

### Monoclonal Antibody Bioreactor

ACUMOUSE is designed to replace laboratory mice as a source of monoclonal antibodies. The bioreactor provides a low-cost cell culture system to replace mouse ascites. Each instrument can hold one to five bioreactors, and each bioreactor can contain 1 billion cells, the equivalent of 20 mice. The bioreactors can run independently for culturing different cell lines or evaluating various media. The unit features programmable media feed protocols and oxygen delivery independent of media feed. It is designed for use in an existing carbon dioxide incubator or with an integrated carbon dioxide incubator. Endotronics. Circle 335.

### Biotechnology Abstracts on CD-ROM

*Biotechnology Abstracts*, a database containing a set of more than 122,000 references going back to 1982, is now available in a CD-ROM version. It is available on an annual lease basis that is updated quarterly. New data, about 15,000 abstracts per year, are taken from Derwent's *Biotechnology Abstracts* fortnightly journal. The abstracts, bibliography, and all other fields on the CD-ROM are fully searchable. Subscribers to the printed journal and academic institutions can receive a discount. Derwent Publications. Circle 336.

### Noninvasive Cellular Biosensor

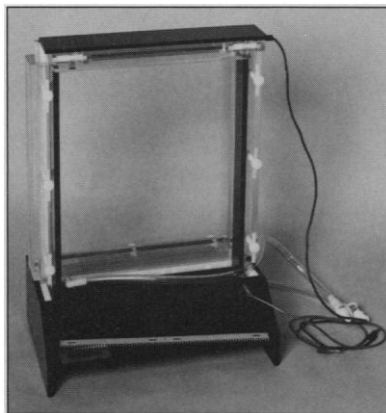
The Cytosensor Microphysiometer, which features living cells on a silicon sensor, allows researchers to detect and characterize biological responses noninvasively at the cellular level. The biosensor allows scientists to examine the reactions of living cells to chemical and biological agents as they occur, without harming the cells. It can detect drug activity or cell toxicity much more rapidly than traditional testing methods. The

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

light-addressable potentiometric sensor technology can detect and measure subtle fluctuations in the metabolic rate of living cells in response to a wide variety of synthetic or natural molecules. Molecular Devices. Circle 337.

### DNA Sequencer

The ISS DNA Sequencer achieves maximum heat distribution due to the extended upper buffer chamber. Both the upper and



lower buffer chambers feature interlock safety lids and in-line stopcock drains. The lid of the lower buffer chamber also acts as a wedge that evenly distributes pressure along the bottom of the glass plates. Integrated Separation Systems. Circle 338.

### Chromatography Results Manager

Focal Point, a chromatography results manager, connects to integrators and data systems manufactured by Hewlett-Packard, Spectra Physics, Waters, PE Nelson, and others, automatically acquiring their reports. Focal Point stores the collected information in a relational database, providing data consolidation, availability, and security for all chromatography laboratory results in the biotechnology laboratory. Advanced query, manipulation, and reporting functions are available to extract and format information and answer questions. Communication is improved because results are reported in one consistent format, eliminating the need to handle report formats unique to each integrator or chromatography system. General results management functions such as charts, results approval, specification checking, audit trail, and archives can be added to existing integrators and chromatography data systems. PE Nelson, Division of Perkin-Elmer. Circle 339.

### CCD Camera

The Model ATC200 charge-coupled device, digital, cooled camera system is integrated with powerful image processing soft-



ware running under Microsoft Windows 3. The camera provides 12, 14, or 16 bits per pixel over spatial resolutions from 512 by 512 to 2048 by 2048 pixels. The cameras are designed for applications requiring low-light imaging, low-contrast detection, or wide dynamic range. Photometrics. Circle 340.

### Literature

*Wall Chart for Selecting an Appropriate Agarose* provides information for optimal resolution of DNA, RNA, and polymerase chain reaction products in submarine gel electrophoresis. FMC Bioproducts. Circle 341.

*Products for Molecular and Cellular Biology* is a catalog detailing a line of products including enzymes, heat shock proteins, and more. Epicentre Technologies. Circle 342.

*Stories from the Field 1991* is a laboratory instrumentation and supply catalog that introduces a variety of new equipment, including analytical balances, electronic pipettors, and labware. Whatman LabSales. Circle 343.

*Bulletin 1609* describes a new polyvinylidene difluoride (PVDF) protein sequencing membrane. Proteins that bind tightly to the membrane actually transfer through other protein sequencing supports. Bio-Rad Laboratories. Circle 344.

*Bench Top Centrifuges C 3.12/CR 3.12* describes two midrange models, one refrigerated and one not. They are capable of speeds up to 3600 rpm with a horizontal rotor and 6600 rpm with a fixed angle rotor and can accommodate tubes as small as 0.5 ml or bottles as large as 250 ml. Jouan. Circle 345.

*In Focus, the Tecator Journal of Technology for Chemical Analysis* has a new edition out featuring a variety of products. Tecator. Circle 346.

# SCIENCE CAREERS

143rd YEAR

1991

NO. EE03

## AAAS ANNOUNCES EXPANSION OF EMPLOYMENT EXCHANGE '92

*During 1992, the Employment Exchange will be held at three annual AAAS-sponsored meetings:*

### **AAAS Annual Meeting**

February 7-10, at the Hyatt Regency Hotel, Chicago, Illinois

### **AAAS Pacific Division Annual Meeting**

June 21-24, at the University of California, Santa Barbara campus

### **Science Innovation '92**

July 21-24, at the Moscone Center, San Francisco, California

### **EMPLOYER BENEFITS**

- ▼ Hundreds of top-notch candidates. Access to all résumés cross-referenced by discipline.
- ▼ On-site interview facilities and scheduling services at no extra charge.
- ▼ Unlimited position postings.
- ▼ Special rates for AAAS Meetings exhibitors and nonprofit organizations.
- ▼ Free admittance to Plenary Lectures and Exhibition Hall without meeting registration fee.

### **EMPLOYER ENROLLMENT INSTRUCTIONS**

- ▼ Complete the Employer enrollment form including which days you will be interviewing.
- ▼ Prepare your Position Available Description(s) on the form provided or on an 8"x11" page (using same format). Be sure to complete all sections.
- ▼ Indicate the names and phone numbers of the recruiters who will be participating at the Exchange.
- ▼ Submit appropriate payment (check or original purchase order) with completed enrollment form and position descriptions to the address listed below.
- ▼ NOTE: If you wish to attend sessions, seminars, or symposia, you must register for the meeting(s).

### **CANDIDATE BENEFITS**

- ▼ Free enrollment for AAAS members who apply by the appropriate advance enrollment date (see below). Low \$10 fee for nonmembers and on-site registrants.
- ▼ Hundreds of current position openings in a variety of disciplines and experience levels.
- ▼ On-site interview facilities, including on-the-spot interviews.
- ▼ Enrollment includes availability of your forms at all AAAS-sponsored annual meetings in 1992.
- ▼ Access to full descriptions of all available positions.

### **CANDIDATE ENROLLMENT INSTRUCTIONS**

- ▼ Candidate Data forms must be complete and typed. Many employers will not consider incomplete or handwritten forms.
- ▼ Candidates may submit supplemental copies of a detailed C.V. with the completed Candidate Data form only.
- ▼ All candidates using the on-site facilities at the meeting(s) **must register for meeting attendance** as well as enrolling with the Employment Exchange.
- ▼ The AAAS Employment Exchange is a free service to AAAS members enrolled by the advance enrollment deadline dates: January 6, 1992 for AAAS Annual Meeting, Chicago; and June 5, 1992 for AAAS Pacific Division Annual Meeting, Santa Barbara, and Science Innovation '92, San Francisco.

*Please forward completed forms and payments to: Jacquelyn Roberts, Manager, AAAS Employment Exchange, 1333 H Street, NW, Suite 1163, Washington, DC 20005 USA. Phone: 202/326-6737*

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# Science

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- **Deadlines:** Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* is published each Friday, except the last Friday of the year. Call for holiday deadlines. Advertisements must be submitted in writing.
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1333 H Street, N.W., Room 814  
Washington, DC 20005  
Telephone: 202-326-6555  
FAX: 202-682-0816
- **Rates:** Ads are \$42 per line; \$420 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces. A 3% cash discount is granted to all prepaid ads. If you would like *Science* to give estimated cost, indicate on letter.
- **Ads from Outside the U.S.:** Prepayment made in U.S. dollars by checks drawn on U.S. banks is required.
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- **Cancellations:** Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

### DISPLAY PERSONNEL ADVERTISEMENTS

For rates and information about fractional display ads (all ads 1/2 page and larger) and all Marketplace listings, contact:

Science Classified Advertising  
Daniel Moran, Traffic Manager  
Telephone: 202-326-6541

Janis Crowley, Recruitment  
Advertising Manager  
Telephone: 212-496-7704  
FAX: 202-682-0816

**CONDITIONS:** Personnel advertising is accepted only with the understanding that the advertisers do not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap or sexual preference. The AAAS encourages employers to actively recruit and employ underrepresented minority groups. *Science* reserves the right, at its discretion, to decline to publish advertisements submitted to it.

## POSITIONS OPEN

### CONSERVATION BIOLOGIST

The Department of Biology at the University of Northern Iowa invites applications from individuals with the Ph.D. degree for a tenure-track **ASSISTANT PROFESSOR** position in conservation biology. The applicant will have a leadership role in our natural history interpretation program, will teach a course in his/her specialty and may also teach a course in our general education program. He/she will develop a research program which will attract participation by graduate (M.A.) and undergraduate (B.A. and B.S.) students. The department expects excellence in both teaching and research. Salary is competitive and commensurate with experience and qualifications. Teaching and/or postdoctoral research is preferred. Applicants should submit curriculum vitae, transcripts, statement of interests and goals in both teaching and research, relevant reprints, and three letters of recommendation. For full consideration, all application materials should be postmarked no later than 6 March 1992. Send application and/or letters of inquiry to:

Dr. George R. Hoffman  
Professor and Chair Search Committee  
Department of Biology  
University of Northern Iowa  
Cedar Falls, IA 50614-0421  
FAX: 319-273-2893

*The University of Northern Iowa is an Equal Opportunity Educator and Employer with a comprehensive plan for Affirmative Action. Women, minority persons, Vietnam era veterans and disabled persons are encouraged to apply.*

**SCIENCE EDUCATION. ASSISTANT PROFESSOR** (target-level) in the Department of Biology. Position includes a quarter-time appointment in the Department of Secondary Education. Tenure track starting fall 1992. Ph.D. required; university/college teaching and/or postdoctoral experience desirable. Teaching certificate in secondary education and experience in teaching at the secondary level is expected. Ability to work with teachers in a field setting is essential. Teaching will include techniques of teaching science, process-oriented biology courses for elementary education majors, field supervision of student teachers, and other departmental courses. Active research program is required. Applicants should send letter of interest, curriculum vitae, and a brief statement of teaching philosophy and research interests by 1 March 1992 to: **Dr. Carl Train, Department of Biology, Southeast Missouri State University, Cape Girardeau, MO 63701. An Equal Opportunity/Affirmative Action Employer, M/F.**

### ANESTHESIOLOGIST

Department of Anesthesiology at the SUNY Health Science Center in Syracuse, New York, is recruiting faculty at the **INSTRUCTOR, ASSISTANT AND ASSOCIATE PROFESSOR** levels. Qualified individuals with a strong academic commitment in all types of anesthesia, critical care and pain management are sought. SUNY Health Science Center is a tertiary care center and provides clinical services also to the Syracuse Veterans Administration Hospital. Rank and salary are commensurate with experience. Must be Board-certified or Board-eligible and possess a New York State medical license. Please send letter, curriculum vitae, names, addresses and phone numbers of three references to: **Enrico M. Camporesi, M.D., Professor and Chairman, Department of Anesthesiology, SUNY Health Science Center, Syracuse, NY 13210. The State University of New York Health Science Center is an Equal Opportunity/Affirmative Action Employer.**

**BIOLOGY.** The Department of Biology, University of Central Arkansas (UCA), invites application for a tenure-track entry level (Ph.D.) **ASSISTANT PROFESSOR** position to begin August 1992. The individual will teach and coordinate a multisection course of general biology for nonscience majors, and conduct research in a specialty area (aquatic biology, mycology, or neurobiology preferred). Submit curriculum vitae, copies of transcripts, a brief description of teaching philosophy and research career goals, and three letters of recommendation to: **Dr. Edmond E. Griffin, Chairman, Department of Biology, University of Central Arkansas, Conway, AR 72032, telephone: 501-450-3146.** The deadline for receipt of applications is 15 February 1992. *UCA is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### MAMMALIAN DEVELOPMENTAL GENETICIST ASSISTANT, ASSOCIATE OR FULL PROFESSOR

Candidates are being sought with special interest in developing mouse models for human disease through gene transfer, homologous recombination in embryonic stem cells and transgenic animal preparation. The faculty member will be housed in newly remodeled space within Emory's Department of Genetics and Molecular Medicine. He/she will have the opportunity to interact and collaborate with other faculty interested in the molecular basis of development and disease, assist in supervising a shared mouse genetics facility and participate in active graduate and medical student training programs. Emory Medical School and University have made major commitments to building expertise and visibility in mammalian molecular genetics and the molecular basis of disease. This provides exciting opportunities for career development in the setting of Emory's pleasant suburban Atlanta campus.

Candidates should send their curriculum vitae and the names of three references to:

Douglas C. Wallace, Ph.D.  
Robert W. Woodruff Professor of Molecular Genetics  
Chairman, Department of Genetics  
and Molecular Medicine  
Rollins Research Center, Room 3035  
Emory University School of Medicine  
Atlanta, GA 30322

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

**ENVIRONMENTAL BIOLOGIST.** Ph.D., **ASSISTANT PROFESSOR**, tenure track, September 1992. Contingent on state funding. Preference given to candidates with active, environmentally oriented research programs in either microbiology or vertebrate physiology. Teaching responsibilities: undergraduate courses, and participation in the graduate program. Send curriculum vitae, transcripts, research statement, and three letters of reference to: **William Mechling, Biology Department, Towson State University, Towson, MD 21204.** Applications by 15 February 1992. *Equal Opportunity Employer. Women and minorities are encouraged to apply.*

### BIOCHEMISTRY/MOLECULAR BIOLOGY MEHARRY MEDICAL COLLEGE

Faculty positions will be available in 1992/93 in the Department of Biochemistry, at the level of **ASSISTANT OR ASSOCIATE PROFESSOR**. Applicants must have a Ph.D. or M.D. degree, or both, and appropriate formal postdoctoral research experience. Joint appointments in clinical science departments are possible. We are seeking individuals who have potential or demonstrated competence in the use of molecular biological approaches to conduct research in molecular medicine, or on fundamental biochemical/cell biological problems. Selected individuals must also be capable of, and committed to, making significant contributions to the teaching and administrative functions of the Department of Biochemistry. Successful applicants will be expected to develop/maintain a funded research program of high quality and to participate in the graduate and professional (medical, dental and allied health) school teaching programs of the department. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary (not exceeding three pages) of potential research project(s) to: **Ifeanyi J. Arizne, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208. Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.**

### ASSISTANT PROFESSOR—PHARMACOLOGY

The Division of Pharmacy Sciences invites applications for a tenure-track position. Responsibilities include undergraduate teaching and establishment of an active, funded research program. Expertise in neuropharmacology and an undergraduate pharmacy degree are desirable. Screening of applications will begin on 15 February 1992. Applicants should submit curriculum vitae and names of three references to: **R. J. Morrow, Ph.D., College of Pharmacy and Health Sciences, Drake University, Des Moines, IA 50311. Equal Opportunity/Affirmative Action Employer. Applications from qualified minorities and women especially encouraged.**

## PHARMACEUTICAL DISCOVERY

Corvas International, Inc., a biopharmaceutical company with research centers in La Jolla, California, and Ghent, Belgium, is expanding to address product opportunities in the thrombosis and vascular disease fields. Our primary focus is the development of small molecule pharmaceutical products targeted at enzymes and receptors involved in the processes of thrombosis and inflammation. Our research team is rapidly expanding, creating the following exciting career opportunities in our Cardiovascular Pharmacology group at our San Diego headquarters.

### Cardiovascular Pharmacologists

We are seeking a highly motivated senior-level Scientist to design and conduct experiments involved in the evaluation of antithrombotic and anti-inflammatory drug candidates in appropriate animal model systems. A successful candidate should have a PhD or equivalent degree and at least 2 years of direct hands-on experience in the area of cardiovascular pharmacology, preferably in the areas of thrombosis and inflammation. Appropriate interpersonal skills commensurate with leading an interdisciplinary group are required. Industrial experience is highly desirable but not required.

We are also looking for associate-level Scientists who will participate in the *in vivo* evaluation of potential drug candidates. Successful candidates must have a BS or MS degree and previous experience in conducting *in vivo* experiments in the area of cardiovascular pharmacology and be willing to work as part of an interdisciplinary team.

Corvas offers attractive compensation packages, equity participation, and a highly interactive and stimulating scientific environment. For consideration, please send a letter of interest and CV to: **Corvas International, Inc., Human Resources, 3030 Science Park Road, San Diego, CA 92121.** EOE.

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## Chairperson Department of Physiology and Biophysics

**THE UNIVERSITY OF MIAMI SCHOOL OF MEDICINE** is seeking a new Chairperson for the Department of Physiology and Biophysics. This opportunity has become available with the decision of Professor Werner Loewenstein, who has guided the Department to a position of international prominence, to pursue his research interests full-time.

On behalf of the School and the Department's faculty, we seek a distinguished scientist who will build on the School's existing strength in Neuroscience and Membrane Biophysics. Dynamic leadership of the Department requires an individual having not only an outstanding record of high quality scientific research, but also a strong commitment to graduate and medical education. The new Chairperson will have the opportunity to recruit faculty dedicated to the highest standards in research and teaching, while fostering collaborative links with others in the University.

Interested applicants should send a *curriculum vitae* to:

Dr. Bernard Roos  
Chair, Physiology Search Committee  
Dept. of Medicine (D-503)  
PO BOX 016960  
University of Miami School of Medicine  
Miami, FL, 33101

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We offer competitive salaries, a comprehensive benefits package and a pleasant working environment. Qualified candidates should submit resumes with salary history to:

**Molecular Biosystems, Inc.**  
Human Resources Department  
10030 Barnes Canyon Road  
San Diego, CA 92121



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## Position in

## MOLECULAR FUNGAL-PLANT INTERACTIONS

The Ohio State Biotechnology Center invites applications for a tenure-track faculty position at the Assistant or Associate Professor level. We are particularly interested in candidates with potential to build a dynamic, innovative research program in the molecular biology of fungal interactions with plants. The successful applicant will hold an academic appointment in an appropriate department in the College of Biological Sciences or Agriculture, and join a campus-wide community of nearly forty scientists studying the molecular biology of plants, microbes and their interactions. Competitive salary, newly renovated laboratory space, and generous start-up funds are offered. Modern plant propagation facilities are available and a state-of-the-art transgenic plant facility is being built.

Screening will begin by February 15, 1992. Send a curriculum vitae, a statement of planned research, and have three letters of reference sent to: **Dr. David M. Bisaro,**

**THE OHIO STATE UNIVERSITY**  
Fungal-Plant Search, The Ohio State Biotechnology Center, Rightmire Hall, 1060 Carmack Road, Columbus, OH 43210. The Ohio State University is an Equal Opportunity/Affirmative Action Employer.



# NATIONAL UNIVERSITY OF SINGAPORE

## FACULTY OF MEDICINE

Applications are invited for **teaching/research appointments** in one of the following departments:

### **ANAESTHESIA—Research Fellow**

Candidates should have at least a MSc degree. Preference will be given to those with experience in High Performance Liquid Chromatography.

### **MEDICINE—Research Fellow** in the area of **Respiratory Medicine**

The following are research projects that the Department is undertaking:

1. The role of mediators and airway inflammation in asthma
2. The role of superoxide anion in the sputum in various lung diseases
3. The role of eosinophils in animal models of airway inflammation
4. The study of the molecular basis of asthma in different ethnic groups
5. Diaphragmatic function tests in patients with lung diseases
6. Normal lung function values in the population
7. Bronchial hyperreactivity and cough

Candidates should have a higher degree. Preference will be given to those with a relevant degree in Biological Sciences and/or related areas.

### **ORTHOPAEDIC SURGERY—Lecturer/Fellow/Senior Fellow**

Candidates should possess a registrable medical degree together with relevant professional/higher academic qualifications. For short-term appointments as **Fellow/Senior Fellow**, the contract will be for one year in the first instance, with the possibility of further extension. Appointees will carry out research in one of the following areas and be expected to participate actively in the teaching of undergraduates and clinical activities of the Department: **Spine, Paediatric Orthopaedics, Orthopaedic Research and Adult Reconstructive Surgery.**

Laboratory facilities are available for animal surgery, motion analysis, biomechanics, histology and biochemistry related to orthopaedic research.

### **Research Fellow in Reconstructive Microsurgery**

The appointee is expected to be involved in current research activities as an investigator and to develop new areas as a principal investigator. Other responsibilities include directing and supervising research projects, management of the microvascular and cadaveric laboratories, supervision and training of junior research staff. There is extensive interaction with the research community at NUS and other hospitals with the possibility of interdisciplinary collaboration.

The contract will be for up to three years. Candidates should possess a MD or PhD in medical science with strong research experience in the field of microsurgery or reconstructive surgery and the related basic sciences.

### **Terms of Appointment**

The commencing salary will depend upon the candidate's qualifications, experience and the appointment offered. Gross annual emoluments range as follows:

Lecturer/Fellow	S\$53,160–64,200
Senior Fellow	S\$58,680–100,310
Research Fellow	S\$50,400–64,200

(US\$1.00 = S\$1.66 approximately)

Benefits under the Professional Fee Scheme with respect to the care of private patients will apply to those on teaching appointments.

Leave and medical benefits will be provided. Depending on the type of contract offered, other benefits may include: provident fund benefits or an end-of-contract gratuity, a settling-in allowance of S\$1,000 or S\$2,000, subsidised housing at nominal rentals ranging from S\$100 to S\$216 p.m., education allowance for up to three children subject to a maximum of S\$16,425 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore.

All academic staff have access to the following computer and telecommunication resources: an individual microcomputer (an IBM AT-compatible or Apple Macintosh); an IBM mainframe computer with 16 MIPS of computing power; an NEC SX supercomputer with 650 MFLOPS of computing power; departmental laser printers; a wide spectrum of mainframe and microcomputer software; voice-mail. A campus-wide network, which is based on the high speed optical fibre based FDDI technology, links up all the academic staff and student microcomputers, UNIX workstations and provides access to the mainframe computer, the supercomputer, UNIX hosts, the on-line library catalogue, Internet and BITNET.

Application forms and further information on terms and conditions of service, including the Professional Fee Scheme, may be obtained from:

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

**The Director  
North America Office  
National University of Singapore  
55 East 59th Street  
New York, N.Y. 10022, U.S.A.  
Tel: (212) 751-0331**

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

## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR** expert in molecular and cellular biology. Applicant should have independent program and cooperate with colleagues within and outside the department. Send curriculum vitae to: **Dr. Dale E. Bockman, Department of Cellular Biology and Anatomy, Medical College of Georgia, August, GA 30912-2000. An Equal Opportunity/Affirmative Action Institution.**

### ASSISTANT PROFESSOR ECOSYSTEM ECOLOGY

The Division of Biology at Kansas State University (KSU) has a tenure-track position available at the assistant professor level effective August 1992. Applications are invited from terrestrial ecosystem ecologists with postdoctoral experience. The division has a strong program in ecological research with excellent facilities available, including the 3487-hectare Konza Prairie Research Natural Area, a member of the Long-Term Ecological Research Network. The successful candidate will be expected to establish a vigorous and creative scholarly program complementing the Konza Prairie research program and to participate in our undergraduate and graduate instruction. Candidates should apply by 4 February 1992 by submitting curriculum vitae, a brief description of future research plans, and having three letters of reference sent to:

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

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

### PLANT SCIENTISTS

The Division of Biological Sciences at The University of Montana invites applications for two tenure-track positions at the **ASSISTANT PROFESSOR** level to start in August 1992. For both positions, productive research, aggressive pursuit of extramural support and supervision of M.S. and Ph.D. students is expected. Ph.D. required, postdoctoral experience preferred, teaching experience desirable. **PLANT PHYSIOLOGIST/DEVELOPMENTAL BIOLOGIST:** The successful candidate will be familiar with molecular techniques. Teaching responsibilities include undergraduate courses in plant physiology and introductory plant sciences and a graduate course in area of specialty. **PLANT ECOLOGIST:** Teaching responsibilities include undergraduate courses in ecology and plant science and a graduate course in area of specialty. Send curriculum vitae, statement of professional goals and three letters of reference to: **Physiology/Development Search Committee or Ecology Search Committee, Division of Biological Sciences, University of Montana, Missoula, MT 59812.** Review of candidates begins 24 January 1992 and will continue until positions are filled. *Affirmative Action/Equal Opportunity Employer.*

### BIOLOGY/VERTEBRATE ZOOLOGY BALL STATE UNIVERSITY MUNCIE, INDIANA

Applications are invited for a tenure-track vertebrate zoology position at the **ASSISTANT PROFESSOR** level in the Department of Biology available fall 1992. Candidates are expected to have a commitment to excellence in teaching, to be competent in current approaches used in the study of vertebrates, and to establish an active research program. Responsibilities: Teach courses in zoology (including ornithology), area of specialty, and introductory biology; conduct research in specialty area and promote student involvement in research; and be an active member of the academic community. Examples of research specialties include (but are not limited to): comparative physiology, physiological ecology, population/community ecology or wildlife biology. Minimum qualifications: Earned doctorate in a biological science. Preferred qualifications: Demonstrated teaching ability, and publications and/or evidence of other scholarly activity. Submit curriculum vitae, documentation of scholarly activity, three letters of reference, and transcripts to: **Dr. Thomas McComish, Search and Selection Committee, Department of Biology, Ball State University, Muncie IN 47306.** Review of applicants will begin 29 January 1992 and continue until the position is filled.

*Ball State University is an Equal Opportunity, Affirmative Action Employer and is strongly and actively committed to diversity within its community.*

## POSITIONS OPEN

### 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 2 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 an individual using modern biophysical techniques to study ion channels and/or receptors. The other could involve a person in any area of neuroscience. The department includes 10 primary faculty and will expand over the next several years to 15. Also, more than 15 neuroscientists from other departments play an active role in research and teaching. Interested candidates should submit their curriculum vitae and a brief summary of research plans by 21 February 1992 and should arrange for four letters of reference to be sent to: **Dr. Story Landis, Chairman, Department of Neurosciences, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106-4975. Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.**

**ASSISTANT PROFESSOR** position open for individual with radiobiology background to join multidisciplinary research group with central goal to investigate basic properties of solid tumors and develop collaborative clinical treatment strategies. Applicants should possess experience in tumor microvascular physiology, mathematical modeling of oxygen transport, impact of both on radiotherapeutic response, and be capable of developing externally funded research programs. Send curriculum vitae, statement of research interests and three names of references to: **Dr. Philip Rubin, Chairman of Radiation Oncology, Box 674, University of Rochester Cancer Center, 601 Elmwood Avenue, Rochester, NY 14642.**

### ZOOLOGIST UNIVERSITY OF GUAM (UOG)

The University of Guam is recruiting at the **ASSISTANT/ASSOCIATE PROFESSOR** level for a full-time (9 months) Ph.D. biologist, preferably with postdoctoral experience. Expertise in population and/or evolutionary genetics is preferred. Teaching duties will include undergraduate genetics, animal diversity, comparative anatomy, evolution, and an upper division or graduate course in the area of expertise. An active research program in support of our M.S. degree (biology) is expected. The opening is flexible and can be a 1-, 2-, or 3-year tenure or nontenure-track position. Send curriculum vitae, a statement of teaching and research interests, reprints, and three letters of reference to: **Dr. Ernest A. Matson, Biology Search Committee, c/o Personnel Services Division, UOG Station, Mangilao, Guam, 96923. Telephone: 671-734-9109/9535; FAX: 671-734-3118.** For information about Guam and UOG, contact: **Dr. John Rider at 1-800-821-9233 (FAX: 206-380-1352; E-Mail jrider@cup.portal.com). UOG is an Affirmative Action Employer.**

### MEMORIAL UNIVERSITY OF NEWFOUNDLAND PLANT ECOLOGIST

Applications are invited for a tenure-track position at the **ASSISTANT PROFESSOR** level in the Department of Biology commencing in September 1992. We are seeking a higher plant ecologist with interest in terrestrial or wetland areas within a boreal environment. The successful candidate will be expected to develop a strong research program, seek and secure external funding, supervise graduate students and teach courses at the undergraduate and graduate levels. Candidates must have a Ph.D. and preferably postdoctoral experience. Applications, including curriculum vitae, statement of research directions, the names and addresses of three references, and copies of representative publications should be sent to: **Dr. R. Sheath, Head, Department of Biology, Memorial University of Newfoundland, St. John's, Newfoundland, Canada, A1B 3X9.** Screening of applications will begin on 1 March 1992. *In accordance with Canadian immigration requirements, this advertisement is directed toward Canadian citizens and permanent residents of Canada. Memorial University is committed to Employment Equity.*

## POSITIONS OPEN

### ASSISTANT STAFF POSITION SECTION OF DIGESTIVE DISEASE RESEARCH THE CLEVELAND CLINIC FOUNDATION

Two new positions at the Assistant Staff (Professor) level are available in the Section of Digestive Disease Research, Research Institute, Cleveland Clinic Foundation. Positions are targeted for expansion of basic investigation in inflammatory bowel disease. The candidates must have a Ph.D. or M.D. degree and potential for an independent career in research. Their area of expertise can include molecular biology, cell biology, immunology, biochemistry, etc., but they must be interested in the gastrointestinal tract as a target organ and/or inflammation as a mechanism of disease. Package includes laboratory space, equipment, supplies, and salary for the staff and technician/fellows, and it is negotiable depending on qualifications. Interested individuals should send curriculum vitae and correspondence to:

**Dr. Claudio Fiocchi  
Section of Digestive Disease Research  
Research Institute NN1-26  
The Cleveland Clinic Foundation  
9500 Euclid Avenue, Cleveland, OH 44195**

*The Cleveland Clinic Foundation provides a smoke-free environment and is an Equal Opportunity Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR DEPARTMENT OF ANATOMY DALHOUSIE UNIVERSITY HALIFAX, NOVA SCOTIA

The Department of Anatomy at Dalhousie University is seeking applications for two tenure-track positions to commence 1 July 1992. Candidates must have a Ph.D. and have undertaken postdoctoral training. The ability to teach histology, gross anatomy or neuroanatomy is desirable, and the candidates will be expected to undertake independent research and contribute to graduate programs. Current research activities within the department include neurobiology, functional morphology and cell biology. Excellent facilities and start up funds will be available. Applications should include curriculum vitae, representative reprints, a summary of present research activities, an outline of future research directions and the names of three referees. Application reviews will begin 31 January 1992. Applications are encouraged from all qualified candidates. *Dalhousie University is an Employment Equity/Affirmative Employer. The university encourages applications from qualified women, aboriginal peoples, visible minorities and persons with disabilities.* Please apply to: **Dr. D. A. Hopkins, Professor and Head, Department of Anatomy, Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia, Canada, B3H 4H7. Telephone: 902-494-6850.**

### ASSISTANT/ASSOCIATE/ FULL PROFESSOR IN THE DEPARTMENT OF PHYSIOLOGY/BIPHYSICS

The Department of Physiology and Biophysics invites applications for a full-time, or tenure track position at the assistant, associate or full professor level with preference for candidates who will develop or have already established an independently funded research program in cardiovascular physiology. We are particularly interested in research involving cellular and molecular aspects of the entire cardiovascular system including neuroendocrine and metabolic regulation. The successful candidate will join a department, matrixed between the School of Medicine and the College of Science and Mathematics, with strengths in cellular, molecular and membrane physiology. The appointee will participate, as part of a team effort, in the instruction of cardiovascular and pulmonary physiology to medical students and to graduate/doctoral students. Applicants must have a Ph.D. and/or M.D. and at least 2 years of postdoctoral experience. Starting date is planned for 1 July 1992. All applications received by 1 March 1992 will be considered. If the position is not filled from these, applications will be considered until the position is filled. Send curriculum vitae, list of publications, statement of research interest/plans, funding support as well as the names of three references to: **Dr. Peter K. Lauf, Professor and Chair, Wright State University, Dayton, OH 45435. Wright State is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.**

## RESEARCH OPPORTUNITIES IN BIOTECHNOLOGY

The Department of Biotechnology is seeking applicants for our ongoing program of crop improvement. Pioneer offers competitive salaries, excellent facilities and a highly cooperative research environment. Successful candidates will be expected to interact extensively with ongoing programs in transformation, gene expression, gene isolation or RFLP programs.

**PROJECT LEADER, TISSUE-SPECIFIC EXPRESSION (JOB #1300)** - This position will be part of a group working on tissue-specific expression in maize for application to crop improvement traits. The successful candidate will have extensive experience in tissue-specific expression in plants, especially the isolation and characterization of regulatory regions of plant genes. **EDUCATION/EXPERIENCE:** Ph.D. or equivalent work experience in plant molecular biology or related field plus at least 2-3 years relevant experience are required. **CONTACT PERSON:** AMY LaMOTTE

**PROJECT LEADER, Bt EXPRESSION (JOB #1325)** - This position will be responsible for genetic engineering of genes from *Bacillus thuringiensis* (Bt) for insect resistance in plants. The successful candidate will have extensive experience in modifying Bt genes for plant expression and broad knowledge of work in the field of Bt genes. **EDUCATION/EXPERIENCE:** Ph.D. or equivalent work experience in molecular biology or related field plus at least 2-3 years relevant experience are required. **CONTACT PERSON:** AMY LaMOTTE

**PROJECT LEADER, SPECIALTY CARBOHYDRATES (JOB #1372)** - The successful candidate will initiate an independent research program in the area of starch biosynthesis and/or modification. The ultimate research goal will be to enhance current, and develop new, value added products. Applicants should have experience and a good working knowledge in starch biosynthesis and enzymology. **EDUCATION/EXPERIENCE:** Ph.D. or equivalent in biochemistry or a related field plus 3 or more years of relevant research experience are required. More experienced individuals are encouraged to apply. **CONTACT PERSON:** LISA HALL

**RESEARCH ASSOCIATE, CORN TRANSFORMATION BIOLOGY (JOB #2381)** - The successful candidate for this position will be part of a team of people using the best available method (such as microprojectile bombardment) for the genetic transformation of maize. This individual will use various herbicide or antibiotic selection systems for the production of fertile transgenic maize plants. **EDUCATION/EXPERIENCE:** B.S. degree or equivalent work experience in botany, agronomy or related field and 3 years directly related experience are required; or M.S. degree with no post-graduate laboratory experience. Knowledge or experience with gas chromatography desirable. **CONTACT PERSON:** JO ANN JORGENSEN

**RESEARCH ASSOCIATE, MAIZE TRANSFORMATION (JOB #1389)** - The successful candidate for this position will be involved with the development and evaluation of new technology for the genetic transformation of maize. This individual will also conduct the procedures to verify the production of stable maize transformants. **EDUCATION/EXPERIENCE:** B.S. degree or equivalent work experience in botany, plant biology or related field plus 3 years directly related experience in plant/maize tissue culture, transformation or related area. **CONTACT PERSON:** JO ANN JORGENSEN

Applications received by FEBRUARY 10, 1992 will be assured of consideration. However, applications will be considered until the positions are filled.

Pioneer Hi-Bred International, Inc. is an Equal Opportunity/Affirmative Action employer. Please send resume to the contact person listed above indicating the JOB # on the outside of the envelope and the names, addresses and telephone numbers of three references in your correspondence to:



PIONEER HI-BRED INTERNATIONAL, INC.  
Plant Breeding Division  
Department of Biotechnology Research  
Attn: (Contact Person) JOB # \_\_\_\_\_  
P.O. Box 38  
Johnston, IA 50131-0038

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## Hitchings-Elion Fellowships in the Biomedical and Behavioral Sciences

For U.S. Postdoctoral Scientists who would like 2 years of study in the United Kingdom plus 1 year in the United States

The Hitchings-Elion Fellowships will provide support for U.S. scientists (U.S. citizens or permanent residents) early in their careers who have held their most recent doctoral degree less than ten years. The purpose of the fellowships is to promote scientific collaboration in basic or clinical research between British and U.S. scientists. They will be awarded to support two years of collaborative research at the sponsor's laboratory in the United Kingdom and a third year at a sponsor's laboratory in the U.S.A. The Wellcome Trust will provide the financial support (between £13,661 and £20,868 annually, depending on experience) for the first two years, £5,000 per year for research expenses in the U.K. and round trip economy class air fare for the fellow and up to three dependents. The Wellcome Trust also will provide an equivalent stipend in U.S. dollars for the third year. The Burroughs-Wellcome Fund will provide \$7,500 for research expenses in the U.S.A. There are three application deadlines each year: January 10, May 10, and September 10 beginning in 1992. Applications will be received at the National Institutes of Health where the initial review process will be conducted. Funding decisions will be announced by the Wellcome Trust approximately six months from the application receipt date.

Those interested in obtaining more information on this new program, the scientific review process or an application kit, may contact:

**International Research and Awards Branch  
Fogarty International Center  
National Institutes of Health  
Building 31, Room B2C39  
9000 Rockville Pike  
Bethesda, MD 20892  
Telephone: (301) 496-1653  
Fax: (301) 402-0779**

Those having questions regarding the fellowship stipends or the administration of the scheme in the United Kingdom should contact:

**Hitchings-Elion Fellowships  
The Wellcome Trust  
One Park Square West  
London NW1 4LJ  
United Kingdom  
Telephone: 071-486-4902  
Fax: 071-487-4915**

Amylin Pharmaceuticals, Inc. in San Diego, CA is a development stage pharmaceutical company working on products for diabetes and related metabolic disorders, initially based on amylin, a recently discovered pancreatic beta cell protein hormone (see Cooper et al., *Biochemica et Biophysica Acta* (1989) 1014:247-58).

## RESEARCH SCIENTIST

### Biochemical Pharmacology

The Pharmacology Department has an opening for a Research Scientist with a Ph.D. in pharmacology, biochemistry, cell biology or related area and at least 3 years of postdoctoral experience. Ongoing research includes characterization of peptide receptors and signal transduction mechanisms in isolated cells and tissues. Experience with biochemical/molecular methods for purification and characterization of proteins of pharmacological interest is desirable. The successful candidate will have a publication record demonstrating innovative and independent research.

Amylin Pharmaceuticals, Inc. offers a stimulating and challenging opportunity to participate in a new area of biomedical science, as well as an excellent benefits package which includes equity ownership participation. Please send your curriculum vitae and names and addresses of three references to: **Ms. Audrey McGovern/KB, Human Resources Administrator, Amylin Pharmaceuticals, Inc., 9373 Towne Centre Drive, San Diego, CA 92121 or Fax (619) 552-2212.** Amylin Pharmaceuticals, Inc. is an Equal Opportunity Employer.



## NANOTECHNOLOGY

Reprint

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This 42-page special section, reprinted from the 29 November issue of *SCIENCE*, is your entry to the expanding world of small-scale engineering. It's a field that spans microelectronics, materials science, chemistry, molecular biology, and microscopy. In this special section, ten illustrated articles by research leaders and by science journalists present the full scope of this small world.

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## ANIMAL HEALTH

The NATIONAL RESEARCH COUNCIL is seeking a program officer for its Board on Agriculture's Panel on Animal Health and Veterinary Medicine. Responsibilities include organizing panel activities, and preparation and publication of reports in veterinary medicine, animal health, animal production, food processing technology and safety, regulatory issues, public health, and public policy. Position requires a Ph.D. or equivalent in veterinary medicine or a related field with special training in animal care and health, at least 5 years experience in research relating to animal health and animal food production, and demonstrated experience in science writing. Knowledge of agricultural and health-related research institutions and policy highly desirable. Salary commensurate with experience. Please send letter of application, curriculum vitae, and names of three references in confidence to: NRC/BA (HA 394-MP), 2101 Constitution Avenue, N.W., Washington, DC 20418. EOE



## POSITIONS OPEN

**BIOLOGIST. ASSISTANT PROFESSOR.** 2-year leave replacement beginning fall 1992. Responsibilities include teaching introductory biology, microbiology, immunology, and another upper-division course in the area of molecular biology consistent with the candidate's training. Ph.D. or A.B.D. in microbiology or immunology and dedication to teaching at a selective undergraduate liberal arts college required. *Affirmative Action/Equal Opportunity Employer.* Please send letter of application, curriculum vitae, transcripts, and at least three letters of reference to: **Christine Wilcox, Secretary to the Biology Department Search Committee, Hanover College, Hanover, IN 47243.**

### ASSISTANT PROFESSOR CELL AND DEVELOPMENTAL BIOLOGY

The Division of Biology at Kansas State University (KSU) has a tenure-track position available at the assistant professor level effective August 1992. Applications are invited from investigators with postdoctoral experience in cell and/or developmental biology. The division has a strong research program in molecular, cell and developmental biology, excellent facilities, and a distinguished faculty with several millions of dollars in extramural grants. This position provides an opportunity to interact with members of a new NASA Center in Gravitational Biology established in the Division of Biology at KSU. The successful candidate will be expected to establish a vigorous and creative scholarly research program and to participate in our undergraduate and graduate instruction. Candidates should apply by 4 February 1992 by submitting curriculum vitae, a brief description of future research plans, and having three letters of reference sent to:

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

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

### EUKARYOTIC MOLECULAR BIOLOGY

Applications are being accepted for an **ASSISTANT PROFESSOR** position to begin fall 1992. Although the area of specialization is open, individuals using molecular approaches to investigate signal transduction, differentiation, or development are encouraged to apply. In addition to the development of a vigorous research program, the successful candidate will participate in development of and teaching in undergraduate and graduate degree programs in cellular and molecular biology. Applicants should submit curriculum vitae, a statement of research and teaching interests, and three letters of reference to: **Dr. Alan Harker, Search Committee Chair, Department of Microbiology, 307 LSE, Oklahoma State University (OSU), Stillwater, OK 74078.** Review of applications will begin 15 February 1992 and continue until the position is filled. *OSU is an Affirmative Action/Equal Opportunity Employer.*

### PLANT BIOLOGISTS

The Department of Biological Sciences at Clemson University invites applications for two tenure-track **ASSISTANT PROFESSORSHIPS** beginning August 1992 or later. Exceptional candidates at the associate level may be considered.

We are seeking individuals who have demonstrated outstanding potential as creative scientists in plant development/cell biology, especially in molecular or genetic analysis of plant development and cellular regulation, and in plant ecology/evolutionary biology. Applicants must have postdoctoral experience. The successful candidates will be expected to establish vigorous programs of research and graduate training, teach courses in their specialty at the undergraduate and graduate levels, and provide leadership and expertise in their specialty within a growing department of 30 faculty and for over 60 plant scientists on campus. Applicants should submit curriculum vitae, reprints, statement of research goals, and the names of three references to: **Angela L. Crawford, Developmental Biology Search Committee Coordinator or Ecology/Evolutionary Biology Search Committee Coordinator, Department of Biological Sciences, Clemson University, Clemson, SC 29634-1903.** Deadline: 28 February 1992. *Clemson University, the land-grant institution of South Carolina, is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR, BIOCHEMISTRY.** Tenure-track position starting 20 August 1992 in an ACS-certified program at Saint Joseph College. Responsibilities include teaching biochemistry (a survey course and a course for majors) in our undergraduate women's college as well as advanced topics in biochemistry in our coeducational part-time masters program. Directing student research is also expected. The department is well equipped with instrumentation. Send résumé, description of research interests, transcripts, and three letters of recommendation to: **Chair, Search Committee, Department of Chemistry, Saint Joseph College, West Hartford, CT 06117.** Applications from women and minority candidates are especially encouraged. Equal Opportunity Employer.

### ASSISTANT PROFESSOR BIOCHEMISTRY

Develop an independent research program that emphasizes biochemical aspects of important biological problems. Interested in graduate and undergraduate teaching. Tenure-track, Ph.D. in biochemistry or related fields. Start-up funds and space in new molecular biology building available. Send curriculum vitae, description of research accomplishments and interests, and have three letters of recommendation sent by 15 March 1992, to: **Dr. Richard M. Robson, Department of Biochemistry and Biophysics, 1210 Molecular Biology Building, Iowa State University, Ames, IA 50011.** Affirmative Action/Equal Opportunity Employer. Applications from women and minority candidates are especially encouraged.

Applications are invited for a position at the **ASSISTANT PROFESSOR** level in the Department of Radiation Oncology at McGill University. The appointee would join a small research group working in cancer research with the emphasis on radiation biology. The area of specialization is open to discussion and the position could be of interest to radiobiologists, tumor or cell biologists. The applicant should have a Ph.D and 2 to 3 years of relevant experience.

In accordance with Canadian Immigration requirements this notice is directed initially to Canadian citizens or permanent residents. Please send curriculum vitae and names of three referees to: **Dr. Shirley Lehnert, Radiation Oncology, Montreal General Hospital, 1650 Cedar Avenue, Montreal, Quebec H3G 1A4, Canada.**

### ENVIRONMENTAL MOLECULAR BIOLOGIST

The Department of Biology at Virginia Commonwealth University invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. The successful candidate will be expected to conduct research in an area of environmental molecular biology, develop external funding and direct graduate students at the M.S. level. Teaching responsibilities may include introductory environmental science, molecular biology and an advanced specialty course. Ability to provide a scientific component to the University's Women's Studies Program is desirable. Postdoctoral experience preferred. Virginia Commonwealth University has an enrollment of over 20,000 students. The Biology Department has 26 faculty with diverse research interests. Filling the position is contingent upon approval of funding. Submit curriculum vitae, statement of research interests and names of three references by 15 February 1992 to: **Dr. Sara McCowen, Chairman, Search Committee, Department of Biology, Virginia Commonwealth University, Richmond, VA 23284-2012.** Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

The University of Missouri-Rolla (UMR) invites applications for a tenure-track position for 1992-1993 at the **ASSISTANT/ASSOCIATE PROFESSOR** level. Excellence in research and teaching is expected. A Ph.D. degree is required, and preference is given to candidates that complement campus research thrusts in environmental/polymer/bioanalytical/bioseparations. A biochemist or bio-organic chemist is wanted to teach undergraduate and graduate courses in biochemistry and develop an externally funded research program in area of specialization. Applications should include curriculum vitae, outline of research plan, transcripts and three letters of recommendation. Send to: **Chair, Chemistry Search Committee, University of Missouri-Rolla, Rolla, MO 65401** by 1 February 1992 or until position is filled. UMR is an Equal Opportunity/Affirmative Action Employer.

10 JANUARY 1992



## IMMUNOLOGY POSTDOCTORAL FELLOWSHIPS Memorial Sloan-Kettering Cancer Center

Postdoctoral fellowships, supported by an NCI National Research Service Award, are available immediately within the Immunology Program at **Memorial Sloan-Kettering Cancer Center**. The main research areas of the Faculty cover the **biological, biochemical and molecular** aspects of **immunogenetics, cellular immunology and tumor immunology**.

**Anthony P. Albino** - Oncogenes in pathogenesis of melanoma; in vitro transformation of normal cells

**Bo Dupont** - Genetic, molecular and biological aspects of the MHC in humans

**Ulrich Hammerling** - Immunogenetics of murine and human cell surface antigens; special emphasis on T cell activation

**Alan Houghton** - Differentiation and transformation-related antigens of human cancer

**Janet Lee** - Analysis of structure, function and regulation of human MHC genes

**Kenneth Lloyd** - Biochemical analysis of glycoproteins and glycolipids of human tumor cells

**Janko Nikolic-Zugic** - Molecular and cellular aspects of T-cell development and intrathymic selection

**Herbert Oettgen** - Humoral and cellular immune responses to human cancer and development of biological approaches to cancer therapy

**Lloyd Old** - Cell surface antigens of mouse and human cancers and development of immunological approaches to the therapy of human cancer

**Richard O'Reilly** - Biology of allogeneic bone marrow transplantation in humans and primates; cellular interactions in engraftment, graft-host tolerance and effective immune reconstitution

**Wolfgang Rettig** - Immunogenetics of differentiation and malignant transformation in human tumors

**Bijan Safai** - Studies of epidermal keratinocytes and Langerhans cells and lymphocyte-epidermal cell interaction

**Osias Stutman** - Development and maintenance of functional T cells in mice; role of T and non-T cells in tumor-host interactions

**Soo Young Yang** - Gene organization and regulation of gene expression in human class I MHC region

Curriculum vitae, statement of research experience and future goals, and names of three references should be sent to: **Kenneth O. Lloyd, Ph.D., Chairman, Immunology Program, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.** Only U.S. citizens and permanent residents with M.D. or Ph.D. degrees are eligible for consideration.

MSKCC is committed to equal opportunity through affirmative action and therefore, members of minority groups are encouraged to apply.

## SENIOR SCIENTIST

### The next major discovery in surgical adhesion research could be yours.

Ethicon, Inc., a Johnson & Johnson company long recognized as a world leader in the development and manufacture of innovative surgical products, continues to expand the scope of its scientific research. We have recently established a multi-disciplinary team to explore products which will prevent post-surgical adhesions. An opportunity has been created on this team for a PhD Scientist with 3-5 years' post-doctoral research experience in the pharmaceutical industry.

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## POSITIONS OPEN

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You must have creative laboratory skills in analytical chemistry and be able to work collaboratively with purification chemists to recover proteins from recombinant and native sources.

Qualifications include a Ph.D. in biochemistry, protein chemistry or analytical chemistry with skills in HPLC, electrophoresis and other traditional characterization techniques. ELISA, immunoassays and a working collaborative knowledge of mass spectrometry and NMR desirable. You must be able to assume the leadership role in developing new methods as needs of emerging projects become apparent and in developing specifications for protein materials as part of a complete process and product picture.

Please send your résumé to: **Monsanto Company, BB5BBD, 700 Chesterfield Village Parkway, St. Louis, MO 63198.** *Equal Opportunity Employer, M/F/H/V.*

**Monsanto**

**ENVIRONMENTAL STUDIES: ASSISTANT PROFESSOR**, tenure track, faculty position starting August 1992. Ph.D. in physics, energy resources, engineering, or other physical science/interdisciplinary program. Specialty: renewable energy. Send letter, curriculum vitae, transcripts, and three references postmarked or FAXed by 17 January 1992 to: **Dr. Gary Klee, Chair, Geography and Environmental Studies Search Committee, Department of Geography and Environmental Studies, San Jose State University (SJSU), San Jose, CA 95192-0116. FAX: 408-924-5303. Telephone: 408-924-5455.** *SJSU is an Equal Opportunity/Affirmative Action Employer.*

### CYTOGENETICS RESEARCH ASSOCIATE

Position available in a research program involving the mechanisms and causes of aneuploidy induction in mammalian germ cells. M.S. or Ph.D. degree in cell biology or molecular cytogenetics required. A minimum of 3 years of relevant research experience is desired. Salary is \$18,000 to \$26,000 (M.S.) or \$24,000 to \$32,000 (Ph.D.). Send curriculum vitae and references to: **John B. Mailhes, Ph.D., Department of Obstetrics and Gynecology, Louisiana State University Medical Center, 1501 Kings Highway, Shreveport, LA 71130.** *An Affirmative Action/Equal Opportunity Employer.*

### DREXEL FELLOWSHIPS IN BIOMEDICAL ENGINEERING AND SCIENCE

Drexel Fellowships in Biomedical Engineering and Science are supported by the Calhoun Endowment. Students can specialize in the following areas: artificial organs, bioinstrumentation, biomedical imaging and signal processing, biomedical science, biomaterials, biomedical systems and control, cardiovascular dynamics, diagnostic ultrasound, sensors and electrodes, biomechanics and rehabilitation. Each fellowship includes a minimum stipend of \$10,000 for a 12-month appointment beginning fall 1992. With a waiver of all tuition and fees this award is worth approximately \$22,000. Deadline for application is 28 February 1992. For application write: **Dr. John M. Reid, Acting Director, Biomedical Engineering and Science Institute, Drexel University, Philadelphia, PA 19104.**

**ECOLOGIST/ZOOLOGIST.** One-year replacement teaching position available for fall of 1992. Teaching responsibilities include introductory biology for majors, ecology and participation in the zoology laboratory. Ph.D., teaching experience required, A.B.D. considered. Submit curriculum vitae, statement of teaching philosophy and three letters of reference by 15 February 1992 to: **Dr. Bill Sype, Chairperson, Biology Department, Albertson College of Idaho, Caldwell, ID 83605.** Formerly The College of Idaho. *Women and minorities are encouraged to apply.*

## POSITIONS OPEN

### VERTEBRATE ANATOMIST/EM

Ph.D. required. Broadly trained biologist sought for a tenure-track position as **ASSISTANT PROFESSOR OF BIOLOGY**, beginning 24 August 1992. Must have commitment to undergraduate teaching, student advising, development of a research program in specialty area. The department has a strong tradition of undergraduate involvement in research. Teaching, 12 credit per semester, includes: one-semester TEM/SEM course; additional courses in general zoology, human anatomy or physiology. Opportunities for course in specialization. Teaching and research experience, publications, successful grant history all desirable; TEM experience necessary. Salary commensurate with qualifications. Send cover letter, résumé, three letters of recommendation, undergraduate and graduate transcripts to: **V. A. Thiesfeld, Chair, Department of Biology, University of Wisconsin-Stevens Point (UWSP), Stevens Point, WI 54481.** Applications must be received by 6 March 1992. *The UWSP is an Affirmative Action/Equal Opportunity Employer.* A list of all nominees and applicants, without differentiation, may be released following closing date.

**PLANT PHYSIOLOGICAL ECOLOGIST.** Tenure-track, **ASSISTANT/ASSOCIATE PROFESSORSHIP** beginning August 1992. Ph.D. plus teaching experience required. Strong preference for experience in high altitude physiological-ecological research. The applicant will be expected to teach courses in plant ecology, plant physiology, general botany, general ecology, biology for the nonmajor and to work with students on undergraduate research projects. Salary and rank commensurate with experience. Send an application letter, curriculum vitae, transcripts and three letters of reference to: **Botanical Search Committee, Department of the Sciences, Western State College, Gunnison, CO 81231.** Deadline for receipt of all materials is 10 February 1992. *An Equal Opportunity/Affirmative Action Employer.*

### ENVIRONMENTAL SCIENTIST

The University of Northern Iowa invites nominations and applications for a senior level environmental scientist to serve as director of emerging programs in the environmental sciences. The position requires a Ph.D. in a scientific discipline with strong environmental emphasis. It will be one-half time teaching/research and one-half time administration. The environmental science position will be located in The College of Natural Sciences which encompasses the Departments of Biology, Chemistry, Computer Science, Earth Science, Industrial Technology, Mathematics, and Physics. The individual selected will report to the Dean of the College of Natural Sciences. We are seeking a person who will provide the leadership and perspective necessary to direct and expand a teaching/research program in the environmental sciences. This position will serve as focal point for the coordination of multidisciplinary efforts, including environmental research, environmental planning, environmental education, natural history interpretation and Master of Public Policy. The possibilities are many for cooperative ventures in developing a strong program in the environmental sciences.

The scientific discipline is open. The person selected will have demonstrated success in extramurally funded research, will have had considerable teaching experience at the college/university level, a successful record of interactions with government and private agencies, and, preferably, some administrative experience. The individual will be experienced in these professional activities at a level commensurate with a tenured professor appointment in one of the academic departments of the college.

Salary is competitive and commensurate with experience and qualifications. Applicants should submit curriculum vitae, statement of interests and goals in teaching and research, relevant reprints, and the names, addresses, and telephone numbers of four references. Screening of applications will begin 24 February 1992, and will continue until the position is filled. Send application and supporting materials to:

**Search Committee for Director of  
Environmental Sciences Programs  
College of Natural Sciences  
University of Northern Iowa  
Cedar Falls, IA 50614-0181  
FAX: 319-273-2893**

*The University of Northern Iowa is an Equal Opportunity Educator and Employer with a comprehensive plan for Affirmative Action. Women, minority persons, Vietnam era veterans and disabled persons are encouraged to apply.*

## POSITIONS OPEN

**ECOLOGY/ZOOLOGY.** Eastern Montana College. Position begins August 1992. Requirements: Ph.D. in appropriate area with necessary expertise in ecology and zoology and a commitment to undergraduate science education. Responsibilities: Teaching advanced and introductory ecology and zoology and introductory biology; and establishment of a research program in ecology involving undergraduates. For additional information contact: **Dr. Michael Dennis, telephone: 406-657-2016.** Letter of application (including a statement of teaching philosophy and research interests), curriculum vitae, copies of transcripts and three letters of recommendation must be submitted to: **Chair, Search #92-8 (Ecology/Zoology), Human Resources/EEO-AA Office, Eastern Montana College, 1500 North 30th Street, Billings, MT 59101-0298. Telephone: 406-657-2278.** Preference review if received by 14 February 1992. Position open until filled. *Equal Opportunity/Affirmative Action Employer.*

**COOPERATIVE EXTENSION (CE) NATURAL RESOURCE SPECIALIST** (North Coast). Department of Forestry and Resource Management, University of California, Berkeley.

Assistant or Associate CE Specialist. Ph.D. required with experience in applied ecology (forest, range or wildlife) at landscape or ecosystem scale. Member of six-person team of specialists in oak woodland conservation program. Responsible for research focused on oak woodland conservation, and extending information to diverse audiences. Primary regional assignment in North Coast of California. Housed at Hopland Field Station in southern Mendocino County. Complete position vacancy announcement and application instructions available from: **Chair, Natural Resource Specialist Search Committee, Department of Forestry and Resource Management, 160 Mulford Hall, University of California, Berkeley, CA 94720. Telephone: 510-643-5428.** Closing date 15 March 1992. *Women and minority candidates encouraged to apply.*

### UNIVERSITY OF WISCONSIN-PARKSIDE TWO ASSISTANT PROFESSORS BIOLOGICAL SCIENCES

The University of Wisconsin-Parkside Biological Sciences Department plans to add two tenure-track faculty positions for September 1992. These positions offer opportunities for individuals seeking a balance of research and teaching.

Applicants for these positions must have a Ph.D. and candidates with postdoctoral experience are preferred. The successful candidates will (1) have training and enthusiasm to organize and implement sophomore/junior level courses in some combination of the following fields: invertebrate and vertebrate zoology, ecology, and evolution. At least one of the appointees will teach a course in quantitative biology; (2) establish an externally funded research program involving students and employing modern biological techniques. Appropriate specialty areas include, but are not limited to, immunobiology, neurobiology, developmental biology, parasitology and physiological, molecular or population ecology; (3) participate in some aspects of the master's degree program.

The University of Wisconsin-Parkside, located in the Chicago-Milwaukee urban corridor, is a predominantly undergraduate institution. The 11-person biology department offers an excellent undergraduate program with options/concentration in general biology, pre-health sciences, and molecular biology and an M.S. program in applied molecular biology with emphasis on biotechnology. The department is well equipped for work at cell and molecular level. Applications, including a letter of interest, curriculum vitae, a list of graduate and undergraduate course work, a brief summary of teaching and research goals, representative publications and three letters of reference should be sent to the address given below by 10 February 1992. *The Search Committee is interested in hearing from qualified women and members of minority groups.* **Dr. S. P. Datta, Chairperson, Biological Sciences Department, University of Wisconsin-Parkside, P.O. Box 2000, Kenosha, WI 53141. Telephone: 414-595-2469/595-2327; FAX: 595-2630.** *The University of Wisconsin System is required to release, within 2 days of a request after the deadline for receipt of nominations and applications, a combined list of all nominees and applicants without differentiation. The University of Wisconsin-Parkside is an Equal Opportunity/Affirmative Action Employer.*

# Postdoctoral Opportunities.

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

## **Transgenic Models of Oncogenesis** **Glenn Merlino, PhD**

The role of peptide growth and differentiation factors in normal and disease processes is being studied using transgenic mice as model systems. Emphasis is being placed on the molecular mechanisms associated with transgene-induced tumorigenesis. Detailed analysis of liver and mammary cancer in transforming growth factor alpha (TGF $\alpha$ ) transgenic mice is currently underway. Candidates should have a strong background in molecular biology techniques, but extensive training in transgenic technology is not required. Applicants must be US citizens or permanent residents. Laboratory of Molecular Biology (OE-5), NCI, Building 36, Room 1D28, 9000 Rockville Pike, Bethesda, MD 20892.

## **Transfusion Science** **P. Ann Hoppe**

Laboratory research focuses on transfusion transmitted diseases caused by retroviruses and hepatitis viruses. In addition, the fellow will be involved in scientific and regulatory programs for the evaluation of the preparation, preservation, and safety of blood and blood products. Division of Transfusion Science (OE-5), CBER/FDA, MO50, Building 29, Room 104, 8800 Rockville Pike, Bethesda, MD 20892.

## **Molecular Biology** **Joyce Goldstein, PhD**

The genetic polymorphisms of cytochrome P450 in humans are being studied using molecular biology techniques. Studies will involve use of cDNA and gene libraries, sequencing, hybridization studies, and PCR analysis. Previous experience with these techniques is highly desirable. Laboratory of Biochemical Risk Analysis (OE-5), Division of Biometry and Risk Assessment, NIEHS, Mail Drop B3-02, PO Box 12233, Research Triangle Park, NC 22709.

## **Molecular Hematology** **John S. Finlayson, PhD**

The physical chemistry of plasma proteins, clotting factors and thrombolytics (including recombinant products), monoclonal antibodies, and cellular components of blood are being studied using molecular biology techniques. The overall objective is to better understand these constituents and their properties to improve techniques for their detection and measurement. Division of Hematology (OE-5), CBER/FDA, MO45, Building 29, Room 104, 8800 Rockville Pike, Bethesda, MD 20892.

## **Molecular and Cell Biology of Peptide Growth Factors** **Matthew M. Rechler, MD**

Molecular biological and biochemical approaches are used to understand the role of insulin-like growth factor I and II in mitogenesis and cell differentiation. Present interest focuses on the IGF-binding proteins as modulators of IGF action, using cell culture, and animal and disease model systems. Transcriptional regulation of IGFBP expression, and the mechanisms of IGFBP action are under study. Growth and Development Section (OE-5), Molecular, Cellular and Nutritional Endocrinology Branch, NIDDK, Building 10, Room 8D08, 9000 Rockville Pike, Bethesda, MD 20892.

## **Molecular Neurobiology of Alzheimer's Disease** **Gerald A. Higgins, PhD**

Current studies are focused on alternative splicing of the amyloid precursor protein gene and its contribution to amyloid neuropathology. Transgenic animal models of Alzheimer's disease are being developed and characterized in a collaborative effort. Regulation of neurotrophin gene expression and mechanisms of neuronal cell death are also under investigation. Applicants should have experience in molecular biology or protein chemistry. Laboratory of Biological Chemistry (OE-5), NIA, Gerontology Research Center, Room 1B2, 4940 Eastern Avenue, Baltimore, Maryland 21224.

## **Additional Postdoctoral Fellowship Opportunities**

For an on-line listing of additional postdoctoral openings you may access the NIH EDNET Bulletin Board's POSTDOC conference via modem (13014922221). The settings for modem access are "7,Even,1". When connected to NIH, type in "vt100" at the connect message, "F5E" at initial, and "AJL1" at account. Those interested in receiving a catalog featuring descriptions of NIH research laboratories and other postdoctoral opportunities may contact the Office of Education, Building 10, Room 1C129. Phone: 301-496-2427.

## **To Apply**

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



# National Institutes Of Health

9000 Rockville Pike, Bethesda, MD 20892  
Department of Health & Human Services • Public Health Service  
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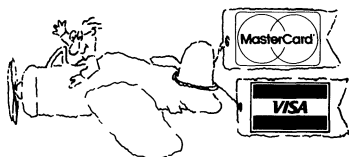
**KAROLINSKA  
INSTITUTE  
POSTDOCTORAL/  
RESEARCH  
ASSOCIATE  
POSITIONS**

**CYTOCHROME P-450:  
MOLECULAR BIOLOGY AND  
GROWTH HORMONE REGULATION**

The Department of Medical Nutrition is a university department within the Karolinska Institute with a staff of some 100 persons (scientists, students, technical, and administrative staff). The main research areas include: steroid hormone receptors (structure, regulation, and function), dioxin receptor (structure and function), chemical hepatocarcinogenesis, molecular mechanism of growth hormone action, cloning of cytochrome P-450 in the central nervous system and kidney. The postdoctoral positions relate to growth hormone mechanism of action and to P-450 in the CNS.

The positions as postdoctors/research associates are initially for two years with possibilities for extension for up to four years. Preference is given to applicants with experience in molecular biology. Adequate laboratory resources will be provided.

**Applications should be sent to Professor Jan-Åke Gustafsson, Dept. of Medical Nutrition, Karolinska Institute, Huddinge University Hospital, Novum, S-141 86 Huddinge, Sweden, together with CV, relevant publications and names of two referees.**



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## POSITIONS OPEN

**UNIVERSITY OF CALIFORNIA  
RIVERSIDE  
DEPARTMENT OF BIOCHEMISTRY  
FACULTY POSITION IN  
PLANT BIOCHEMISTRY**

The Department of Biochemistry is seeking a new faculty member in the area of plant biochemistry. Our campus has a long history of excellence in plant and agricultural research. This position is to be filled at the **ASSISTANT PROFESSOR** (tenure-track) level with joint 9-month appointments in the College of Natural and Agricultural Sciences and the Agricultural Experiment Station to be effective 1 July 1992 with the possibility of summer salary. Requirements for this position include a demonstrated record of productivity in the general area of plant biochemistry. Although all research areas will be considered, some preference will be given to candidates with backgrounds in physical biochemistry and/or molecular biology. Specific research areas include, but are not limited to, the study of structure-function relationships of plant systems; defense mechanisms against diseases, environmental stresses, and pests; gene expression; plant metabolism; enzymology; protein engineering; or plant developmental biology. Both the strength of the existing research record and the potential for developing a strong, innovative research program, and teaching at the undergraduate and graduate level to fit within the existing structure of plant research on this campus will be considered. Candidates should send a summary of research interests and detailed curriculum vitae, and arrange to have at least three letters of recommendation sent to: **Plant Biochemistry Search Committee, Department of Biochemistry, University of California, Riverside, CA 92521-0129**. Deadline for applications is 15 February 1992. *The University of California is an Equal Opportunity/Affirmative Action Employer; all qualified candidates, including minorities and women, are encouraged to apply.*

**MEDICAL RESEARCH ASSISTANT.** Northwestern research center is looking for a medical research assistant. Must possess B.S. in biological sciences or chemistry and 3 years of experience in job offered. Must perform laboratory analysis including reagent preparation, data entry and analysis, and operate and calibrate a variety of laboratory equipment (balances, centrifuges, pH meters, hand and automated micropipettes, radioisotope counting equipment, etc.). Must utilize radioimmunoassays (steroid and protein), Sephadex column chromatography, tissue isolation and cell culture techniques for bioassays. Must handle nonhuman primates in a laboratory setting. Will be exposed to various organic solvents and other hazardous chemicals in rigorously controlled conditions. Will be exposed to biohazards (animals and their tissue as well as human biological samples) and work with low activity radioisotopes ( $^3\text{H}$ ,  $^{125}\text{I}$ ). Forty hours a week, plus overtime as needed. Salary: \$20,080 per year. Mail résumé by 11 February 1992 to: **Employment Division, Attention: Job Order Number 5550245, 875 Union Street N.E., Room 201, Salem, OR 97311.**

**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, 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 Employment Opportunity/Affirmative Action, M/F/V.*

## POSITIONS OPEN

Carnegie Mellon. **THE DEPARTMENTS OF ENGINEERING AND PUBLIC POLICY AND OF CHEMICAL ENGINEERING** seek candidates at any academic rank for a 50:50 joint appointment. Require earned Ph.D. in chemical engineering or closely related field, strong technical skills, and at minimum strong interest in policy research and analysis. Especially interested in environmental transport and chemistry; hazardous materials; global change; pollution control and associated technologies; and issues in biochemical technology and public policy. Send résumé to: **Professor M. Granger Morgan, Department of Engineering and Public Policy, Carnegie Mellon, Pittsburgh, PA 15213.**

**LECTURERS IN PHYSIOLOGY, MICROBIOLOGY AND HISTOLOGY. LABORATORY INSTRUCTOR IN HISTOLOGY/NEUROANATOMY/GROSS ANATOMY.** Widely approved, successful, international Medical School seeks qualified teaching staff. Both senior and junior posts are available. Recently retired lecturers will be considered. Ability to cross-teach in other areas is a plus. Send curriculum vitae (preferably by FAX) to:

**Faculty Recruitment Office  
St. George's University  
School of Medicine  
Grenada, West Indies  
FAX: 809-444-4823**

The University of California, Los Angeles (UCLA), invites applications for a **LABORATORY SAFETY OFFICER (LSO)** position with the School of Medicine and the Division of Life Sciences.

The position involves coordinating and conducting laboratory safety inspections for the safe use and storage of chemicals and biological agents. Additional duties include developing and conducting training programs covering a wide range of topics to a diverse audience. The LSO must also develop, maintain and disseminate information and technical guidelines relating to chemical and biological safety and waste management procedures to faculty, staff, researchers, and graduate students. They also assure departmental compliance with federal, state and local regulations and university policies pertaining to health and safety. Must be able to manage a crisis situation, such as a chemical spill, effectively.

Candidates must possess a master's degree in the physical or natural sciences and have experience in laboratory techniques and procedures. Experience with laboratory health and safety issues strongly preferred including Cal/OSHA regulations and CDC and NIH guidelines. Demonstrated experience in effective writing and oral presentations.

Please submit résumé to: **Victor H. Kennedy, UCLA Office of Environment, Health and Safety, 601 Westwood Plaza, Los Angeles, CA 90024-1364.**

**VISITING EMINENT SCHOLAR  
BIOLOGY/SCIENCE EDUCATION**

Jacksonville State University invites applications for a visiting appointment for 1991-1992 as eminent scholar in the Department of Biology. Appointee will bring to the department a demonstrated interest and ability in both biology and science education. Duties are negotiable; however, the appointee will be expected to teach one or more undergraduate and/or graduate courses and conduct research in areas of the individual's interest; to assist faculty in the development of laboratories that emphasize science as a process in introductory biology (and/or other courses) and depending on qualifications, participate in the development of off-campus environmental activities at Little River Canyon (a proposed National Preserve). Appointee must hold the Ph.D. and current rank of associate professor or professor, enjoy a national reputation for scholarly productivity and have demonstrated excellence in teaching. Terms of the appointment, including length (12 months or less), salary (competitive, depending on qualifications, experience and research record) and other support (travel, etc.), are negotiable. Jacksonville State University is a primarily undergraduate campus, enrolling 8000 students. Located in northeastern Alabama, it is convenient to both Birmingham and Atlanta. Nominations/applications accepted until position filled; initial review will begin 17 February 1992. Send letter of application, résumé, and the telephone numbers and addresses of three references to: **Personnel Services, Jacksonville State University, Jacksonville, AL 36265.** *An Equal Opportunity/Affirmative Action Employer.*

## Epidemiological Studies

### Health Effects of Agent Orange Adverse Effects of Childhood Vaccines

The INSTITUTE OF MEDICINE is seeking an associate study director and a program officer for a project on the health effects of Agent Orange on Vietnam veterans, and a study director for a project on the possible adverse effects of childhood vaccines.

#### ASSOCIATE STUDY DIRECTOR

Responsibilities include assisting in planning study strategy; assembling, reviewing, and analyzing epidemiological, medical, and other scientific literature; coordinating the efforts of others in reviewing information; writing and editing background material; and assisting the study director with committee management and other tasks. Requires M.D. or Ph.D. or equivalent preferably related to epidemiology, at least 4 years experience carrying out and reviewing epidemiological or related scientific studies—preferably in occupational or environmental health—ability to understand, critique, and summarize results of scientific studies, excellent writing and analytical skills, and ability to work with scientific experts from a number of fields.

#### PROGRAM OFFICER

Responsibilities include assembling and organizing epidemiological, medical, and other scientific literature; assisting other in reviewing information; assisting study director in organizing public hearings and meetings and summarizing results; preparing statistical and graphical analyses; helping prepare reports; and other tasks. Requires M.A. or equivalent in a quantitative field, and at least 5 years experience with literature searching, database development, statistical analyses, committee management, and editorial work.

#### STUDY DIRECTOR

Responsibilities include assisting in the planning of a study strategy; assembling, reviewing, and analyzing epidemiological, medical, and other scientific literature; coordinating efforts in reviewing information; writing and editing background material; and assisting study director with committee management and other tasks. Requires M.D. or Ph.D. or equivalent preferably related to epidemiology, at least 4 years experience carrying out and reviewing epidemiological or related scientific studies—preferably in pediatrics, immunology, or neurology—ability to understand, critique, and summarize results of scientific studies, excellent writing and analytical skills, and ability to work with scientific experts.

Please send resume in confidence to:  
NRC/IOM, MS/  
FO-3026, 2101  
Constitution  
Ave., N.W.,  
Washington,  
D.C. 20418.  
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Research Leadership

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*The recent opening of the new Glaxo Inc. Girolami Research Institute, located at our headquarters site in Research Triangle Park, NC, represents our continued commitment to the discovery of medicines for the treatment of serious diseases of mankind. We will strengthen our biological research leadership with the appointment of three Scientists. These Scientists will play a crucial role in the direction of established research groups and be instrumental in the augmentation of our research base through additional recruitment.*

## DIRECTOR OF CELLULAR SCIENCES

*This is a senior and highly influential position for an established researcher and scientific leader. This individual will strengthen and enrich the scientific mix of our research management team and provide leadership and strategic research direction to our therapeutic area of metabolic diseases, particularly for the important diabetes programs.*

*Selected candidate will direct existing world class research groups (in diabetes, tumor cell biology, signal transduction, ion channel biology, gene control, and macrophage and bone cell biology) and play a key role in the expansion and diversification of each of these departments and our new biological research division. Individual must be an established scientific leader in one of the growth areas of diabetes research.*

*Please refer to Job # 9129B148-SC on all resumes.*

## SECTION HEAD Signal Transduction & Cell Cycle Regulation

*We are directing considerable biological and chemical effort toward the study of signal transduction, oncogenes and cell cycle control in cancer cells. To assist in our search for potential drug targets, we seek a Molecular or Cell Biologist to lead an established team in the Department of Cell Biology.*

*This position will provide opportunities for leadership and innovation with the support of an established team of biologists with relevant experience. We will provide you with the interdisciplinary support required to turn ideas into action and action into successful drug discovery and career advancement.*

*The successful candidate will have a Ph.D. or M.D. with a minimum of 5 years relevant post-doctoral experience and 2 years leadership of a research team. Significant research contribution and experience in the regulation of cyclins and cell-cycle dependent kinases is required.*

*Please refer to Job # 9125B116-SC on all resumes.*

## SECTION HEAD Control of Gene Expression

*We will expand our Department of Molecular Biology by the creation of a new section dedicated to understanding the control of gene expression at the DNA level. Although Glaxo has several research teams committed to other aspects of gene control, this section head will lead a new team of specialists in transcriptional control.*

*The successful candidate will have a Ph.D. or M.D. with a minimum of 5 years relevant post-doctoral experience and 2 years leadership of a research team. This is a challenging position for an individual with a record of scientific achievement evidenced by publications of consistent high quality.*

*Please refer to Job # 9126B110-SC on all resumes.*

*Our Research Triangle Park, NC location (near Raleigh, Durham and Chapel Hill) offers a lot more for people who seek a well-rounded lifestyle. This world-famous scientific, industrial and academic community affords access to respected universities, beautiful residential areas, excellent health care and abundant cultural and recreational facilities. Join Glaxo and enjoy excellent salaries, flexible benefits, an on-site recreation and fitness center, a spirit of enthusiasm and teamwork and outstanding opportunities for career satisfaction.*

*Send your resume, INDICATING THE CORRESPONDING JOB # and salary history, to: Human Resources Department, Glaxo Inc., P.O. Box 13398, Research Triangle Park, NC 27709. (No Phone Calls or Agency Referrals, Please.) An Equal Opportunity Employer M/F/H/V.*

# Glaxo Inc.

**CHAIR OF BIOLOGY DEPARTMENT  
WESTERN WASHINGTON UNIVERSITY**

The Biology Department of Western Washington University invites applications and nominations for the position of department Chair. Appointment will be at senior level with tenure. Salary is negotiable. We are seeking a person with a Ph.D. in a biological science with accomplishments in teaching and research to provide vision and leadership. The Department is committed to excellence in undergraduate education, with research playing an important role in the educational process. The 16-member faculty offers a solid B.S. degree core curriculum and has programs in marine biology, terrestrial ecology, and cell and molecular biology. We currently have 400 biology undergraduate majors, and a Master's program with 17 students. Supporting resources include the Shannon Point Marine Center, several study sites which represent the rich diversity of Northwest Washington habitats, and a University Instrument Center. A new Biology Building is under design with occupancy scheduled for 1995.

Applicants should submit a curriculum vitae, a statement of teaching and administrative expertise, and four letters of reference to:

**Professor James Talbot, Chair  
Department of Geology  
Western Washington University  
Bellingham, WA 98225-9080**

The expected starting date will be September 1992 or earlier.

The committee will begin reviewing applications on February 15 and the search will remain open until the position is filled.

*WWU is committed to enhancing the diversity of the faculty. Women and minorities and persons with a disability are encouraged to apply. WWU is an Affirmative Action/Equal Opportunity Employer.*

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

## **Senior Scientists**

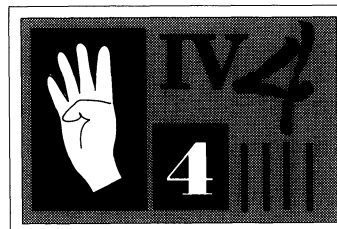
NeXagen is seeking scientists with Ph.Ds. or M.Ds., having at least two years of postdoctoral experience. Very experienced scientists are encouraged to apply. Candidates should have a documented ability to conduct independent research and have a strong background in several of the following areas: cloning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

## **Research Associates**

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

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

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## SCIENTIST

### DRUG METABOLISM AND PHARMACOKINETICS

SmithKline Beecham Pharmaceuticals, a world leader in pharmaceutical research is seeking a Scientist to join the Biotransformation and Analytical Methods group.

The Scientist will determine the metabolic fate of candidate compounds using radiolabeled and stable isotope labeled substrates, as well as isolate and structurally characterize the metabolites of drug candidates using mass spectrometry, nuclear magnetic resonance spectrometry, and chemical derivatization techniques. The Scientist will be expected to establish a basic research program in an area of personal scientific expertise which will enhance the study of biotransformation pathways and mechanisms within the group. Since the Scientist will assume a high degree of both project and discovery related responsibilities, the position will draw heavily upon individual scientific initiative, independence and innovation. Excellent interpersonal and communication skills are essential. Publications and presentation of research findings are strongly encouraged.

Candidates should possess a Ph.D. in Analytical Chemistry, Biochemistry, Medicinal Chemistry, or a related discipline with postdoctoral experience highly desirable. The essential elements are the following: relevant experience in analytical methodologies to quantify, isolate and characterize metabolites from biological milieu and knowledge of biochemical pathways of biotransformation.

Our research facility offers state-of-the-art instrumentation in mass spectrometry (Sciex API III, Finnigan TSQ70, VG707EHF), as well as gas and liquid chromatography with various detection methods. We are located in suburban Philadelphia, Valley Forge, PA. We offer a competitive compensation/benefits/relocation package and a stimulating team environment. For confidential consideration, send your resume to: Helene McConnell, M032, Employment Administrator, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.



**SmithKline Beecham**  
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## VICE PRESIDENT/RESEARCH AND DEVELOPMENT

Alcide Corporation, a publicly-held company based in Norwalk, Connecticut, develops and markets unique products based on its proprietary biocidal chemistry. Alcide has a profitable international animal health business. In addition, Alcide technology is currently under development for a variety of applications in human pharmaceuticals, animal health and food processing. Oral care applications of our technology are being developed as part of a strategic alliance with a Fortune 50 company.

We are seeking an experienced Vice President of Research and Development to manage our diverse R&D programs. A successful candidate will have a Ph.D. in chemistry, biochemistry or a related life science, at least 5-years' experience in pharmaceutical or animal health R&D and be able to function effectively in a small company setting. A knowledge of chlorine chemistry is helpful.

A competitive compensation package is being offered, including an excellent opportunity to participate in the success of the company through stock options. Please send a curriculum vitae, list of four references and a letter describing professional objectives and salary history to **Joseph A. Sasenick, President and Chief Operating Officer, Alcide Corporation, One Willard Road, Norwalk, CT 06851**. All inquiries will be kept in confidence.

**Alcide** CORPORATION

## RESEARCH ASSISTANT

Baxter Diagnostics Inc., a leading supplier of diagnostic products and instrumentation for clinical laboratories has an opportunity available for a Research Assistant in our **Miami based** Paramax Reagent Research & Development Department.

The successful applicant will join an interdisciplinary research team that is developing new types of diagnostic immunoassays. The ideal candidate will have a B.S. in Chemistry or a B.S. in a Life Science, with a strong chemical background and 0-4 years biochemical laboratory research experience. Experience in the following areas of protein biochemistry is highly desirable: ultraviolet/visible spectroscopy, electrophoresis, column chromatography, immunochemical methods and computer data analysis.

We are seeking a highly motivated individual who is capable of learning new skills quickly. The successful applicant must possess excellent interpersonal, verbal and written communication skills. We offer an excellent scientific environment, supported by a highly competitive salary and complete benefits package. For confidential consideration, please send your resume to: **Baxter Diagnostics Inc., Paramax Chemistry, M.S.#606, Recruitment Coordinator, P.O. Box 520672, Miami, FL 33152**. Equal Opportunity Employer. We Conduct Pre-Employment Drug Screening.

**Baxter Diagnostics Inc.**

**Baxter**

## NIH PREDOCTORAL FELLOWSHIPS IN BIOTECHNOLOGY

**LEHIGH UNIVERSITY**

*Center for*

*Molecular Bioscience & Biotechnology*

Interested students are invited to apply for predoctoral fellowships in biotechnology. This is an interdisciplinary program involving the Departments of Chemical Engineering, Chemistry, Molecular Biology, and Psychology leading to the Ph.D. degree. The positions carry full tuition and competitive 12-month stipends.

Research interests of participating faculty include mammalian proteoglycan and glycoprotein structure and function, recombinant glycoprotein therapeutics, protein/DNA interactions and alternate DNA conformations, enzyme immunoassay technology and protein/surface interactions; microbial, mammalian and plant cell kinetics, bioreactor instrumentation and control, bioseparations; virology and vaccine technology, regulation of gene expression in plant and animal cells, microbial genetics of *Sulfolobus*, hormone receptors and reproductive cell biology; mechanism of action of steroids in the central nervous system, biochemistry/pharmacology of neurotrauma, neuroendocrine regulation of behavior, energy utilization and fertility.

Interested individuals should contact **Dr. A.E. Humphrey, Program Director, CMBB/LU, 111 Research Drive, Bethlehem, PA 18015, 215-758-5426**. Application deadline 3/1/92.

## POSITIONS OPEN



### FACULTY POSITIONS DEPARTMENT OF BIOCHEMISTRY AND BIOPHYSICS UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE

The Department of Biochemistry and Biophysics at the University of Pennsylvania School of Medicine invites applications from outstanding candidates for full-time senior and junior faculty appointments. The search will focus on individuals with research interests in molecular and cellular biochemistry and biology although exceptionally qualified candidates in any area broadly related to biochemistry and biophysics will be considered.

Candidates should forward their curriculum vitae, a summary of research interests, and arrange for three letters of recommendation to be sent to: **Ms. Ruth Keris, Staff Assistant, Department of Biochemistry and Biophysics, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6059.** The deadline for applications is 15 April 1992. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

Duke University. **FACULTY POSITION IN CELL AND LEUKOCYTE BIOLOGY.** We have an opening, beginning in early 1992, for a junior faculty member (nontenure track) to join our research group. The laboratory, comprising five faculty members with diverse backgrounds in cell biology, molecular biology, biochemistry, immunology, and leukocyte biology, investigates the functions of macrophages and how these are regulated. Interactions between second messengers and gene regulation are emphasized. We seek a highly qualified scientist with interests and skills in second messengers. A background in either cyclic nucleotides, kinases, or ion fluxes would be highly desirable but not necessary. The position offers the opportunity for the successful candidate to join a well-established laboratory, develop and supervise a productive ongoing research program, and develop independent research initiatives. An attractive working environment and salary are offered. Interested individuals should send their curriculum vitae and the names of at least three references to: **Dolph O. Adams, M.D., Ph.D., Director, Laboratory of Cell and Molecular Biology of Leukocytes, Box 3712, Duke University Medical Center, Durham, NC 27710.** *Duke University is an Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS IN BIOCHEMISTRY AND NUTRITIONAL SCIENCES

Applications are invited for separate tenure-track positions in the Department of Biochemistry and the Department of Nutritional Sciences at Oklahoma State University. Preference will be given to applicants at the level of **ASSISTANT PROFESSOR** who are using modern molecular biological approaches to investigate important problems in biochemistry and nutrition. Individuals with research interest in areas of regulation of gene expression or protein structure-function using recombinant DNA approaches are particularly encouraged to apply. Applications from exceptional individuals with other research interests and established investigators also will be considered. Applicants should have their Ph.D. and postdoctoral experience in biochemistry, nutrition or a related field. They will be expected to develop an active, externally funded research program and to participate in the undergraduate and graduate teaching programs of the departments. Applicants should include their curriculum vitae, copies of representative publications, and a brief statement of their current and future research interests. Three people well acquainted with the applicant's research and teaching abilities should be asked to send letters of reference. Review of applications will begin 1 March 1992 with the intent of filling the positions in the fall 1992. Inquiries and applications should be directed to: **Chairs, Search Committees, Department of Biochemistry, Department of Nutritional Sciences, 454 Physical Sciences II Building, Oklahoma State University, Stillwater, OK 74078-0454. Telephone: 405-744-6189.** *Oklahoma State University is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

Baylor University. **ORGANIC CHEMISTRY FACULTY POSITION.** The Department of Chemistry invites applications for a tenure-track organic faculty position at the **ASSISTANT PROFESSOR** level, beginning fall 1992. A Ph.D. in chemistry is required and postdoctoral experience is desirable. The successful applicant will be expected to demonstrate excellence in teaching at the undergraduate and graduate levels and to establish an independent research program capable of attracting graduate students (M.S. and Ph.D.) and extramural funding. Applicants should submit a letter of application, curriculum vitae, including a list of publications, and a description of research interests and plans, and have three letters of recommendation and graduate and undergraduate transcripts sent to: **Professor Stephen L. Gipson, Department of Chemistry, P.O. Box 97348, Baylor University, Waco, TX 76798.** The deadline for receipt of all materials is 10 February 1992. Baylor University is governed by an all-Baptist Board of Regents and is operated within the Christian-oriented aims and ideals of Baptists. *An Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.*

### FACULTY POSITION IN MICROBIOLOGY

The Discipline of Microbiology invites applications for a tenure-track position in microbiology at the **ASSISTANT PROFESSOR** level beginning fall 1992. A Ph.D. is required. The candidate is expected to teach medical microbiology to first- and second-year osteopathic medical students. Research is encouraged. Applicants should submit curriculum vitae, transcripts, three letters of recommendation and a statement of teaching philosophy and career objectives to:

**Chairman, Microbiology Search Committee  
College of Osteopathic Medicine of the Pacific  
College Plaza  
Pomona, CA 91766  
Closing date: 31 January 1992.**

### Calendar of Upcoming Meetings

SCIENCE will be distributed to scientists attending the following meetings:

#### MIAMI BIO/TECHNOLOGY WINTER SYMPOSIUM

19 to 24 January 1992, Miami  
Issue date: 3 January 1992

#### HPCE

9 to 13 February 1992, Amsterdam  
Issue date: 24 January 1992

#### ASBMB

10 to 17 February 1992, Houston  
Issue date: 31 January 1992

#### Society of Toxicology

23 to 27 February 1992, Seattle  
Issue date: 14 February 1992

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## POSITIONS OPEN

**FACULTY POSITION IN ANIMAL BIOLOGY.** 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. Our interactive group of molecular/cell biologists and physiologists seeks an individual who will foster further interaction between these two areas of animal biology. Primary consideration will be given to persons working on invertebrate or vertebrate systems in the area of hormone action. Applicants must have the Ph.D., postdoctoral research experience and a commitment to excellence in research and teaching. The successful applicant's responsibilities will include engaging undergraduate and graduate students in extramurally funded research. Competitive start-up funds will be provided. Review of applications will begin 14 February 1992 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, Department of Biological Sciences (ENDO), Duquesne University, Pittsburgh, PA 15282.** *Duquesne University, an Affirmative Action/Equal Opportunity Employer, strongly encourages applications from women and minority candidates.*

### IMMUNOLOGY, IMMUNOCHEMISTRY, AND PROTEIN CHEMISTRY

The Immunology Division of the Beckman Research Institute of the City of Hope, Duarte, California, is inviting applications for a tenure-track staff position in basic research areas including immunology, immunochimistry, protein chemistry, and molecular immunology. The division has a broad base in research activities with major strengths in immunology and protein chemistry. Collaborative research within the division and other divisions is highly encouraged. Qualified individuals should send their curriculum vitae by 10 February 1992 to: **Dr. John E. Shively, Chairman of the Division of Immunology, Beckman Research Institute of the City of Hope, 1450 East Duarte Road, Duarte, CA 91010.** *An Equal Opportunity/Affirmative Action Employer.*

### NATIONAL PARK SERVICE RESEARCH ECOLOGIST, GM-408-13

This position serves as the Director of the National Park Service Cooperative Park Study Unit (CPSU), University of Tennessee. The Director supervises two research scientists and coordinates planning, administrative and contract functions for the unit. The Director will also define and conduct an ecosystem level research program for the upland area National Parks of the Southeast United States. Scientists at the CPSU provide expert advice to parks on a wide variety of research and resource management issues. Interested applicants should write or call: **Office of Personnel Management, Huntsville Area Office, 3322 Memorial Parkway South, Building 600, Suite 347, Huntsville, AL 35801-5311. Telephone: 205-544-5803** (between the hours of 9:00 a.m. and 1:00 p.m.) or **1-900-990-9200** (24 hours a day). All inquiries should reference position control number **HU20044**. Applications must be postmarked no later than 24 January 1992.

### FACULTY POSITIONS IN MOLECULAR PHARMACOLOGY UNIVERSITY OF SOUTHERN CALIFORNIA (USC) SCHOOL OF PHARMACY

Two tenure-track **ASSISTANT/ASSOCIATE PROFESSOR** positions exist in the Department of Molecular Pharmacology and Toxicology. Candidates must have Ph.D. degree in pharmacology or related discipline, postdoctoral experience, and strong commitment to excellence in research and teaching in the professional and graduate programs. Preference will be given to candidates with demonstrated research accomplishment in neuropharmacology using biochemical and/or molecular approaches, and will be expected to maintain an independent, externally funded, research program. Interviews to begin in mid-February, to fill by July 1992. Send curriculum vitae, set of selected reprints, brief statement of research interests, and names of three references to:

**Dr. Timothy Chan, Chairman  
Department of Molecular Pharmacology  
and Toxicology  
USC School of Pharmacy  
1985 Zonal Avenue, Los Angeles, CA 90033  
Equal Opportunity Employer, M/F/H.**

## PHARMACOLOGY RESEARCH ASSOCIATE PROGRAM

The National Institute of General Medical Sciences is seeking applications for the Pharmacology Research Associate (PRAT) Program at the National Institutes of Health (NIH). The PRAT program is a 2 year postdoctoral training program for 11 recently training, highly qualified scientists per year to spend 2 years working in one of the research laboratories of the component institutes of the NIH and the Alcohol, Drug Abuse, and Mental Health Administration. A wide variety of research opportunities are available for people trained in pharmacology who wish to expand that training at the NIH, and for people trained in related areas who wish to apply their training to problems of pharmacological interest. Research proposals are not required for application. **Deadline for receipt of applications for positions beginning in July of 1993 is March 2, 1992.** For more information and application material, please write to:

**Program Assistant  
Pharmacology Research  
Associate Program  
National Institute of General  
Medical Sciences  
Westwood Building, Room 919  
Bethesda, Maryland 20892**

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Applied Biosystems, a major supplier of systems and tools for biotechnology research, is having a remarkable impact on the advancement of scientific knowledge. As we grow, so does our need for top talent to join our team in the San Francisco Bay area—one of the largest biotechnology communities in the country.

### Senior Chemist

We are seeking a senior-level Chemist to be responsible for research and development of new reagents for automated DNA synthesis. This will include conducting bench level chemistry and instrument development for the analysis, synthesis, and purification of DNA.

The ideal candidate will possess a Ph.D. in Organic Chemistry with experience synthesizing complex molecules, including nucleic acids. Proficiency with HPLC, NMR and other modern analytical skills is required along with good communication abilities. Mechanical/electrical/computer aptitude is a plus.

We offer a competitive salary and benefits package. Please forward your resume, indicating Ref. #1090, to Applied Biosystems, Inc., Human Resources, 850 Lincoln Centre Drive, Foster City, CA 94404. Applied Biosystems is an equal opportunity employer.



# Opportunities In Mass Spectrometry

## Wyeth-Ayerst Research

**We're building on our success.**

Wyeth-Ayerst Laboratories, a division of Fortune 100 American Home Products Corporation, is expanding its R&D activities. As a result, several new opportunities exist for experienced mass spectrometrists at our Princeton, New Jersey research facility.

### Pharmacokinetic/Pharmacodynamic Ph.D.

This position will support pharmacokinetic/pharmacodynamic studies using mass spectrometric techniques. Responsibilities will include supervision of BS/MS level mass spectrometrists as well as hands on operation and maintenance of MS/MS instruments, evaluation of data, method developments, and interfacing with drug metabolism scientists. A Ph.D. in Chemistry, computer literacy and 2-5 years experience in quantitative mass spectrometry are required. Experience with the applications of LC/MS/MS techniques in trace levels quantitation of drugs and metabolites in biological matrices is highly desirable. **(Position #421)**

### Pharmaceutical & Metabolic Research Ph.D.

This position will employ mass spectrometry to solve structural problems related to pharmaceutical and metabolic research. Responsibilities will include hands on operation and maintenance of instruments, interpretation of mass spectra, methods development and interfacing with medicinal chemists and metabolic scientists. A Ph.D. in Chemistry, computer literacy and 1-5 years experience in qualitative mass spectrometry are required. Strong mass spectral interpretation skills and experience with LC/MS/MS techniques are highly desirable. **(Position #423-69)**

### Qualitative/Quantitative BS/MS

This position will support either qualitative or quantitative mass spectrometry. Major responsibilities will be to operate and maintain mass spectrometers, as well as to evaluate mass spectral results. A BS/MS in Chemistry, some experience with mass spectrometry, computer literacy, GC, LC and microderivatization techniques is highly desirable. **(Position #425)**

Wyeth-Ayerst offers an excellent compensation and benefits package in our highly professional environment. Our research laboratory is just minutes away from Princeton University and is convenient to many cultural, educational and leisure activities. For confidential consideration, please forward resume and salary requirements to: **WYETH-AYERST RESEARCH, Personnel Manager, (Reference Position #), CN 8000, Princeton, NJ 08543-8000.** An equal opportunity employer, M/F/D/V responses encouraged.



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## POSITIONS OPEN

### FACULTY POSITIONS CELL REGULATION/PHARMACOLOGY THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER

The Department of Pharmacology of The University of Texas Southwestern Medical Center seeks applicants for tenure-track positions at the level of **ASSISTANT PROFESSOR**. Applicants must have a relevant Ph.D. or M.D. degree, postdoctoral training, and show evidence of firm commitment to a career in independent research. Departmental faculty apply molecular and cellular techniques to approach problems of fundamental importance to cell regulation. Generous start-up funds and ongoing research support are available to candidates with outstanding potential. Send curriculum vitae, a brief description of proposed research, and up to three reprints to: **Dr. Alfred G. Gilman, c/o Ms. Wendy Deaner, Department of Pharmacology, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9041. An Equal Opportunity/Affirmative Action Employer.**

### FACULTY POSITION MACROMOLECULAR STRUCTURE/FUNCTION

The Biochemistry Department of Tufts University invites applications for a tenure-track position at the **ASSISTANT, ASSOCIATE OR FULL PROFESSOR** level. We are seeking a candidate who has demonstrated substantial accomplishment in the area of structure-function relationships in proteins and who can develop and sustain a creative research program. The candidate should be able to add to departmental strength in NMR spectroscopy and take advantage of a newly acquired 500-MHz spectrometer. Detailed curriculum vitae, several reprints, a summary of planned research and three letters of reference should be sent to:

**Chairman, Search Committee  
Department of Biochemistry  
Tufts University Health Science Campus  
136 Harrison Avenue  
Boston, MA 02111**

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

### FACULTY POSITIONS IN VISION SCIENCE

The Department of Physiological Optics seeks two outstanding scientists interested in the eye and vision. These scientists should be committed to their own independent research programs. Successful applicants will be expected to participate in the graduate program and the optometry program. However, teaching loads are compatible with a strong departmental commitment to investigator-initiated research. Faculty in the department interact closely with other researchers on the UAB campus through the Vision Science Research Center. The positions are at the **ASSISTANT PROFESSOR** level and are on a tenure track. There is particular interest in adding research expertise in the areas of: ocular microbiology and immunology, anatomy, and the development of the eye and visual system. Applicants should send curriculum vitae with a statement of research interests to: **Dr. Graeme Wilson, Chairman, Department of Physiological Optics, School of Optometry, The University of Alabama at Birmingham, Birmingham, AL 35294. UAB is an Affirmative Action/Equal Opportunity Employer.**

**ASSOCIATE CHIEF OF STAFF, RESEARCH,** Cleveland, Veterans Administration Medical Center. Responsible for \$5.5 million annual VA research funding among 50 principal investigators in multiple disciplines in general medical research, complemented by significant efforts in rehabilitation research. Current research program encompasses 42,000 square feet. Affiliated with Case Western Reserve University. Candidates need proven ability to obtain research funding, detailed understanding of funding mechanisms on the local/national levels, competence in management of research programs, academic credentials supporting faculty appointment, and Board certification. Inquiries and curriculum vitae to: **George B. Naff, M.D., Chairperson, ACOS/Research Search Committee (111K), VA Medical Center, 10701 East Boulevard, Cleveland, OH 44106. Telephone: 216-791-3800. Equal Opportunity Employer.**

## POSITIONS OPEN

### DIRECTOR DIVISION OF MINERAL RESOURCES/ STATE GEOLOGIST

The Virginia Department of Mines, Minerals and Energy is seeking an individual to direct the comprehensive activities of the Division of Mineral Resources. This position is located in Charlottesville, Virginia, and is responsible for the management and administration of statewide programs for development of mineral resources, geologic and economic maps, descriptive geologic reports, and basic geologic research. Salary range is \$42,994 to \$65,645.

Qualifications: Proven ability to direct a staff of professional and support personnel engaged in a variety of programs and activities. Demonstrated ability to manage and organize major mineral resources programs; environmental geology; and topographic mapping. Progressively responsible management positions in geology and mineral resources, including supervision of a professional staff and carrying out significant programs in economic development, environmental control, and geologic studies.

To apply: Send résumé to: **Virginia Department of Mines, Minerals and Energy, Human Resources Office, 2201 West Broad Street, Richmond, VA 23220 by 5:00 p.m., Monday, 2 March 1992. For more information telephone: 804-367-1820.**

### CHAIR DEPARTMENT OF CLINICAL STUDIES (COMPANION ANIMAL) SCHOOL OF VETERINARY MEDICINE THE UNIVERSITY OF PENNSYLVANIA

The University is seeking a highly qualified individual to provide leadership for the Department of Clinical Studies in Philadelphia. The department includes 65 full-time faculty members and academic responsibility for a large companion animal teaching hospital. Candidates should have experience in administration and a commitment to excellence in research, service, and teaching. Nominations and applications should be sent to: **Dr. Mark Haskins, School of Veterinary Medicine, 3800 Spruce Street, Philadelphia, PA 19104-6044. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.**

**DIRECTOR DIABETES RESEARCH.** We seek a Scientist (Ph.D.) with established record of productivity in diabetes-related research to direct physiologic laboratory research in an expanding Division of Endocrinology. The Endocrine Division has an active clinical program in diabetes including a Diabetes Education Center and inpatient diabetes unit. Applicants should be capable of independent research and also able to collaborate with clinical scientists. Located on Long Island, Winthrop-University Hospital is a 548-bed teaching hospital affiliated with SUNY at Stony Brook School of Medicine. Send curriculum vitae to: **Ph.D. Search Committee, Department of Human Resources, Winthrop-University Hospital, 259 First Street, Mineola, LI, NY 11501.**

Juniata College has a tenure-track **BIOLOGY CHAIR** position; specialty neurobiology/microbiology. Excellence of teaching and the ability to involve undergraduates in research are expected. The department has attracted major grants including a Howard Hughes Medical Institute grant. For details see the 27 November or 4 December 1991 *Chronicle of Higher Education* or contact: **Dr. Karen Wiley Sandler, Vice President and Dean of Academic Affairs, Juniata College, Huntingdon, PA 16652. An Affirmative Action/Equal Opportunity Employer.**

The University of Utah School of Medicine is seeking a **CHAIRPERSON** for the newly created Department of Neurosciences and Anatomy. The chairperson would occupy the newly endowed George and Laura Winder Chair of Neurosciences. Interested individuals should write and submit current curriculum vitae and bibliography to: **J. Richard Baringer, M.D., Department of Neurology, University of Utah School of Medicine, 50 North Medical Drive, Salt Lake City, UT 84132. This position will close on 31 January 1992 or until suitable applicant identified. The University of Utah is an Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

### UNIVERSITY OF BRITISH COLUMBIA (UBC) HEAD, DEPARTMENT OF ANATOMY

The Faculty of Medicine, University of British Columbia, invites applications and nominations for the position of Head of the Department of Anatomy.

We seek an academic leader who will direct and develop the teaching and research programs of the department. The department has 13 full-time faculty members and attracts research support of approximately \$1,000,000 annually. Candidates should have a proven record of scholarly achievement, a strong research background, a commitment to undergraduate and graduate medical education and the ability to encourage and develop interdisciplinary initiatives. Starting date will be 1 July 1992. Salary will be commensurate with experience and qualifications. This appointment is subject to final budgetary approval.

*UBC encourages qualified women and minority applicants.*

*In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.*

Applications, accompanied by detailed curriculum vitae and the names of three references, should be directed by 15 April 1992 to: **Dr. M. J. Hollenberg, Dean, Faculty of Medicine, Room 317, Instructional Resources Centre, University of British Columbia, 2194 Health Sciences Mall, Vancouver, BC, Canada, V6T 1W5.**

### ASSOCIATE DIRECTOR FOR RESEARCH HEMATOLOGY/ONCOLOGY

Responsibility for coordinating research laboratory activities and integrating laboratory and clinical studies. Requirements include Ph.D. or M.D. degree plus a minimum of 10 years of research experience in which the applicant has demonstrated success both in obtaining individual national grant support and managing a scientific group in cancer research. Submit curriculum vitae and letter of interest to: **Frederick Valeriote, Ph.D., Wayne State University (WSU), Harper Hospital, 3990 John R, 105 Brush South, Detroit, MI 48201. WSU is an Affirmative Action/Equal Opportunity Employer.**

### NORTHWESTERN UNIVERSITY CHICAGO, ILLINOIS SOLOVY-ARTHRITIS RESEARCH SOCIETY CHAIR

The Division of Arthritis-Connective Tissue Diseases is seeking to fill an endowed position with an accomplished investigator. We are seeking a Ph.D. or M.D. with interests in basic cellular and molecular immunology. The individual should qualify at the rank of a **SENIOR ASSOCIATE or FULL PROFESSOR**. The position offers an opportunity to collaborate with basic and clinical scientists within an exciting environment. If interested, please send curriculum vitae, a statement of research interests and the names of three references to: **Richard M. Pope, M.D., Department of Medicine, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611. Northwestern University is an Affirmative Action/Equal Opportunity Employer.**

### DEPARTMENT HEAD CHEMISTRY AND BIOCHEMISTRY

Montana State University seeks nominations and applications for Department Head of Chemistry and Biochemistry. Requirements are a Ph.D. in chemistry, biochemistry, or related field, an established and respected teaching record, evidence of a highly regarded research program, and proven administrative, communication, and leadership skills. The department head is expected to promote excellence in teaching, research, and service; stimulate enhancement of undergraduate teaching and undergraduate research; continue a vigorous research program; and perform limited teaching. Screening will begin 17 February 1992, and continue until the position is filled. Send letter describing how applicant's experience qualifies him/her for the position, résumé, and names, addresses, and telephone numbers of five professional references to: **Professor Edward A. Dratz, Chair, Department Head Search Committee, Department of Chemistry and Biochemistry, Montana State University (MSU), Bozeman, MT 59717. MSU provides employment preference for eligible veterans (contact HR/AA, 210-C MH, MSU). Affirmative Action/Equal Opportunity Employer.**

NEW ENGLAND BIOLABS

# Molecular Biology and Biotechnology

## Summer Workshop

### WHEN:

Session I: May 31-June 13, 1992  
Session II: June 17-June 30, 1992

### WHERE:

Clark Science Center  
Smith College  
Northampton, MA

### FACULTY:

**Dr. Steven A. Williams**  
Dept. of Biological Sciences, Smith College,  
Northampton, MA, and Program in Molecular and  
Cellular Biology, University of Massachusetts

**Dr. Molly Fitzgerald-Hayes**  
Dept. of Biochemistry and Program in Molecular  
and Cellular Biology, University of Massachusetts

**Dr. John McCarrey**  
Dept. of Genetics, Southwest  
Foundation for Biomedical Research

**Dr. Barton Slatko**  
New England Biolabs, Inc.

### TO APPLY

for this workshop, please submit a recent curriculum vitae and a one page statement of motivation to:

**Dr. Steven A. Williams**  
Dept. of Biological Sciences  
Smith College  
Northampton, MA 01063

We are pleased to announce the seventh annual New England Biolabs' Molecular Biology and Biotechnology Summer Workshops held at Smith College, Northampton, MA.

**INTENSIVE BENCH EXPERIENCE:** This intensive, two-week course emphasizes hands-on molecular biology laboratory work. About eight hours each day will be spent working at the bench. All of the work is hands-on; there are no demonstrations.

**EXPERIMENTS WILL INCLUDE:** Purification of DNA, restriction enzyme digestion, gel electrophoresis, construction of recombinant DNA molecules, cloning in plasmid and phage vectors, cloning strategies, bacterial transformation and transfection, Southern and Northern transfer and hybridization, radioactive and nonradioactive labeling of DNA, polymerase chain reaction, RNA PCR, in situ hybridization, and DNA sequencing. All of these techniques are woven into a cohesive research project carried out by each participant during the two-week session. Lectures and discussion sessions (at least three hours each day) will deal with all of the above topics and how these methods are applied in molecular biology research.

### INTENDED FOR BEGINNERS IN MOLECULAR BIOLOGY.

No previous experience in molecular biology is required or expected. Thirty participants will be selected from a variety of disciplines and academic backgrounds. Last year's participants included principal investigators, directors of programs, postdoctoral fellows and research assistants. Their fields of research included biochemistry, medical physiology, immunology, microbiology, plant biology and others. They came from large universities, small colleges, hospitals, industry, and private foundations.

**FEE:** \$2600 per participant includes lab manual, use of all equipment and supplies, and room and board (all rooms are singles). Fee includes the use of the libraries and all campus athletic facilities including indoor and outdoor tennis courts, pool, weight room, track, etc.

**APPLICATIONS MUST BE RECEIVED BY** March 1, 1992. Notification of acceptance, wait-list, or rejection will be mailed by March 6, 1992. Payment in full will be due by April 15, 1992. Your application should include a C.V. and a one page statement of motivation. Please specify the session to which you are applying and indicate if you wish to be considered for the other session as a second choice. Women and minorities are especially encouraged to apply. **For additional information, please contact Dr. Steven A. Williams at (413) 585-3826.**



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# RESEARCH ASSOCIATES

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As a global healthcare provider, Hoffmann-La Roche's commitment to excellence in basic research and emerging technologies has helped many people in many ways. This commitment has also created the following post-doctoral opportunities:

## IMMUNOLOGY

Joining a multi-disciplinary team of immunologists, protein chemists, and molecular biologists, you will perform research on the biology of interleukin-12 (a recently discovered cytokine) and its roles in normal and pathological immune responses. To qualify, you'll need a PhD in Immunology or a related discipline, with some experience in molecular biology techniques.

## ONCOLOGY

As a member of our Oncology Department, you will have the opportunity to carry out basic research in molecularly-oriented drug discovery programs. Retinoic acid receptors and tumor suppressor genes are specific areas of interest. To qualify, you must have a PhD in Molecular Biology or Biochemistry coupled with relevant research experience.

## VIROLOGY

Your interest and expertise in molecular approaches to protein: DNA interactions, DNA replication, and/or virology, will allow you to select your specific project in the area of viral DNA replication (human papilloma virus). Supported by virologists, biochemists and crystallographers, your efforts in molecular biology will be directed toward the structure/function analysis of the proteins involved in viral DNA replication. Although the research will be fundamental in nature, publication of results is expected.

We offer a state-of-the-art research environment and a competitive compensation and benefits package. Publications are encouraged. For confidential consideration, please send your resume with references to: **Mr. R.H. Stevenson, Assistant Director, Biotechnology Research, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



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City of Hope

N A T I O N A L M E D I C A L C E N T E R

## Cellular Immunologist

M.D. or Ph.D. Cellular Immunologist at the Assistant or Associate level in the area of viral cellular immunology. Interested candidates should send their resumes to: Stephen J. Forman, M.D., Director, Department of Hematology and Bone Marrow Transplantation, City of Hope National Medical Center, 1500 E. Duarte Road, Duarte, California 91010. Phone: (818) 359-8111 X2403 – FAX (818) 301-8256.

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Each year, the College Board's Advanced Placement Program (AP<sup>®</sup>) gives hundreds of thousands of exceptionally able high school students an opportunity to take rigorous college-level courses and appropriate exams in 16 disciplines. Over 2,200 colleges and universities offer credit or advanced standing to students based on their exam performance. For six days in June, more than 2,000 college faculty and AP teachers from across North America gather in the Princeton area and at Clemson University to evaluate and score students' essays and problem solutions at the annual AP Reading. The participants also exchange ideas and contribute suggestions about their discipline, their courses, and the AP Examinations. Participants are paid honoraria, provided with housing and meals, and reimbursed for travel expenses.

Applications are now being accepted for Faculty Consultants to the College Board's Advanced Placement Readings in Biology, Chemistry, and Physics. Applicants should currently be teaching or directing instruction for the first-year college course (for science majors) in biology, chemistry, or physics.

**For an application or additional information, please contact: Dr. Walt MacDonald, Director, Advanced Placement Program, Educational Testing Service, Rosedale Rd., Princeton, NJ, 08541.** Educational Testing Service is an Equal Opportunity/Affirmative Action Employer and especially encourages minorities and women to apply.

# Atmospheric Sciences Department Manager

The **Atmospheric Sciences Department** of Battelle, Pacific Northwest Laboratories is seeking a **Department Manager** to direct and manage the operational aspects of the department's activities.

The successful candidate will prepare departmental business programs; lead the development of major research programs and contribute as an active scientific/engineering leader; develop implementation plans for policies related to program evaluation, quality assurance, personnel evaluation and safety.

Ph.D. or MS degree in Atmospheric Sciences, Chemical Engineering, Meteorology, Mechanical or Environmental Engineering is required. Must also have 10 years of research experience and demonstrated technical competence by regular publication in peer-reviewed journals. 3 years, or more, of research management experience is desirable.

Our location in the Tri-Cities area of southeastern Washington provides an outstanding quality of life, excellent schools, low cost of living, and numerous recreational opportunities.

To pursue this career opportunity, send/FAX your resume to:  
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Dept. 6099-RJZ, Richland,  
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### FRENCH "ACADEMIE DES SCIENCES" PROFESSORSHIPS

In order to foster international cooperation between academic and industrial research, the French Académie des Sciences, the Centre National de la Recherche Scientifique and Elf Aquitaine will open several one-year professorships in France for the 92-93 academic year.

These openings are reserved for research professionals, typically at the Associate to Full Professor level, and may be held in conjunction with a sabbatical leave. They include generous benefits, such as housing arrangements and travel expenses, depending upon the candidate's experience.

The scientific domains involved cover Elf Aquitaine's activities in oil, chemical and pharmaceutical research:

- Earth Sciences, with an emphasis on surface seismology, sedimentology, organic and mineral geochemistry and the physics of oil-related fluids, including rock interactions;
- Chemical Sciences, with an emphasis on polymers, halogen and thio-chemistry, heterogeneous catalysis including process engineering research;
- Life Sciences, with an emphasis on studies dealing with thrombosis, the cardio-vascular and central nervous systems.

Prearranged agreements with French academic laboratories are eligible for these professorships, and they will be appreciated although not mandatory.

There are no citizenship restrictions. Mastery of French is not required although some familiarity with French culture would be helpful.

Additional information can be obtained from the following contacts:

- For North America-based candidates:  
J. BODELLE, Vice President Research & Development  
Elf Aquitaine, Inc.  
1899 L Street, N.W., Suite 500  
Washington, DC 20036
- For other candidates:  
C. JABLON, Chief Scientist  
Elf Aquitaine, DRDI  
Tour Elf, Cedex 45  
92078 Paris-La-Défense, FRANCE

Formal applications should include a detailed résumé, a description of the research project and any other relevant information in order to select the most qualified candidates. They should be sent to the above addresses before February 15th, 1992. They shall be processed in confidence and the professorships are scheduled for announcement on April 30th, 1992.

## THE CHINESE UNIVERSITY OF HONG KONG

invites applications for the following newly created teaching positions in the Faculty of Medicine, tenable from August 1992:

Applicants should have relevant teaching and research experience. Those applying for post (1), (2) or (3) should possess a relevant higher degree, preferably a Ph.D., or its equivalent, or a medical qualification. Those applying for post (4) should have a relevant higher degree, preferably a Ph.D.

(1) **Lectureship in Anatomy (Ref. 106/509/2/91)**

Teaching experience in one or more of the following topics will be an advantage: histology, embryology, neuro-anatomy and topographic anatomy. The Department of Anatomy is currently active in research programmes involving tissue culture techniques, immunocytochemistry, and transmission and scanning electron microscopy.

(2) **Lectureship in Pharmacology (Ref. 107/509/2/91)**

The appointee is expected to participate in teaching and research activities. The Pharmacology Department's research is concentrated on prostaglandins, anticoagulants, rheumatoid arthritis, vascular smooth muscle, asthma and pharmacokinetics.

(3) **Lectureship of Physiology (Ref. 108/509/2/91)**

The appointee is expected to participate in teaching and research activities. The Department of Physiology is currently actively engaged in research in epithelial transport mechanisms, muscle in physiology, renal and acid-base physiology as well as somato-sensory and neurophysiology.

(4) **Lectureship in Biochemistry (Ref. 109/509/2/91)**

Established skills in neurochemistry or food science or immunology will be an advantage.

### Annual Salary

HK\$309,120-350,700 by 2 increments BAR

HK\$371,520-516,480 by 7 increments

(approx. exchange rate : £1 = HK13.9)

Starting salary will be commensurate with qualifications and experience.

### Conditions of Service

The University offers a competitive remuneration package. For superannuable appointment, benefits include leave with full-pay, contributory superannuation scheme (University 15%, appointee 5%), medical and dental care, education allowances for children, housing benefit for an appointee with annual salary of HK\$329,880 or above (with appointee contributing 7.5% of salary towards the provision of housing). Appointment may also be made on fixed term contract which carries equivalent benefits including a contract-end gratuity (15% of basic salary) in lieu of superannuable benefits. The University may also consider more flexible terms for suitable candidates.

### Application Procedure

Send full resume in duplicate, giving full particulars, as well as names and addresses of 3 referees, together with copies of qualification documents (in duplicate) and recent publications to the Personnel Section, The Chinese University of Hong Kong, Shatin, Hong Kong (Fax: (852)603-5026) before **February 1, 1992. Please quote the appropriate reference number and mark "Recruitment" on cover.**

## POSITIONS OPEN

### CANCER CENTER DIRECTOR

Bowman Gray School of Medicine of Wake Forest University seeks a leading physician-scientist to direct its Comprehensive Cancer Center. A strong clinical program with regional research network and basic sciences core laboratories are prominent features. *Minority and women candidates are especially encouraged. Wake Forest is an Affirmative Action/Equal Opportunities Employer.* Reply to: **William R. Hazzard, M.D., Medical Center Boulevard, Winston-Salem, NC 27157-1052.**

### PROFESSOR AND HEAD DEPARTMENT OF PHYSIOLOGY AND PHARMACOLOGY

Applications and nominations are solicited for the position of Professor and Head of the Department of Physiology and Pharmacology, Auburn University College of Veterinary Medicine. The department includes 12 tenure-track faculty members, has active programs of teaching, research and graduate education, and interacts extensively with other units of the university. The appointee will be expected to have a strong record of research and teaching accomplishments, with leadership and administrative abilities. Candidates should have the Ph.D. or comparable research experience, and preference may be given to individuals who also hold the D.V.M. or equivalent degree. Anticipation is that the successful candidate will (1) provide leadership, in both professional and graduate education, (2) foster competitive research programs, and (3) comprehend the future trends in veterinary medical education and faculty development. Applications must include a cover letter with statement of goals, current curriculum vitae, and the names, addresses and telephone/FAX number of three references. Salary will be commensurate with experience and qualifications. Applications with supporting material will be accepted until 1 April 1992, or until the position is filled. Date of appointments is negotiable, but should be on or before 1 October 1992.

Send applications, nominations and inquiries to: **Dr. Ray Dillon, Search Committee Chair, Scott-Ritchey Research Center, College of Veterinary Medicine, Auburn University, AL 36849. Telephone: 205-844-5951; FAX: 205-844-5850.**

*Auburn University is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.*

### PHYSICIST/BIOPHYSICIST

A position is available for a candidate to join a team of scientists and engineers involved in supporting, developing and implementing a radiation health protection program for Space Station Freedom. The successful candidate will interact with scientists and engineers to develop and improve radiation risk assessment, to support space flight and computer tasks, and to contribute to technical reports. Opportunities exist for collaborative interactions with or participating in ongoing cellular and molecular radiobiology research programs at NASA/Johnson Space Center.

This position requires a Ph.D. in physics or biophysics or an M.S. degree in physics with experience in radiation health physics, computer programming and modeling. A background in radiation physics, radiobiophysics and computer modeling is preferred.

Interested applicants should submit current résumé, a list of references, and salary history indicating position number 91-T33-01 to: **KRUG Life Sciences Inc., P.O. Box 58827, Houston, TX 77258-8827, Attention: June E. Richmond, Human Resource Manager. An Equal Opportunity Employer, M/F/H/V. Smoke-free workplace provided.**

**THREE POSITIONS. VERTEBRATE ZOOLOGIST** (prefer ornithologist or herpetologist). **BOTANIST/PLANT TAXONOMIST** and **WETLAND SCIENTIST** needed by full-services environmental consulting firm. Positions require sophisticated technical and research capabilities for: studies of endangered species (experience with Section 7, Endangered Species Act), wetlands (Section 404, Clean Water Act), habitat creation and management; multidisciplinary NEPA studies (EA and EIS); managing large field studies; report and proposal writing; and coordination with federal and state agencies. Ph.D. preferred. Send résumé and materials to: **Dr. Virgil Brack, Jr., 3D/ESI, 781 Neeb Road, Cincinnati, OH 45233. Telephone: 513-922-8199; FAX: 513-922-9150.**

## POSITIONS OPEN

### VICE CHANCELLOR AND DEAN GRADUATE STUDIES AND STUDENT ACADEMIC AFFAIRS UNIVERSITY OF CALIFORNIA SAN FRANCISCO

The University of California, San Francisco (UCSF), invites nominations and applications for the position of Vice Chancellor and Dean, Graduate Studies and Student Academic Affairs.

UCSF is the only one of nine campuses of the University of California that is devoted solely to the health sciences, including professional schools of dentistry, medicine, nursing, and pharmacy, and a graduate division. In addition to offering advanced degrees in the health professions, there are 22 doctoral programs in the biological and social and behavioral sciences related to human health.

Responsibilities: As Dean of Graduate Studies: provide strong leadership for graduate programs in the four schools; oversee administration of all matters concerned with the academic progress and general welfare of graduate students; coordinate long-term planning in graduate education and development of new programs; develop and administer policies and services for postdoctoral research training programs.

As Vice Chancellor, Student Academic Affairs: coordinate student *Affirmative Action* programs, including recruitment and retention of students from traditionally underrepresented groups; oversee administration of academic support services to the schools and graduate division, including admissions and registrar, student financial aid, services to international students and scholars.

Qualifications: Applicants or nominees must hold a Ph.D. or M.D. degree (or equivalent). Evidence of scholarly achievement in teaching and research is required. Proven leadership ability in the administration of graduate and postdoctoral education is essential. The successful candidate must be eligible for faculty appointment and tenure, with the opportunity to continue an active research program.

Salary: Negotiable and commensurate with qualifications.

Position open: 1 July 1992. Consideration of applications will begin 15 February 1992. Letters of application or nomination, with complete curriculum vitae, bibliography, and names of three references should be sent to:

**Ms. Janice Babula  
Search Committee, Vice Chancellor and Dean  
Box 0400  
University of California  
San Francisco, CA 94143-0400**

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

**POSTDOCTORAL POSITION** available immediately for recent Ph.D. with training in neurobiology to study brain transplantation of genetically engineered cells in animal models of Parkinson's disease. Experience in stereotaxic surgery and cell culture preferred. Send curriculum vitae with names of three references to: **Dr. Martha Bohn, Department of Neurobiology and Anatomy, Box 603, University of Rochester Medical Center, Rochester, NY 14642.**

## POSITIONS OPEN

**PLANT ECOLOGY.** The Ecology and Evolutionary Biology Department at Rice University seeks to fill a **HUXLEY RESEARCH INSTRUCTORSHIP**. This is a 2-year appointment for a recent Ph.D. for research and teaching. Preference will be given to candidates with research interests in plant population, community, or physiological ecology, ecological modeling, or global change. The teaching commitment is a one-semester junior-level botany or ecology course. Applications, including curriculum vitae, a summary of research and teaching interests, and three letters of reference, are to be sent to: **Dr. P. A. Harcombe, Ecology and Evolutionary Biology Department, P.O. Box 1892, Houston, TX 77251** by 15 February 1992. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

**TWO POSTDOCTORAL POSITIONS IN MOLECULAR PLANT PATHOLOGY.** One position, which is available immediately, is to clone a gene that influences the response of *Arabidopsis* to the black rot pathogen, *Xanthomonas campestris* pv. *campestris*, by chromosomal walking. The second position, available 1 April 1992, is both to genetically analyze barley mutants with altered resistance to the powdery mildew pathogen and to analyze cDNA clones associated with the expression of *M1-a* resistance. Applicants with training in genetics or molecular genetics will be given preference. Send curriculum vitae, the names of three references, and a statement of research interests to: **Dr. Shauna Somerville, DOE Plant Research Laboratory, Michigan State University, East Lansing, MI 48824-1312. Telephone: 517-353-9181; FAX: 517-353-9168. Michigan State University is an Equal Opportunity/Affirmative Action Employer.**

### NEUROANATOMIST

Neuroanatomist to join neuroscience laboratory pursuing studies of molecular biology of novel neuronal and glia receptors and transmitters. **POSTDOCTORAL/RESEARCH ASSOCIATE/INSTRUCTOR** level. *U.S. citizen/permanent resident.* Please send curriculum vitae and bibliography to: **D. J. Reis/K. Koenig, Division of Neurobiology, Cornell University Medical College, 411 East 69th Street-KB410, New York, NY 10021. Equal Opportunity/Affirmative Action Employer, M/F/H/V.**

One **POSTDOCTORAL POSITION** with fellowship stipend is available immediately in the Harvard/MIT Division of Health Sciences and Technology (HST) at Massachusetts Institute of Technology. The primary goal is to explore and to develop new strategies of genetic manipulation of mammalian cells with broad potential applications for cell and gene therapy. Candidates should have a Ph.D. and/or M.D. with background in molecular genetics including experience in complex recombinant DNA construction, PCR, DNA sequencing, mammalian cell culture and transfection. Send curriculum vitae, description of research interest and career goals, and names of three references by 31 January 1992 to: **Drs. Philippe LeBoulch and Irving M. London, HST Division, Massachusetts Institute of Technology, Cambridge, MA 02139.**

### POSTDOCTORAL POSITION

A postdoctoral position is available immediately to study the structure, expression, and regulation of mannosidase genes involved in eukaryotic protein glycosylation. Expertise in the area of molecular biology is essential. Interested candidates should send curriculum vitae, and names and telephone numbers of three references to: **Dr. Annette Herscovics, McGill Cancer Centre, 3655 Drummond Street, Montreal, Quebec, Canada H3G 1Y6. FAX: 617-398-3533.**

**POSTDOCTORAL FELLOWSHIP, CENTER FOR IMAGING AND PHARMACEUTICAL RESEARCH.** A research position in the neuroimaging of cerebrovascular and neurotransmitter perturbations in disease. Skills required: small animal surgery, in vivo microdialysis, knowledge of neurochemistry. The Neuroscience Applications Group in the center is currently exploring the use of in vivo imaging techniques to study mechanisms of cerebral injury and recovery. Our center comprises a multidisciplinary group of scientists that include neuroscientists, pharmacologists, radiologists and biostatisticians. Position available immediately. Send curriculum vitae and three references to: **Dr. Eng H. Lo, Center for Imaging and Pharmaceutical Research, Massachusetts General Hospital and Harvard Medical School, MGH-East Building 149, 13th Street, Charlestown, MA 02129.**

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## GLAXO INSTITUTE FOR MOLECULAR BIOLOGY

Research at the Glaxo Institute in Geneva is focused on discovering the molecular mechanisms of diseases of the CNS, allergies and inflammatory conditions. We have an outstanding opportunity for a

### NEURO-IMMUNOLOGIST

**to study the role of the immune system in diseases of the Central Nervous System**

The successful applicant will have a key role in a new research programme directed towards understanding the role of immune and inflammatory responses in neuro-degenerative diseases. Candidates are expected to have several years of relevant post doctoral experience and a proven track record of research in the immunology of the CNS.

The Institute provides a dynamic international research environment and actively encourages collaborative projects with academic groups as well as the publication and presentation of results at scientific meetings. The Glaxo Institute is part of the Glaxo group, one of the world's most successful healthcare companies which has an outstanding reputation for the quality of both its research and products.

We offer an excellent compensation and benefits package and significant opportunities for career development. Geneva, situated in a very attractive part of Europe, has many advantages as a place to live

If you are interested in this position, please send your curriculum vitae with a list of publications and the names of three referees to: Rita Gloor, Personnel Manager, Glaxo Institute for Molecular Biology, 14, chemin des Aulx, 1228 Plan-Les-Ouates, Geneva, Switzerland.

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■ *The University of*  
**ILLINOIS**  
*at Urbana-Champaign*

## Announces a Major Expansion in Molecular Neurobiology

Receipt of a major grant from the Lucille P. Markey Charitable Trust will provide funding for several positions in molecular neurobiology, with an emphasis upon molecular mechanism of neural development and plasticity, over the next several years.

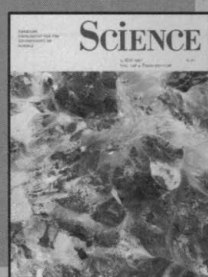
We plan to fill two positions (rank open) for fall 1992 or as soon as is practical thereafter. Qualifications should be appropriate for tenure or tenure track positions. Candidates will be appointed primarily in the Departments of Cell and Structural Biology and Biochemistry, although appointments may be made in other departments. Substantial funds are available for laboratory start-up and research. The University has a strong interdisciplinary Neuroscience Program with strengths in neural development and plasticity and growing strength in cellular and molecular neuroscience. In addition to the interdisciplinary resources of the Beckman Institute (which may house the candidates' laboratories), the University of Illinois is home to the NSF-funded National Center for Supercomputing Applications, a Biotechnology Center that provides a number of subsidized services including production of oligonucleotides, peptides and monoclonal antibodies, molecular graphics, fluorescence activated sorting, protein sequencing and transgenic animal facilities.

Salary is commensurate with experience and qualifications. Minorities and women are particularly encouraged to apply. Applications (vita, 1-2 representative reprints, and a statement of research interests) and three letters of recommendation should be sent no later than March 1, 1992, to:

William T. Greenough, Chair, Molecular Neuroscience Search Committee  
University of Illinois at Urbana-Champaign, Beckman Institute  
405 N. Mathews, Urbana, Illinois 61801 Tel. (217) 333-6118

We may interview some candidates before the application deadline of March 1, but all applications received by that date will receive full consideration.

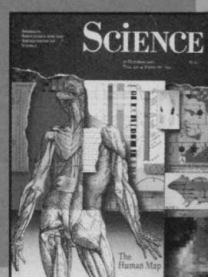
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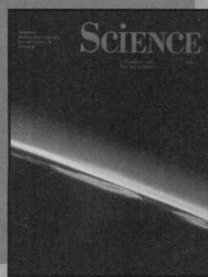
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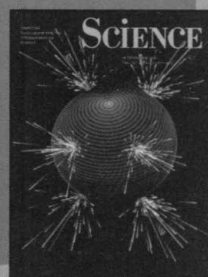
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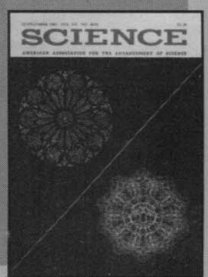
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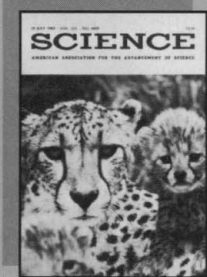
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Professor Thomas D. Cook  
Chair, Search Committee  
Northwestern University  
2040 Sheridan Road  
Evanston, Illinois 60208

Northwestern University is an Equal Opportunity/Affirmative Action Employer and Especially Welcomes Applications from Women and Minorities.

# Assistant Investigator

Support advances in Genetics Research.

The New York Blood Center concentrates major scientific effort, talent and resources on integral studies in human genetics.

To meet our strong commitment to ongoing development and discovery, we are offering a challenging opportunity to an insightful Scientist possessing pronounced expertise in the concepts and techniques of genetics and molecular biology.

This is an ideal setting for an individual with special interest in either Bloom's Syndrome and the biology of DNA replication/repair/recombination, or in V chromosome inactivation.

Qualified candidate must have two to three years related postdoctoral experience. Salary will be in the upper \$30's with an attractive benefits package. Will also receive a generous monthly housing allowance to join our corporate headquarters located on Manhattan's upper Eastside.

Please send curriculum vitae and letter detailing your professional interest and goals to: **The New York Blood Center, Dr. Nathan Ellis, 310 East 67th Street, New York, NY 10021.** Equal opportunity employer M/F/H/V.

**New York Blood Center**

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## CHAIR, PHARMACOLOGY DEPARTMENT

St. Jude Children's Research Hospital, a private research institute, is recruiting a new chairperson for its established Department of Pharmacology. The appointee will be expected to lead an internationally recognized program in his/her area of interest and to shape the future direction of research within the institution, through faculty recruitment and by contributions to the institution's overall scientific leadership, as a member of the Institution's Executive Committee. The institute is currently undergoing major expansion, and has recently occupied a new 240,000 sf research tower, where substantial laboratory and office space has been reserved for the pharmacology chair. The department currently has 9 faculty, all of whom are NIH funded investigators, and the new chair will be expected to recruit additional faculty. The current departmental budget is approximately \$3 million. The department interfaces with established basic science programs in Virology and Molecular Biology, Biochemistry, Immunology, and Tumor Cell Biology, and established clinical research programs in Hematology/Oncology, Pharmaceutical Sciences and Infectious Diseases. Appointment to the University of Tennessee graduate faculty is also possible. The Chair's salary will be provided through committed endowment funds, together with additional resources commensurate with the needs of a dynamic and productive individual.

**Applicants should submit a curriculum vitae and the names and addresses of four references to:** Dr. William E. Evans, Chair, Pharmacology Search Committee, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, Tennessee 38105



St. Jude Children's Research Hospital is an Affirmative Action/Equal Opportunity Employer

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- \* Stipends: \$35,000
- \* Deadline: February 15, 1992

For application materials contact:

**Global Change Postdoctoral Fellowships  
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P.O. Box 117  
Oak Ridge, TN 37831-0117  
(615) 576-4805**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study the molecular biology of the bombesin-like peptides. Projects include cloning of new mammalian bombesin-like peptides, their receptors and enzymes involved in their biosynthesis. Applicants should be experienced in protein chemistry or molecular biology. Send curriculum vitae and names of three references to: **Eliot Spindel, M.D., Ph.D., Division of Neuroscience, Oregon Regional Primate Research Center, 505 N.W. 185th Avenue, Beaverton, OR 97006. An Equal Opportunity/Affirmative Action Employer.**

**TWO POSTDOCTORAL POSITIONS IN MOLECULAR GENETICS.** (1) Study the molecular genetics of atherosclerosis susceptibility and the determinants of lipoprotein structure [*Nature* 353, 265 (1991); *PNAS* 88, 434 (1991)]. (2) Develop models for disorders of globin gene structure and regulation [*J. Clin. Invest.* 87, 638 (1991)]. Both studies will center on the creation and analysis of mice engineered by standard transgenic and embryonic stem cell approaches to address genetic hypotheses. Send curriculum vitae, publication list and names of three references to: **Dr. Edward Rubin, Job #A/6991, Lawrence Berkeley Laboratory, Employment Office, M.S. 90-1042, Berkeley, CA 94720. An Equal Employment Opportunity/Affirmative Action Employer.**

**TWO POSTDOCTORAL ECOLOGISTS** to study mechanisms controlling dynamics and structure of the grasslands of Cedar Creek Natural History Area. Potential topics include nitrogen and water competition, biodiversity, ecophysiology, or soil nitrogen dynamics. To apply, by 2 March 1992, submit curriculum vitae, statement of research interests, reprints, and have three letters of reference sent to: **Dr. David Tilman, Department of Ecology, Evolution and Behavior, 318 Church Street S.E., Minneapolis, MN 55455. The University of Minnesota is an Equal Opportunity Educator and Employer.**

**POSTDOCTORAL POSITIONS** available for research into ion channel function and the physiological basis of neural plasticity in *Drosophila*. Experience in cell culture and electrophysiological technique desirable. Send curriculum vitae and names of two references to: **Dr. Chun-Fang Wu, Department of Biology, University of Iowa, Iowa City, IA 52242. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION.** Available winter or spring 1992 for the study of the radiobiology of radioimmunotherapy, growth factors and the molecular biology of radioresistance and other related topics. Experience in tissue culture, immunology, molecular biology and small animal handling desirable. Salary commensurate with experience. Send curriculum vitae and names of three references to: **Susan J. Knox, M.D., Ph.D., Department of Radiation Oncology, Stanford University Medical Center, Stanford, CA 94305. An Equal Opportunity Employer.**

### TWO POSTDOCTORAL POSITIONS

Available immediately to participate in two NIH-funded projects on alterations of host defense induced by thermal injury. These projects will (1) extend studies [*J. Immunol.* 143, 2609 (1989)] to determine subcellular mechanisms responsible for neutrophil dysfunction (Dr. A. Bjornson) and (2) characterize alterations of cytokine production and other functional responses of macrophages (Dr. S. Somers). Our program offers the opportunity to apply fundamental knowledge in phagocyte biology to an area of clinical importance. Compensation includes stipend of \$28,000 to \$32,000 (dependent on experience) and fringe benefits. Send curriculum vitae, summary of research experience and names of three references to: **Drs. Bjornson or Somers, c/o: Division of Immunology, James N. Gamble Institute of Medical Research, 2141 Auburn Avenue, Cincinnati, OH 45219. An Equal Opportunity Employer.**

### POSTDOCTORAL POSITION

Applications are invited for positions in a multidisciplinary research group studying the biogeochemistry of inorganic pollutants in the aquatic environment. Current topics include trace element speciation, exchange processes at the sediment-water interface, metal bioaccumulation by aquatic plants and animals, sulfur cycling. Applicants with a Ph.D. in such fields as analytical chemistry, geochemistry, biochemistry or toxicology should send their curriculum vitae either to: **Drs. P. G. C. Campbell, R. Carignan, L. Hare or A. Tessier, C.P. 7500, Sainte-Foy (Québec), G1V 4C7, Canada.**

## POSITIONS OPEN

### POSTDOCTORAL POSITION MOLECULAR AND POPULATION GENETICS OF PRIMATES

The New York Consortium in Evolutionary Primatology (NYCEP), consisting of 22 faculty from City University of New York, Columbia University, New York University, The American Museum of Natural History (AMNH), and Wildlife Conservation International (NYZS), invites applications to join a team using molecular genetic techniques (including RFLP analysis, PCR amplification and sequencing of DNA) to elucidate (1) the effects of behavior and demography on population structure in primates, and (2) primate phylogeny and systematics. The successful applicant will work primarily with either Dr. Don Melnick (Columbia University) or Dr. Clifford Jolly (New York University), for 1 year starting in 1 July 1992. Applicants should have laboratory experience and the Ph.D. in hand before start date. Salary and benefits are competitive. Please send a preliminary application, including curriculum vitae, a one-page statement of research interests, and names, addresses and telephone numbers of three references, by 1 February 1992 to: **Dr. Eric Delson, Vertebrate Paleontology, AMNH, New York, NY 10024. An Equal Opportunity/Affirmative Action Employer.** (This ad supersedes ads of 6 and 20 December)

**POSTDOCTORAL POSITION** available to use modern techniques in molecular and cellular biology to study the role of cytokines in regulating functions of epithelial cells from the urinary bladder. Salary negotiable, commensurate with experience. Send letter of application, curriculum vitae and two references to: **Dr. Ada Elgavish, Department of Comparative Medicine, University of Alabama at Birmingham School of Medicine, Birmingham, AL 35294. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION.** Available immediately to study signal transduction pathways by which proinflammatory cytokines stimulate hepatic expression of the serum amyloid A gene family during inflammation. Strong background in cell biology, molecular cloning or gene expression desired. Send curriculum vitae and names and telephone numbers of three references to: **Dr. Jean D. Sipe, Department of Biochemistry, Boston University School of Medicine, Boston, MA 02118.**

The University of Alabama at Birmingham invites applications for a **POSTDOCTORAL POSITION** to begin working immediately on project investigating the pathogenesis of pulmonary murine blastomycosis. Current studies are focused upon macrophage-conidia attachment mechanisms and cytokine responses of murine alveolar macrophages. Applicants should be highly motivated, have a strong foundation in basic microbiological, molecular and biochemical techniques. Send current curriculum vitae and names of three references to: **Stephen A. Moser, Ph.D., Department of Pathology, The University of Alabama at Birmingham, Room 565 Lyons Harrison Research Building, University Station, Birmingham, AL 35294-0007. The University of Alabama at Birmingham is an Affirmative Action/Equal Employment Opportunity Employer and especially invites applications from women and minorities.**

**POSTDOCTORAL RESEARCH FELLOW** available immediately for 2 years at \$24,000 per year to study the exchange of biodegradative genes among bacteria in mixed cultures under controlled environmental conditions (reactors). Experience in PCR, recombinant DNA techniques, 16S rRNA analysis and handling microorganisms is highly desirable. Please submit curriculum vitae and three references to: **Dr. Charles Kulpa, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556.**

**POSTDOCTORAL FELLOWSHIPS** in gastroenterological research available for two or more years beginning 1992. Faculty employs multidisciplinary approach using biochemical, cell/molecular biological, immunological, physiological and electrophysiological techniques. Applicant may focus on clinical and/or basic studies. Applicants should have M.D. or Ph.D. degree and must be a U.S. citizen or have permanent visa status. Send curriculum vitae and names of three references to: **N. F. LaRusso, M.D., Program Director, NIH Training Grant, Mayo Clinic, Rochester, MN 55905. Mayo Foundation is an Affirmative Action and Equal Opportunity Educator and Employer.**

## POSITIONS OPEN

**NIH/NRSA POSTDOCTORAL FELLOWSHIP** position available in the Research Medicine/Radiation Biophysics Division, Lawrence Berkeley Laboratory, to investigate the role of calcium precipitates in eschismic heart disease using microscopy, spectroscopy, tracer techniques, and x-ray imaging methods. Require recent M.D. or Ph.D. in physics, electrical engineering, or related field; experience in imaging methods; and U.S. citizenship or permanent resident status. Send curriculum vitae and names/addresses of three references to: **Dr. Thomas F. Budinger, Director, Research Medicine/Radiation Biophysics Division, Lawrence Berkeley Laboratory, M.S. 55-121, Berkeley, CA 94720.**

**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE** in the area of vasopressin receptor, biochemistry and cell biology; the biochemistry and physiology of calcium transport including an examination of the vitamin D-dependent calcium binding proteins, plasma membrane calcium pumps and effects of steroid hormones on cell function. Applicant will gain experience in the areas of fluorescence microscopy, peptide synthesis, molecular biology and protein biochemistry. Send curriculum vitae to: **Dr. R. Kumar, Mayo Clinic Departments of Biochemistry/Molecular Biology and Medicine, 911A Guggenheim Building, Rochester, MN 55905. Mayo Foundation is an Affirmative Action and Equal Opportunity Educator and Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE.** (Short term, immediate opening.) Ongoing project to monitor toxic contaminants (PAH's and BNA's) in river and bay sediments. From 15 February 1992 to 31 July 1992. Experience with GC/MS and/or HPLC desirable. Mail or FAX curriculum vitae, copies of publications, and three letters of recommendation to: **Dr. Peter Fraleigh, Biology Department, The University of Toledo (UT), Toledo, OH 43606, by 31 January 1992. Telephone: 419-537-2126. FAX: 419-537-7737. UT is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL RESEARCH TRAINING FELLOWSHIPS** in endocrinology, metabolism, and diabetes for M.D. or Ph.D. graduates are available at Emory University School of Medicine utilizing eleven training faculty in six basic and clinical departments. *Must be U.S. national or permanent resident.* M.D. applicants must have U.S. residency experience. Send curriculum vitae, statement of research and career objectives, and two letters of reference to: **Lawrence S. Phillips, M.D., Program Director, Emory University School of Medicine, 69 Butler Street, S.E., Atlanta, GA 30303. An Equal Opportunity Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE** position available for recent Ph.D. to study the signal transduction pathways or interference in growth factor responses for interferons in human neoplastic cells that relate to antiproliferative activity. Studies will utilize mutants selected for interferon resistance with aberrant signaling processes, and will additionally determine the mechanism by which interferons potentiate the activity of other cytotoxic agents. Techniques include cell and molecular biology, protein biochemistry, HPLC and cell culture. A strong background in cell biology, molecular biology or biochemistry is required. Send curriculum vitae and three letters of reference to: **Dr. J. A. Houghton, Department of Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. An Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE** positions (two positions, 12-month full time, 1-year duration with possibility of annual renewals) examining chemical carcinogenesis and its inhibition in fish (zebrafish, rainbow trout). Specific areas of research include gene transfer, oncogene and suppressor gene function, tumor histopathology and histochemistry, carcinogen metabolism, mechanisms of cancer inhibition. Applications due 15 February 1992, start date 1 March 1992 or later. Send letter of application and curriculum vitae, and have three letters of reference sent to: **Drs. George Bailey and Jerry Hendricks, Marine/Freshwater Biomedical Center and Department of Food Science and Technology, Wiegand Hall, Oregon State University (OSU), Corvallis, OR 97331. OSU is an Affirmative Action/Equal Opportunity Employer and has a policy of being responsive to the needs of dual-career couples.**

# DEPARTMENT OF BOTANY

## University of British Columbia

The Department of Botany at The University of British Columbia is seeking applications to fill two tenure track positions. The first is in the area of **Departmental Botany**. Preference will be given to individuals employing a variety of approaches (molecular, genetic, cytological) to fundamental problems in plant development. The second is for a **Bryologist, Phycologist or Mycologist** whose research interests emphasize biodiversity, systematics, evolution or evolutionary ecology.

Candidates for these positions must have a Ph.D. degree and published evidence of research ability. The expected date of appointment is **July 1, 1992** (or as negotiated). Application deadline is **February 29, 1992** or until such time as suitable candidates are identified.

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. UBC encourages qualified women and minority applicants. The position is subject to final budgetary approval.

Applicants should send a curriculum vitae, selected reprints, a statement of research interests and have at least three letters of reference sent to:



**Dr. David H. Turpin, Head**  
Department of Botany  
University of British Columbia  
#3529 - 6270 University Blvd.  
Vancouver, B.C. CANADA, V6T 1Z4

The recent opening of the new Glaxo Inc. Girolami Research Institute, located in Research Triangle Park, NC, represents Glaxo's continued commitment to the discovery and development of drugs for unmet patient needs. We invite you to experience the challenges and accomplishments a future with us holds for you. The following opportunity is now available.

## CELL BIOLOGIST/BIOCHEMIST G Proteins

We seek a Cell Biologist/Biochemist with experience in G protein coupled signal transduction. This individual will be part of an interdisciplinary team dedicated to the discovery of novel cancer chemotherapeutic agents. Active collaboration within this research team and with other teams inside and outside the Company is required.

Background must include a Ph.D. or M.D. with a minimum of 3 years relevant post-doctoral experience. Experience in the application of molecular biology to cell biology and biochemistry is desirable.

Join Glaxo and enjoy an excellent salary, flexible benefits, an on-site recreation and fitness center, a spirit of enthusiasm and teamwork and outstanding opportunities for career satisfaction. Equally appealing is our world famous scientific, industrial and academic community in Research Triangle Park, NC. Send your resume, including salary history, to: **Human Resources Department, Job #9125B117-SC, Glaxo Inc., P.O. Box 13398, Research Triangle Park, NC 27709.** (No Phone Calls or Agency Referrals, Please.) An Equal Opportunity Employer M/F/H/V.

# Glaxo Inc.



# Leicester University

## School of Medicine

## PROFESSOR OF ANATOMY

Applications are invited for the vacant Chair of Anatomy tenable in the Department of Anatomy which is a Department in both the Medical School and the School of Biological Sciences. There is a strong preference for candidates with a proven record of original research in the broad field of human neurobiology/neuroscience. The successful candidate will be the Head of the Department of Anatomy which is responsible primarily for the teaching of anatomy to medical students and postgraduates - preparing for the FRCS but also has teaching commitments in the School of Biological Sciences and to students in professions allied to medicine.

The successful candidate will have qualities of academic leadership and a clear vision for research in neurobiology/neuroscience relevant to medical science. The Department of Anatomy is based on the main campus in the Medical Sciences Building adjacent to the new Interdisciplinary Research Centre (IRC) on the Mechanisms of Human Toxicity (which includes the MRC Toxicity Unit) currently under construction and the Adrian Building which houses the School of Biological Sciences. The Chair offers an exciting opportunity to exploit the interface between human neurobiology, molecular biology and the IRC. Salary will be negotiated within the Professorial Range.

Further particulars may be obtained from the Staffing Office (Academic Appointments), University of Leicester, University Road, Leicester LE1 7RH, UK. Telephone: (0533) 522439. UK candidates should submit fifteen copies of their application (overseas candidates may submit one copy). The University FAX number is (0533) 522200.

Closing date for applications is 20 March 1992.



**Saskatchewan Cancer Foundation**  
Saskatoon Cancer Centre  
Saskatoon, Saskatchewan

## CANCER RESEARCH SCIENTIST

The Cancer Research Unit of the Saskatoon Cancer Centre is seeking a research scientist with interest in the cancer field and experience in the area of molecular biology, in particular with respect to gene cloning. The Research Unit currently has six research scientists with interests in the areas of tumor metastasis, tumor markers, anticancer drugs, and signal transduction. The Unit is housed in the Saskatoon Cancer Centre which contains over 1000 m<sup>2</sup> of new laboratory space. Initial operating funds, as well as funds for major equipment and support services, are available. Initial funding for this position is provided by a Terry Fox Regional Development Grant from the National Cancer Institute of Canada. Successful candidates will also receive an appointment at the University of Saskatchewan at a rank commensurate with their level of experience. Candidates with a Ph.D. or M.D. degree and at least two years of postdoctoral training are encouraged to apply by submitting a curriculum vitae, description of research interests and names of three references to: **Dr. S. A. Carlsen, Director of Research, Saskatoon Cancer Centre, 20 Campus Drive, Saskatoon, Saskatchewan, Canada S7N 4H4.** In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

The closing date for this competition is February 28, 1992.

## POSITIONS OPEN



### GRADUATE FELLOWSHIP IN PLANT SCIENCE PHYTOTECHNOLOGY RESEARCH CENTER MICHIGAN TECHNOLOGICAL UNIVERSITY

Applications are invited for graduate fellowship in Phytotechnology Research Center, a program involving chemistry, biological sciences and forestry. The fellowship is funded by the USDA National Needs Program and is restricted to U.S. citizens. Interested students should send GREs, transcripts, three letters of recommendation and statement of purpose to: **Dr. Pushpa Murthy, Chemistry Department, Michigan Technological University (MTU), Houghton, MI 49913. Telephone: 906-487-2094. MTU is an Equal Opportunity Education Institution/Equal Opportunity Employer.**

### GRADUATE FELLOWSHIPS CENTER FOR THE STUDY OF EVOLUTION AND THE ORIGIN OF LIFE (CSEOL) UCLA

From the origin of the cosmos,  
to the beginnings of life,  
to the advent of *Homo sapiens*.

CSEOL invites applications for five graduate fellowships for 1992-93. In addition to support provided Fellows by UCLA departments, CSEOL will grant each fellow a stipend of \$5000 per year, for each of the first 2 years of graduate study, with no teaching or other duties. Fellows are included in a select group of graduate students invited to interact with center faculty in a weekly dinner/seminar/discussion series. Applicants should be planning to carry out doctoral research under the direction of a CSEOL faculty member in a subject area relating to virtually any aspect of evolution—of the cosmos, of the solar system, of Earth, of the environment, of life, of humans. Areas of particular interest for 1992-93 include (1) biochemical evolution and molecular phylogeny; (2) the origin and early history of life; and (3) interrelated environmental-biotic evolution. Faculty are members of the UCLA Departments of Anthropology, Astronomy, Atmospheric Sciences, Biology, Chemistry and Biochemistry, Computer Science, Earth and Space Sciences, Geography, and Microbiology; the School of Medicine; the School of Public Health; the Institute of Geophysics and Planetary Physics; and the Molecular Biology Institute. Fellowship applicants must apply (preferably by 15 January 1992) both to an appropriate academic department and to CSEOL. For application forms and a list of CSEOL members, contact:

**CSEOL Fellows Committee**  
Geology Building, Room 5687  
University of California, Los Angeles  
Los Angeles, CA 90024  
Telephone: 310-825-1170  
FAX: 310-825-0097

**RESEARCH SCIENTIST** is sought for a tenure-track position as **ASSISTANT OR ASSOCIATE PROFESSOR** in the Department of Surgery at the University of Medicine and Dentistry of New Jersey (UMDNJ)—Robert Wood Johnson Medical School. A cell/molecular biologist with an interest in integrins, adhesion molecules and endothelial cell interactions is sought to be Director of a fully equipped laboratory which includes cell sorting flow cytometry. The Department of Surgery consists of more than 30 full-time faculty, of whom 8 are Ph.D.'s. There is the likelihood of collaboration with basic scientists with specific interests in integrins and the extracellular matrix. Salary and benefits are competitive and the basic science resources in a 20 mile radius are outstanding. Qualified applicants should submit curriculum vitae to: **Ralph S. Greco, M.D., Professor and Chief, Division of General Surgery, UMDNJ—Robert Wood Johnson Medical School, CN 19, New Brunswick, NJ 08903-0019. The UMDNJ is an Affirmative Action/Equal Employment Opportunity Employer, M/F/H/V, and a member of the University Health System of New Jersey.**

**University of Medicine and Dentistry of  
New Jersey**

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH FELLOWSHIPS IN ENDOCRINOLOGY

The Endocrine Research Unit, Mayo Clinic, has openings in an NIH-funded postgraduate training program for qualified M.D. and Ph.D. candidates. Twelve NIH-supported faculty are involved in basic studies of several areas, including studies of diabetes with emphasis on metabolism (P. Butler, M. Jensen, J. Miles, R. Rizza, F. Schwenk, and J. Service), bone/calcium metabolism (L. Fitzpatrick and L. Riggs), growth factors (C. Conover), thyroid stimulating hormone (J. Morris), Grave's ophthalmopathy (R. Bahn) and control of gene expression (N. Eberhardt and D. Tindall). The programs provide excellent training experiences in very well equipped laboratories investigating molecular, cellular and organ level endocrinology. NIH stipends are supplemented according to standard Mayo policy. Appointments are made for a minimum 2-year period with maximum support up to 3 years. *Candidates must be U.S. citizens or have resident alien status. Mayo is an Equal Opportunity Employer.* Interested individuals should contact:

**Norman L. Eberhardt, Ph.D.**  
4-407 Alfred  
Mayo Clinic  
Rochester, MN 55905  
Telephone: 507-255-6554



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

### SUPERVISORY MICROBIOLOGIST. Brucellosis Research Unit, National Animal Disease Center, Ames, Iowa.

ARS is seeking a supervisory microbiologist to lead a group of five scientists in research on bovine immune responses to *Brucella abortus*. Candidate must develop a personal research program directed toward humoral or cell-mediated responses of cattle to *Brucella* spp. Position involves the direction of a research team and coordination of plans with molecular biology and pathology units. Knowledge of advanced immunologic techniques, cell culture methods, and identification of pathogenic bacteria are required. Ph.D. and D.V.M. is desirable. *Must be U.S. citizen.* Salary is commensurate with experience (\$46,210 to \$83,502 per annum). For information on the research program and position, contact: **Dr. Norman Cheville, telephone: 515-239-8204.** For information on application procedures/forms, contact: **Janie Carr, telephone: 301-344-1258.** Applications in response to this advertisement should be marked 2N018. Applications must be postmarked by 3 February 1992. Mailing address: **USDA, ARS, Personnel Operations Branch, Room 325, 6305 Ivy Lane, Greenbelt, MD 20770.**

## ATTENTION SCIENCE ADVERTISERS \$40 SPECIAL

Place your classified ad in any January 1992 or February 1992 issue of *SCIENCE* and we'll give you double exposure. We'll display the same position announcement at the **Employment Exchange** during the **AAAS Annual Meeting** for only \$40 more. That's less than the cost of one additional line.

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## POSITIONS OPEN

### CELL AND MOLECULAR BIOLOGY OF AGING

#### POSTDOCTORAL RESEARCH TRAINING

Positions are available for postdoctoral trainees in cell and molecular biology of aging at Baylor College of Medicine. This interdisciplinary program offers traineeships in the laboratories of Drs. Julius Allen, Stanely Appel, Eugene Barnes, Gretchen Darlington, Stephen Elledge, Russell Lebovitz, Dorothy Lewis, Gregory May, Bert O'Malley, Olivia Pereira-Smith, Robert Schwartz, and James Smith. Research emphasis is on alterations in DNA synthesis which occur in aging cells; the regulation of gene transcription and expression in normal and aged cells; the role of calcium in cell proliferation; receptor and ion channel alterations in aging; and the study of genes involved in the genetic program of mortality. *Applicants must be citizens of the United States.* Send curriculum vitae and three reference letters to: **Dr. Gretchen Darlington, Huffington Center on Aging, Room M-320, Baylor College of Medicine, Houston, TX 77030.**

**PROJECT SCIENTIST, BIOMEDICAL ENGINEERING AND APPLIED THERAPEUTICS:** Research and develop techniques related to regulation of human metabolic, immune and biochemical disorders for treatment of related diseases, including blood purification by membrane filtration and sorption. Research and develop techniques for extracorporeal respiratory support, including membrane oxygenation and carbon dioxide removal in blood. Research and develop techniques to separate and differentiate cells from blood and other fluids to diagnose and treat diseases, including targeting cells by paramagnetic markers such as rare earth metal ions, and magnetic separation. Design and perform necessary experiments with biological fluids in vitro, and with animals in vivo. Assist in clinical application of diverse extracorporeal therapeutic techniques such as plasmapheresis, cryofiltration for treatment of arthritis, and artificial lung for extracorporeal respiratory support.

Responsible for in vitro and in vivo research investigations involving separation and transport processes in aqueous media including selective membrane transport of proteins, selective protein sorption, membrane transport of respiratory gases, biochemistry of metal ion reaction with cell and magnetic separation. Serve as adviser to postdoctoral fellows, master of science and senior graduate students concerning separation, transport and chemical processes in blood and other biological fluids. Coordinate research activities with outside contractors and sponsors.

Develop, coordinate and supervise program on novel techniques of cell separation and fractionation for diagnostic and therapeutic applications. Includes: generation of project support by successfully competing for extramural funding, direction and supervision of experimental laboratory work, publication of results in peer-reviewed scientific journals, establishing a collaboration with research and industrial partners, transfer of technology to commercial partners. Take part in development, coordination and supervision of various programs on blood and plasma separation and protein fractionation as applied to clinical therapy. Includes: participating in successful competition for extramural funding, supervision of experimental laboratory work, publication of results in peer-reviewed scientific journals, taking part in collaborative research, and taking part in technology transfer to commercial partners.

Must have Ph.D. in biomedical engineering and/or biophysics engineering, plus 4 years of experience in job offered or as biophysicist or biomedical engineer. Experience must include 4 years of experience in: research in separation of blood and other biological fluids as applied to clinical diagnostics and therapeutics; research and development in experimental separation chambers and in new approaches to cell separation including magnetic separation; research in biochemical and biophysical processes underlying mass transport and chemical reactions in blood; data analysis, writing research proposals, supervising researchers and research technicians, coordinating research with outside contractors and sponsors. Total experience required does not exceed 4 years. Must have published at least three research papers in the subject areas in peer-reviewed scientific journals. Must speak and write English fluently. Forty hours per week, 8 a.m. to 5 p.m.; \$42,921 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé in duplicate (no calls) to: **J. Davies, JO #1206029, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

## THE WISTAR INSTITUTE

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- **Developmental Biology** - The program focuses on the molecular control of mammalian embryogenesis with a thrust on pre- and early post-implantation embryogenesis. We seek expertise in development of the hemopoietic, nervous and cardiovascular systems.
- **Molecular Genetics** - The aim of the program is to understand the mechanisms involved in gene expression, malignancy and tumor progression. We are looking for expertise in genome analysis, in gene transfer and in homologous recombination.
- **Molecular Immunology** - The program conducts research in: the molecular regulation of immune cells, the molecular basis of tolerance and autoimmunity and the molecular basis of B and T cells responses to viruses. We are interested in an investigator working in the field of cell-cell interactions and signalling in the immune system and/or molecular mechanisms of activation of lymphocytes and inflammatory cells.
- **Structural Biology** - The current staff has expertise in the following areas: X-ray, Crystallography, Molecular Modelling, Structure Prediction, Electron-microscopy and Image Processing. We are looking for expertise in NMR.

The Wistar Institute is located on the University of Pennsylvania campus and is equipped with the latest biotechnology support facilities. Send curriculum vitae and the names of three references to:

**Faculty Search Committee**  
**THE WISTAR INSTITUTE**  
**36th & Spruce Streets**  
**Philadelphia, PA 19104**

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## THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

### Professor & Head of Department of Biology

The Hong Kong University of Science & Technology is a newly established university funded by the Hong Kong Government. Enrolment is expected to grow to 10,000 students by the end of this decade.

The Department of Biology provides undergraduate and post-graduate education (including Ph.D.) in a wide range of biological sciences, with special research emphasis on molecular genetics, cell biology, developmental biology and neurobiology. The Department is also closely associated with an on-campus Biotechnology Research Institute, which is actively engaged in (1) Genetic engineering & molecular pharmacology, (2) Molecular immunology, (3) Biomedical instrumentation & modeling, and (4) Industrial and agricultural bioengineering.

The Department is equipped with modern biological research facilities. The salary scale is highly competitive in comparison with most North American universities, with generous fringe and housing benefits.

The University is searching for an accomplished scientist to fill the position of Head and Professor for the Department of Biology. Candidates should have extensive teaching and research experience. Besides being a recognised scholar, the selected Head should also possess personal qualities that would enable him/her to interact well with others and to successfully lead the Department in its multifaceted functions.

Please send all nominations and applications to the Chairman of Search Committee, Prof. Nelson Cue, Hong Kong University of Science & Technology, Clear Water Bay, Kowloon, Hong Kong (Tel No. 852-358-7506, Fax No. 852-358-1652) before **March 1, 1992**.

## TWO SENIOR SCIENTISTS

**Immunomedics, Inc.**, a biopharmaceutical company using monoclonal antibodies for imaging and therapy of cancers and infectious diseases, has immediate openings in our R&D department. Each position requires creative and independently working individuals.

**Ph.D. Chemist/Radiochemist** to join our development group for monoclonal antibody conjugates. We require a highly self-motivated individual who would enjoy the challenge and reward of developing agents from conception through clinical evaluation. The ideal candidate would also have experience in technetium chemistry.

**M.S./Ph.D. Scientist** with 2-5 years experience in protein isolation, purification and characterization. We are especially interested in candidates with working knowledge of monoclonal antibody technology and an immunology background.

Send resume and job history to:  
**Immunomedics, Inc.**  
**Human Resource Department**  
**150 Mt. Bethel Road**  
**Warren, NJ 07059**

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At the American Association for the Advancement of Science we're investing in our future with Project 2061.

This national program, sponsored by the AAAS, is designed as a blueprint for science education. Project 2061 is based on the premise

that students learn best when connections are made between fundamental scientific theories and real-life applications. From rural Georgia to San Francisco; from Philadelphia to suburban Wisconsin, the AAAS is working with teachers to design the science curriculum of the future.

Although just a beginning, AAAS and its members are

not only dedicated to the advancement of science today, but through Project 2061 and other educational programs, to the continual advancement of science in years to come.



**AMERICAN ASSOCIATION FOR  
THE ADVANCEMENT OF SCIENCE**

MacroNex, a newly-emerging drug discovery and research company located in the Research Triangle area of North Carolina, is positioning itself to be a world leader in developing human therapeutics based on the physiological regulation of macrophages. We currently have openings available for the following key professionals.

#### MACROPHAGE BIOLOGISTS

Successful candidates will have a Ph.D. Degree with a minimum of 3+ years experience in cell biology, immunology or a related area. Experience in bioassays for monocyte/macrophage function is required; experience in immunoassay development and the measurement of cytokines is desired. We seek energetic, highly-motivated individuals who possess excellent interpersonal skills. Selected individuals will be part of a team of 3-5 scientists. Refer to Job # 105 on all resumes.

#### CELL/MOLECULAR BIOLOGIST

The successful candidate will have a Ph.D. Degree with a minimum of 3+ years experience in cell or molecular biology or a related area. Experience in working with monocytes/macrophages of human or murine origin is required; experience in the study of receptor coupling and gene activation is highly desired. Preference will be given to candidates experienced in molecular biology techniques, particularly the isolation of RNA and Northern blotting. Refer to Job # 103 on all resumes.

We offer competitive salaries and benefits including employee stock participation. Candidates interested in either of the above positions should send their resume, indicating the corresponding Job #, and CV with names, addresses and phone numbers of three references, to: MacroNex, Inc., Suite 700, 120 Southcenter Court, Morrisville, NC 27560.

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## POSTDOCTORAL SCIENTISTS

Stratacyte is looking for exceptional postdoctoral candidates. Research experience required in Molecular Biology especially with bacteriophage vectors, PCR strategies, and DNA library cloning. Preference will be given to innovative individuals that also have some expertise in protein structure and/or immunology. The research area is the use of cutting edge molecular biology techniques in immunology leading to human therapeutic applications (see *Science* **246**, 1275-1281 (1989); and *Proc. Natl. Acad. Sci. (USA)* **87**, 8055-8099 (1990)). Publication in referred journals and attendance at national scientific meetings will be strongly encouraged. This position offers a very competitive industrial postdoctoral salary and may lead to a full Staff Scientist position. Stratacyte offers an attractive and stimulating work environment. All qualified candidates please forward curriculum vitae to:

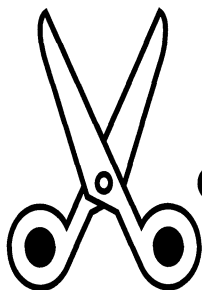


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## POSITIONS OPEN

### SCIENTIST

Scientist for national public-interest group to work on food safety issues. Related Ph.D. and advocacy experience preferred. Salary range: \$33,000 to \$40,000. *Non-smoking office.* Send résumé, salary history, writing samples to: J. Douglas, CSPI, 1875 Connecticut Avenue, N.W., #300, Washington, DC 20009.

**SENIOR RESEARCH CHEMIST/RESEARCH CHEMIST.** Princeton University's Department of Chemistry welcomes applications to develop and lead a research program in global and regional environmental impacts of industrial chemicals and processes. Focus is on sources, accumulation, transport and effects of toxic materials, interactions with natural and anthropogenic chemical cycles, and strategies for management. Research will be conducted in conjunction with the Center for Energy and Environmental Studies. Candidate must have a Ph.D. in chemistry or related field, an established track record of outstanding research in the areas of focus and demonstrated success in obtaining research funding. Salary and rank commensurate with experience and background. Please submit curriculum vitae and three letters of recommendation to:

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Eugene Higgins Professor of Chemistry  
c/o Nancy Duprey Kochler  
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**RESEARCH ASSOCIATE** for university in central Ohio. Undertakes research in experimental high-energy particle physics; participates in experiments in Charm and Beauty production using a hybrid emulsion spectrometer system; develops dependable codes for extracting interesting physics from the data on detector hardware and software systems; develops, modifies and maintains data analysis and database systems for experimental projects; develops Monte Carlo simulations to determine efficiencies of the apparatus and consistency of results; liaises between U.S. counter and Japanese emulsion physicists; supervises graduate students; helps prepare papers for publication in research journals; two short trips monthly to national research laboratory in Chicago. No experience required in the duties described but applicants will qualify with the following: Ph.D. in physics and 2 years of research experience in high-energy physics with detector hardware, data acquisition, data analysis and computer simulation. Forty hours per week, 8 a.m. to 5 p.m., Monday to Friday. Salary: \$33,000 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumés in duplicate (no calls) to: G. Maugans, JO#1260339, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.

### REGULATORY AFFAIRS PROFESSIONAL

Participate in intensive studies pertaining to food, drug and device laws, submissions to regulatory agencies, clinical trials, review of labeling and advertising requirements, and FDA audit/inspections; participate in corporate inspection teams, serving as liaison with personnel of the Food and Drug Administration when they visit company facilities; participate in regulatory audits of manufacturing and research and development facilities, with emphasis on new product development; participate in the submission of applications to the Food and Drug Administration or similar foreign governmental agencies for approval or similar foreign governmental agencies for approval of new medical products.

Applicants should possess Ph.D. degree in biomedical engineering. Graduate-level coursework must include at least one (1) course in each of the following subjects: (1) physiology; (2) biomedical computing; (3) digital controls. Ph.D.-level research must include mathematical modeling and simulation of the neural control of the cardiovascular system and the spectral analysis of heart rate variability.

Forty hours per week; 9:00 a.m. to 5:00 p.m.; \$45,000 per year. *Must have proof of legal authority to work permanently in the United States.*

Send résumé to: Illinois Department of Employment Security, 401 South State Street, 3 South, Chicago, IL 60605. Attention: Maxine Counts. Reference # V-IL 4763C. No calls. An employer-paid ad.

## COURSES AND TRAINING

**TOXICOLOGY TRAINING** at The University of Michigan. Pre- and postdoctoral traineeships in reproductive, developmental, endocrine, metabolic, genetic, pesticide, and neurological toxicology. *Applicants must be U.S. citizens or permanent residents.* Contact: Walter N. Piper, Ph.D., Professor and Director, Toxicology Program, Department of Environmental and Industrial Health, School of Public Health, M6242A, The University of Michigan, Ann Arbor, MI 48109-2029. Telephone: 313-764-5410.

### CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain the Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education and research. Contact: Dr. D. Chauncey, Program Director, Accelerated Program, The New England College of Optometry, Room S, 424 Beacon Street, Boston, MA 02115.

## ANNOUNCEMENTS

### GRADUATE PROGRAM IN PHARMACOLOGY

The Department of Pharmacology at Wayne State University School of Medicine currently has 18 faculty with interests covering all traditional areas of pharmacology, toxicology and cancer biology. Recent appointments have expanded research in the areas of neuroscience and molecular biology. The Ph.D. program offers broad-based training to individuals who want to pursue careers in modern pharmacology in academic, industrial, or governmental institutions. The primary research areas include biochemical and molecular pharmacology, cancer biology, cardiovascular pharmacology, drug metabolism and environmental toxicology, neuropharmacology, and renal/urinary tract pharmacology.

The program fosters innovative basic research in all of the above areas. Qualified individuals will receive competitive stipends and full tuition support. *Applications from qualified minority and women are encouraged.* For further information contact: Dr. Lawrence H. Lash, Graduate Admissions Director, Department of Pharmacology, Wayne State University School of Medicine, 540 East Canfield Avenue, Detroit, MI 48201.

### RESEARCH GRANTS

As part of its efforts to encourage the utilization of alternatives to traditional uses of laboratory animals, The Demeter Fund is soliciting research proposals to develop such methods. Funding up to \$40,000 each is available to support individual projects at U.S. universities and research institutions. Special attention will be given to proposals which focus on the production of monoclonal antibodies through in vitro systems. Deadline for applications is 30 April 1992, with recipients announced on 15 July 1992. For further information and application instructions contact (mail or FAX only): The Demeter Fund, Suite 204 Noble Plaza, 801 Old York Road, Jenkintown, PA 19046-1685. FAX: 215-887-2088.

### GRADUATE PROGRAM IN CANCER BIOLOGY

The Meyer L. Prentiss Comprehensive Cancer Center of Detroit and Wayne State University have established a Graduate Program in Cancer Biology which includes more than 35 faculty from Wayne State University and the Michigan Cancer Foundation. The program offers a broadly based, multidisciplinary curriculum directed to the training of individuals who want to pursue careers in cancer research. The primary research areas include: molecular oncology, carcinogenesis, developmental therapeutics, tumor metastasis, cancer immunology, and breast cancer. The program fosters innovative, interdisciplinary basic research in all of the above areas. Qualified individuals will receive competitive stipends and full tuition support. Postdoctoral fellowships are also available in the above areas with participating faculty. *Minorities and women are encouraged to apply.* For further information contact: Dr. Paul F. Hollenberg, Director, Graduate Program in Cancer Biology, Department of Pharmacology, Wayne State University School of Medicine, 540 East Canfield Avenue, Detroit, MI 48201.

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## POSITIONS OPEN

**STAFF RESEARCH ASSOCIATE, STEP IV.** Conduct studies on the mechanisms of "molecular mimicry" involving the role of mycobacterial heat shock proteins in the initiation of the autoimmune process. Must have a Ph.D. in immunology; 3 years in the job offered or 3 years of experience as a biomedical researcher in cellular immunology; experience with both animal and human tissue antibody-forming cell culture; experience producing T-cell hybridomas and clones; knowledge of autoimmune diseases, especially tuberculosis or leprosy; must be proficient in SDS-PAGE gels, Western blotting, culture of mycobacteria, limiting dilution analysis, and FACS staining; must have in vivo experimental experience; must have completed graduate-level coursework in parasitology, virology, chemical pathology, hematology, infectious disease epidemiology and treatment. Salary: \$34,300 per year. Place of employment and interview: Los Angeles, California. Send ad with résumé to: Job #CR4525, P.O. Box 9560, Sacramento, CA 95823-0560 no later than 25 January 1992.

## MEETINGS

### OCCUPATIONAL HEALTH RISK ASSESSMENT

**DIRECTIONS FOR THE 90'S. 27 TO 29 MAY 1992, BOSTON.** Symposium sessions: current applications of risk assessment for occupational health; the use of scientific approaches and policy implications for risk assessment, hazard management and communication. Sponsors: Harvard Occupational Health Program and NIOSH. Cosponsors: American Industrial Health Council, Exxon, Harvard Center for Risk Analysis, NIEHS. Contact: Etta Baurhenn, telephone: 617-432-1262.

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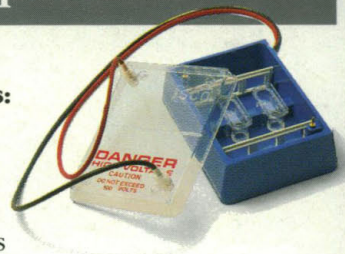
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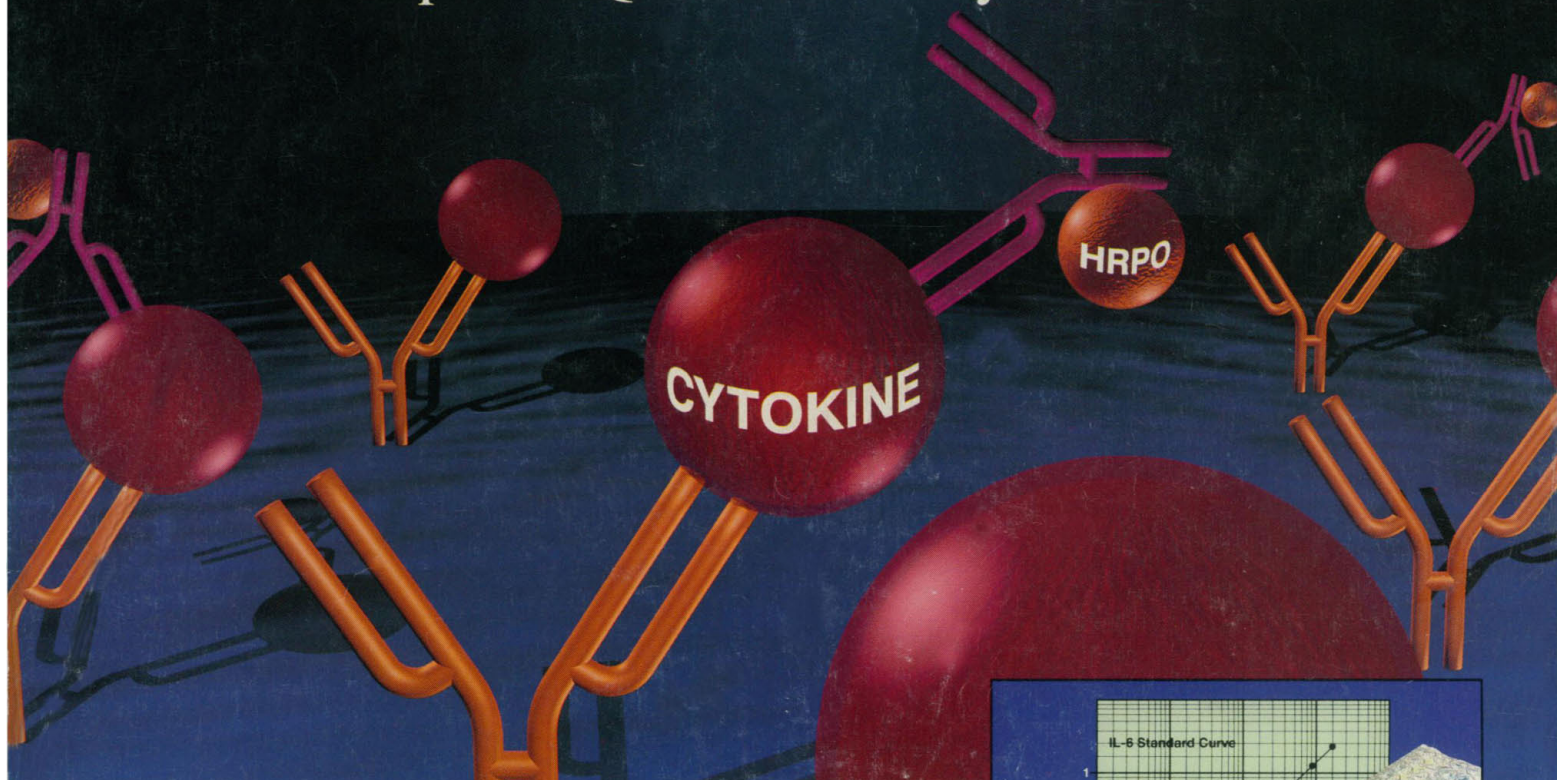
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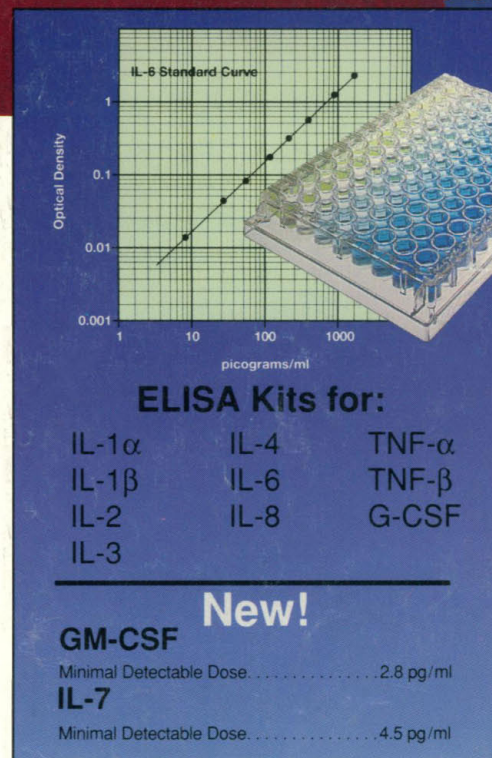
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