Chemistry, Center for Environmental Research, State University of New York College at Buffalo, 1300 Elmwood Avenue, Buffalo, NY 14222, Telephone: 716-878-5422, FAX: 716-878-5400.**

## ANNOUNCEMENTS

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Instructions to Authors can be obtained from and manuscripts should be sent: *from Europe, Asia and Africa:* **Gaetano Crepaldi, M.D., Editor-in-Chief, Aging/Clinical and Experimental Research, Istituto di Medicina Interna, Università di Padova, Via Giustiani, 2-35128 Padova, Italy.**

*From North and South America and the Pacific:* **Roger McCarter, Ph.D., Executive Editor, Aging/Clinical and Experimental Research, Department of Physiology, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284-7756.**

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Statement required by the Act of 12 August 1970, Section 3685, Title 39, United States Code, showing the ownership, management, and circulation of:

1-6. *Science* is published weekly on Friday, except the last week in December, at 1333 H Street, NW, Washington, DC 20005. Date of filing: 30 September 1992. This is also the address of the publisher, the editor, and the managing editor, who are, respectively, Richard S. Nicholson, Daniel E. Koshland, Jr., and Monica M. Bradford.

7. The owner is American Association for the Advancement of Science, 1333 H Street, NW, Washington, DC 20005. Stockholders: None.

8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities: None.

9. The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes have not changed during the preceding 12 months.

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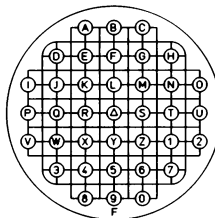
Actual number of copies of single issue published nearest to filing date are (A) Total number of copies printed: 162,000; (B) Paid circulation: (1) Sales through dealers and carriers, street vendors, counter sales: None; (2) Mail subscriptions: 154,255; (C) Total paid circulation: 154,255; (D) Free distribution by mail, carrier, or other means: samples, complimentary, and other free copies: 3,757; (E) Total distribution: 158,012; (F 1) Office use, leftover, unaccounted, spoiled after printing: 3,988; (F 2) Returns from news agents: None; (G) Total: 162,000.

I certify that the statements made by me above are correct and complete. (signed) **Michael Spinella**, Director, Membership/Circulation.



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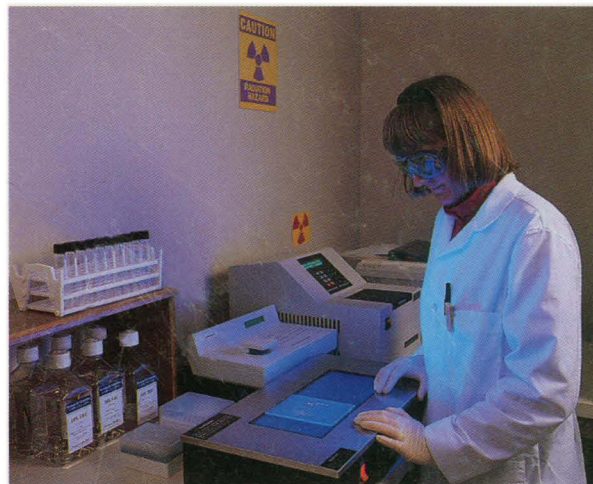
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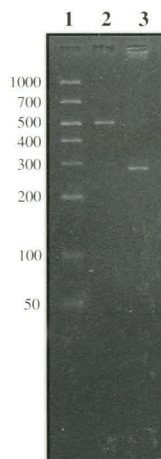
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