

## Products & Materials

### Drug Discovery Software

Catalyst is a drug discovery software system that enables medicinal chemists to design realistic new molecules interactively; construct, test, and refine hypotheses that explain and predict their bioactivity; search databases for additional leads; and organize the molecules, hypotheses, and databases for easy exploration. Catalyst is available on the Silicon Graphics Indigo personal computer. It requires 32 megabytes of random access memory and 432 megabytes of disk space. BioCAD Corp. Circle 362.

### Monoclonal Antibodies

A monoclonal antibody (MAb) to rat antimurine IL-6 receptor is available. Innogenetics. Circle 363.

A rat-specific blood-brain barrier MAb works on frozen and de-paraffinized sections and is specific for an endothelial protein found only in areas with blood-brain or blood-nerve barriers. Reactivity with this MAb disappears in lesions of experimental allergic encephalomyelitis. Affiniti Research Products Ltd. Circle 364.

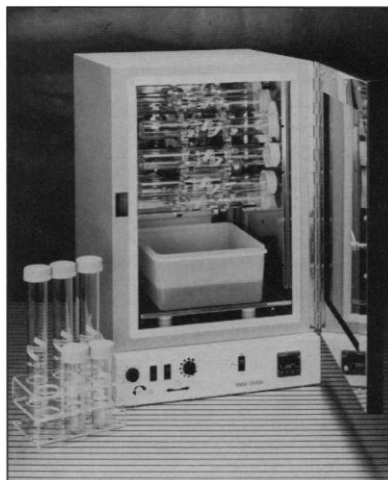
### DNA Fingerprinting Agarose

I.D.NA agarose, designed for DNA fingerprinting, provides the lot-to-lot consistency needed to establish clear DNA banding patterns. FMC Corp. Circle 365.

### Hybridization System

The Maxi Oven has a variable speed rotisserie with a 12-bottle capacity. The rotisserie unit ensures constant and even exposure of blots to a thin layer of moving probe solution, resulting in sharp bands and lower backgrounds. The shaking platform at the base of the oven can be operated at variable speeds up to 180 rotations per minute, with a choice of two modes: linear (side to side)

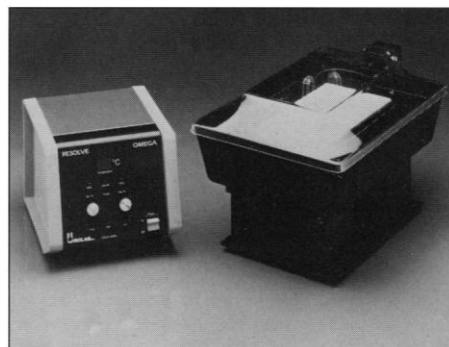
Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement 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.



for blot washing and orbital for gel treatments. The oven can also be used as a static incubator for in situ hybridization, growing colonies on agar plates, and transformation experiments. A platinum temperature sensor within a fan-assisted oven ensures temperature uniformity of  $\pm 0.25^\circ\text{C}$ . Hybaid Ltd. Circle 366.

### Electrophoresis Unit

The RESOLVE Omega horizontal electrophoresis unit can be used for any electrophoretic procedure using film-backed layer gels (such as zone electrophoresis in agar-



ose, isoelectric focusing, polyacrylamide horizontal gradient gels, or immunoelectrophoresis). The unit has a thermoelectric support plate to cool the gel during electrophoresis or to heat the gel for enzyme visualization, incubation, or drying. The acrylic lid has movable electrodes that adjust from 40 to 120 mm to accommodate a wide range of gel sizes. Isolab. Circle 367.

### Amniotic Cell Medium

AmnioMAX-C100 Medium is designed for in vitro propagation of primary cultures of human amniotic fluid cells, which are used in the study of chromosome abnormalities. It allows maximum growth rates of amniocytes along with an increased meta-

phase yield. It is a basal medium with only one premeasured supplement added before use. Each lot is qualified for use on primary amniotic fluid isolates by a 6-day colony assay by a commercial cytogenetic reference lab. Gibco BRL. Circle 368.

### Nucleic Acid Blotting Membranes

Zeta-Probe GT membranes are designed to bring consistency to nucleic acid hybridization. To ensure consistency, each lot is tested using human genomic DNA as a hybridization target and a single-copy gene as a probe. The membranes give a strong signal with no membrane background. Bio-Rad Laboratories. Circle 369.

### Video Documentation System

The VDS6000 video documentation system produces full-color images from a wide range of gels or plates. A color thermal print can be generated in 80 s. Thermal images are printed on special paper and will not fade or degrade with time. The system consists of a charge-coupled device color camera with its own power supply, 8.5-mm lens and stand, color monitor, and color thermal printer. Options include a transilluminator, a white light box, an ultraviolet viewing cabinet, and an overhead lighting system. Ultra-Violet Products. Circle 370.

### Literature

*Systems for GPC Clean-up* describes equipment for sample preparation in gel permeation chromatography. ABC Laboratories. Circle 371.

*High Performance Columns for Affinity Chromatography* describes a line of columns developed for the selective purification of peptides, proteins, and nucleic acids. TosoHaas. Circle 372.

*ATCC Microbes and Cells at Work* is an index of special applications for the microorganisms, cell lines, recombinant DNA materials, and viruses in a vast collection of cultures. A printed book and an electronic version for personal computers are available. American Type Culture Collection. Circle 373.

*The Most Powerful Tool for Kjeldahl Analysis* is a brochure on an autosampler system. Tecator. Circle 374.

*Spectrophotometer Cells* is a new catalog listing more than 300 different types of cells. NSG Precision Cells. Circle 375.

# Science

## PERSONNEL PLACEMENT

### LINE CLASSIFIED ADVERTISEMENTS

➤ **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.

➤ **How to Submit a Classified Ad:** Prepare double-spaced typewritten copy. Do not include any abbreviations. *Science* will edit and typeset ads according to *Science* guidelines. Deadline for applications stated in ad must be at least 2 weeks after date of publication. Include billing information, and desired publication date. Available categories: Positions Open, Meetings, Announcements, Courses and Training.

➤ **Mail or FAX materials to:**  
Science Classified Advertising  
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.

➤ **Credit Cards:** *Science* accepts MasterCard and VISA. Discount does not apply to credit cards.

➤ **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

### ASSISTANT PROFESSOR UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE DEPARTMENT OF ANATOMY AND PENNSYLVANIA MUSCLE INSTITUTE

A tenure-track assistant professor position is being jointly offered by the Pennsylvania Muscle Institute and the Department of Anatomy of the University of Pennsylvania School of Medicine. The successful candidate will be expected to establish an extramurally funded research program using a molecular biological approach to study either gene regulation in muscle (preferred emphasis on development) or contractile protein structure/function relationships. The position will also involve the teaching of medical students (e.g., cell and tissue biology), and participation in the training of graduate students and postdoctoral fellows.

Application deadline is 1 April 1992. Send curriculum vitae and three letters of recommendation to: **Search Committee, c/o Dr. Yale Goldman, Director, Pennsylvania Muscle Institute, University of Pennsylvania School of Medicine, 37th and Hamilton Walk, Philadelphia, PA 19104-6085.**

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

**BACTERIOLOGY/ENVIRONMENTAL MICROBIOLOGY.** University of Central Oklahoma. **ASSISTANT PROFESSOR.** Full-time appointment effective 24 August 1992. Requires Ph.D. in microbiology or related field. Previous higher education teaching experience preferred. Demonstrated commitment to teaching excellence expected. Develop active research program in ecological or environmental microbiology; direct master's research. Teach introductory microbiology, nonmajors general biology and courses in areas of specialization. Salary commensurate with experience and qualifications. Submit application letter, résumé, official transcripts and three letters of recommendation to: **Dr. G. Kay Owens, Dean, College of Math and Science, University of Central Oklahoma, Edmond, OK 73034.** Application deadline: 1 April 1992. *Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR:** Requires Ph.D. in biochemistry or molecular biology plus 3 years of research experience in cloning and gene expression in mammalian systems and knowledge of all aspects of molecular biology as it relates to the control of smooth muscle uterine function. Participate in ongoing studies of control of uterine function. Initiate and carry out detailed molecular analyses of regulation of major proteins involved in contractility by myometrial cells. Conduct and teach studies for a full comprehension of the events which underly term and preterm labor. Salary range: \$35,000 to \$40,000 annually. Interested applicants please send résumé to: **The Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. #6687319** or apply in person at the **Texas Employment Commission, Galveston, Texas.** *Ad paid by an Equal Employment Opportunity Employer.*

### ASSISTANT PROFESSOR PHYSIOLOGY

Applications are invited for a tenure-track position in the Department of Physiology at the University of New England. Prerequisites include a doctoral degree, at least 2 years of postdoctoral training (preferably in the areas of reproductive, endocrine, or gastrointestinal physiology), and documented evidence of excellence in teaching at the graduate and/or medical school level. The successful applicant will be responsible for instruction in the College of Osteopathic Medicine and M.S. nurse anesthesia programs, and will be expected to pursue an active research program supported by extramural funding. Please submit curriculum vitae, a detailed statement of teaching interests and experience, and the names of three references to:

**James M. Norton, Ph.D.**  
Chairperson, Department of Physiology  
University of New England  
College of Osteopathic Medicine  
11 Hills Beach Road  
Biddeford, ME 04005

*The University of New England is an Affirmative Action/Equal Opportunity Employer and encourages female and minority candidacies.*

## POSITIONS OPEN

**FACULTY POSITION** in microbiology. The Department of Microbiology, Immunology and Parasitology (MIP) at the Louisiana State University (LSU) Medical Center has a tenure-track position available at the **ASSISTANT PROFESSOR** level. Minimum qualifications include a Ph.D. degree, 2 years of postdoctoral experience, and evidence of significant research accomplishments. We seek an individual who will establish a funded research program and participate in departmental teaching of professional and graduate students. The department is housed in modern, well-equipped facilities conveniently located in downtown New Orleans, Louisiana. Applicants should submit curriculum vitae, brief description of their research plans, and three references to: **Dr. Ronald B. Luftig, Head, Department of MIP, LSU Medical Center, 1901 Perdido Street, New Orleans, LA 70112-1393.** *LSU is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

### ASSISTANT PROFESSOR MOLECULAR MODELING BIOMEDICINAL CHEMISTRY

The Biomedical Chemistry Department at the University of Maryland at Baltimore (UMAB) announces the availability of a **TENURE-TRACK POSITION** at the assistant professor level. Candidates should have research interests in the area of molecular modeling, drug design and/or computational chemistry. Relevant Ph.D. and postdoctoral research training is required. Applications should include complete curriculum vitae, a summary of research plans, areas of teaching interest, and three letters of reference, and should be sent to: **Dr. Patrick Callery, School of Pharmacy, University of Maryland at Baltimore, 20 North Pine Street, Baltimore, MD 21201.** *UMAB is an Equal Opportunity/Affirmative Action Employer.*

### STRUCTURAL BOTANIST—HAWAII

Developmental or functional anatomist/morphologist. **ASSISTANT PROFESSOR**, nontenure track, but renewable annually, to begin approximately 1 August 1992. Duties include teaching plant anatomy, a graduate course in area of specialty, participation in a plant diversity course, and developing an active research program. Minimum qualifications: Ph.D. in botany or related field with dissertation and research concentration on plants, evidence of research/scholarly achievement, and teaching experience. Preference will be given to candidates with a commitment to research on tropical/Hawaiian plants and the ability to teach transmission electron microscopy. Minimum annual salary: \$34,644. Submit curriculum vitae, brief statement of research interests, and names and addresses of three references to: **Chairman, Department of Botany, University of Hawaii, 3190 Maile Way, Honolulu, HI 96822.** Closing date for receipt of applications: 24 March 1992. Inquiries accepted by FAX: 808-956-3923. *An Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR, VITICULTURE.

The Department of Horticulture, Oregon State University, will have a 12-month, tenure-track position in wine grape research (70%) and extension (30%) available 1 September 1992. The successful candidate will develop a research program on the physiology of high-quality wine grape production. The candidate must have the ability to direct graduate students and research assistants; cooperate effectively with collaborators in other disciplines; train, motivate, and assist extension agents in implementing effective educational programs; and keep abreast of scientific and industry trends worldwide and communicate these to the Oregon wine industry. Applicant must have a Ph.D. in horticulture, viticulture, botany, or closely related field with experience or interest in viticulture, and competence in written and oral communication. Applicants must submit an application form, statement of interest, curriculum vitae, transcripts, and three letters of reference. For application forms or additional information, call or write: **Dr. Patrick J. Breen, Department of Horticulture, Oregon State University, 2042 Cordley Hall, Corvallis, OR 97331-2911** (telephone: 503-737-3695), or **Dr. Delbert D. Hemphill, Jr., Screening Committee Chair, North Willamette R&E Center, 15210 N.E. Mile Road, Aurora, OR 97002-9543** (telephone: 503-678-1264). Application deadline: 1 May 1992. *Oregon State University is an Equal Opportunity/Affirmative Action Employer.*

# Research Opportunities in Japan



Promising new researchers may win fellowships for visits to Japan of six months to two years. The fellowships, which support both American and Canadian researchers at Japan's national laboratories and certain non-profit R&D institutes, are provided by the Research Development Corporation of Japan (JRDC).

To qualify, researchers should hold a recent doctoral degree in a field of science or engineering. In the fields of engineering, candidates without the doctorate will be considered if they can demonstrate equivalent professional experience.

The STA fellowships provide the following allowances (in Japanese yen):

Round-trip, economy-class air transportation (for the researcher only, not for dependents)	one ticket
International relocation allowance	¥200,000
Monthly living allowance	270,000
Monthly housing allowance up to	100,000
Monthly family allowance	50,000
Annual travel allowance in Japan	115,000

In all, more than 100 Japanese government research institutions are potential hosts for STA postdoctoral fellows. They include such well known laboratories as the Institute of Physical and Chemical Research (RIKEN), Electrotechnical Laboratory, National Institute for Environmental Studies, National Institute of Health, Mechanical Engineering Laboratory, National Institute of Agrobiological Resources, Communications Research Laboratory, and the National Research Institute for Metals.

Potential candidates are responsible for finding the Japanese research institute which will best match their field of professional interest. Each applicant should begin correspondence with his or her prospective Japanese host well before submitting a proposal.

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## In the United States

To obtain an application, United States citizens, nationals, or permanent residents should request NSF publication 90-144, *Japan Program Announcement*, from the following address:

Forms and Publications Unit, Room 232  
National Science Foundation  
Washington, D.C. 20550

Publications may also be ordered electronically through either Internet (**pubs@nsf.gov**) or BitNet (**pubs@NSF**). Please include the NSF publication number and title, number of copies needed, your name, and a complete mailing address.

The NSF application deadline is November 1, 1992, for positions starting in April 1993 or after. In addition, there are opportunities for individuals wishing to start sooner. Further information is available from the following address:

Japan Program, Room V-501  
National Science Foundation  
Washington, D.C. 20550  
or, by electronic mail:  
**NSFJinfo@nsf.gov** (Internet) or  
**NSFJinfo@NSF** (BitNet)

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## In Canada

For further information, Canadian candidates may contact the following:

Ms. Dawn Conway  
Director, International Programs  
Natural Sciences and Engineering Research  
Council of Canada  
200 Kent Street  
Ottawa, Ontario  
K1A 1H5  
Canada

Tel: (613) 995-1818  
Fax: (613) 992-5337

## POSTDOCTORAL RESEARCH POSITIONS

Four postdoctoral positions available in connective tissue research group. Investigate molecular biology of extracellular matrix genes and structure and function of connective tissue proteins using biochemical, biophysical chemical, immunochemical and molecular biology techniques.

Apply To:

Hans Peter Bächinger, Ph.D.: Procollagen biosynthesis, thermal stability and folding of proteins and peptides and protein-protein interactions.

Kurt J. Doege, Ph.D.: Recombinant expression, mutagenesis and functional analysis of the cartilage proteoglycan, aggrecan, and other cartilage matrix proteins.

Nicholas Morris, Ph.D.: Characterization of the collagen/proteoglycan hybrid molecule, collagen type XII: tissue specific structure, glycosaminoglycan attachment, ultrastructural localization.

Lynn Y. Sakai, Ph.D.: Assembly and functional of fibrillin microfibrils; characterization of other novel connective tissue proteins.

**NO PHONE INQUIRIES, PLEASE!**

**Direct CV with three professional references to:**

**Barbara Nagle**

**SHRINERS HOSPITAL FOR CRIPPLED CHILDREN**  
and

**Department of Biochemistry and Molecular Biology**  
**Oregon Health Sciences University**  
**3101 SW Sam Jackson Park Road**  
**Portland, OR 97201**

*Shriners Hospital maintains a drug/alcohol-free workplace.  
Equal opportunity employer.*



**WEST VIRGINIA UNIVERSITY**  
**HEALTH SCIENCES CENTER**  
**School of Medicine**  
**PET Center**

The WVU School of Medicine invites applications for the staffing of its new PET Center expected to open in 1993. Openings exist for a **Center Director** and several other members of the professional staff (e.g., Radiochemists, Radiophysicists). The Director, who will report to the Dean of the School of Medicine, should hold an M.D., Ph.D., or equivalent degree and must have experience with PET technology, particularly its research applications. The other members of the professional staff will be selected by the Director to complement his or her own expertise. In each case, salary and level of academic appointment will be commensurate with experience. We expect to appoint the Director approximately one year before opening the Center to provide him or her with the opportunity of participating in the planning process.

This search will remain active until the positions are filled, and thus there are no formal application deadlines. However, those applications received by April 15, 1992 will be assured of consideration during the first cycle of review. Applicants should send a Curriculum Vitae, a summary of professional goals, and the names of three references to:

**George A. Hedge, Ph.D.**

**Chairman, PET Center Search Committee**  
**Associate Dean for Research and Graduate Studies,**  
**and E.J. Van Liere Professor**  
**West Virginia University School of Medicine**  
**2267 Health Sciences South**  
**Morgantown, WV 26506**

*An Equal Opportunity/Affirmative Action Employer*

### 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.

**POST-DOCTORAL RESEARCH ASSOCIATE (JOB #0309-SB)** - A post-doctoral position is immediately available to investigate methods for gene isolation from maize. Training in plant genetics and plant molecular biology will be provided. Strategies that combine recent advances in molecular technologies with the unique genetic tools available in maize will be developed and implemented. This position will be part of a successful maize gene isolation program and is encouraged to collaborate with other group members in the isolation and characterization of additional genes. **EDUCATION/EXPERIENCE:** PhD in molecular biology or biochemistry is required.

**RESEARCH ASSOCIATE, PROTEIN BIOCHEMISTRY (JOB #1356)** - A research associate position is immediately available in protein biochemistry with special emphasis in the area of peptide synthesis and characterization. **EDUCATION/EXPERIENCE:** BS degree or equivalent in biochemistry or organic chemistry plus 3 years directly related lab experience including 1 year of lab experience in the biochemical characterization of proteins with chromatographic and electrophoretic techniques. Experience in peptide chemistry is preferred.

**RESEARCH ASSOCIATE, MOLECULAR ENTOMOLOGY (JOB #2353)** - This position will be part of a successful multi-disciplined research group involved in the development of insect resistance. Extensive collaboration with other groups will be required to identify potential material and determine the effect on target insects. **EDUCATION/EXPERIENCE:** MS degree or equivalent in entomology, biochemistry, or biology with excellent knowledge of insect physiology, biochemistry and host-plant resistance plus 3 or more years of directly related experience. Experience with insect dissections, computer, and statistics are essential.

Applications received by March 27, 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 and indicate in your correspondence the JOB #, the names, addresses and telephone numbers of three references to:



**PIONEER HI-BRED INTERNATIONAL, INC.**  
Plant Breeding Division  
Department of Biotechnology Research  
Attn: Amy LaMotte JOB # \_\_\_\_\_  
P.O. Box 1004  
Johnston, IA 50131-1004

**ESCA GENETICS CORPORATION**, a public San Francisco Bay Area biotech company, is applying biotechnology to develop improved food crops, planting materials, natural flavorings and food ingredients for the food processing industry. The following outstanding opportunity is immediately available:

### SR. POTATO BREEDER

Join an interdisciplinary group working on the development and worldwide commercialization of True Potato Seed (TPS) hybrids in this senior level position. Responsibilities include breeding and TPS hybrid development with major emphasis on agronomics and production of TPS hybrids and their parental lines. A Ph.D. in Plant Breeding and 5+ years recent experience in potato breeding are required, as well as the requisite technical expertise to achieve superior independent results and the ability to effectively participate as a team member. The ability to function professionally in various parts of the world is also important.

*Occasional foreign travel will be required; fluency in Spanish is a plus.*

ESCAgenetics offers an excellent compensation and benefits package. For immediate consideration, send resume to: Personnel, ESCAgenetics Corporation, 830 Bransten Road, San Carlos, CA 94070.



**ESCA GENETICS**  
CORPORATION



# 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.

## **Adipocyte Biology** **Constantine Londos, PhD**

Adipocyte development and the regulation of lipid metabolism in normal and pathophysiological states are being studied. Hormone signaling, enzyme trafficking, lipid deposition/removal, and the regulation and function of novel proteins unique to the lipid storage droplet are being investigated. Background in biochemistry and molecular biology is desirable. Laboratory of Cellular and Developmental Biology (OE-7), NIDDK, Building 6, Room B1-15.

## **Cellular and Molecular Biology** **Thomas Y. Shih, PhD**

Oncogene and proto-oncogene functions are being studied in order to understand their roles in cell signaling. Current efforts are directed toward determining Ras-mediated signaling pathways using dominant negative *ras* mutants. Laboratory of Molecular Oncology (OE-7), NCI-FCRDC, Building 469, Frederick, MD 21702-1201.

## **Molecular Therapeutics** **Darrell T. Liu, PhD**

Interdisciplinary research programs in the areas of molecular, developmental and cell biology, molecular pharmacology, immunology, biophysics, and biochemistry are being conducted. These studies support fulfillment of our regulatory responsibilities in the areas of somatic cell/gene therapies and monoclonal antibodies. Division of Biochemistry and Biophysics (OE-7), CBER/FDA MO48, Building 29, Room 104, 8800 Rockville Pike, Bethesda, MD 20892.

## **Molecular Neuroendocrinology** **Sevilla D. Detera-Wadleigh, PhD**

The transcriptional regulation, evolution and neurogenetics of members of the steroid receptor superfamily are being investigated. Recent doctoral degree recipients and more experienced scientists, with an interest in molecular biology, are invited to apply for this position. Clinical Neurogenetics Branch (OE-7), NIMH, Building 10, Room 3N218.

## **Bacterial Pathogenesis** **Thomas A. Russo, MD**

The molecular mechanisms of capsule regulation and other virulence determinants in an extra-intestinal isolate of *Escherichia coli* are currently being studied. Applicants should have doctoral level experience in bacterial genetics or molecular biology. Full support is committed initially for two years. Laboratory of Clinical Investigation (OE-7), NIAID, Building 10, Room 11C216.

## **Transcription Factor Structure and Function** **Charles R. Vinson, PhD**

The mammalian class of bZIP transcription factors is being examined in structural detail to develop a code for the specificity of dimer formation of coiled-coil structure. The biological relevance of our conclusions will be tested using homologous recombination in tissue culture cells. A background in molecular biology, biophysics, and/or genetics is desirable. Laboratory of Biochemistry (OE-7), NCI, Building 37, Room 4D11.

## **Additional Postdoctoral Fellowship Opportunities**

For an on-line listing of additional postdoctoral openings you may access the NIH EDNET Bulletin Board's POSTDOC conference via modem (1,3014922221). The settings for modem access are "7Even,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  
Equal Opportunity Employer

## POSITIONS OPEN

### NORTHERN STATE UNIVERSITY COLLEGE OF ARTS AND SCIENCES BOTANY

**BOTANIST**, tenure-track **ASSISTANT PROFESSOR**. Ph.D. to teach botany, plant taxonomy, environmental and general courses. Send curriculum vitae, transcripts, and three original letters of recommendation to: **Dr. T. O. Flickema, Vice President for Academic Affairs, Northern State University, Aberdeen, SD 57401**. Screening of applicants will begin 16 March 1992. *Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT PROFESSOR IN MOLECULAR PLANT VIROLOGY

The Department of Plant Pathology at the University of Arkansas at Fayetteville is accepting applications for a tenure-track faculty position in molecular virology. This is a 12-month appointment with 90% research and 10% teaching responsibilities. The appointee is expected to develop a nationally competitive research program on both applied and basic aspects of virus diseases of plants. Responsibilities include team teaching a graduate-level course in plant virology and an undergraduate course in general virology. Postdoctoral experience in the area of plant molecular virology is preferred. Requires effective communication skills and demonstrated teaching abilities. Applicants should submit a letter of application with a statement of research and teaching goals, curriculum vitae, and the names and addresses of three referees to: **Dr. Rose Gergerich, Search Committee Chair, Department of Plant Pathology, 217 Plant Science Building, University of Arkansas, Fayetteville, AR 72701**. Review of applications will begin 1 April 1992.

*The University of Arkansas is an Equal Opportunity/Affirmative Action Institution.*

## FACULTY POSITION CELL BIOLOGY

The Department of Biology of the University of Wisconsin-River Falls (UW-RF) invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level, effective 25 August 1992. Teaching responsibilities will include cell biology, introductory biology, and advanced courses in area of expertise. Experience in histology, electron microscopy, molecular biology and/or microbiology is desirable. The successful applicant will participate in an interdisciplinary major in biotechnology. Research, including that which involves students, is encouraged and supported. Well-equipped laboratory facilities are available in the department. Applicants must have a Ph.D. and demonstrated potential for excellence in teaching. *Applications from qualified women and members of minority groups are particularly encouraged.* Please send a letter of application, curriculum vitae, transcripts and three letters of reference by 6 April 1992 to: **Dr. Mark Bergland, Biology Search Committee, Department of Biology, University of Wisconsin-River Falls, River Falls, WI 54022-5010**. UW-RF, a comprehensive university with over 5000 students, offers bachelor's and master's degrees and is ideally located in the scenic Kinnickinnic River Valley, just 30 miles from Minneapolis/St. Paul, Minnesota. *The University of Wisconsin-River Falls is an Equal Opportunity/Affirmative Action Employer.* 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.

**MOLECULAR/CELL BIOLOGIST**. Roosevelt University invites applications for an **ASSISTANT PROFESSOR**, tenure-track opening in August 1992. Candidates should have expertise in molecular and/or cell biology and a strong commitment to innovative undergraduate teaching. Teaching experience and proven ability to involve undergraduates in laboratory research highly desirable. Roosevelt University is a nonsectarian, independent teaching institution located in downtown and suburban Chicago with a nontraditional student body and a commitment to educational excellence. Send curriculum vitae, letter of application and names, addresses and telephone numbers of three references to: **Dr. Vinton Thompson, Chair, Department of Biology, Roosevelt University, 430 South Michigan Avenue, Chicago, IL 60605**, by 1 April 1992. *Roosevelt University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**FACULTY POSITION**. Tenure-track full-time **ASSISTANT PROFESSOR** position to begin in early 1993.

We are seeking a person who will use modern tools of biochemistry and/or molecular biology to develop an innovative independent research program. We will look particularly for people who can interact creatively with current faculty research interests. The successful candidate will also participate in graduate and medical school teaching.

Applicants should submit detailed curriculum vitae and a one-page description of research plans. For best consideration the application should be received by 1 April 1992. Send all materials to: **Search Committee, Department of Biological Chemistry, University of Maryland, School of Medicine, 660 West Redwood Street, Baltimore MD 21201**. *The University of Maryland is an Affirmative Action/Equal Opportunity Employer M/F/H/V.*

**RESEARCH IMMUNOLOGIST**. The Immunology Division of the Department of Pathology and Laboratory Medicine seeks an immunologist for the position of **RESEARCH ASSISTANT PROFESSOR**. Candidates should possess a Ph.D. and/or M.D. degree, and have demonstrated strong research potential in modern immunology. The successful candidate will be expected to generate a vigorous research program, with emphasis on growth regulation in normal and neoplastic lymphocytes. Expertise in flow cytometry is also desirable. Interested individuals should send their curriculum vitae, a summary of research interests, and the names of three references to: **Peter C. Nowell, M.D., Department of Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine, M161 John Morgan Building, 37th and Hamilton Walk, Philadelphia, PA 19104-6082**. *University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT/ASSOCIATE PROFESSOR**, Unit for Laboratory Animal Medicine, University of Michigan Medical School, Ann Arbor. Candidates must have veterinary degree, advanced training and evidence of productivity in research. Research interests and activities should include development or use of animal models or investigation of diseases of laboratory animals. Research emphasis in the unit includes bacterial and parasitic diseases, pulmonary inflammation, and neurophysiology of pain. Duties include establishment of a research program capable of attracting national funding, instruction of veterinary residents and graduate students, and service responsibilities in the unit. The primary emphasis of the position will be research. Rank and salary are commensurate with training and experience. Send cover letter including statement of research interests and plan, curriculum vitae and names of five references to: **Daniel H. Ringler, D.V.M. Director, Unit for Laboratory Animal Medicine, University of Michigan, Ann Arbor, MI 48109-0614**. *The University of Michigan is an Affirmative Action/Equal Opportunity Employer.*

## CHEMICAL OCEANOGRAPHER

Tenure-track, **ASSISTANT/ASSOCIATE PROFESSOR** faculty appointment beginning January 1993. Ph.D. required: postdoctoral experience preferred with salary commensurate with experience. Participate with a growing faculty of 17 marine scientists on campus and at the nearby Marine Environmental Sciences Consortium/Dauphin Island Sea Lab in a new Marine Sciences Ph.D. program. The successful candidate will be expected to teach one course per quarter (including an introductory graduate level course in chemical oceanography and advanced specialty courses), advise graduate students and develop an active, extramurally funded research program. An interest in near coastal processes is preferred. The university is a growing institution of 12,000 students located on the central Gulf Coast with access to a variety of coastal environments. The university and Sea Lab have a diverse array of research capabilities with modern laboratories, analytical instrumentation and field sampling support (including the 41-foot R/V *Deborah B* and the 65-foot R/V *A. E. Verrill*). Application review will begin 1 April 1992. Send curriculum vitae, statement of interests and names of three references to: **Dr. Erich Mueller, Chair, Chemical Oceanographer Search Committee, Department of Marine Sciences, ISCB 25, University of South Alabama, Mobile, AL 36688**. *The University of South Alabama is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### ASSISTANT/ASSOCIATE PROFESSOR FOREST ECOSYSTEMS ECOLOGY

The Department of Forest Resources and Ecology Center at Utah State University are seeking applicants for a tenure-track faculty position in forest ecosystems ecology. The successful applicant will be expected to conduct research in nutrient cycling and carbon budgets of temperate forest ecosystems and to teach three quarter-system courses in his or her area of expertise. Applicants must have Ph.D. at time of appointment; evidence of research productivity; ability to develop a research program based largely on extramural funding; commitment to interdisciplinary research; and commitment to quality teaching. Send letter of interest, curriculum vitae, transcripts and supporting material, and have three letters of recommendation sent to: **Dr. David W. Roberts, Department of Forest Resources, Utah State University, Logan, UT 84322-5215; telephone: 801-750-2416**. Application reviews begin 15 April 1992; position open until filled.

*Affirmative Action/Equal Opportunity Employer that strongly encourages applications from women and minorities.*

## FACULTY POSITIONS IN CELLULAR AND MOLECULAR PHYSIOLOGY

The Department of Cellular and Molecular Physiology of The Pennsylvania State University College of Medicine is seeking applications for one or more full-time, tenure-track positions at the **ASSISTANT/ASSOCIATE PROFESSOR** rank to begin in summer or fall 1992. The department presently has 14 full-time, well-funded faculty who are working in the general area of cellular and molecular physiology. We are seeking candidates with substantial research experience at the postdoctoral level, or above, in applying molecular biology and recombinant DNA techniques to one or more of the following areas: metabolic regulation, mechanisms of hormone action, membrane receptors, transmembrane signaling mechanisms, and regulation of expression of eukaryotic genes. Special attention will be given candidates who are able to relate molecular concepts and information to the cell and tissue levels of the organism.

Significant research accomplishment and ability to obtain independent funding are essential. Excellent opportunities exist for research collaboration, teaching in a medical school curriculum, and participation in one or more graduate programs.

Applicants should submit, prior to 1 May 1992, curriculum vitae, reprints, statement of current and planned research interests, and letters from at least three references to: **Dr. Leonard S. Jefferson, Chairman, Department of Cellular and Molecular Physiology, College of Medicine, The Pennsylvania State University, P.O. Box 850, Drawer SC, Hershey, PA 17033**. *An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.*

**RESEARCH ASSISTANT PROFESSOR**—Duties will include graduate level, laboratory, and classroom teaching (regular classroom teaching on a weekly basis) in the subjects of basic and clinical immunology. Research duties include planning, supervision, execution, analysis, and presentation of immunological research (using human blood products) primarily in the field of cytokine networking and autoimmune diseases. Doctoral (Ph.D./M.D.) in immunology with 1 year of postdoctoral training. Knowledge of cellular and molecular immunology and immunopathology with proficiency in cell activation studies, cytokine and Northern blot assays, quantitative PCR, in situ hybridization, and immunohistology. Forty hours per week, 9:00 a.m. to 6:00 p.m. Salary: \$37,000 per calendar year. Contact: **Sandra T. Starnes, Alabama State Employment Service, 3440 Third Avenue, South, Birmingham, AL 35222**. **Re: Job Order #AL0228703**.

**ASSISTANT/ASSOCIATE PROFESSOR, MOTOR BEHAVIOR**. University of Wisconsin-Madison, August 1992. Required: Ph.D., teaching experience and refereed publications. Candidate will establish research program and teach. Send curriculum vitae, three reprints and references to: **Professor Michael Kane, 2000 Observatory Drive, Madison, WI 53706**. Note: names, titles and/or occupations, and addresses of applicants and nominees cannot be kept confidential. Deadline: 15 March 1992. *Equal Opportunity and Affirmative Action Employer.*

# Biotechnology Professionals

Roche Molecular Systems, a San Francisco Bay Area research group, has immediate openings for highly motivated scientists interested in pursuing careers focused on the research and development of applications for the Polymerase Chain Reaction technology.

## Research Investigator

You will develop novel approaches to solving problems related to preparing clinical samples for amplification by the PCR. You will participate in a wide variety of projects and integrate the appropriate techniques into each project goal. Requires a PhD or equivalent in Chemistry, Biochemistry, Molecular Biology or related field. Ability to be innovative in solving complex problems is essential. Job# RMS416.

## Project Team Leader

Direct an aggressive and multi-disciplined R&D group devoted to the development of PCR-based diagnostics for human viral disease. Requires PhD with at least five years' postdoctoral experience and proven project management experience. Expertise in the area of DNA viruses, especially HPV, HSV, CMV and parvovirus, is particularly desirable. Job# RMS305.

## Scientist

Perform technical laboratory tasks in development of methods for protein and oligonucleotide purification as well as perform assays to validate and document new purification procedures. Requires BS/MS in Chemistry/Biochemistry, at least five years' relevant laboratory experience and familiarity with HPLC, FPLC and general chromatographic methods. Job# RMS458.

We are part of an international pharmaceutical company offering competitive salaries, a generous bonus and benefits package, state-of-the-art resources enabling scientific discovery and significant opportunities in an important new venture.

For confidential consideration, please fax your resume or C.V., indicating Job# of interest, to (510) 522-1285 or mail to Human Resources Department, Roche Molecular Systems, 1145 Atlantic Avenue, Suite 100, Alameda, CA 94501. We are an equal opportunity employer.

## Roche Molecular Systems



a subsidiary of Hoffmann-La Roche

## Genome Project Scientists

CLONTECH Laboratories, Inc. has two openings for Ph.D.'s with at least 3 years of post-doctoral training. Experience in modern techniques such as chromosome sorting and mapping, FISH, and general cytogenetics are preferred. The successful candidates will lead a high-growth group with potential for rapid expansion.

## Protein/Peptide Chemist

A position is available for a Ph.D. with at least 3 years experience in the protein/peptide research industry. This candidate should possess an innovative approach in the development of new and exciting products in the protein/peptide area.

## Post-Doctoral Researcher

A position is also available for a Ph.D. with research training in Molecular Biology or related disciplines. The successful candidate will be engaged in the NIH-supported Human Genome Project involving cloning and mapping of dissected chromosomes.

We are located in the hub of Silicon Valley, close to Stanford University and more than 200 biotechnology companies. CLONTECH offers a stimulating environment for career growth and excellent salary and compensation packages. Please send a resume and three references in confidence to:

Hensi Lise  
Human Resources  
CLONTECH Laboratories, Inc.  
4030 Fabian Way  
Palo Alto, CA 94303

**CLONTECH**

Shaping Tomorrow's Biotechnology

## RESEARCH SCIENTISTS

Natural Product Sciences, Inc. is a rapidly growing pharmaceutical company combining a novel focus on calcium-related drug targets with a non-traditional program in discovery of natural product drug leads. NPS has developed a unique multidisciplinary program in the pathophysiology and pharmacology of calcium-dependent regulatory processes, especially as it applies to bone and mineral-related diseases and central nervous system disorders. NPS is currently undergoing a major expansion and is seeking research scientists in the following fields of expertise.

**Cardiovascular Pharmacology** Applicants (Ph.D. level) should have training in both *in vitro* and *in vivo* assessment of cardiovascular function. Those with expertise in the pharmacology of voltage-sensitive calcium channels are especially encouraged to apply.

**Cellular Physiology/Pharmacology** Applicants (B.S., M.S., Ph.D. level) should be familiar with ligand-receptor interactions and receptor-dependent transmembrane signaling mechanisms. Those with experience in the measurement of cytosolic calcium and/or ligand-binding techniques are especially encouraged to apply.

**Animal Physiology/Endocrinology** Applicants (Ph.D. level) should have a thorough understanding of bodily calcium metabolism and be capable of performing *in vivo* experiments. Those with experience in the measurement of serum levels of calcium-regulating hormones and assessment of kidney function are especially encouraged to apply.

**Behavioral Pharmacology** Applicants (M.S., Ph.D. level) should have experience in assessing the effects of drugs in animal models. Those familiar with animal models of stroke will be given special consideration.



Natural Product Sciences offers competitive salaries, benefits and the opportunity for equity ownership. Our location on the western slopes of the Rocky Mountains provides an unusually beautiful and livable environment in which to pursue innovative research.

Please send curriculum vitae to: Director of Personnel, Natural Product Sciences, Inc., 420 Chipeta Way, Suite 240, Salt Lake City, Utah 84108. We are an Equal Opportunity Employer.

## NATURAL PRODUCT SCIENCES, INC.

## BIOLOGISTS

Wyeth-Ayerst Research is a multi-national leader in the research and development of a broad range of highly advanced pharmaceuticals. We currently have several positions available in the Biotechnology and Microbiology Division at our Radnor, PA headquarters.

### Senior Biologist

This position, in the Experimental Biology and Immunology Subdivision, will be responsible for the maintenance of cell lines, virus propagation and purification, and virus titrations. Candidates will also be responsible for serological assays, including virus neutralizations, RIAs, ELISAs and Western Blotting. Additional responsibilities will include the ordering of reagents and equipment maintenance. A BS or MS in Biological Sciences (Microbiology, Immunology, Virology) and 4-5 years laboratory experience are required. Experience in cell culture techniques, virology and immunology is also necessary. **Position #012.**

### Molecular Biologist

This scientist will work in the Technological Support Subdivision and will participate in the development of viral vaccines and biologicals. Candidates should have a BS/BA degree plus at least two years of research experience, or an MS degree. Training in molecular biology, biochemistry and/or microbiology is desirable, and familiarity with methods for characterization of proteins would be helpful. **Position #099.**

### Senior Microbiologist

This scientist will work in the Technological Support Subdivision, and will provide support to the Bioreactor Lab, assisting in scale-up of mammalian cell cultures for production of clinical supplies. A BS or MS in Biological Sciences and 4-5 years laboratory experience are required. Experience in microbiology and/or fermentation necessary. **Position #CE-100.**

Wyeth-Ayerst Research offers a competitive salary, comprehensive benefits package and opportunities for advancement. For immediate consideration, forward your resume and salary history/requirements, including appropriate position #, to:

Wyeth-Ayerst Research  
Personnel, P.O. Box 8299,  
Philadelphia, PA 19101-0082.

An equal opportunity employer,  
M/F/D/V.



Leading The Way For A Healthier World.

## POSITIONS OPEN

### IMMUNOLOGIST FORDHAM UNIVERSITY

Individuals are invited to apply for a tenure-track position at the **ASSOCIATE PROFESSOR** level. The department has an active research program and provides excellent physical facilities, state-of-the-art equipment, a stimulating research environment, start-up funds and competitive salaries and benefits. Candidates should possess expertise in the area of immunology and have an ongoing grant-supported research effort underway. Special consideration will be given to individuals with experience in molecular biology. The appointee will be expected to establish an active research program and participate in teaching at the graduate and undergraduate levels. Please submit curriculum vitae, a statement of research goals and the names and addresses of three references by 23 March 1992 to: **Dr. Berish Y. Rubin, Chairman, Department of Biological Sciences, Larkin Hall, Fordham University, Bronx, NY 10458.** Fordham University is an Affirmative Action/Equal Opportunity Employer.

### CLEVELAND CLINIC FOUNDATION DEPARTMENT OF HEART AND HYPERTENSION RESEARCH FACULTY POSITIONS

The Department of Heart and Hypertension Research has immediate openings for research scientists at the **ASSISTANT, ASSOCIATE, AND PROFESSOR** levels to pursue independent, competitive scientific research. The department is currently involved in basic and clinical research with particular strength in molecular and structural biology as well as cell and integrated physiology. Applicants holding a doctoral degree with strong training and experience in any area of cardiovascular biology are invited to apply, although particular consideration will be given to highly qualified applicants with experience in structural biology and biophysics for the study of protein structure and function, enzymology, and protein-protein interactions; electrophysiology and molecular biology; and conscious-animal integrated physiology. Salary and appointment will depend on experience and qualifications. Send curriculum vitae and a short statement of research interests to: **Dr. Robert M. Graham, Chairman, Department of Heart and Hypertension Research, Cleveland Clinic Foundation/FF3-20, 9500 Euclid Avenue, Cleveland, OH 44195-5071.**

**FACULTY POSITIONS: BIOCHEMISTRY AND MOLECULAR BIOLOGY.** The Department of Biochemistry and Molecular Biology is seeking applicants for tenure-track faculty position, preferably at the **ASSOCIATE** or **FULL PROFESSOR** level. Outstanding individuals with active, funded research programs and teaching experience are being sought. Applicant should send curriculum vitae, list of publications, description of research and names of three references to: **Chairman, Search Committee, Department of Biochemistry and Molecular Biology, Texas College of Osteopathic Medicine (TCOM), 3500 Camp Bowie Boulevard, Fort Worth, TX 76107-2690.** TCOM is an Affirmative Action/Equal Opportunity Employer and Educator.

### PROFESSOR OF ANALYTICAL CHEMISTRY

The chemistry department of Tulane University is seeking an analytical chemist at the **FULL PROFESSOR** level as a part of continued faculty expansion. Individuals with an outstanding record of publication and funding in any area of analytical chemistry are encouraged to apply. Presently, Tulane has 16 research active faculty and a steadily growing graduate program. The person filling the position will be expected to be instrumental in the development of an analytical chemistry program at Tulane. The department is interested in attracting the best possible person for the position and is willing to provide substantial startup support and an attractive salary. Interested persons should submit curriculum vitae, a brief summary of future research plans and a list of at least three references to: **Analytical Search Committee, Department of Chemistry, Tulane University, New Orleans, LA 70118, by 15 April 1992.** Tulane is an Affirmative Action/Equal Opportunity Employer and women and minorities are encouraged to apply.



## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR:** The Department of Rheumatology at the Hospital for Joint Diseases, affiliated with NYU School of Medicine, seeks a Ph.D. or M.D./Ph.D. molecular biologist with an interest in signal transduction in the human neutrophil. Experience in the area of chemoattractant receptors, GTP binding proteins or surface adhesion molecules desirable. Full salary support guaranteed but applicant must have demonstrated ability to acquire federal (NIH) or other competitive grants. Send curriculum vitae to: **Dr. Steven Abramson, Chairman, Department of Rheumatology, Hospital for Joint Diseases, 301 East 17th Street, New York, NY 10003.** An Equal Opportunity Employer.

**ASSOCIATE/FULL PROFESSOR OF PHARMACOLOGY.** Established scientist with interest in neuroscience related to molecular mechanisms of drug action is sought for a tenure-track position to head a new section. Send nominations/applications including curriculum vitae, a statement of research goals and teaching interest to: **Dr. Harbans Lai, Chairman, Department of Pharmacology, Texas College of Osteopathic Medicine, 3500 Camp Bowie Boulevard, Fort Worth, TX 76107.** Affirmative Action/Equal Opportunity Employer and Educator.

## PROFESSOR OF BIOCHEMISTRY

UNIVERSITY OF FRIBOURG  
(SWITZERLAND)  
INSTITUTE OF BIOCHEMISTRY

A position at the full or associate professor level will be opening in April 1993. The tasks will be to participate in the teaching programs for students of medicine, biochemistry, biology and chemistry (lectures are in German or French) and to establish an independent research project that attracts outside funding. Current research in our institute concentrates on molecular mechanisms of intracellular vesicular transport processes in yeast and on signal transduction in leukocytes. Priority will be given to candidates whose interests are related to one of these fields and who are experienced in molecular biology, but outstanding candidates in any field will be considered. Applications containing curriculum vitae, list of publications, copies of three of the most important contributions, a two-page outline of actual and planned research and names of three persons to whom reference may be made should be sent to: **The Dean of the Science Faculty, University of Fribourg, Pérolles, CH-1700 Fribourg,** before 15 June 1992. Additional information can be obtained from: **Professor A. Conzelmann, Director of the Institute of Biochemistry,** telephone: 037 826354; FAX: 037 826341.

## FACULTY POSITIONS

The Department of Molecular Biology at Vanderbilt University is planning to fill three or four tenure-track faculty positions during 1992 and 1993. One of these will be at the level of tenured **FULL PROFESSOR WITH AN ENDOWED CHAIR** (the Stevenson Professorship); for the others, faculty rank is open, but it is anticipated that most of these appointments will be at the level of **ASSISTANT PROFESSOR**. The department has interests in diverse areas including molecular genetics, cell and developmental biology, and biophysics and structural biology. Candidates are sought from any area of modern molecular biology, broadly defined, who complement the present faculty. *Women and minority candidates are especially encouraged to apply.* Successful candidates will be expected to establish independent research programs and to participate actively in the undergraduate and graduate educational programs of the department. Review of applications will begin 1 April 1992 and will continue until the positions are filled. Applications, which should include curriculum vitae, a statement of research interests, and the names, addresses and telephone numbers of three references (five, in the case of candidates for a senior position), should be sent to: **Professor James V. Staros, Chair, Department of Molecular Biology, Vanderbilt University, Box 1820 Station B, Nashville, TN 37235.** *Vanderbilt University is an Equal Employment Opportunity/Affirmative Action University.*

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

28 FEBRUARY 1992

## Courses in Techniques for Separation and Characterization of Complex Carbohydrates June 8-12 and June 15-19, 1992

Two courses will be offered at the Complex Carbohydrate Research Center (CCRC) of the University of Georgia. The first course (*June 8-12, 1992*), "The Separation and Characterization of Oligosaccharides Isolated from Glycoproteins", is intended for scientists with no experience with carbohydrate analysis. The second course (*June 15-19, 1992*), "Structural Analysis of Oligosaccharides", is intended for scientists with some experience with glycoconjugates or for those who have completed the first course, and will focus on techniques of composition and linkage analysis. Both courses will consist of hands-on laboratory work, demonstrations and lectures. A lab manual including selected analytical techniques and references will be provided. Each course is limited to 10 participants. Experience with basic biochemical techniques is a prerequisite for participation. The cost of registration per course is \$250 for individuals from non-profit institutions, \$500 for others. Lodging and food expenses are not included in the registration fee.

The courses are supported jointly by the Plant and Microbial Carbohydrate Center (a unit of the USDA/DOE/NSF Plant Science Centers Program sponsored by the Department of Energy), and the NIH Biomedical Resource Center of the CCRC. For further information or to apply for the courses contact: **Dr. Roberta K. Merkle, Technical Director for Biomedical Carbohydrates, Complex Carbohydrate Research Center, 220 Riverbend Road, The University of Georgia, Athens, Georgia 30602.** Phone: 404-542-4402. Facsimile: 404-542-4412.

## Purdue University West Lafayette, Indiana

Purdue University invites applications and nominations for the position of **Dean of the School of Science.**

Established in 1867, Purdue is Indiana's land-grant university. The West Lafayette campus, located one hour north of Indianapolis and two hours south of downtown Chicago, encompasses thirteen Schools, with an enrollment of 36,000 students. The School of Science is made up of seven departments: Biological Sciences, Chemistry, Computer Sciences, Earth and Atmospheric Sciences, Mathematics, Physics and Statistics. With 300 faculty, 1000 graduate students and more than \$30 million in annual sponsored-research expenditures, the School operates a number of the largest and most important programs in the University.

The Dean's primary mission is to provide vision and leadership in the School, promoting and environment optimal for the pursuit of scholarship in teaching and research. The Dean joins with the School's department heads and faculty to assure that learning activities of the highest quality flourish at all levels, from undergraduate education to graduate research. As chief academic and administrative officer of the School, the Dean actively represents the School to a variety of constituencies inside and outside the University. The Dean reports directly to the Executive Vice President for Academic Affairs, and works closely with other deans, vice presidents and the President.

Qualified candidates will have distinguished research and teaching records appropriate for a tenured full Professorship, and demonstrated excellence in academic management. They will have a working knowledge of the national research and funding milieu. They will be sensitive to all the constituencies served by the University and be able to articulate and advocate the goals of the School. They will evince enthusiasm for meeting the multifaceted challenges of academic leadership.

Applications and nominations should be sent to: **Professor Henry T. Yang, Chairman of the Search Advisory Committee, ENAD 101, Purdue University, West Lafayette, IN 47907.**

Screening will commence March 9, 1992, and continue until the position is filled.

Purdue University is an equal opportunity/affirmative action employer. Minority and women candidates are especially encouraged to apply.

Dean, School of Science

National Institutes of Health  
National Institute of Environmental  
Health Sciences  
Research Triangle Park,  
North Carolina

## RESEARCH POSITION

**MISSION** - The mission of the National Institute of Environmental Health Sciences (NIEHS) is to characterize the chemical, physical, and biologic factors in the environment that can adversely affect human health.

**ORPHAN RECEPTORS** - A scientist is sought to lead a group in the study of "Orphan Receptors" at the molecular or cellular levels. Orphan receptors are those molecules belonging to the nuclear receptor super gene family which include steroid hormones, retinoic acid, and peroxisome proliferators among their members. Research in this group will include identification of the orphan receptor proteins, determine the effector ligands and xenobiotics and identify which genes are regulated by these proteins. The incumbent will also have the opportunity to collaborate with established NIEHS research programs involving estrogen receptor action, hormonal carcinogenesis, retinoic acid responsiveness, TCDD receptor mediated toxicity, and expression in brain and relation to neural function.

Salary and resources will be determined by the qualifications of the candidate. The appointment has excellent compensation and benefit packages.

**GENERAL REQUIREMENTS** - All applicants must possess a Ph.D., M.D., or equivalent degree and, at least, three years *postdoctoral* experience. Applicant must have a doctorate degree in one of the following fields: molecular biology, biochemistry, cell biology, physiology, pharmacology, and genetics and show evidence of the ability to carry out independent research. A U.S. Citizenship is required for permanent positions.

For prompt consideration, send a cover letter within thirty days indicating area of interest, Curriculum Vitae, and three letters of reference to:

**Mr. Bruce Wiggins**  
**NIEHS Personnel Office**  
**(HNV47)**  
**P. O. Box 12233**  
**Research Triangle Park,**  
**North Carolina 27709**

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NIH is a Smoke-Free Environment

## POSITIONS OPEN

### ASSISTANT MEMBER MEMORIAL SLOAN-KETTERING CANCER CENTER

The Program in Molecular Biology, Sloan-Kettering Institute (SKI), Memorial Sloan-Kettering Cancer Center (MSKCC), invites applications for a position as **ASSISTANT MEMBER**. The successful candidate will have demonstrated outstanding potential for a research career and will be using a combination of modern biochemical, cell biological, or molecular genetic approaches to study the regulation of cellular growth processes in higher eukaryotes. Areas of interest include: genome structure and function, cellular signaling mechanisms, replication, transcription, translation, oncogenesis, and developmental control mechanisms. Applications should include curriculum vitae, a summary of current research activities and future research plans, and three letters of reference. Please send applications, which we would appreciate receiving by 31 March 1992, to:

**Dr. Kenneth J. Marians**  
**Chairman**  
**Program in Molecular Biology**  
**Sloan-Kettering Institute**  
**Memorial Sloan-Kettering Cancer Center**  
**1275 York Avenue**  
**New York, NY 10021**  
*SKI/MSKCC is an Equal Opportunity Employer.*

### DIRECTOR NUCLEAR RADIATION ASSESSMENT DIVISION (NRD)

The U.S. Environmental Protection Agency (EPA), Environmental Monitoring Systems Laboratory—Las Vegas, is soliciting candidates for a supervisory environmental scientist, to serve as the Director of the Nuclear Radiation Assessment Division (NRD), (GM-3303-35), salary range: \$64,233 to \$83,502. This position manages the programs, resources, and a multidisciplinary staff which are necessary to fulfill the NRD mission. The NRD develops and applies techniques for maintaining a continuous environmental radiation and public safety program in areas surrounding the sites of U.S. underground nuclear tests conducted by Department of Energy (DOE). Individual must have experience in managing complex scientific operations; reviewing programs; determining the nature and cause of problems; recommending and managing solutions or corrective actions; and in developing, performing, and managing programs for assessment of radiological measurements in the environment. The NRD Director functions as Offsite Radiological Safety Adviser to the DOE Test Controller's Scientific Advisory Panel; and participates in radiation emergency response exercises. Position requires an advanced degree in one of the physical or biological sciences, engineering, mathematics, or computer technology; and a degree or comparable experience in health physics. The individual must possess general knowledge and experience with the operation of environmental radiation monitoring networks. Much of the work of NRD requires a Top Secret "Q" security clearance which the incumbent must possess or be qualified to obtain. Incumbent will be considered a radiation worker. Send copies of college transcripts or OPM Form 1170 and Federal Application Form (SF-171) by 27 March 1992 to the attention of **Connie A. Christenson, Human Resources Office; U.S. EPA, P.O. Box 98516, Las Vegas, NV 89193-8510**. Application materials must be requested in writing at the above EPA address. *Proof of U.S. citizenship is required prior to appointment. The U.S. EPA is an Equal Opportunity Employer.*

**EXECUTIVE DIRECTOR** sought for nonprofit membership organization of 25 FTE, budget of \$1.2 million (1992), with an integrated program of research and conservation policy emphasizing birds in the Pacific Rim Region. Minimum of 5 years of management, fund-raising and communications experience required. Salary: \$45,000 to \$60,000 per year plus benefits. Experience with governmental agencies and in environmental field experience desirable. Graduate degrees a plus. Interested applicants should send résumé with three references to: **Point Reyes Bird Observatory Search Committee, c/o Dix Boring, 100 Shoreline Highway, Suite 295 B, Mill Valley, CA 94941**. Deadline: 15 March 1992.

More than 150,000 people paid to see your ad in **SCIENCE**. Classified Advertising Department telephone: 202-326-6555. FAX: 202-682-0816.

## POSITIONS OPEN

**DIRECTOR, G.I. RESEARCH**. For the Division of Gastroenterology and Nutrition at Winthrop-University Hospital in Mineola, New York. Requires a Ph.D. in physiology/pharmacology with at least 2 years of post-doctoral experience. Eligibility for academic rank of assistant professor of medicine at State University of New York at Stony Brook is necessary. Focus is on motility of the intestine with emphasis on inflammatory diarrheal disorders. Research activities supported by two fully equipped laboratories with equipment to perform in vivo and in vitro muscle physiology/electrophysiology. Using Chambers for study of secretion, full-time technical staff and an excellent hospital budget. Winthrop-University Hospital is a major teaching affiliate of the School of Medicine, State University of New York at Stony Brook. Ideally located on Long Island, only 30 minutes from Manhattan. Please send curriculum vitae and names of three references to: **Robert Burakoff, M.D., Chief, Division of Gastroenterology and Nutrition, Winthrop-University Hospital, 222 Station Plaza North, Suite 429, Mineola, LI, NY 11501**. *Equal Opportunity Employer M/F/H/V.*

### RESEARCH INSTRUCTOR HUMAN GENETICS AT THE UNIVERSITY OF UTAH

The University of Utah, Department of Human Genetics, would like to fill a faculty position at the research instructor level. The department would like to recruit a candidate who has an M.D. and/or Ph.D. with four or more postdoctoral years of research in molecular genetics of the human. Research experience with a variety of techniques, including the generation of monoclonal antibodies, receptor-binding methods, positional cloning of genes causing hereditary disease, and detection of sequence variants at the DNA and RNA level by Southern and Northern blotting, and the polymerase chain reaction. Single-stranded conformation polymorphism method would be highly desirable.

Application deadline will be 3 March 1992. Applications submitted after the deadline may be considered if no qualified candidates have applied by the deadline.

Send curriculum vitae and references to: **Dr. Raymond Gesteland, Human Genetics Recruitment Committee, University of Utah, Building 533, Room 2100, Salt Lake City, UT 84112**.

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

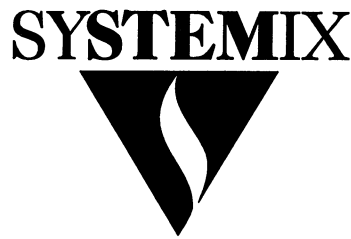
### MATH/SCIENCE TEACHER/SPECIALISTS.

Join a Math/Science Center team to develop and implement a model Project 2061 curriculum for talented secondary students. The Battle Creek Area Math/Science Center is seeking staff with a master's degree in a scientific discipline, knowledgeable of current research techniques and certifiable as secondary teachers in Michigan. Ideal candidates will be positive and team-oriented with excellent communication skills. Applications due by 3 April 1992. Start summer 1992. For information call or send curriculum vitae to: **Dr. Terry E. Parks, 765 Upton Avenue, Battle Creek, MI 49015**. Telephone: 616-965-9440; FAX: 616-965-9589.

*The Battle Creek Public Schools is an Equal Opportunity Employer.*

**THE UNIVERSITY OF CHICAGO** is seeking **JUNIOR AND SENIOR FACULTY** for its cardiology program. Opportunities are broadly available in clinical cardiology, in non-invasive imaging, electrophysiology, and hypertension. Opportunities are available in clinical research and basic investigation in device trials, applications of newer technologies, clinical pharmacology and molecular biological approaches to cardiovascular disease. Teaching of students, housestaff and fellows is an integral part of all positions. Send curriculum vitae and the names of three referees to: **The University of Chicago, Human Resources Management, 956 East 58th Street, c/o CFAC, Chicago, IL 60637**. *An Affirmative Action/Equal Opportunity Employer.*

**BIOLOGY INSTRUCTOR**: Full-time starting 15 August 1992. Ph.D. preferred. Duties include lecturing in, and lab coordination of, introductory biology courses, including environmental biology and/or physiology and seeking instructional development funding. Submit by 1 April 1992: résumé, letter outlining career objectives, and three letters of recommendation to: **Dr. Reginald Noble, Department of Biological Sciences, Bowling Green State University, Bowling Green, OH 43403**. *Affirmative Action/Equal Opportunity Employer.*



# Research Opportunities

SyStemix, Inc. is an exciting biotechnology company utilizing revolutionary technology — the SCID-hu mouse model for the study of human disease and its treatment. We are pioneering the clinical use of cellular therapies including human stem cell transplants for cancer treatment. In addition, a principal research focus is the identification and characterization of novel growth factors. We seek creative individuals to join us in the following challenging opportunities:

## Research Scientists

Our growth has created three positions for experienced research scientists. The first involves designing, organizing and initiating experiments for developing novel mammalian expression vector systems and bringing known expression systems in-house. We require a PhD in Biology, or related discipline, and 5+ years' lab management experience along with strong skills in molecular biology and expression vectors. Job Code: 1012AT.

The second position involves establishing assays for screening sources of novel growth factors. Requirements include a PhD and 2+ years' lab experience with a background in bioassays. Protein experience desirable. Job Code: 1014AT.

The third position involves working with hematopoietic progenitor cells to isolate cell populations and develop specific assays for these rare cells. A PhD and 3+ years' lab experience are required along with cell biology, hematopoiesis and FACS experience. Job Code: 1019AT.

## Research Associate

Additionally, we have a need for an experienced Research Associate to oversee the purification and testing of stem cells for in vitro and in vivo experiments. You will also assist in the development of more efficient methods of stem cell isolation, oversee stocking and testing of antibodies and assist in the development of assays and screening cDNA library pools or protein fractions. Requires a BS/MS degree and 3+ years' experience along with small animal surgical skills, tissue culture, antibody staining and FACS analysis experience. Job Code: 1016AT.

We are also searching for talented Research Scientists and Research Associates at all levels in **Biological Chemistry, Hybridoma Technology, Transplantation Biology, Molecular Biology and Cell Biology.**

## Product Development Cellular Products Project Manager

You will lead a development team responsible for cellular therapy products emphasizing hematopoietic stem cells. Additionally, you will perform product and process development as well as implement methodologies to purify stem cells and their progenitors under GMP standards. Requires a PhD or equivalent with 5+ years' relevant experience in development and project management. Additionally, a strong background in cell biology with proven technical creativity and a successful product development record are necessary. Knowledge of regulatory processes is essential. Job Code: 1043JF.

## Cellular Products Engineer

We are seeking an Applied Cell Biologist or Biochemical Engineer to support clinical applications of stem cell and related technologies. You will direct a group working with bioreactors to expand cell populations for human transplant. A PhD in Biochemical Engineering, Cell Biology or a related field is required. Experience with hematopoietic or other differentiated tissue is preferred. Background producing cellular products or mammalian-cell expressed proteins for clinical use under GMP is beneficial. Job Code: 1035MB.

## Cellular Products/Development Scientist

You will create, implement and scale-up process methodology to purify target cell populations and growth factors in an effective, safe and reproducible manner. Requires an MS or PhD with 2-5+ years' relevant industrial experience as well as a strong background in cell biology and large-scale mammalian-cell culture or protein purification processes. An excellent track record in development, teamwork skills and a knowledge of regulatory requirements desirable. Job Code: 1033CA.

In addition to our exciting environment and ideal location, we also offer an outstanding salary and benefits package, as well as equity participation. To apply, please send or fax your resume, indicating appropriate Job Code, to SyStemix, Inc., Human Resources, 3400 W. Bayshore Road, Palo Alto, CA 94303; (415) 856-4919. EOE.

Cambridge NeuroScience is a growing pharmaceutical company committed to the discovery and development of unique medicines for the treatment of major disorders of the nervous systems. The Company is recognized for its combination of scientific expertise in biotechnology, chemistry, and pharmacology, as well as its collaborations with leading academic institutions and experts. We are seeking to expand our efforts with the help of the following professionals:

### IN VITRO PHARMACOLOGY

**Staff Scientists Neurochemistry** – (Job Code 55SSNC) Ph.D. with 2 or more years' postdoctoral experience in biochemistry, pharmacology, biophysics or related field. Knowledge of and expertise in ion channel pharmacology and biophysics, membrane transport, and neuropharmacology.

**Neurophysiology** – (Job Code 53SSNP) Ph.D. with 2 or more years' postdoctoral experience in single-cell neurophysiology, membrane biophysics or related field. Expertise in one or more of the following techniques is desired: voltage/patch clamp, intracellular microelectrode recording, brain-slice recording, measurement of intracellular calcium.

**Neurotrophic Factors** – (Job Code 47SSNT) Ph.D. with at least two years' postdoctoral experience in evaluating the actions of neurotrophic factors on neurons and glial cells in cell culture preparations.

### IN VIVO PHARMACOLOGY

**Staff Scientists** (Job Code 56SSGF) Two positions are available. Both require a minimum of a Ph.D. and two years' experience: the first in the area of ischemic or traumatic brain injury; the second in the area of neuropathy and nerve regeneration.

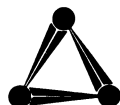
### BIOTECHNOLOGY GROUP

**Staff Scientist Protein Chemistry** – (Job Code 54SSPC) Ph.D. in Biochemistry plus 2 or more years' postdoctoral training with expertise in protein purification. Familiarity with various column chromatography, FPLC, HPLC, SDS PAGE, Western blot, amino acid analysis, peptide mapping, and protein sequencing is required. Knowledge in tissue culture is desired.

### CHEMISTRY

**Staff Scientist Analytical Chemistry** – (Job Code 48SSAC) Ph.D. in Chemistry or related field with at least 5 years' experience in the application of analytical techniques to the discovery and development of therapeutics. Will lead a small group with responsibility for drug candidates, both small organic molecules and proteins.

If you are interested in participating in a company that demands and supports scientific excellence which will positively impact on the treatment of neurological disorders, consider a career at Cambridge NeuroScience. Please indicate appropriate job code when you apply to: Human Resources, Dept. SCI0228, Cambridge NeuroScience, One Kendall Square, Building 700, Cambridge, MA 02139. An Equal Opportunity Employer.



**CAMBRIDGE  
NEUROSCIENCE**

NYU  
Medical  
Center

## ASSISTANT RESEARCH SCIENTIST

Post-doctoral level position available immediately to conduct research on mechanisms involved in the regulation of expression of mammalian neurotransmitter receptor genes, and the role of early response genes in regulating CNS activity.

Candidates should have a Ph.D. or equivalent with previous experience in basic molecular biology techniques, including recombinant DNA methodology, RNA techniques and in situ hybridization. Familiarity with immunocytochemical techniques and some knowledge of basic neurobiology would be an advantage.

Send C.V. and names of two references to: Ms. Singh, Human Resources, NYU Medical Center, 550 First Ave., New York, NY 10016. Equal Opportunity Employer.

## Cellular Regulation Expansion

To meet our commitment to become a leader in the cellular regulation product area, we are seeking to fill the following positions:

### Senior Scientist

Ph.D. in Cell Biology or related field with 2-4 years' experience in study of signal transduction or cellular oncogenes. Will assist in planning future direction of Cellular Regulation, develop signal transduction and oncogene-related products for Cellular Regulation utilizing polyclonal and monoclonal antibodies, and hire a Research Scientist to assist in your duties.

### Research Scientist

M.S. or B.S. in Cell Biology or related field and 2 years' experience in cell culture and antibody technology as well as pilot scale eukaryotic cell culture using various types of bioreactors. Will perform QA assays on growth factors, cytokines, and antibodies and operate a pilot scale eukaryotic cell culture facility.

### Marketing Manager

M.S. or equivalent in Cell Biology, Molecular Biology, or related field; 3 years' experience in a marketing management role; and excellent communications skills. Will identify new product opportunities in Cellular Regulation and plan introduction of products to new markets including advertising and promotion, product line pricing, forecasting, and sales.

### Technical Services Representative

B.S., M.S., or equivalent in Cell Biology, Molecular Biology, or Protein Biochemistry and 2 years' experience. Will offer technical support to Promega's complete product line including telephone interaction with customers and international distributors, track and record technical problems, and write and edit technical support literature.

We offer a competitive salary, comprehensive benefits and a challenging, high-growth environment in modern facilities. Please forward your resume with references and salary history, in confidence, to: **Promega Corporation, Human Resources/SCI, 2800 Woods Hollow Road, Madison, WI 53711-5399.** An Equal Opportunity Employer.



## PHYSIOLOGIST

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 physiology. The applicant should expect to teach courses in animal and human physiology, 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. Research area is open in molecular, cellular or systemic physiology. Salary is competitive and commensurate with experience and qualifications. Teaching and/or post-doctoral research experience is preferred. Applicants should submit a 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 March 27, 1992. Send application and/or letters of inquiry to:

**Dr. Nixon Wilson  
Chair Search Committee  
Department of Biology  
University of Northern Iowa  
Cedar Falls, IA 50614-0421  
(Fax No.: 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.

# Make A Difference In The Quality of Life

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The Hyland Division of Baxter Healthcare, a leader in the area of human plasma-derived protein therapeutics, is undertaking the development of its next generation of therapeutics with the aid of state-of-the-art biotechnology. We seek energetic individuals who can contribute effectively in a multi-disciplinary R&D environment in the following areas:

## **SCIENTIST IV**

### **Protein Characterization (Dept. LD/C-4)**

We seek two individuals with demonstrated expertise in the biochemical investigation of proteins to participate in the study of structure and function of protein therapeutics under development.

A) This individual must be thoroughly versed in all aspects of protein biochemistry and/or molecular cell biology as these relate to protein structure-function. The candidate should have experience in the identification of structural elements which influence protein function through development of quantitative techniques pertaining to antibody-antigen/protein-ligand interactions.

B) In addition to familiarity with current protein chemistry and biochemistry, the qualified candidate will have applied mass spectrometric methods to solving problems of protein structure, with an emphasis on carbohydrate structures.

Excellent communication skills and ability to interact in a team-oriented R&D environment are essential. The successful candidate will make key recommendations concerning research directions of the Group and develop novel approaches which coincide with overall strategic R&D objectives. A PhD in biochemistry with relevant industrial or postdoctoral experience is required.

## **SCIENTIST III**

### **Protein Purification (Dept. LD/P-3)**

The successful candidate will have extensive experience in the purification of diverse proteins, with emphasis on recombinant proteins from prokaryotic and eukaryotic sources. The position also requires expertise in developing and performing assays relevant to product purity. Demonstrated knowledge of state-of-the-art purification methods and problem-solving ingenuity is essential. Experience in purification of monoclonal antibodies and engineered proteins is helpful. Knowledge of GLP/GMP and effective communication skills an asset. Qualified individuals with a BS/MS in biochemistry or related field, plus at least 3 years relevant experience are encouraged to apply.

The name Baxter Healthcare Corporation is synonymous with products, systems and services devoted to improving health care throughout the world. We are a Fortune 100 company providing a smoke-free environment, competitive compensation and benefits. Please send your resume in confidence (*indicating on the outer envelope the Dept. Code for your position of interest*) to: **Baxter Hyland Division, Human Resources Dept., 1710 Flower Avenue, Duarte, CA 91010.** An Affirmative Action/Equal Opportunity Employer.

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Hyland Division

***Baxter***



**HEAD, EXPERIMENTAL THERAPEUTICS SECTION AND NEIL BOGART PROFESSOR OF PEDIATRICS AND CANCER PHARMACOLOGY.**

The Division of Hematology-Oncology of Childrens Hospital Los Angeles (CHLA) is seeking a senior medical scientist to lead a major West Coast program in pediatric pharmacology and therapeutics. The position offers access to one of the most complex and extensive pediatric cancer populations in the United States, and an irreplaceable resource for definitive studies on cancer treatment, drug resistance, and responsiveness, and for the spectrum of cellular, biochemical, and molecular factors currently underlying these issues. Candidates should have an MD degree and research, teaching, and administrative experience equivalent to the academic rank of Associate Professor/Professor. The individual sought would have a major leadership role in a large and expanding program in pediatric cancer drug research and development. The laboratory space that houses this program consists of 8,000 square feet in a ten floor, 80,000 square foot facility that was completed in 1989. Very substantial continued research funding is available for this program from private sources, to supplement peer review grant support. The individual will serve as the Director of the Pharmacology Laboratory of the Neil Bogart Memorial Laboratories/T.J. Martell Foundation of CHLA. Active collaboration exists with the Pharmacology Program of the Kenneth J. Norris, Jr./USC Comprehensive Cancer Center and the Children's Cancer Study Group (CCSG).

Candidates should submit documentation of experience with grant-supported research and leadership in advancing novel concepts to clinical trial. Correspondence should be sent to: **Stuart E. Siegel, M.D., Head, Division of Hematology-Oncology, Childrens Hospital Los Angeles, 4650 Sunset Blvd., Los Angeles, CA 90027.**

**Career Opportunities in  
Agricultural Biotechnology  
Ph.D., M.S., & B.S. Levels**

DEKALB Plant Genetics, a leading international agricultural seed company, is expanding its plant biotechnology research program in Southeastern Connecticut. A 53,000-square-foot research laboratory and greenhouse facility are currently under construction for occupancy this summer. Ph.D., M.S. and B.S. level scientists having experience and interest in any of the following areas are encouraged to apply:

- Molecular biology and biochemistry of amino acid metabolism
- Modification of seed oil and starch quantity and quality
- Gene mapping technology, molecular biology and statistics
- Gene cloning and expression vectors
- Insect bioassays

In addition to a stimulating scientific environment, we offer excellent salary, benefits, and relocation assistance to an attractive Southeastern Connecticut shore community. Qualified applicants should submit their resumes to:

Ms. Donna Temple  
DEKALB Plant Genetics  
Eastern Point Road  
Groton, CT 06340



*An equal opportunity employer*

## Forging New Frontiers...

That's what we're doing today at Searle, forging new frontiers in research and development. At Searle, our leadership and innovation have made us a premier, worldwide pharmaceutical company.

### Cardiovascular Scientists

Searle is seeking Cardiovascular Scientists to conduct in vivo and in vitro research to discover new anti-hypertensive and anti-platelet drugs and to do fundamental work in atherosclerosis. Positions available in both St. Louis and Chicago.

Minimum requirements include a Ph.D. or M.D. with 3 or more years post-doctoral experience. Qualified candidates must have a strong record of independent research based on publications in quality journals. Some management experience is desired.

Searle offers a competitive salary and benefits package and a strong, aggressive approach to international success. For consideration, send your resume to: **Cardiovascular Scientists, SEARLE Human Resources - BB4E; 700 Chesterfield Parkway North; St. Louis, MO 63198.** Equal Opportunity Employer.

**SEARLE**  
*On track to being on top.*

## UNIVERSITY OF HAMBURG

**The Position of  
University Professor (C4)  
for Tropical Medicine (II)  
of the Faculty of Medicine  
is available beginning October 1, 1992  
Reference No. 1334/4**

### Responsibilities:

The occupant of this position will also be Head of the newly established Division of Immunology of the Bernhard Nocht Institute for Tropical Medicine, Department of Health, Hamburg. This Division is to conduct research in the field of molecular and cellular immunology with relevance to host defense and infectious disease mechanisms.

### Teaching responsibilities:

Maximally 8 hours per week per Semester, with corresponding reduction in case of patient care responsibilities.

### Conditions of Employment:

In accordance with § 15 of Hamburgisches Hochschulgesetz. Applicants may be M.D.s or Ph.D.s with extensive basic research experience who are actively engaged in basic immunological research.

The occupant of the chair must be capable of participating in and responsibly continuing with the on-going reorganization of the Bernhard Nocht Institute.

The University of Hamburg endeavors to increase the proportion of women among the scientific personnel and wishes to emphasize that qualified women are encouraged to apply.

Applications, including curriculum vitae, bibliography and list of teaching experiences, are requested to be submitted (with the above cited Reference No.) by April 13, 1992, to the President of the University of Hamburg, Verwaltung/Personal- referat -331.9-, Moorweidenstr. 18, 2000 Hamburg 13.

Join Sterling Winthrop and be a part of a team dedicated to the enhancement of scientific discovery. Sterling Winthrop Pharmaceuticals Research Division is the worldwide pharmaceutical research and development organization of Sterling Winthrop Inc. We currently have the following opportunities available:

## MOLECULAR BIOLOGY

### Transgenic Technology Research Investigator

We currently have an excellent opportunity in the Department of Molecular Biology to participate in establishing a scientific team to develop disease models using transgenic technologies. The qualified individual should have a record of demonstrated accomplishments in this area. Essential skills for this position include retroviral vector design and construction, gene targeting and homologous recombination technologies, microsurgery and micromanipulation technologies and in vivo cell replacement technologies. The successful candidate will be responsible for developing transgenic disease models and for in vivo validation of therapeutic targets. Training and supervision of other scientists in this area are also required. Qualified candidates will possess a Ph.D. in Molecular Biology or related area with at least two years relevant postdoctoral experience, or a DVM with relevant technical experience. (Ref. # RS-04-92)

## CARDIOVASCULAR PHARMACOLOGY

### Research Investigator

We seek a candidate to establish in vivo models for evaluation of antithrombotic drugs and to actively participate in the discovery of novel antithrombotic and antiatherosclerotic agents. Requirements include a Ph.D. in Pharmacology, Physiology or related discipline with a minimum of 2 years post-doctoral experience, as well as strong written and oral communication skills and a working knowledge of thrombosis models. Drug discovery experience is desirable. (Ref. #RS-79-91)

At Sterling Winthrop, you'll enjoy a highly competitive salary and a comprehensive benefits program. Our Rensselaer, NY facility will be relocating to a new state-of-the-art facility in Upper Providence Township, PA in approximately 1993. For confidential consideration, please send your resume to:



**STERLING  
WINTHROP**

Pharmaceuticals  
Research Division

Human Resources  
(Insert Ref. #)  
Sterling Winthrop PRD  
81 Columbia Turnpike  
Rensselaer, NY 12144  
Equal Opportunity Employer, M/F/D/V

A Division of Sterling Winthrop Inc.  
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BS/MS

## ASSOCIATE RESEARCH SCIENTISTS

The Bristol-Myers Squibb Pharmaceutical Research Institute is the R&D Division of Bristol-Myers Squibb, a worldwide leader in the discovery and development of pharmaceuticals. We currently have several exceptional opportunities available for Associate Research Scientists at our Princeton, New Jersey facility:

### Cell Biology

Participate in a project studying vascular wall biology and inflammatory mechanisms in atherosclerosis, with particular focus on LDL oxidative modification and monocyte/macrophage involvement. Position uses cellular, biochemical and molecular biology experimental approaches to develop new assays and methods to study atherogenesis from a vessel wall perspective and to evaluate lead experimental compounds. Candidates must possess a BS/MS plus 2-4 years experience. Reply to **Dept. 288A-AR**.

### Biochemistry

- Conduct experiments in the biochemistry of cardiac ischemia. Requires a BS/MS with a minimum of 2-4 years of lab experience in biochemistry/molecular biology which should include exposure to mammalian cell culture, polyacrylamide gel electrophoresis, Western blotting, nucleic acid isolation, and analysis and immunohistochemistry. Reply to **Dept. 288B-AR**.
- Research is targeted toward novel antiviral and a thorough understanding of the mechanisms of viral replication and pathogenesis. Requires a BS/MS and 2-4 years experience with enzymology, protein purification, protein chemistry or kinetics. Familiarity with basic techniques of molecular biology desired. Reply to **Dept. 288C-AR**.

### Molecular Biology

- Join a multidisciplinary team investigating gene regulation in the development of atherosclerosis. Candidates should have a BS/MS, and 2-4 years experience, be proficient in transcriptional regulation and gene expression, and possess extensive experience in the commonly used techniques of molecular biology including PCR, vector construction, mobility shift assays, foot print analysis, bacterial and mammalian cell expression of cloned genes, etc. Familiarity with the basic techniques used for protein purification and cell culture is necessary. Reply to **Dept. 288D-AR**.
- Working with the Yeast Genetics Group, you will be responsible for conducting research in the area of molecular genetics relevant to the development and implementation of microbial cell based screens for drug discovery. A BS/MS degree and 2-4 years experience in molecular genetics and recombinant DNA technology are required; a background in yeast genetics is preferred. Reply to **Dept. 288E-AR**.

### Pharmacology

Conduct in vitro experiments involving the measurement of mechanical and biochemical function of isolated tissues. Position requires BS/MS in Biology and 2-4 years experience in the collection, analysis, storage and presentation of data. Reply to **Dept. 288F-AR**.

Please forward your resume and salary history, with appropriate Department #, to: **Bristol-Myers Squibb Pharmaceutical Research Institute, P.O. Box 4000, Princeton, NJ 08543-4000**. Equal Opportunity Employer, M/F/D/V.



**Bristol-Myers Squibb Company**

## POSITIONS OPEN

### INSTRUCTOR AND COORDINATOR EDUCATIONAL COMPUTER LABORATORY

Vanderbilt University School of Medicine, Division of Medical Administration, invites applications for a non-tenure-track position as Instructor and Coordinator of the Educational Computer Laboratory. Responsibilities include assisting faculty in writing or adopting computer-assisted instructional programs for medical curriculum, developing evaluation strategies for assessing impact of C.A.I., overseeing maintenance of computer network and software. Desired background includes Ph.D. in educational psychology, extensive experience with computers and educational software development and with evaluation of educational programs. Applicants should send résumé and should arrange for three letters of reference to be sent to: **Dr. Gerald S. Gotterer, Associate Dean, 201 Light Hall, Vanderbilt University School of Medicine, Nashville, TN 37232-0685.**

*Vanderbilt University is an Equal Employment Opportunity/Affirmative Action University.*

### FACULTY POSITIONS AVAILABLE IN BACTERIAL PATHOGENESIS

The Department of Molecular Genetics, Biochemistry and Microbiology currently numbers 25 full-time faculty with strong research programs in multiple disciplines, including the lead role in an NHLBI-sponsored Program of Excellence in Molecular Biology. We are now adding faculty to our Microbiology Group and are particularly interested in identifying individuals who are using molecular approaches to investigate microbial pathogenesis. The appointment can be at any level and generous space and startup funds are available. The department has a strong and active graduate program, and maintains core facilities in microbiology, cell culture, DNA synthesis and sequencing, and production of transgenic mice. All of these factors contribute to an excellent research atmosphere. Applicants should submit curriculum vitae, brief description of anticipated research, and the names of three qualified references to:

**Jerry B. Lingrel, Ph.D.**

*Professor and Chair*

**Department of Molecular Genetics,  
Biochemistry and Microbiology  
University of Cincinnati College of Medicine  
Cincinnati, OH 45267-0524**

*Affirmative Action/Equal Opportunity Employer.*

**RESEARCH INSTRUCTOR:** Electrophysiologist for research on neural control of circulation and teach medical and graduate students. Require: Ph.D. (physiology) or M.D. plus graduate studies in physiology; research using peripheral nerve single fiber recording and intracellular microelectrode recording from rat medulla slices; 4 years of experience splitting and recording single baroreceptor fibers from rat aortic nerve in vitro; six research papers in peer-reviewed journals of which at least two as primary author; 2 years of teaching medical and graduate students. Process: Submit curriculum vitae, current salary and names of three references to: **Dr. Michael C. Andresen, L334, Department of Physiology, Oregon Health Sciences University, Portland, OR 97201.** Recruitment period: 30 days. *Affirmative Action/Equal Opportunity Employer.*

The University of Pittsburgh Medical Center (UPMC) and the Pittsburgh Cancer Institute are seeking applicants for new **FACULTY POSITIONS**, in the area of molecular biology of human tumors. By a close cooperation between the Departments of Otolaryngology and Neurosurgery and the Pittsburgh Cancer Institute, there are excellent opportunities to perform extensive research on meningiomas, squamous cell carcinomas, and other tumors originating in the skull base or the head and neck. There already are well-functioning collaborative teams of clinical and basic investigators working on these problems. Faculty appointments, mainly at the Assistant Professor level, jointly in clinical and basic science departments are available. Successful applicants will be given laboratory space in the new Biomedical Science Tower of the UPMC and needed start-up equipment and other support.

To obtain more information and to submit an application, write to: **Ronald B. Herberman, M.D., Chairman of Search Committee and Director of the Pittsburgh Cancer Institute, 200 Meyran Avenue, Pittsburgh, PA 15213; telephone: 412-647-8586.** *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**BIOLOGIST.** Wabash College, a private liberal arts college for men, invites applications for a 1-year appointment to begin 1 July 1992. Ph.D. required. Responsibilities include teaching in a team-taught introductory biology course and a course in one of the following three areas: developmental biology, comparative anatomy and embryology or microbiology. Excellent facilities for research are available. *Wabash College is committed to a diverse faculty of excellent teaching ability. We are eager to receive applications from a broad spectrum of people and especially from women and members of minorities.* Applicants should submit curriculum vitae, three letters of recommendation and a statement of teaching to: **David Polley, Department of Biology, Wabash College, Crawfordsville, IN 47933** by 3 April 1992. *Equal Opportunity Employer.*

### PROKARYOTE GENOMIC SEQUENCING POSTDOCTORAL POSITIONS

To begin on or about April 1992 to work on a bacterial genomic sequencing project. The candidate should have broad experience in recombinant DNA technologies, DNA sequencing, microbiology, microbial genetics and the use of computational facilities working with the bacterium *Rhodospirillum rubrum*, and the target of analysis is chromosome II (914-kb). Grant support for 1 year with a commitment for an additional 4 years. It will involve approximately four to five personnel including these positions. The candidates will play a major role in developing the project, directing junior personnel, and setting research priorities. The project will be conducted within the below-listed departments. Both automated and manual DNA sequencing, automated gel readers, oligonucleotide synthesis, PCR, VAX and PC networks are available, in addition to state-of-the-art facilities. Starting salaries will be competitive and a generous fringe benefit package will be provided including a comprehensive health plan.

Call **Dr. Samuel Kaplan** at 713-794-1742 or **Dr. George Weinstock** at 713-792-5266 or write to the listed address.

**Microbiology and Molecular Genetics**

or

**Biochemistry and Molecular Biology**

**P.O. Box 20708**

**Houston, TX 77225**

*The University of Texas Health Sciences Center at Houston is an Equal Opportunity Employer. Minorities and women are encouraged to apply.*

**POSTDOCTORAL POSITION.** Available immediately to study signal transduction mechanisms during aging and regulation of bone signaling pathways by cytokines. Experience in adenylate cyclase and phosphoinositide turnover pathways and cell and molecular biology desired. Send curriculum vitae and names of three references to: **Dr. Michael S. Katz, GRECC (182), Audie L. Murphy Memorial Veterans Hospital, 7400 Merton Minter Boulevard, San Antonio, TX 78284.** *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITION.** Position available spring/summer 1992 for Ph.D. or M.D.-Ph.D. with training in cell and molecular biology to study structure and function of adenylate cyclase toxin from *Bordetella pertussis* and its mechanism for entering and intoxicating cells. Contact: **Erik L. Hewlett, M.D., Departments of Medicine and Pharmacology, Box 419, University of Virginia School of Medicine, Charlottesville, VA 22908.** FAX: 804-982-3830. *U.S. citizen or permanent residency required.*

### POSTDOCTORAL POSITION LABORATORY OF IMMUNOLOGY HARVARD UNIVERSITY SCHOOL OF PUBLIC HEALTH AND HARVARD MEDICAL SCHOOL

One postdoctoral position for individual with a Ph.D. and training in prokaryotic or eukaryotic gene transcription to study the regulation of class II major histocompatibility complex genes in the immune system. To apply, send curriculum vitae, names of three references, and a statement of research interests to: **Dr. Laurie H. Glimcher, Department of Cancer Biology, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115.** *Harvard School of Public Health and Harvard Medical School is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS

Gladstone Institute of Cardiovascular Disease, University of California, San Francisco. In the laboratories of: **Robert W. Mahley, M.D., Ph.D.:** Research will involve site-directed mutagenesis of Apo-B and to study the impact of the mutations on lipoprotein metabolism and atherosclerosis. **Israel Charo, M.D.:** Research on the molecular biology of monocyte-endothelial cell interactions. Project will involve cloning and mutagenesis of novel receptors. Background in vascular biology is desirable. **Bea Levy-Wilson, Ph.D.:** Study of apolipoprotein-B control and expression, mutations and expression in animals.

Candidates should possess a Ph.D. in molecular biology or biochemistry. Competitive salary and benefits. Send curriculum vitae and names of three references to: **Postdoctoral Recruitment/Human Resources, The Gladstone Institute of Cardiovascular Disease, University of California, San Francisco, P.O. Box 419100, San Francisco, CA 94141-9100.** *Equal Opportunity Employer.*

### POSTDOCTORAL TRAINING IN VASCULAR BIOLOGY SCRIPPS RESEARCH INSTITUTE LA JOLLA, CALIFORNIA

Fundamental studies of the molecular biology of cells of the vasculature and structure and function of proteins relevant to vascular disease. Applicants should be about to complete, or have recently completed, doctoral training in molecular biology, cell biology, or biochemistry. Contact: **Mark H. Ginsberg, M.D., Program Director, Scripps Research Institute, 10666 North Torrey Pines Road, La Jolla, CA 92037.** *Equal Opportunity Employer/Affirmative Action.*

**POSTDOCTORAL POSITION. NEPHROPATHOLOGY/PATHOPHYSIOLOGY.** Position for mid-1992 at Johns Hopkins to study proximal tubular dysfunction in nephropathic cystinosis. Well-equipped laboratory in new research facility. Experience in cell culture, electrophysiology, transport, protein purification, EM preferred. Send curriculum vitae, names and telephone numbers of three references to: **Dr. L. Racusen, Ross 624, The Johns Hopkins School of Medicine, 720 Rutland Avenue, Baltimore, MD 21205.** *An Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately to participate in ongoing studies of the intracellular targeting, processing and assembly of mutant and native proteins in eukaryotes. Knowledge of molecular biology and protein biochemistry are prerequisites. Send résumé and three letters of reference to: **L. Waskell, M.D., Ph.D., University of California San Francisco, VA Medical Center, Department of Anesthesia, 4150 Clement Street, San Francisco, CA 94121.** *Equal Opportunity Employer.*

**POSTDOCTORAL POSITION.** Available immediately to study preferential repair of DNA damage in active genes in *S. cerevisiae*. The role of transcription in directing repair to active genes and the factors involved in coupling transcription and repair will be investigated. Candidates should have a strong background in molecular biology and yeast genetics. Send curriculum vitae and the names of three references to: **Dr. Steven A. Leaden, Department of Radiation Oncology, CB#7512, University of North Carolina, Chapel Hill, NC 27599-7512.** *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to identify themselves voluntarily.*

### FREE PRODUCT INFORMATION SERVICE

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### Scientist

In this hands-on research position, you will support the development of a peptide drug currently in clinical trials. Specifically, you will isolate and characterize peptide degradation products that will require the use of HPLC, tryptic mapping, amino acid analysis, peptide sequencing and mass spectrometry. Additionally, you will develop HPLC methods to characterize peptide stability. Requirements include a PhD (with 0-5 years of experience) or an MS (with 4-10 years of experience) in Pharmacy, Chemistry or Biochemistry. A background in protein/peptide chemistry, HPLC, peptide mapping and analysis, and mass spectrometry is desirable. Experience developing and validating analytical methods for peptide characterization and an understanding of cGMPs is a plus. Job Code: 100

### Stability Supervisor/Staff Research Associate

You will support the development of a peptide drug currently in clinical trials. Specifically, you will develop and validate analytical HPLC methods, conduct stability studies requiring the use of HPLC, moisture analysis, pH and visual measurements and other analytical techniques, and establish/maintain a computer database for stability data. Requirements include an MS (with 2-6 years of experience) or a BS (with 4-10 years of experience) in Pharmacy, Chemistry or Biochemistry or a related field. Knowledge of protein/peptide chemistry, HPLC, and stability studies is essential. Analytical method validation experience; familiarity with cGMPs; and experience with computer databases are advantageous. Candidates with less experience will also be considered for this group. Job Code: 113

### Staff Research Associate/Scientist

You will work on a team developing topical formulation for a product currently in clinical trials. Responsibilities include evaluation of excipients, determination of shelf-life of the product, and investigation of the method to analyze. Requirements include an MS or PhD in Pharmacy, Biochemistry or Chemistry. Job Code: 115

## DEVELOPMENT

### Department Head Analytical Methods

Lead a staff of six professionals developing quantitative methods for determining purity, identity and potency of therapeutic proteins. Additionally, you will review, edit and interpret data that will support regulatory filings such as INDs, PLAs, and NDAs of protein therapeutics; develop assays to measure protein expression during fermentation of recombinant hosts as well as assays for in-process control and validation of large scale purification processes. Department planning and budgeting will also be involved. Job Code: 106

### Project Manager

Lead a multi-disciplinary team effort to ensure the rapid progression of project and product development activities through the preclinical, clinical, product registration and launch phases. You will also develop a comprehensive product development plan and monitor the status and results of all activities carried out under the plan. Requirements include 5+ years of project management experience in the biotechnology/pharmaceutical industry and a strong scientific background. Superior organizational and interpersonal skills are requisite. Job Code: 104

We offer a stimulating work environment and an outstanding compensation/benefits package. Please send your resume or C.V., indicating appropriate Job Code, to: California Biotechnology Inc., Human Resources, 2450 Bayshore Parkway, Mountain View, CA 94043. Or FAX to: (415) 968-2438. Equal Opportunity Employer.

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# Postdoctoral Fellowships In Molecular And Cell Biology.

## Molecular Neuroendocrinology Bruce D. Weintraub, MD

The transcriptional regulation of pituitary and hypothalamic hormone genes is currently being investigated. Various positive and negative hormone regulatory elements are being defined and novel transcription factors have been elucidated. Human models of aberrant transcriptional regulation, particularly thyroid hormone resistance, are being studied and various mutations of the thyroid hormone beta receptor have been defined. The functional effects of these mutations are being studied in cotransfection systems and in transgenic mice. For further information contact Bruce D. Weintraub, MD, Molecular and Cellular Endocrinology Branch, Building 10, Room 8D14, Phone 301-496-3405, FAX 301-496-1649.

## 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, animal, and disease model systems. Transcriptional regulation of IGFBP expression and the mechanisms of IGFBP action are under study. For further information contact Matthew M. Rechler, MD, Molecular and Cellular Endocrinology Branch, Building 10, Room 8D08, Phone 301-496-2483, FAX 301-496-1649.

If you hold a PhD, MD, or MD-PhD 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. Both tenure-track and term positions are available beginning July 1992 and 1993.



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Contribute to the exploration of novel approaches to the discovery of therapeutics for reproductive and bone metabolic diseases through the study of steroid, growth factor and cytokine regulatory interactions. We encourage unique new perspectives and solutions in these areas through teamwork between individuals with diverse interests and expertise ranging from cellular and molecular biology to histopathology and physiology. Respond to Department FH.

### **INFLAMMATION/ ALLERGY/IMMUNOLOGY**

Apply biochemical, pharmacologic and immunologic techniques to identify and characterize novel therapies of inflammatory and immunological disorders. Investigate signal transduction mechanisms, cell adhesion molecule interactions or cartilage biochemistry *in vitro*, and autoimmune, transplantation or asthma models *in vivo*. Respond to Department IA.

### **CARDIOVASCULAR/ METABOLIC DISORDERS**

Join in the development of *in vivo* disease models and ongoing research using molecular, cellular and ion channel techniques directed toward the discovery of novel therapeutics for the treatment of stroke, diabetes and atherosclerosis. Respond to Department CM.

### **CENTRAL NERVOUS SYSTEM PHARMACOLOGY**

Become a part of our search for new drugs for the treatment of neuropsychiatric and neurodegenerative diseases. Study cellular electrophysiology with cloned and expressed neuroreceptors as well as the biochemistry of neuronal signal transduction. Develop cellular models in stroke, neurodegeneration and neuronal signal transduction. Respond to Department CNS.

### **ORGANIC CHEMISTRY**

Synthesize potential therapeutic agents as part of one of Wyeth-Ayerst's multidisciplinary teams engaged in a variety of basic research programs. Strong synthetic organic chemistry experience is desired; medicinal chemistry experience is a plus. Respond to Department OC.

### **ANALYTICAL CHEMISTRY**

Provide spectroscopic, chromatographic and/or mass spectrometric expertise for multidisciplinary basic research teams aimed at development of novel therapeutic agents. Academic or industrial experience is required in general instrumental analysis, NMR, mass spectrometry or HPLC method development. Respond to Department AC.

### **DRUG METABOLISM**

Study the metabolic disposition and pharmacokinetics of new drug candidates. Desired experience includes HPLC, GLC, LSC, fluorometry, spectrophotometry and TLC. Respond to Department DM.

The openings in the above areas require a BS/MS/PhD in the appropriate scientific discipline (Molecular Biology, Biology, Immunology, Pharmacology, Biochemistry, Organic Chemistry, Chemistry).

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## GRADUATE FELLOWSHIPS FOR VETERINARIANS

The Department of Anatomy and Physiology has three openings for recent veterinary medical graduates who are interested in pursuing an academic career. It is expected that the successful candidates will have an exceptional post-baccalaureate transcript, a sincere interest in veterinary education and an enthusiastic commitment to basic research. Research areas of emphasis within the department include cell biology, exercise physiology, immunophysiology and neurobiology. Stipends are competitive and the research facilities are excellent. Candidates will be selected by 1 May 1992 and stipends will begin 1 August 1992. Send letters of inquiry to:

**Dr. Frank Blecha**  
Coordinator of Graduate Studies  
Department of Anatomy and Physiology  
College of Veterinary Medicine  
VMS 228  
Kansas State University  
Manhattan, KS 66506-5602

**POSTDOCTORAL FELLOW: NEUROPHYSIOLOGY.** Position available for a Ph.D. or M.D. with training in electrophysiology to join ongoing research program focusing on pathophysiology and regeneration of the spinal cord. Experiments will focus on ion channel organization and injury-induced calcium fluxes. Prior experience in electrophysiology is essential. Excellent opportunities for interactions with biophysicists, pharmacologists, confocal microscopists, electron microscopists, and molecular biologists. Send curriculum vitae and three letters of reference by 3 April 1992 to: **Stephen G. Waxman, M.D., Ph.D., Chairman, Department of Neurology, Yale Medical School, New Haven, CT 06510.** Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL FELLOWSHIPS IN MOLECULAR NEUROIMMUNOLOGY AND NEUROIMMUNOMODULATION** at the University of Alabama at Birmingham (UAB) are available 1 July 1992, supported by an NIH training grant for basic scientists or clinicians to conduct research on the molecular basis of neuroimmunology, neuroimmunomodulation and the bidirectional communication between the nervous and immune systems. Applicants must be U.S. citizens or permanent residents of the United States. Preceptors and areas of interest are as follows: E. N. Benveniste, Ph.D. (cytokines and glia); J. E. Blalock, Ph.D. (neuroimmunomodulation: lymphocyte derived hormones); E. J. Dropcho, M.D. (paraneoplastic neurological disorders); M. L. Egan, Ph.D. (immunoregulation and natural killer cells); G. Y. Gillespie, Ph.D. (immune response to glial tumors); R. D. LeBoeuf, Ph.D. (molecular biology of the immune network); J. D. Neill, Ph.D. (neuro-endocrinology); D. A. Weigent, Ph.D. (growth hormone and the immune system); and J. N. Whitaker, M.D. (immunochimistry and degradation of myelin basic protein). Interested applicants should submit a letter stating their specific interests, curriculum vitae and names of three references by 20 April 1992 to: **John N. Whitaker, M.D., Department of Neurology, University of Alabama at Birmingham, Birmingham, AL 35294, telephone: 205-934-2402.** UAB is an Affirmative Action/Equal Employment Opportunity Employer.

## POSITIONS OPEN

### POSTDOCTORAL FELLOWSHIP

A postdoctoral fellowship is available to study signal transduction for cytokines and hormones including tumor necrosis factor- $\alpha$ , interleukin-1 and activin. Signaling will be assessed with respect to models of differentiation and neoplasia. Salary is \$30,000 per year. M.D. or M.D./Ph.D. preferred. Please send curriculum vitae to:

**Dr. Richard Kolesnick**  
Head, The Laboratory of Signal Transduction  
Memorial Sloan-Kettering Cancer Center  
1275 York Avenue  
New York, NY 10021

**POSTDOCTORAL FELLOW.** Position available, June 1992, for the study of cellular mechanisms of simple forms of learning in the marine mollusc *Aplysia*. These studies will focus on correlates of both nonassociative and associative learning in a reduced preparation with a well-defined neural circuit. Experience with intracellular electrophysiological techniques and behavioral methods is desirable. Send curriculum vitae and the names of three references to: **Dr. Robert D. Hawkins, Center for Neurobiology and Behavior, College of Physicians and Surgeons of Columbia University, 722 West 168th Street, New York, NY 10032.**

**POSTDOCTORAL RESEARCH FELLOWSHIPS** are available at the Center for Cardiovascular Biology, School of Public Health, Harvard University. Research in the laboratory aims to elucidate basic biological mechanisms of thrombolysis and thrombosis to design improved strategies for the inhibition of clotting, or the detection and lysis of pathologic clots. Experience with molecular cloning, protein engineering, protein chemistry, immunology or cell biology is desirable. No citizenship required. Please send curriculum vitae and three letters of recommendation to: **Dr. Guy L. Reed, Jackson 14, Massachusetts General Hospital, Boston, MA 02114.**

### POSTDOCTORAL FELLOWSHIP RESEARCH ASSOCIATE

Positions available to study the cellular and molecular immunology of autoimmunity and regulation of autoaggression. Additional opportunities available to study the mechanism of novel immunosuppressive drugs. Knowledge of cellular immunology and molecular biological techniques is desirable. Send curriculum vitae and names of three references to: **Dr. Allan D. Hess, Bone Marrow Transplant Unit, Oncology 3-127, The Johns Hopkins University, 600 North Wolfe Street, Baltimore, MD 21205.**

### RESEARCH ASSOCIATE POSTDOCTORAL FELLOW

Position available for Ph.D. to join and aid in the direction of an active hematopoiesis and stem cell transplantation program. Laboratory studies include (1) mechanisms of mobilization of blood stem cells, (2) influence of cytokines on stem cell subpopulations, (3) role of donor stem cells and host preparation on engraftment, and (4) protection of stem cells with regulatory molecules. Direct inquiries to:

**Peter Mauch, M.D.**  
Harvard Medical School, JCRT  
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### POSTDOCTORAL/RESEARCH ASSOCIATE

Available immediately for investigation of the cellular mechanism of translocation of protein toxins and hybrid toxins after receptor-mediated endocytosis. Current investigation focuses on identification of the intracellular compartment from which translocation of toxin occurs. Working techniques involve synthesis and purification of hybrid toxins, isolation of subcellular particles and study toxin translocation in a cell-free system. Candidates with a recent Ph.D. in biochemistry or cell biology interested in working on target-specific cell killing with hybrid toxins and/or membrane trafficking should apply by sending curriculum vitae and three references to: **Dr. Ta-min Chang, Gastroenterology Unit, The Genesee Hospital and University of Rochester School of Medicine and Dentistry, Rochester, New York 14607.**

## POSITIONS OPEN

**POSTDOCTORAL-ASSOCIATE RESEARCH BIOCHEMIST** positions available to study the biosynthesis of hydrogenases in *E. coli* and *Desulfovibrio* species. Candidates must have experience in fermentation, protein biochemistry and molecular genetics. Site-directed mutagenesis, protein chemistry and spectroscopy are used to trace biosynthetic pathways and determine the role of metal clusters and metals in catalysis. Send curriculum vitae and three letters of reference to: **Dr. Alan Przybyla, Department of Biochemistry, Life Science Building, University of Georgia, Athens, GA 30602.** An Equal Opportunity/Affirmative Action Institution.

**RESEARCH ASSISTANT IN LIMNOLOGY,** available immediately, to work as part of the Arctic Long-Term Ecological Research (LTER) Program. In summer, duties are to coordinate field research on lakes near Toolik Lake, Alaska. Winter duties include coordination of lakes research plus data management and logistical coordination for the overall Arctic LTER Program (based in Woods Hole, Massachusetts). M.S. in environmental science and field experience are required; additional skills in chemistry, equipment repair and maintenance, statistics and database management, and personnel management are desirable. To apply, send cover letters, résumé, and names of at least three referees to: **Dr. John Hobbie, The Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA 02543** by 1 April 1992. FAX number is: 508-457-1548.

### RESEARCH POSITION

The Universities Space Research Association (USRA) has a need for two research scientists to investigate processes or products which are limited or affected by conditions not shared by the Space and Earth environments (e.g., microgravity, high vacuum, etc.). Candidates should be able to quantify these limitations and effects theoretically and/or experimentally. They will be expected to develop theories for various heat and mass transport processes encountered during crystal growth and solidification and develop numerical codes. Candidates will perform analyses on mass redistribution, interface stability and defect formation in structural, electronic, and optical materials, and/or evaluate the effects of residual gravitational forces on materials and processes. Additionally, candidates could provide assistance with ground-based and flight hardware related to studies to ascertain the potential benefits of processing materials in space. Work will be conducted in the Microgravity Sciences Division of the Space Science Laboratory, NASA/Marshall Space Flight Center. A 1-year renewable appointment is anticipated. USRA offers an attractive fringe benefits package and a salary commensurate with experience. An Equal Opportunity Employer, M/F/V/H. Send résumé to: **USRA, Attention: Dr. J. Van Alstine, 4950 Corporate Drive, Suite 100, Huntsville, AL 35806.**



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### Staff Scientist, Bioerodible Systems

We seek highly motivated individuals to design and perform *in vitro* assays, and assist with *in vivo* studies toward the development of bioerodible systems. This work will support our bone repair program within our Drug Delivery Group/Pharmaceutical Development Department.

A Ph.D. in Pharmaceutics, Chemical Engineering or equivalent, plus a strong background in and understanding of drug delivery, protein-pharmaceutics, polymer science or applied chemistry is preferred. One to three years of experience required.

### Postdoctoral Fellow, Drug Delivery

Participate in the design and fabrication of novel drug delivery systems for our proprietary recombinant proteins. Additionally, this individual will perform *in vitro* experiments and assist in *in vivo* studies.

A one-year appointment, renewable for a second year, is available within our Drug Delivery Group/Pharmaceutical Development Department. A Ph.D. in Pharmaceutics, Chemical Engineering, the life sciences or equivalent, plus a strong background in and understanding of drug delivery, protein-pharmaceutics, polymer science or applied chemistry is preferred. No experience required.

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### Insulin Action/Signal Transduction

This position requires a scientist with a PhD in Biochemistry or related field and an interest in the areas of insulin action, signal transduction, and/or protein phosphorylation. The study, to be carried out with the Diabetes Research Group at Pfizer and with Dr. Gustav Leinhardt in the Biochemistry Department at Dartmouth Medical School, will focus on the diabetes-associated defects in the insulin signal transduction pathway in intact cells and at the subcellular level. Publication of the results of these studies will be expected.

These positions include a stipend, medical and dental insurance, and relocation assistance. To be considered please forward your *curriculum vitae* and the names of three references, indicating position of interest, to: Mr. Kym Goddu, Personnel Associate, Employee Resources, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, Connecticut 06340. An equal opportunity employer.



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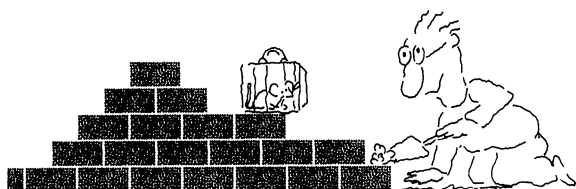
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## Assistant Professor of Environmental Science Geology/Geography—GIS Tenure Track—Fall 1992

The Environmental Science Program at Marist College is seeking an individual who has extensive experience using Geographic Information Systems as a tool in environmental impact assessment or environmental resources and policy analysis.

The primary responsibilities of the position are: 1) Teaching two undergraduate courses in GIS, plus some combination of environmental geology, hydrology, geography, cartography, and environmental issues. 2) Directing undergraduate research projects and internships. 3) Assisting with the recruitment and advisement of undergraduate environmental science majors.

The ideal candidate will have completed a Ph.D. in geology, geography, or a closely related field, have evidence of broad training in environmental science or environmental policy analysis, and have two years of undergraduate teaching experience.

Women and minorities are encouraged to apply. Please submit a resume, a brief description of research plans, and three letters of recommendation by March 13, 1992. Credentials will continue to be accepted until the position is filled. Please address to:

**Dr. Andrew Molloy**  
Chair, Division of Science  
Marist College  
MPO 905  
Poughkeepsie, NY 12601

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**Assistant Professor of Biology/Botany  
Tenure Track—Fall 1992**

The Marist College Science Division invites applications for a tenure track position beginning fall 1992. Qualified candidates must have a completed Ph.D. degree and a strong interest in undergraduate education. Candidates are expected to have a commitment to excellence in teaching and to establish a program of research preferably involving undergraduate students.

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Women and minorities are encouraged to apply. Please submit a resume, a brief description of research plans, and three letters of recommendation by March 13, 1992. Credentials will continue to be accepted until the position is filled. Please address to:

**Dr. Andrew Molloy  
Chair, Division of Science  
Marist College  
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Other positions will be responsible for research of recombinant DNA and lymphocyte development. Candidates must have a BS, MS or PhD in a related discipline and a minimum of two years experience in recombinant DNA and immunological research. Experience in bone marrow culture and purification of progenitor cell is highly desirable.

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**Molecular Biologists** Coordinating the molecular biology efforts in our autoantigen identification program, you'll develop novel antigen identification methods; construct cDNA libraries; develop eucaryotic and procaryotic expression systems; and investigate the molecular mechanisms responsible for T cell non-responsiveness. Requires a Ph.D. in Molecular Biology or a related field, a minimum of 2 years' relevant post-doctoral training, with experience in molecular biology, and a demonstrated record of success.

**Cellular Immunologists** You'll investigate the events leading up to T cell activation in autoimmune disease and other immune-mediated conditions, and cover all analytical aspects — from antigen processing to T cell activation. Interaction with outside collaborators/consultants will be involved. Requires a Ph.D. in Immunology or a related field, and 2+ years' relevant postdoctoral experience in human T cell immunology using traditional and novel analytical techniques.

**Protein Biochemists** Using traditional and novel protein chemistry techniques, you'll investigate MHC class II/peptide interactions and/or autoantigen identification in a variety of immune-mediated processes. You'll also be responsible for and supervise protein purification, analysis and characterization. You must have a Ph.D. in Biochemistry or a related field; at least 2 years of relevant postdoctoral training, with experience in protein chemistry; and a demonstrated record of success.

We're in a position to offer you exceptional opportunities and support for your professional stature, as well as an excellent compensation and benefits package. Please send your resume, to: *Human Resources, ImmuLogic Pharmaceutical Corporation, 855 California Avenue, Palo Alto, CA 94304.* An Equal Opportunity Employer.

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# ASSISTANT and ASSOCIATE SCIENTISTS

DEPARTMENT OF VIROLOGY

Hoffmann-La Roche is a diversified, research-intensive health care company with major businesses in pharmaceuticals, diagnostic products and clinical laboratory testing services, and vitamins and fine chemicals for human and animal health and nutrition.

We are seeking several highly motivated individuals to join our Virology Department. Working in conjunction with Scientists, you will apply basic research findings to drug discovery; and participate in the research and development of therapeutics for viral infections. Qualifications include a BS/MS in a relevant discipline coupled with 1-3 years of research experience in molecular biology. Familiarity with tissue culture and virus propagation is highly desirable; knowledge of PCR techniques and the expertise required to handle blood from HIV infected patients would be a plus.

You'll enjoy the atmosphere of discovery at Hoffmann-La Roche, as well as an environment conducive to intellectual and professional growth. We offer salaries commensurate with your education and experience, and a generous bonus and benefits package. For confidential consideration, please send your resume, indicating salary history and requirements, to: **Mrs. Frances Newman, Staffing Department FN22MH, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



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## DIRECTOR, DIVISION OF ENVIRONMENTAL BIOLOGY NATIONAL SCIENCE FOUNDATION Washington, D.C. 20550

NSF's Directorate for Biological Sciences is seeking qualified candidates for the position of Director, Division of Environmental Biology. The Division funds research in systematic and population biology, ecological studies, and long-term projects in environmental biology.

Appointment to this Senior Executive Service position will be on a two-to-three year limited term basis with a salary range of ES-1 (\$90,000) to ES-4 (\$104,000). Alternatively, selectee may be assigned under Intergovernmental Personnel Act provisions, retaining current salary and benefits. Applicants must have a Ph.D. or equivalent experience in biological subdisciplines supported through the programs of Division (e.g., ecology, ecosystem studies, population biology, and systematic biology); substantial research contributions or innovative leadership in research administration in the biological sciences; and ability to achieve organizational objectives through the supervision and management of subordinates.

Applicants should contact George Pittmon on 202-357-7351 (hearing impaired individuals may call TDD-357-7492) to request EP 92-2 (SES appointment) or EP 92-12 (IPA) for complete qualification requirements and application procedures. Applications must be received by March 31, 1992.

EQUAL OPPORTUNITY EMPLOYER



## THE RESEARCH INSTITUTE KING FAHD UNIVERSITY OF PETROLEUM & MINERALS DHAHRAN, SAUDI ARABIA

The Research Institute of King Fahd University of Petroleum and Minerals has positions available for *marine scientists* to participate in ongoing research projects in its Water Resources and Environment Division. These projects are field oriented and involve the evaluation of impacts of oil facilities on the marine environment of the Arabian Gulf. Applicants should have a strong field orientation and the ability to write well. Experience in impact assessment preparation and project management will be helpful. The following specific positions are available; however, applicants with other backgrounds are encouraged to apply:

**Physical Oceanographers** - Ph.D., M.S., or B.S. required. Applicants should have experience in the collection and analysis of oceanographic and meteorological data. Transport modelling experience useful but emphasis will be on field data collection and its evaluation.

**Marine Biologists** - Ph.D., M.S., or B.S. required. Senior staff applicants should have experience in benthic studies, fisheries statistics, reef fish ecology, or plankton dynamics. Other applicants should have training and/or experience in some area of marine biology. Field orientation including SCUBA certification required.

Salaries are competitive and benefits include annual repatriation, free housing and transportation allowance.

Send detailed resume, in duplicate, with supporting documents and names of four referees to:

**Assistant Director for Administrative Affairs  
Research Institute  
King Fahd University of Petroleum & Minerals  
Dhahran 31261, Saudi Arabia**

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## LOBBYIST

The Washington, DC, Government Affairs office of a large professional health care organization is looking for a qualified candidate to serve as a lobbyist to federal agencies on public health issues. Qualified candidates should have a minimum of 3-5 years experience working with the Federal Government on public health issues. Excellent written and oral communications are essential as is an undergraduate degree. Must be a self-starter with the ability to analyze and synthesize complex issues.

We offer an attractive salary and benefits package. For immediate and strict confidential consideration, please forward your resume and salary history to: P.O. Box 10944, Chicago, IL 60610. An equal opportunity employer m/f/h.

### NATIONAL INSTITUTES OF HEALTH

#### HAS IMMEDIATE OPENINGS IN CLINICAL TRIALS AND PRECLINICAL ANIMAL STUDIES

The National Institute of Allergy and Infectious Diseases, Division of AIDS, Vaccine Research and Development Branch has challenging positions in the areas of clinical trials and preclinical animal studies. The clinical trials applicant will work in the Clinical Development Section of the Vaccine R&D Branch, participating in the design, development, testing, and evaluation of candidate HIV vaccines in human clinical trials (Phase I/II). The applicant will interact with the AIDS Vaccine Evaluation Group, the FDA, and the private sector in administering a cohesive HIV vaccine clinical trials program. The applicant should possess a M.D. or Ph.D. degree with experience in human clinical trials, immunology, and/or HIV infection. Strong leadership, experience in pharmaceutical development, and administrative skills would be desirable.

The animal studies applicant will work in the Preclinical Development Section of the Vaccine R&D Branch, participating in the design and evaluation of preclinical vaccine studies in the SIV/monkey and chimp/HIV models and will administer and develop programs that facilitate this research. The applicant should possess a D.V.M. or Ph.D. degree, with experience in SIV virology, primate studies, immunology, and/or molecular biology. Leadership skills and administrative experience would be desirable. Applicants should send curriculum vitae or Application for Federal Employment (SF-171) to: Dr. Wayne C. Koff, Division of AIDS/NIAID, Solar Building, Rm. 2B-01, 6003 Executive Blvd., Bethesda, MD 20892, U.S.A., Phone: 301-496-8200; FAX: 301-402-1506.

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### DIAGNOSTICS

#### MICROBIAL PHYSIOLOGIST

##### Rare Reagents Fermentation Development Group

You will participate in projects involving the expression of recombinant hepatitis and HIV virus proteins in bacterial cells. This includes developing protocols and evaluating results of experiments to determine project suitability, clone selection, and optimization of fermentation conditions to maximize product yields. Aspects of the project will include protein purification and assay development.

We require a Ph.D. or M.S. with experience in Microbiology or Biochemical Engineering. In-depth knowledge of microbial physiology and fermentation of recombinant bacteria is essential, along with hands-on experience with laboratory and pilot scale fermentation equipment. **Reply to Dept. AR, Job #19159.**

### RESEARCH CHEMIST

We have an immediate opening for a Synthetic Organic Chemist with an M.S. in Organic Chemistry or a related field or a B.S. and 2+ years of industrial experience. Responsibilities include synthesis and characterization of organic intermediates, modification of polymeric substances, and preparation of enzyme conjugates. Candidates should be familiar with modern analytical methods (NMR, IR, UV, MASS SPEC, etc.) and separation techniques (flash chromatography and HPLC). Experience in Biochemistry and/or basic immunology a definite plus. **Reply to Dept. AR, Job #54924.**

### PHARMACEUTICAL PRODUCTS

#### GROUP LEADER

##### Antiviral Biochemistry

You will be involved in antiviral biochemistry with emphasis on HIV. Duties include protein expression, isolation, purification and characterization, plus analysis of enzyme kinetics and mechanisms. You will also implement new assay systems for the discovery/characterization of enzyme inhibitors, and investigate the molecular and cellular pharmacology of drug candidates. We require a Ph.D. Biochemist with 2+ years at the supervisory level, and enzymology expertise. Knowledge of viral replication or experience with proteinases or nucleoside metabolism is preferred. **Reply to Dept. PH, Job #7540.**

### CARDIOVASCULAR

#### PHARMACOLOGIST/PHYSIOLOGIST

You will design and implement experiments for preclinical investigation of new drug entities. Experience related to the regulation of vascular and cardiac hypertrophy utilizing *in vivo* and *in vitro* techniques is preferred, but the position is open to all backgrounds with direct relevance to cardiovascular drug discovery. Qualifications include a Ph.D. and 3+ years postdoctoral training, a proven record of publication, and a willingness to adapt to project needs. **Reply to Dept. PH, Job #48650.**

### ANTIVIRAL DRUG DISCOVERY GROUP

#### VIROLOGIST

Responsibilities will include conducting analysis and detailed evaluation on current drug candidates, performing studies on the mechanisms of viral resistance, identifying new antiviral targets and derivation of novel screening candidates. We require a Ph.D. in Molecular Virology and 0-4 years related experience, along with demonstrated experience in one or more areas of virology (herpesvirus, rhinovirus, papillomavirus or retrovirus) with emphasis in Molecular Biology. Experience in antiviral drug characterization desired. **Reply to Dept. PH, Job #50512A.**

### RESEARCH ASSISTANT

We have a technical level position available for a research assistant with a relevant B.S./M.S. degree and related experience. Candidate must have knowledge of cell culture based viral assays and molecular biology techniques. May require working with HIV or other viral agents. **Reply to Dept. PH, Job #50512B.**

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

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## POSITIONS OPEN

**RESEARCH INVESTIGATOR.** Develop research methods to be used in the introduction of new pharmaceutical products which treat hypertension, as well as gastrointestinal diseases, nervous system irregularities, sickle cell anemia and diabetes. Focus is on second messenger cyclic GMP metabolism and hormonal regulation of guanylate cyclase, the synthesizing enzyme of cyclic GMP. Also concentration on the study of nitric oxide, which activates guanylate cyclase and increases cyclic GMP and may be involved in learning and memory and system irregularities such as Alzheimer's disease. Ph.D. in pharmaceutical science and 3 years of experience as research investigator or 3 years of experience as scientific researcher required. Applicants must have had research experience in metabolism and hormonal regulation of guanylate cyclase-cyclic GMP system, especially in soluble guanylate cyclase activation and inhibition study by establishing bioassays of platelet aggregation and vascular smooth muscle relaxation, and by physico-chemical detection method for nitric oxide. Research must have also involved the effect of cyclic GMP on patients diagnosed with hypertension and nervous system irregularities. Forty hours, 8:15 a.m. to 4:55 p.m., \$72,000 per year. *Must have proof of legal authority to work permanently in the U.S.* Send résumés to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605, Attention: Mary Millea, Reference #V-IL-4886-M.** No calls. Two copies of your résumé required. *An employer-paid ad.*



### PRECLINICAL MANAGER-VACCINES

MicroCarb is a rapidly growing biotechnology company located on the I-270 Technology Corridor in Gaithersburg, Maryland, just minutes north of the National Institutes of Health, that is committed to the discovery and application of novel microbial adhesins, based on receptor technology, for the development of vaccines for human infectious diseases. We are currently seeking a creative scientist with proven expertise in conducting efficacy studies and evaluating humoral and cellular immune responses to candidate vaccines in appropriate animal models.

Background should include a Ph.D. in microbiology/immunology or a related discipline with several years experience in the vaccine industry. Familiarity with FDA protocols and regulatory affairs in bringing vaccines up to phase I clinical trials is also highly desirable.

MicroCarb's state-of-the-art research facility offers a challenging environment with a competitive compensation package and a full range of benefits. Please send your curriculum vitae, in confidence, to: **Dr. Howard C. Krivan, MicroCarb Inc., 300 Professional Drive, Suite 100, Gaithersburg, MD 20879.** *MicroCarb Inc. is an Equal Opportunity Employer.*

The Department of Commerce (DOC) NOAA/Office of Oceanic and Atmospheric Research (OAR)/Program Development and Coordination Staff is seeking applicants for the position of **PHYSICAL SCIENTIST, GM-1301-15** (\$64,233 to \$83,502). Duties: The position serves as the OAR staff expert and focal point for global change research, climate and atmospheric chemistry, and related national and international public policy issues. This position is located in Silver Spring, Maryland. Applicants must submit the June 1988 edition of the Standard Form 171 by 12 March 1992 to: **NOAA/Personnel Operations Division/NOS-OAR Operations Branch, SSMC-1, OA213, #3230, 1335 East West Highway, Silver Spring, MD 20910.** For additional information and a list of quality ranking factors call: **301-713-0506** refer to vacancy #: **OA/M-92-15-MMP.** *DOC is an Equal Opportunity Employer.*

## SCIENCE

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## POSITIONS OPEN

### COLUMBIA UNIVERSITY CENTER FOR RADIOLOGICAL RESEARCH

**ASSOCIATE RESEARCH SCIENTIST**—Position available immediately to study molecular aspects of DNA repair. Candidate must have either academic or lab experience in DNA repair, cloning techniques, DNA sequencing, expression systems and use of yeast and mammalian cells for radiobiological studies.

Familiarization with main-frame computer molecular biology-related software programs, such as Intelligent Genetics Series Program and GCG programs required. Minimum of 6 months of postdoctoral experience preferred. Full-time position (40 hours per week), salary at \$32,000 annual. Send curriculum vitae with three letters of recommendation to: **Dr. H. B. Lieberman, Center for Radiological Research, Columbia University, 630 West 168th Street, New York, NY 10032.** *An Affirmative Action/Equal Opportunity Employer.*

**SENIOR SCIENTIST.** Technical responsibility for studies relating to pesticide registration. Studies include plant and animal metabolism, environmental fate and residue. Design, preparation of protocol, preparation of final reports, supervision of contract labs and compliance studies. Isolation and identification of metabolites or degradates. Operate and maintain instrumentation. Requires Ph.D. (ABD) biophysical chemistry and 1 year of experience with strong background in physical chemistry and biochemistry. Background in fluorescence spectroscopy including photo-induced electron tunneling and energy transfer process and real-time studies of protein dynamic process and anisotropy. Course work or other background in isolation, purification and characterization of proteins and naturally biological products utilizing chromatography HPLC. Forty hours per week; salary: \$49,500 per year; résumé received to: **Philadelphia Job Bank, 444 North 3rd Street, 3rd Floor, Philadelphia, PA 19123.** Job Order #4427966.

### TOXICOLOGIST

The Washington State Department of Ecology is a state agency involved in remediation of contaminated properties. Washington has one of the most comprehensive state "Superfund" programs in the country.

We are currently seeking a self-motivated professional for a full time toxicologist position in Olympia, Washington. Salary ranges from \$34,000 to \$43,800. Minimum qualifications include a master's in toxicology, public health or closely related field and 3 years of experience in an environmental field.

The toxicologist serves as a department expert on risk assessment, toxicology and risk-based cleanup standards. Specific responsibilities include: reviewing risk assessment documents for individual sites, completing literature research on individual compounds where data are limited, writing policy relative to risk assessment/toxicology and providing technical support on cleanup standards established under state law.

If you have questions concerning the position or wish to apply, please contact: **Lynn Coleman at 206-438-3073.**

## MEETINGS

### BIOMEDICAL SIMULATIONS RESOURCE UNIVERSITY OF SOUTHERN CALIFORNIA

Announcement of Annual Workshop and Short Courses:

**1 AND 2 MAY 1992:** Workshop on "Nonlinear Methods of Physiological System Modeling," organized and chaired by Professor V. Z. Marmarelis.

**15 AND 16 MAY 1992:** Short Course on "Modeling and Data Analysis in Pharmacokinetics and Pharmacodynamics using ADAPT II," organized and chaired by Professor D. Z. D'Argenio.

**30 AND 31 MAY 1992:** Short Course on "Simulation in Neurobiology Training Programs," organized and chaired by Professor G. P. Moore.

All meetings will be held in Los Angeles. There is no registration fee, only a nominal charge for short course materials; seating is limited. For information, please telephone: **213-740-0342**, or FAX inquiry to: **213-740-0343**, or write to **BMSR, OHE 500, USC, Los Angeles, CA 90089-1451.**

## COURSES AND TRAINING

### TOXICOLOGY TRAINING PROGRAM

The University of Texas Medical Branch (UTMB) is currently seeking applicants for an integrated, interdepartmental program in environmental toxicology mechanisms. Stipends are available for predoctoral and postdoctoral candidates through the NIH/NIEHS-funded program. Training is provided through the combined expertise of faculty from both the Medical School and Graduate School of Biomedical Sciences and encompasses disciplines of molecular, biochemical, organ, genetic, and clinical toxicology. Predoctoral students are affiliated with specific Graduate School Departments and earn the Ph.D. degree. Postdoctoral fellows are based with individual program faculty. For complete information please write or telephone: **Dr. K. Lemone Yielding, Program Director, Toxicology Training Program, 528 Administration Building, A-33, University of Texas Medical Branch, Galveston, TX 77550.** Telephone: **409-772-3088.** *UTMB is an Equal Opportunity/Affirmative Action Employer, M/F/H/V. UTMB hires only individuals authorized to work in the United States.*

**FIFTH SUMMER INSTITUTE IN ENVIRONMENTAL HEALTH STUDIES**—18 to 29 May 1992. The Johns Hopkins School of Hygiene and Public Health, Baltimore, Maryland. ■ Principles of Toxicology ■ Risk Communication of Environmental Hazards ■ Fundamentals of Occupational Health ■ Physical Agents in Environmental Health Sciences ■ Contemporary Problems in Radiation Health Sciences ■ Risk Assessment and Risk Management ■ Principles of Industrial Hygiene ■ Clinical Occupational Medicine and ■ Introductory Ergonomics. Contact: **Dr. J. Corn, The Johns Hopkins School of Hygiene and Public Health, 615 North Wolfe Street, Room 6001, Baltimore, MD 21205;** telephone: **410-955-2609.**

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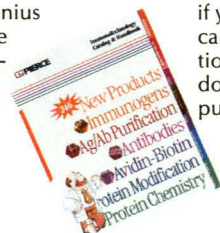
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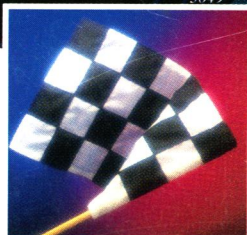
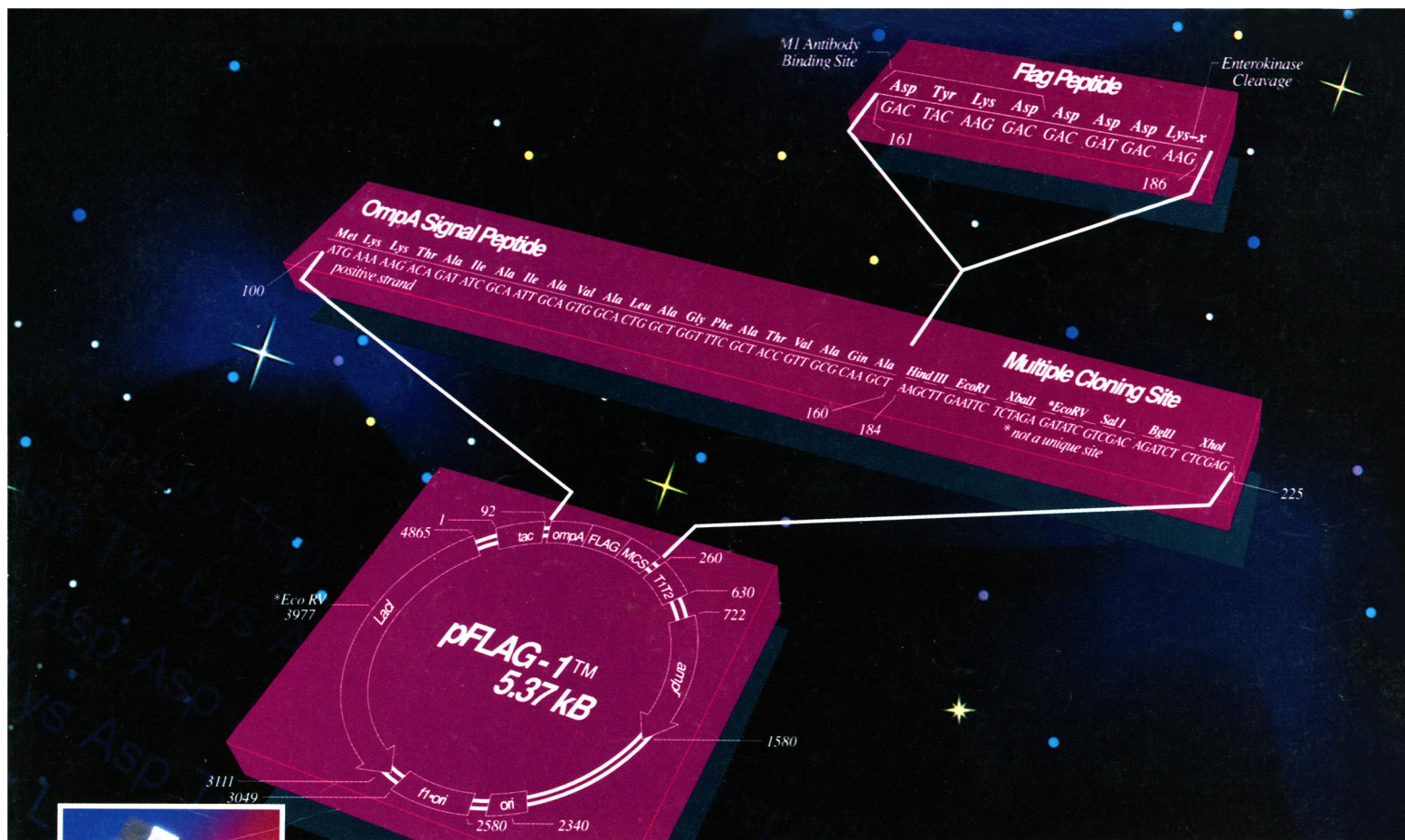
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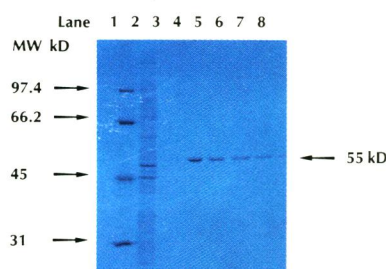
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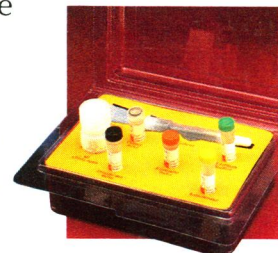
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