

Products & Materials

Monoclonal Antibodies

CBL 463 is a monoclonal antibody (MAb) with specificity toward glycosphingolipids possessing a lactosyl residue. The antibody reacts with neutrophils, monocytes, and platelets. Cymbus Bioscience. Circle 517.

A range of MAb cancer markers includes AUA-1 (for use in the differential diagnosis of carcinoma and mesothelioma), QBend 10 (an endothelial cell marker), and Leucocyte Common Antigen (for differentiating tumors of white cell origin from other types). Unipath. Circle 518.

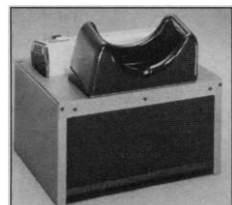
A MAb directed toward CD28 antigen is available. Serotec. Circle 519.

Cryopreservation Vessel

BICELL is a compact, inexpensive, and simple method for cell preservation without programmable freezers. The vessel can preserve many kinds of mammalian cells, such as cultured cells, hybridoma, ascites, or solid tumor cells of experimental animals. Provided the freezer temperature is maintained at -80°C , the vessel will create a steady and uniform slow freezing. The freezing process is completed within 4 hours. The vessel is 109 mm high and 88 mm in diameter. It can hold nine 1-ml ampules or seven 2-ml serum tubes. Biotanni. Circle 520.

Portable Ultraviolet Darkroom

The Spectroline Model CM-26 UV Viewing Cabinet acts as a portable darkroom that allows researchers to view even dim fluorescence in bright room light. The cabinet can provide both longwave and shortwave ultraviolet irradiance at the push of a button.



The unit's lamp produces a typical peak longwave (365 nm) intensity of $350 \mu\text{W}/\text{cm}^2$ and a shortwave (254 nm) intensity of $420 \mu\text{W}/\text{cm}^2$ at the cabinet floor. Spectronics. Circle 211.

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.

Differential Equation Solving Software

DIFFEQ is a new ordinary differential equation solver for IBM-compatible computers. Features include a graphics user interface with drop-down menus and optional mouse support. Data can be imported from and exported to Excel, Lotus, dBase, DIF, and ASCII files. The software can approach problems using any of seven numerical methods. Plot types include time-phase, time-flow, phase-field, and phase-flow, with publication-quality output via various user-defined devices. MicroMath Scientific Software. Circle 522.

Digitizer for DNA Base Input

The HDG-1717BL is a backlighted desktop tablet digitizer designed for reading DNA sequencing films and autoradiography-based x-ray films. The tablet features a built-in light box with a fully backlighted 17 inch by 17 inch digitizing surface. It includes an ergonomic stylus pen for easy data input and features variable light adjustment. Hitachi Software Engineering America. Circle 523.

Perfusion Chromatography System

The BioCAD Workstation is a dedicated perfusion chromatography system. Perfusion chromatography allows scientists to perform 1-min to 3-min separations of biomolecules. Perfusion chromatography is based on specially engineered POROS media. POROS media incorporate two types of pore sizes that allow the liquid sample to flow both around and through the media particle. This combination allows high resolution and high capacity, up to 100 times faster than conventional chromatography and high-performance liquid chromatography. PerSeptive Biosystems. Circle 524.

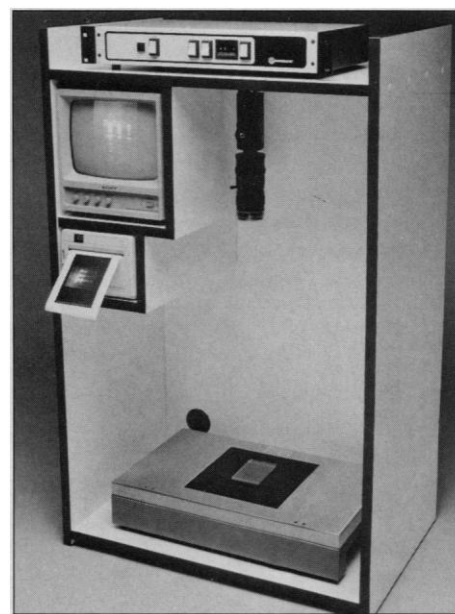
Custom Anti-Peptide Antibodies

A service providing production of purified polyclonal antibodies to a custom peptide sequence includes: the synthesis and purification (to greater than 95% purity) of the peptide sequence, the conjugation of the peptide to keyhole limpet hemocyanin (or other carrier if desired), immunization of two rabbits and enzyme-linked immunosorbent assay (ELISA) of the serum, and affinity purification of the anti-peptide antibodies.

The client receives purified peptide, crude serum, affinity-purified antibodies, and a certificate of analysis detailing the reactivity of the antibody against the peptide in an ELISA. Multiple Peptide Systems. Circle 525.

Still Video Gel Documenter

The Eagle Eye still video system can reduce the cost, enhance the sensitivity, and increase the speed of generating printed gel images. A frame (image) storage and integration device allows the consolidation of up to 99 captured frames into one image, bringing the limit of detection for DNA down to 0.25 ng, a fourfold increase over conventional instant photography systems. The system's high-resolution, quick-focus lens eliminates the tedious chore of adjusting the camera focal length. Publication-



quality thermal prints can be produced in seconds. The system can generate print images for ultraviolet-illuminated gels or white-light illuminated items such as protein gels or thin-layer chromatography plates. Statagene. Circle 526.

Literature

Tools for the Molecular Biologist 91/92 is a catalog with more than 200 new products, including polymerase chain reaction products and DNA modification reagents. Clontech Laboratories. Circle 527.

Technical briefs are available that describe *Rheometrics Enhanced Calculation* (RHECALC) software. Rheometrics. Circle 528.

Sequencing strategies custom-tailored for
your projects and budget.

- **Automated (ABI 373A or manual sequencing)**
- **Rapid turn-around time**
- **Sequences guaranteed**
- **Complete confidentiality assured**

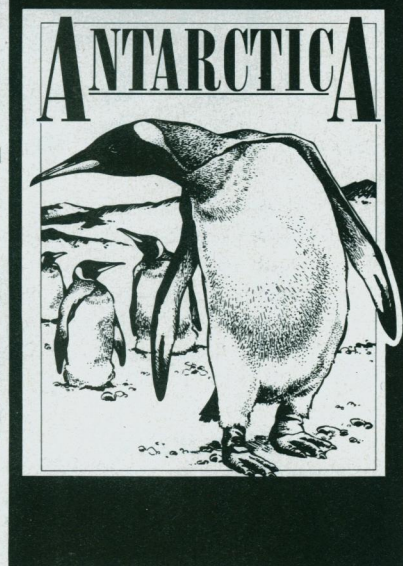
- Service to support your
Research Projects:**
- **Sub-Cloning**
 - ***In-vitro* Mutagenesis**
 - **Phage & Plasmid DNA Production**
 - **Probe Labeling**
 - **Oligonucleotide Synthesis**

LOFSTRAND LABS LIMITED

“Highest quality sequencing at the lowest price”

DISCOVER!

1991/92



Travels with AAAS

For the Inquisitive Traveler

NEW in 1991!

- **Ancient Anasazi & Southwest**, Aug. 31–Sept. 9. Explore Chaco Canyon, Santa Fe, Mesa Verde, Hopi & Navajo lands. \$2,290
- **Thailand & Hong Kong**, Nov. 8–24. Bangkok & Chiang Mai cultural treasures, Surin elephant roundup, Khao Yai & Phi Phi Island. \$3,490 (plus air)

- **Amazon & Brazil: Wildlife**, Sept. 11–26. From golden lion tamarins to the rainforest of Amazonia, Manaus, Brasília, the Pantanal, Emas, and Rio. \$3,490 (plus air)
- **Tahiti** with *S/V Wind Song*, Sept. 27–Oct. 7. Paradise! Papeete, Raiatea, Bora Bora, and Moorea. \$2,195 (plus air)
- **Voyage to the Sea of Cortez**, Dec. 21–28. For your Christmas holiday! \$2,000+ (plus air)



BETCHART EXPEDITIONS INC. • 21601 Stevens Creek Blvd. • Cupertino, CA 95014 • (800) 252-4910

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. 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.

➤ **Mail or FAX materials to:**
Science Classified Advertising
 1333 H Street, N.W., Room 940
 Washington, DC 20005
 Telephone: 202-326-6555
 FAX: 202-682-0816

➤ **Rates:** Ads are \$41 per line; \$410 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 1/8 page and larger) and all Marketplace listings, contact:
 Scherago Associates
 1515 Broadway
 New York, NY 10036
 Telephone: 212-730-1050
 FAX: 212-382-3725

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

TENURE-TRACK POSITION IN BIOLOGICAL CHEMISTRY THE UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

The Department of Biological Chemistry is seeking applications at the ASSISTANT PROFESSOR level for a 12-month, tenure-track faculty position. Outstanding individuals having research experience dealing with molecular aspects of gene regulation or signal transduction mechanisms are sought. The successful candidate will be expected to establish an active, externally funded research program. Other responsibilities will include teaching biochemistry to undergraduate, graduate, medical, or dental students. Applicants should send curriculum vitae and bibliography, a brief description of current and future research directions, and three letters of reference sent to: Dr. Jack E. Dixon, Chair, Department of Biological Chemistry, University of Michigan, 5416 Medical Science I, Ann Arbor, MI 48109-0606. Deadline for applications is 31 October 1991.

The University of Michigan is an Affirmative Action/Equal Opportunity Employer. Applications from qualified women, minorities, and/or disabled individuals are encouraged.

BROWN UNIVERSITY ASSISTANT PROFESSOR OF MEDICAL SCIENCE MOLECULAR BIOLOGY AND GENE THERAPY

Broadly trained molecular biologist with strong interest in gene therapy, particularly in research involving gene transfer for use in immuno-isolated cellular transplants and/or organoid research. Full-time, tenure-track appointment commencing 1 January or 1 July 1992. A doctoral degree and postdoctoral research experience are required. The appointment will be in the Section of Artificial Organs, Biomaterials and Cellular Technology, a multidisciplinary group with research emphasis on tissue regeneration, polymeric drug release systems and development of membrane-protected cellular transplants. Candidates must show evidence of their ability to establish an independent, externally funded research program and must demonstrate the potential for excellence in teaching. Teaching responsibilities include the participation in graduate and undergraduate courses in molecular biology and gene therapy, and the academic advising of undergraduate and graduate students.

Screening of applications will begin on 30 October 1991 and continue until a successful candidate has been identified or the search is closed. Applicants should submit curriculum vitae, a set of five representative reprints, a concise description of research interests and goals, and should arrange for three letters of reference to be sent to: Professor E. H. Leduc, Division of Biology and Medicine, Box G, Brown University, Providence, RI 02912. *We encourage applications from women and minority candidates. Brown University is an Equal Opportunity Affirmative Action Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER

Applications are invited for tenure-track positions in the Department of Molecular Genetics at the assistant or associate professor levels. Successful candidates who join this expanding department will develop independent and innovative programs to investigate the molecular and genetic basis of cellular function.

We are particularly interested in two areas of research: (1) *Drosophila* developmental genetics, and (2) cell cycle regulation in eukaryotes. Although these areas are of special concern, we are interested in outstanding individuals working in the field of eukaryotic genetics who will develop vigorous and strong interactive programs.

Apply before 1 December 1991 by sending curriculum vitae, a concise description of research interests, and names of three references to:

Benoit de Crombrughe, M.D., Professor and Chairman
 Department of Molecular Genetics—Box 11
 The University of Texas
 M. D. Anderson Cancer Center
 1515 Holcombe Boulevard
 Houston, TX 77030

The University of Texas M. D. Anderson Cancer Center is an Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR SECTION OF GENETICS DUKE UNIVERSITY MEDICAL CENTER

The Section of Genetics at Duke University Medical Center invites applications for tenure-track, junior level faculty positions. Individuals utilizing genetic approaches to address problems in most any important area of biology will be considered. The Section of Genetics is a newly created academic unit that offers a cohesive and interactive research environment as well as an extremely attractive and generous package of research support. Applicants should forward curriculum vitae, a statement of research plans, and the names of three references to: Dr. Joseph R. Nevins, Section of Genetics, Duke University Medical Center, P.O. Box 3054, Durham, NC 27710. *Duke University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR DEPARTMENT OF BIOCHEMISTRY COLLEGE OF MEDICINE THE UNIVERSITY OF ARIZONA

Applications are invited for a tenure-track assistant professor position. Candidates should have a doctoral degree, significant postdoctoral research experience, a strong record of research accomplishment, and should have demonstrated potential for the development of an independent academic research career. We are seeking an outstanding individual with research interests in the application of state-of-the-art methods to investigate regulation of eukaryotic cell processes. The successful candidate's teaching responsibilities will include participation in a team-taught medical biochemistry course. Applications should include curriculum vitae, a list of publications, and a summary of current research activities and future research plans. The applicant should arrange for at least three letters of reference to be forwarded. Review of applications will begin 9 September 1991, but the position will remain open until filled. *Women and minorities are urged to apply.* Please send applications or nominations to: Chair, Search Committee, Department of Biochemistry, Biological Sciences West, The University of Arizona, Tucson, AZ 85721.

An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.

NUTRITION FACULTY: The University of Chicago, Nutrition Research Center, is seeking applications for two faculty positions at the ASSISTANT OR ASSOCIATE PROFESSOR level. Preference will be given to individuals with training in molecular biology or stable isotopes and research interests in vitamin or energy metabolism, obesity, molecular genetics or molecular medicine. Individuals are expected to develop an independent research program and participate in graduate education in human nutrition. Send curriculum vitae, reprints of recent work, a statement of research interests, and names of three references to: Dr. Michael Sitrin, Director, Clinical Nutrition Research Unit, Box 223, The University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637. *The University of Chicago is an Affirmative Action Equal Opportunity Employer.*

ENVIRONMENTAL TOXICOLOGIST

The Cooperative Extension Service and The Department of Environmental Toxicology is seeking an Extension Toxicologist up to the ASSOCIATE PROFESSOR level/tenure track to promote the transfer of technology and new information to the public, concerned citizens groups and other organizations related to toxic chemicals and their impacts on the environment. The individual must have a strong background in toxicology with good written and oral communication skills. Cooperating in an extensive wildlife and environmental toxicology research initiative on golf courses will be a major effort during the first 3 years. The person must be able to work within the context of an interdisciplinary research team and to promote transfer of new technology and knowledge being developed through research and development in environmental toxicology. Requirements: Ph.D. in an appropriate discipline, excellent scholarly record, university teaching experience or strongly demonstrated potential. Send letter of interest and curriculum vitae and list references by 6 September 1991 to: Dr. Raymond Noblet, Department of Environmental Toxicology, Clemson University, P.O. Box 709, Pendleton, SC 29670. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF MEDICINE

The Department of Medicine, Dana-Farber Cancer Institute, is seeking to appoint an Assistant Professor of Medicine, Harvard Medical School. The incumbent shall supervise a laboratory to test for carriers of germ line mutations in the p53 gene, and other tumor suppressor genes when cloned. This laboratory program complements the clinical program at the institute to test and care for carriers of cancer susceptibility genes. The candidate will also conduct independent research on cancer-associated genes, particularly studies of clinical relevance to early cancer detection, diagnosis, staging and prognosis. M.D. or Ph.D. and record of substantial productivity in research in molecular biology or genetics required. Experience in research on the p53 gene desirable. Successful physician candidate can elect to engage in limited patient care activities.

Please send four copies of curriculum vitae to: **Dr. Frederick P. Li, Dana-Farber Cancer Institute, 44 Binney Street, M3A28, Boston, MA 02115.** *Affirmative Action/Equal Opportunity Employer.*

NMR and X-RAY CRYSTALLOGRAPHY FACULTY. Tenure-track **ASSISTANT PROFESSORSHIPS** to begin fall 1992. Candidates should have strong records of research in the determination and functional interpretation of biomolecular structure. Positions are associated with the Institute for Molecular Design, which offers access to modern area detector and graphics supercomputing facilities, funds for a high-field NMR facility, and extensive opportunities for collaboration. Send curriculum vitae, research plans, and three letters of recommendation to: **Professor J. Andrew McCammon, Department of Chemistry, University of Houston, Houston, TX 77204-5641.** *Equal Opportunity/Affirmative Action Employer.*

BASIC SCIENCE RESEARCH NEPHROLOGISTS. The University of Pennsylvania seeks individuals at the **ASSISTANT OR ASSOCIATE PROFESSOR** level who will bring a basic science research program into an already active research division currently supporting 25 postdoctoral fellows. Research space and resource assistance for implementation of a laboratory program will be provided by the Renal Electrolyte Section at the Veterans Administration Medical Center in conjunction with a Molecular and Cell Biology Core at that institution. The Veterans Administration Medical Center is on the Medical School Campus and is fully integrated with all activities in the Department of Medicine at the Hospital of the University of Pennsylvania. While such individuals should be Board-certified or Board-eligible in nephrology, these positions will involve a major commitment to research and the training of research-oriented postdoctoral fellows. Interested individuals should forward a description of their research program with curriculum vitae and two letters of reference to: **Eric G. Neilson, M.D., Chief, Renal-Electrolyte Section, 700 Clinical Research Building, University of Pennsylvania, 422 Curie Boulevard, Philadelphia, PA 19104-6144.** *The university is an Affirmative Action/Equal Opportunity Employer and solicits applications from women and minority persons.*

ASSISTANT OR ASSOCIATE PROFESSOR EXPERIMENTAL PATHOLOGY

The Department of Pathology, University of Oklahoma Health Sciences Center, Oklahoma City, invites applications for a tenure-track position at the assistant or associate professor level. The positions will be in experimental pathology and we seek candidates in the following areas: cardiovascular biology, endothelial cell biology, coagulation/clot-lysis, immunology, and tumor biology. The successful candidate will be expected to establish and maintain a vigorous and funded research program and participate in teaching at the graduate level. Candidates should have an M.D., Ph.D. or equivalent and postdoctoral research experience in an area related to his/her planned research program.

Applicants should submit curriculum vitae, a concise description of research interests and goals, and the name, address and telephone number of three references to: **Dr. Lawrence E. DeBault, Chairman of Search Committee, Department of Pathology, P.O. Box 26901, Oklahoma City, OK 73190.** Deadline for receipt of applications is 1 October 1991. *The University of Oklahoma is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

VISITING ASSISTANT PROFESSOR in biochemistry or bio-organic chemistry, with a contract running from February or September 1992 through May 1993. The position may eventually be converted to tenure track. ACS-approved department in an undergraduate university of 1700 students. Ph.D. in biochemistry or organic chemistry required. The successful candidate will be expected to teach biochemistry, and share in the teaching of organic chemistry, nonmajors courses, laboratory sections and supervise undergraduate research. Send application, curriculum vitae, including undergraduate and graduate transcripts, and have three letters of recommendation sent to: **Dr. Timothy R. Rettich, Head, Department of Chemistry, Illinois Wesleyan University (IWU), Bloomington, IL 61702.** Applications considered beginning 3 weeks after first publication of this ad. *IWU is an Equal Opportunity Employer and applications from women and minorities are strongly encouraged.*

SURGICAL PATHOLOGISTS ASSOCIATE/ASSISTANT PROFESSOR

The Department of Pathology at Fox Chase Cancer Center, under the direction of its Chairman, Jose Russo, M.D., invites applications for two positions in the Division of Anatomic Pathology: one at the associate professor level and one at the assistant professor level. Requirements include Board certification in anatomic pathology. Candidates should have experience in surgical pathology with a special interest in tumor pathology and hematopathology and/or cytopathology. Whereas the positions involve primary responsibilities in diagnostic oncologic pathology, a commitment to basic research in the understanding of the neoplastic process and/or in the development of prognostic indicators of tumor behavior is highly desirable. Special training in the areas of immunopathology, molecular biology, flow cytometry and/or cell biology are welcome. Rank and salary commensurate with experience and training. Please send curriculum vitae to: **Search Committee for Surgical Pathologists, c/o Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** *We are an Equal Opportunity/Affirmative Action Employer.*

BEHAVIORAL PHARMACOLOGIST DEPARTMENT OF ANESTHESIA AND CRITICAL CARE UNIVERSITY OF CHICAGO PRITZKER SCHOOL OF MEDICINE

ASSISTANT PROFESSOR tenure-track position available to examine the effects of drugs commonly used in medical/surgical procedures on mood and behavior. Qualifications: must have Ph.D. in psychology, preferably in the experimental analysis of behavior (operant conditioning). Must have 2 to 5 years of postdoctoral work in human behavioral pharmacology, some of that work related to drugs used to provide analgesia/hypnosis. Must provide evidence of obtaining extramural funding, and must have a strong publication record. Send curriculum vitae and three letters of reference to: **Michael F. Roizen, M.D., Chairperson, Department of Anesthesia and Critical Care, University of Chicago Pritzker School of Medicine, 5841 South Maryland Avenue, Chicago, IL 60637.**

ASSISTANT/ASSOCIATE PROFESSOR OF NUTRITION

Applications are invited for 10-month, tenure-track appointment in the Graduate Program in Nutrition at the State University of New York at Buffalo (SUNYAB). A Ph.D. in nutrition and 2 years of postdoctoral experience in cellular nutrition are required. Previous experience in teaching, extramural funding and research is required for the appointment as associate professor. Successful candidates are expected to develop a research program in an area of cellular nutrition that can attract extramural funding, advise students, teach graduate and undergraduate courses and participate on committees. Deadline for application is 1 November 1991 or until position is filled. Send curriculum vitae, names of three references, and a letter stating research interests and plans to:

**Atif B. Awad, Ph.D., Nutrition Program Director
301 Parker Hall, South Campus
SUNY/Buffalo, Buffalo, NY 14214**

SUNYAB is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITION BIOCHEMISTRY, BIOPHYSICS AND MOLECULAR BIOLOGY UNIVERSITY OF IOWA COLLEGE OF MEDICINE

The Department of Biochemistry of the University of Iowa seeks highly qualified applicants for a faculty position at the **ASSISTANT PROFESSOR** (tenure track) level. Salaries are competitive and will depend on qualifications and experience. Support for equipping laboratories and initiating research programs will be excellent. Applicants with research interests in any area of modern biochemistry will be considered. Quality of research, not a specific research area, will be the primary criterion.

All applicants must have a relevant graduate degree [Ph.D., M.D. (or both) or equivalent foreign degree], and should have at least 2 years of productive postdoctoral experience and the potential to initiate and maintain a rigorous research program. In addition to establishing or continuing successful research programs, faculty participate in the department teaching programs. The training of graduate students and participation in appropriate graduate programs also is expected.

Applications should include complete curriculum vitae and a summary of future research plans. Applicants should ask three scientists familiar with their work to write letters of reference. Applications, nominations and letters of references should be sent to: **Alan G. Goodridge, Professor and Head, Department of Biochemistry, College of Medicine, University of Iowa, Iowa City, IA 52242.**

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

The Cooperative Studies Program and Health Services Research Service of the Department of Veterans Affairs (VA) and the Department of Health Research and Policy at Stanford University seek a **PROFESSOR (RESEARCH) AND CHIEF OF THE COOPERATIVE STUDIES COORDINATING CENTER** in Palo Alto. Requirements for the position would include a record of research and scholarship in the areas of clinical trials and health services research, and administrative skills and interest necessary for the direction of the center. The center works with VA investigators across the country in planning, coordinating and managing collaborative clinical trials and other health-related studies involving various groups of VA hospitals. The Chief of the center would be an active faculty member of the Department of Health Research and Policy of Stanford University, which consists of Divisions of Biostatistics, Health Services Research and Epidemiology. The Chief would also be Codirector (with Dr. Rudolf Moos) of the VA Center for Cooperative Studies in Health Services. The position would carry VA career status and an appointment as full professor (research) at Stanford University. *U.S. citizenship is required.*

The University and the Department of Veterans Affairs are committed to increasing the representation of women and members of minority groups on their faculty and staff and particularly encourage nominations of and applications from such candidates. Correspondence should be addressed to: **Dr. Marguerite T. Hays (640/151), VA Medical Center, 3801 Miranda Avenue, Palo Alto, CA 94304** or to **Dr. Byron Brown, Jr., at the Health Research and Policy Building, Stanford University Medical Center, Stanford, CA 94305-5092.**

CHAIRMAN, DEPARTMENT OF PATHOLOGY UNIVERSITY OF VERMONT COLLEGE OF MEDICINE

The University of Vermont and Medical Center Hospital of Vermont (MCHV) seek a full-time chairman of the Department of Pathology. Applicants must be Board-certified in pathology; have administrative experience, strong leadership skills, and an outstanding record of accomplishment in biomedical research; and be interested in fostering programs for patient services, teaching, and scholarship. MCHV is a tertiary care teaching hospital associated with the University of Vermont, College of Medicine. *The University of Vermont is an Affirmative Action/Equal Opportunity Employer, and women and people from diverse racial, ethnic, and cultural backgrounds are encouraged to apply.* Interested parties should send curriculum vitae to: **Kenneth Mann, Chair of Pathology Search Committee, c/o Department of Pathology, Soule Medical Alumni Building, University of Vermont, Burlington, VT 05405.** Applications will be accepted until position is filled.

Queen's University
Kingston, Ontario, CANADA
Department of Biochemistry
**Faculty Positions at the Assistant
Professor Level**

The Department of Biochemistry in the Faculty of Medicine, Queen's University, Kingston, Ontario is seeking applicants for two positions at the Assistant Professor level. Although all areas of research will be considered the Department is especially interested in studies which will complement current programs in molecular endocrinology and physical biochemistry. Selected candidates will be expected to compete successfully for salary support and research funds from the Medical Research Council of Canada and/or other provincial and national funding agencies. A minimum of 2 years of postdoctoral experience is required at the time of appointment. Successful applicants will be expected to devote at least 75% of their time to research with limited teaching duties, and to supervise graduate students. The Department is located with other Basic Science departments in Botterell Hall which has excellent library and animal care facilities. The Department is well-equipped and has a core facility in protein/DNA sequencing and synthesis which is sponsored by a federally funded Centres of Excellence Program. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Queen's University has an employment equity programme and encourages applications from all qualified candidates, including women, aboriginal peoples, people with disabilities, and visible minorities. Candidates should send a detailed curriculum vitae and the names and telephone numbers of three referees to: **Dr. T. G. Flynn, Craine Professor and Head, Department of Biochemistry, Queen's University, Kingston, Ontario, Canada, K7L 3N6.**

MOLECULAR BIOLOGIST

The Biology Department invites applications for tenure-track faculty position to conduct research in molecular aspects of marine systems. Areas of interest include phylogeny of prokaryotic or eukaryotic organisms; gene expression and environmental signal transduction; and, mechanisms and processes in species-species interactions. Candidates with interests in these or similar areas, also having a broad appreciation of biological systems are especially encouraged to apply. Successful candidate will be expected to develop a vigorous research program, to obtain significant external funding, will be encouraged to participate in joint MIT/WHOI graduate education program. Ph.D or equivalent required, postdoctoral experience preferred. To apply, send curriculum vitae, statement of research interests, and names of three references by October 15, 1991 to:

**Biology Department Chairman
Box 54PJ**



**WOODS HOLE
OCEANOGRAPHIC
INSTITUTION**

Woods Hole, MA 02543

*An equal opportunity/affirmative action
employer M/F/H/V*



Manager Biotechnical Research Department

The Biotechnical Research Department of TVA's National Fertilizer and Environmental Research Center (NFERC) has an immediate career opportunity for a leader with technical and managerial skills in the fields of microbiology, biotechnology, and biochemistry to plan, administer, and direct research and development of environmental and waste management technologies to alleviate urban, agricultural, and industrial problems.

Experience, skill, and graduate knowledge in environmental chemistry, microbiology, and related fields are needed. Ability to translate technologies from conceptualization through to practice is desirable. It is imperative that the candidate have an understanding of the responsibilities of management and the obligations of managers to the workforce. Excellent interpersonal and communication skills (both oral and written) are required.

The National Fertilizer and Environmental Research Center is world renowned for its development of innovative fertilizer products, fertilizer manufacturing processes, and nationwide cooperative agricultural programs. The center is located in extreme northwest Alabama, approximately one hour from Huntsville, two hours from Birmingham, and two hours from Memphis, Tennessee.

We offer a competitive salary, a comprehensive benefits package, and an excellent opportunity for personal and professional growth in an organization that can make a difference. Must be a U.S. citizen to apply. Please send resume to: Ms. Janice M. Skipworth, Human Resources.

**National Fertilizer & Environmental
Research Center
Tennessee Valley Authority
Post Office Box 1010
Muscle Shoals, Alabama 35660**

TVA is an equal opportunity employer. Selections will be made on the basis of merit and efficiency as set out in the TVA Act and applicable laws prohibiting discrimination in Federal employment.

POSTDOCTORAL POSITION AVAILABLE

The Basic Research Branch in the National Center for Biotechnology Information (NCBI), National Library of Medicine (NLM) has an opening for a Molecular Biologist with interests in Chromatin Structure and function and Computational Molecular Biology. We expect the successful applicant to develop experimental or computational techniques to investigate the structural and functional interactions of non-histone chromosomal proteins. A Ph.D. or M.D. or equivalent degree with a background in research and training in Molecular or Cellular Biology is preferred.

Candidates may be U.S. or non-U.S. citizens and must have completed their doctorate training with no more than 3 years postdoctoral experience. Stipends begin at \$25,000 but may be adjusted depending on candidate's postdoctoral experience.

The NCBI is located on the campus of the National Institutes of Health in Bethesda, Maryland. If you have an interest in this position, send a letter describing your research interests, and resume, and the names of three references to:

Rita Sweeney
Office of Personnel Management
National Library of Medicine
National Institutes of Health
8600 Rockville Pike
Bldg. 38/Rm. 2N05
Bethesda, MD 20894 U.S.A.



For further information, please call David Landsman, Ph.D. on (301) 496-2475

NIH is an Equal Opportunity Employer

CHAIRMAN DEPARTMENT OF PATHOLOGY EASTERN VIRGINIA MEDICAL SCHOOL



Candidates are being sought for the position of Chairman and Professor of the Department of Pathology, Eastern Virginia Medical School. The candidate will also be Director of Medical Education of Pathology for Sentara Hospitals, Norfolk, Virginia. We seek a candidate with outstanding academic credentials who is Board certified in anatomical pathology, clinical pathology, or both, and eligible for medical licensure in Virginia with demonstrated experience and skill to provide leadership in administration, research, service and teaching medical and graduate students, residents and fellows. Candidates who have a national reputation in a specific area of cancer research are urged to apply, although candidates with national recognition in other areas of pathology will be given equal consideration. Submit curriculum vitae, summary of current research activities, goals, and research funding record, and the names of three or more references to: **George L. Wright, Jr., Ph.D., Chairman, Search Committee, Department of Microbiology and Immunology, Eastern Virginia Medical School, 700 W. Olney Road, Norfolk, Virginia 23507-1696. An Equal Opportunity/Affirmative Action Employer.**

The Bioorganic Chemistry group, within our Medicinal Chemistry Department, has several positions available for innovative Scientists who wish to participate in multidisciplinary drug discovery efforts.

MEDICINAL CHEMISTS

Selected individuals will be responsible for the design and synthesis of therapeutically relevant new chemical entities. Positions are available for Ph.D.'s with 2+ years relevant postdoctoral experience and BS/MS Scientists with 3-7 years relevant experience. Demonstrated skills in synthetic organic chemistry and analytical techniques (HPLC, MS, NMR) are required, as is the ability to work independently as part of a team. Experience with peptidomimetic design and synthesis is a plus.

POSTDOCTORAL FELLOW

Individual will be responsible for fundamental studies toward the chemical synthesis of proteins and the development of new methodologies, as appropriate. Publication of results is expected. This position requires a Ph.D. in Synthetic Organic Chemistry.

Send your resume to: **Human Resources Department, Job # 9140-SC, Glaxo Inc., P.O. Box 13398, Research Triangle Park, NC 27709. (No Phone Calls or Agency Referrals, Please.) An Equal Opportunity Employer M/F/H/V.**

Glaxo Inc.

RESEARCH SCIENTIST

Ross Laboratories, a division of Abbott Laboratories, and the leading producer of pediatric and medical nutritional products, has an excellent opportunity for a Research Scientist.

The candidate's primary responsibilities include individual and collaborative studies to isolate and characterize microbes producing proteins, peptides and other bioactive compounds with functional nutritional benefit; application of recombinant DNA testing techniques to clone genes and develop appropriate microbial strains; develop appropriate assays for biological activity and identification including antimicrobial and immunological techniques.

This position requires a Ph.D. in Biochemistry/Genetics or related field, with 3-5 years research experience. Also requires 5-10% travel.

Research experience in use of radioisotope methods, isolation of DNA and RNA, cell fractionation, protein purification, nucleic acid hybridization, DNA sequencing and CDNA library construction needed.

Ross Laboratories offers a smoke-free environment and an excellent compensation and benefits program. Qualified individuals should send their resume in confidence to: Manager, Division Employment, Department 2069.



ROSS LABORATORIES
Division of Abbott Laboratories, USA
625 CLEVELAND AVENUE
COLUMBUS, OHIO 43216

An Equal Opportunity Employer, M/F

ROSS LABORATORIES



THE WORLD HEALTH ORGANIZATION

has a vacancy with its Global Programme on AIDS at its Headquarters in Geneva for the post of

CHIEF, OFFICE OF RESEARCH

Duties: The incumbent is responsible for identifying research priorities and defining the scope and intent of studies to be undertaken; supervising the search for and selection of interested and competent researchers for such studies and the negotiation of support for the studies, and ensuring that completed research is adequately disseminated. His/her role is to effect the direction of research globally on HIV infection by encouraging other bodies to support research which WHO and GPA Governing Bodies determine as worthwhile.

Qualifications required: A diploma in medicine or a related field and/or Ph.D. in laboratory sciences, or similar discipline. Demonstrated skills in designing and conducting biomedical or epidemiological research, including ability to train researchers. Ability to negotiate with governments or scientific institutions; interpersonal skills needed for motivation of subordinates and for establishing and maintaining effective working relationships with colleagues and with researchers throughout the world. Extensive experience in biomedical or epidemiological research, including substantial time as leader of a research group. At least two years in HIV/AIDS research is required. Excellent knowledge of English or French, with a good working knowledge of the other language.

A detailed curriculum vitae with photograph should reach the following office within three weeks of publication of this advertisement quoting reference "MPR/GPA/RES" and the name of this journal:

**Personnel Officer
World Health Organization
Avenue Appia
1211 Geneva 27, Switzerland**

*Applications from women are encouraged.
Only candidates under serious consideration will be contacted.*

JT founded its Pharmaceutical Division in 1986. Since then, JT has been investing ¥10 billion annually in this Division, the main pillar of JT's diversified business operations. As we approach the 21st century, our goal is to become a research-driven corporation supported by four major research laboratories and 500 research personnel. Our researchers are now working to develop innovative pharmacological agents for use against diseases of the cardiovascular and central nervous systems, metabolic disorders, inflammatory diseases, and cancer.

PHARMACEUTICAL DIVISION OF

Work site	Fields
Pharmaceutical Basic Research Laboratory (Kanazawa Ku, Yokohama). Scheduled to be opened in April 1999.	Biochemistry, molecular biology, biology, & basic medicine
Pharmaceutical Research Laboratory (Midori Ku, Yokohama)	Biochemistry, pharmacology, synthetic science, formulation, & ADME
Safety Research Laboratory (Hatano City, Kanagawa Prefecture)	Research in toxicity & safety
Head Office (Shinagawa Ku)	Research planning

JT IS RECRUITING RESEARCHERS !!

ing, soft drinks, agriculture business, real estate, and other services. **The Pharmaceutical Div.** Newly established in November 1986, for the research & development of new medicines (for cardiovascular/central nervous/immune system disorders and cancer) for our aging society. Operations range from research & development to production & marketing of pharmaceuticals (Ethical + OTC). Research at a Laboratories: The Pharmaceutical Research Laboratory (Yokohama), Toxicology Research Laboratory (Hatano City, Kanagawa Prefecture, and Pharmaceutical Basic Research Laboratory (Kanazawa Ku, Yokohama) are now under construction and nearing completion. In addition, a Pharmaceutical General Research Laboratory is slated for construction in Osaka.

For further information, please contact:

Address : Mr. Takeuchi, Pharmaceutical Operations Division, Japan Tobacco Industries Ltd., Higashi Shinagawa 4-12-62, Shinagawa-ku, Tokyo 140 **Tel :** 03-3747-3111 (In Direct) (*Please call collect.)

Company outline **Founded** April 1985 **Capital** ¥100 billion **Annual sales** ¥2.6 trillion (est.) (1989) **Number of employees** 24,200 **Business operations** Everything from procurement and production to marketing of raw materials for salt & tobacco. The JT Group is also actively involved in other major industries, including pharmaceuticals, biochemicals, machinery, computer systems, print-

POSITIONS OPEN

The Division of Neurogenetics at the New England Regional Primate Research Center (NERPRC), Harvard Medical School, is seeking new staff at nontenured faculty ranks. **INSTRUCTOR** positions are open for full-time research on grafting of immature nervous tissue into mature rodent CNS, in order to analyze mechanisms controlling axonal growth and synaptogenesis. Previous experience is necessary with immunohistochemistry, small animal neurosurgery, and developmental neuroscience. **ASSISTANT PROFESSOR** opportunities are open for experienced electron microscopists/histochemists, to analyze normal and pathological development of the nervous system in mice and primates. Familiarity with mammalian genetics and with human neurological disease is desirable. Teaching will focus on human neuroanatomy and neuropathology. An **ASSOCIATE PROFESSOR** slot is open for an individual to supervise a large mutant mouse colony and develop an independent research program that utilizes behavioral/pharmacological/genetic concepts and methods. Interest in extending research questions to primates is desirable.

Candidates should send curriculum vitae, a statement of interests, and the names of three references to: **Professor Richard L. Sidman, NERPRC, One Pine Hill Drive, P.O. Box 9102, Southborough, MA 01772-9102. FAX: 508-624-8075. Women and minorities are encouraged to apply. NERPRC/Harvard Medical School is an Affirmative Action/Equal Opportunity Employer.**

THE UNIVERSITY OF VIRGINIA ENDOWED PROFESSORSHIP IN AIDS, HIV AND/OR RETROVIRIOLOGY

The University of Virginia Health Sciences Center is seeking an outstanding scientist to lead a newly created center for the study of AIDS, HIV and/or retroviruses. Candidates should have an accomplished record of scientific research in cell biology, molecular biology or immunology and an active research program relating to AIDS, HIV and/or retroviruses. The successful candidate is expected to provide leadership for development of new programs and the recruitment of new faculty to the center. Endowment funds are available to facilitate start-up, purchase of equipment and the hiring of additional faculty. The center will be located within the Department of Microbiology and will actively participate in departmental training and research programs. The University of Virginia provides an outstanding environment and support facilities for basic research including active interdisciplinary research and training programs in immunology, cell and molecular biology and cancer research. Letters of nomination or application should include curriculum vitae as well as the names of three references and should be forwarded to:

Dr. J. Thomas Parsons
Search Committee

**Thaler Center for HIV and AIDS Research
Box 441, The University of Virginia
Health Sciences Center
Charlottesville, VA 22908**

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

BOSTON UNIVERSITY CHAIR DEPARTMENT OF BIOMEDICAL ENGINEERING

Boston University's College of Engineering invites applications and nominations for the position of Chair, Department of Biomedical Engineering. The department currently has 18 full-time faculty with annual sponsored research exceeding \$3 million, 81 graduate students and 130 upperclass undergraduates. The current research activities of the faculty include auditory, fields and tissues, molecular, neuromuscular, respiratory, and vision research. The department has grown steadily over the last decade, and currently has two associated centers. We seek a distinguished engineer/scientist with a proven research record to lead the department in its continuing growth.

A letter of interest or nomination, curriculum vitae, and the names of at least three references should be sent to: **Allyn Hubbard, Ph.D., Chair, Biomedical Engineering Search Committee, Boston University, 44 Cummington Street, Boston, MA 02215. Please telephone: 617-353-2815 for additional information if desired.**

An Equal Opportunity, Affirmative Action Employer.

POSITIONS OPEN

DIRECTOR, COMPUTER-BASED EDUCATION RESEARCH LABORATORY. The Computer-based Education Research Laboratory (CERL) is a research unit of the University of Illinois at Urbana-Champaign. For more than three decades, CERL has been a world leader in the development of Computer-based Education (CBE) systems. Although known best for the PLATO® and NovaNET® systems, CERL also did pioneering work on stand-alone microcomputer and on local area network CBE systems. CERL works on every aspect of teaching and learning by computers including research on instruction, design and development of courseware; computer and network hardware; systems software; language and authoring systems for instructional computing; electronic communications; instructional management systems, and other tools and utilities useful to students, teachers, or authors.

The director must lead and inspire the research efforts of nearly 100 professionals and graduate students; facilitate collaboration with other instructional units at the University of Illinois on educational uses of computers; and attract outside funding. The director also administers a large and growing network that provides a broad spectrum of services to the University of Illinois and to colleges, K-12 schools, prisons, governmental agencies, and businesses. Traditionally, the director has been a faculty member of a related academic department of the University of Illinois.

Required characteristics: A leader in CBE research and development with roots in either its educational or technical component; a vision for the future of instructional technology; administrative skills; earned doctorate or equivalent academic/research experience.

Desired characteristics: Leadership experience in interdisciplinary research; administrative experience in a large university setting; experience in transferring the results of research and development to the private sector.

Salary open. Start date negotiable. To be assured of full consideration, nominations and applications (including résumé) should be submitted by 1 October 1991 to: **Professor Bertram Bruce, Search Committee Chair; c/o Office of the Vice Chancellor for Research, 601 East John Street, 408 Swanlund Building, Champaign, IL 61820; Attention: Harriet Weatherford.**

The University of Illinois at Urbana-Champaign is an Affirmative Action and Equal Opportunity Employer.

PLANT GENOME PROGRAM DIRECTOR

The National Research Initiative Competitive Grants Program of the U.S. Department of Agriculture (USDA) seeks a qualified scientist to serve as Program Director for grants administration in the area of plant genome. Candidates must have a B.S. or higher degree with major study in plant genetics or a closely related discipline. In addition the candidate must have a Ph.D. or equivalent experience directly related to molecular biology or a closely related discipline.

Closing date is 19 September 1991. For information on the position, contact: **Dr. Sally Rockey, National Research Initiative Competitive Grants Program, CSRS/USDA, Room 323 Aerospace Building, Washington, DC 20250-2200. Telephone: 202-401-5114.** For information on application procedures/forms, contact: **Ms. Kathy Asmussen, personnel staff specialist, 202-475-4811.**

USDA is an Equal Opportunity Employer.

LABORATORY DIRECTOR PARKINSON'S DISEASE CENTER

The Department of Neurology, Henry Ford Hospital and Health Sciences Center, is seeking an established neuroscientist (Ph.D. or M.D.) to direct research into the mechanisms of neuronal injury and death or with an interest in tissue transplantation. Generous funding is available to set up a major new laboratory for research in Parkinson's disease.

The Department of Neurology is a major research center with active university affiliations and pre- and postdoctoral programs. It has an NINDS Cerebrovascular Research Center as part of a wide spectrum of basic and clinical research in CNS disease. Applicants should send a letter of application, curriculum vitae and three letters of recommendation to: **Jay M. Gorell, M.D., Director, Gossett Parkinson's Disease Center, Department of Neurology, Henry Ford Hospital and Health Sciences Center, 2799 West Grand Boulevard, Detroit, MI 48202. Henry Ford Hospital is an Equal Opportunity Employer.**

MOLECULAR BIOLOGISTS

The Cell Biology and Bone Biology groups at Merck Sharp and Dohme Research Laboratories in West Point, PA have career opportunities for two research associates. We are looking for individuals interested in studies of either potassium channels or of integrins.

A M.S. degree in molecular biology, biochemistry, or a related discipline and 2-3 years of laboratory experience is required. The successful candidate will be experienced in RNA isolation and Northern analysis, generation and isolation of cDNA and genomic clones, DNA sequencing, in vitro transcription and translation, and site-directed mutagenesis. Experience with expression cloning and in situ hybridization is preferred.

Excellent salary and benefit programs accompany this position at our modern research facilities located 25 miles northwest of Philadelphia.

Please send curriculum vitae with references, transcripts and cover letter to: **Personnel Manager, Ad #D-27, Research Personnel, WP42-2, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486.**

EEO/AA/VH/Employer



Merck & Co., Inc.

NATIONAL INSTITUTES OF HEALTH

POSITIONS FOR SENIOR STAFF FELLOWS

POLYREACTIVE ANTIBODIES and CD5+ B CELLS - Mechanism of polyreactivity; biology of CD5+ and CD5- B lymphocytes; molecular cloning of molecules; production and characterization of human monoclonal antibodies of clinical relevance.

Positions available immediately. Experience in molecular biology desirable. **Growing program with opportunity for Senior Staff Fellows to have technical and/or postdoctoral support.** Salary commensurate with experience (range \$30,000 to \$50,000 per year). Send Curriculum Vitae and names of references to: **Dr. Lois Salzman, Deputy Director, Intramural Research Program, National Institute of Dental Research, National Institutes of Health, Building 30, Room 131, 9000 Rockville Pike, Bethesda, MD 20892.**

NIH is an Equal Opportunity Employer



University of Alberta
Edmonton

The Astra Chair in Asthma Research

The Astra Chair in Asthma Research has been endowed at the University of Alberta in Edmonton with funds provided by the Alberta Lung Association (Asthma Centre campaign). Applications are now invited for this position with the intention that the incumbent will establish a Centre with the capability of performing outstanding research, teaching and clinical care in the field of asthma.

The position will carry the rank of Full Professor with appropriate salary (minimum \$57,415 per annum) and benefits. The successful applicant will be an M.D. or Ph.D. scientist with a proven record of achievement in asthma research. Generous infrastructure support is available and further support may be sought from external granting agencies.

Enquiries are invited; applicants should send a complete curriculum vitae and the names of three referees, in confidence, by December 31, 1991, to:

**Dr. E.G. King, Chair
Department of Medicine
Faculty of Medicine
2F1.19 Walter C. Mackenzie
Health Sciences Centre
University of Alberta
Edmonton, Alberta, Canada
T6G 2R7**

The University of Alberta is committed to the principle of equity in employment. The University encourages applications from aboriginal persons, disabled persons, members of visible minorities, and women.

Ciba-Geigy is a major Pharmaceutical Company with an active interest and commitment to molecular Biology and its exploitation in drug discovery. A vacancy exists for a

Molecular Biologist

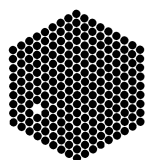
for a position as research scientist in the Molecular Biology Department within the Biotechnology Section, located in the Company's main R&D facility in Basel, Switzerland.

The successful candidate will join an active, well-established unit and assume responsibility for a laboratory involved in developing and applying state-of-the-art molecular biology techniques to identify, express and characterise new proteins of potential therapeutic interest. The Department also makes an important contribution to the establishment of new, advanced screening systems for drug discovery.

We are seeking to recruit an independent, highly innovative research scientist with a Ph.D. and 2-5 years postdoctoral experience. The applicant should have initiative, self-motivation, the ability to work effectively in a highly interactive, multidisciplinary research environment and have a genuine interest in applying his/her knowledge to the drug discovery process. Preference will be given to candidates whose main expertise/training is in Molecular Biology. A background in Biochemistry, Immunology or Cell Biology could also be an advantage.

Applications, including a c.v., a summary of previous experience, relevant research background and the names of two referees should be sent under ref. "SCIENCE 7861" to **Mr. H. Schmid, CIBA-GEIGY AG, Personnel Department, P.O. Box CH-4002 Basel, Switzerland.**

CIBA-GEIGY



EMBL

*The European Molecular Biology Laboratory, an international research organization situated in Heidelberg, Germany has a vacant position in its **Outstation in Grenoble, France** for a*

SYNCHROTRON RADIATION PROTEIN CRYSTALLOGRAPHY

The Grenoble Outstation seeks a protein crystallographer with an interest in instrumentation to take responsibility for the design and construction of the protein crystallography station of an undulator beamline at the European Synchrotron Radiation Facility due to be operational in 1994. The beamline will provide extremely intense monochromatic X-ray beams for protein crystallographic measurements on weakly diffracting crystals (e.g. with a large unit cell) and time-resolved studies.

The successful candidate would interact strongly with ESRF physicists already working on the beamline, but would be responsible for those features of the instrument specific for protein crystallography such as camera design, choice of detector and computer facilities for data treatment.

The position would be suitable for a scientist with post-doctoral experience in protein crystallography. A fully equipped structural biology laboratory is available at the EMBL Outstation in Grenoble, which is located right next to the ESRF ring. This will enable the scientist to continue research activity preferably in projects making use of synchrotron radiation.

Laboratoire
Européen
de Biologie
Moléculaire
c/o I.L.L.
B.P. 156 X
38042 GRENOBLE
CEDEX
FRANCE

*Further information can be obtained from Dr. S. Cusack
(Tel. 76 20 72 38, Bitnet CUSACK @FREMBL51)*

We offer an above-average salary, plus certain allowances depending on personal circumstances.

Please write, enclosing a CV and description of research interests, for an application form to Dr. S. Cusack in Grenoble.

POSITIONS OPEN

SCIENTIFIC DIRECTOR AND CHIEF EXECUTIVE OFFICER MONTANA

The Deaconess Research Institute in Billings, Montana, is now accepting applications for a Scientific Director and Chief Executive Officer.

Qualified candidates will have demonstrated ability to obtain external research support and develop/expand research program(s). While no disciplinary structure has been set for the Institute, applicants should have a demonstrated interest in aging-related research. In addition to research, other duties will include recruitment of up to ten additional research scientists who can attract and maintain external funding. This is also a key position regarding the Institute's fund raising efforts. Billings is Montana's largest city with an incredible array of recreational opportunities in every direction. Yellowstone Park is just 2 hours away by car. Hunting, fishing, boating, camping, hiking, skiing and sightseeing are just minutes from your doorstep!

For application and information call 1-800-325-1774. Send résumés describing research and program development experience to: **Employment Coordinator—M, P.O. Box 37000, Billings, MT 59107. Equal Opportunity Employer.**



**Deaconess
Research
Institute, Inc.**

U.S. Department of Agriculture (USDA) Forest Service **STATION DIRECTOR**. Southeastern Forest Experiment Station. Position is located in Asheville, North Carolina. The position is responsible to the Chief of the Forest Service for providing leadership in the formulation and direction of research and scientific activities in natural resources. Responsibilities encompass the important forest areas consisting of the states of Florida, Georgia, North Carolina, South Carolina and Virginia. This position is in the Senior Executive Service, salary range is \$87,000 to \$108,300 per annum. All applicants must submit (1) application for federal employment (SF 171) typed, (2) supplemental applicant statement, (3) copy of most recent supervisory appraisal of performance, (4) Senior Executive Candidate Development Program graduates must provide proof of OPM certification, and (5) Form AD-779, Biographical Sketch. To obtain the application forms or if you have questions, please contact: **Denise Howell, 703-235-2730, USDA Forest Service, P.O. Box 96090 (Room 913 RPE) Washington, DC 20090-6090.**

DIRECTOR OF TECHNOLOGY ANALYSIS IN HEALTHCARE CONSULTING FIRM

Position available immediately in an established life sciences consulting firm in northeast United States. Ph.D. in basic medical sciences or M.D. degree with industrial experience preferred. Duties include directing technology-based projects for clients in the pharmaceutical, diagnostic and biotechnology industries and providing technology analysis support for strategic planning projects. Must be a strong communicator with excellent written and verbal skills. Salary commensurate with experience. Send résumé to: **Judi Chastain, Bogart Delafield Ferrier, 60 Washington Street, Morristown, NJ 07960.**



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

ENVIRONMENTAL AND BIOSAFETY OFFICER position available at the Plum Island Animal Disease Center. Seek individual with professional background in biological and industrial safety, veterinary medicine or microbiology. Must have knowledge of and experience in infectious diseases and biocontainment facilities, systems and operations. The center is situated off the northeast tip of Long Island, New York. Government ferry services from Orient Point, New York, and Old Saybrook, Connecticut, offers a choice of living on Long Island or in Connecticut. Salary range is \$56,000 to \$73,000. Must be a U.S. citizen. For information on application procedures, contact: **Alice MacNamara** by 6 September 1991 at 301-344-1920.

ARS is an Equal Opportunity Employer.

POSITIONS OPEN

DIRECTOR, ONCOLOGY CENTER

The Johns Hopkins University School of Medicine and The Johns Hopkins Hospital are seeking a physician-scientist to lead our Department of Oncology, which is also a Comprehensive Cancer Center. The center is one of the largest academically integrated programs in the nation. Applicants should have evidence of leadership qualities and demonstrated outstanding abilities in research and teaching as well as the capability to direct the service missions of the center.

Please send letter of application, curriculum vitae and bibliography to:

**Dr. John D. Stobo
Chairman, Oncology Search Committee
The Johns Hopkins University and
The Johns Hopkins Hospital
1830 East Monument Street
Baltimore, MD 21205**

An Affirmative Action/Equal Opportunity Employer.

PRODUCT STEWARDSHIP MANAGER

Albright and Wilson Americas, a manufacturer of quality industrial and specialty chemicals, is seeking an experienced life science professional to manage our Product Stewardship Program. This will include the preparation of material safety data sheets, evaluation and assessment of product safety issues and ensuring governmental compliance in countries of product end use, i.e. U.S. EPA, TSCA, FIFRA, OSHA Hazard Communications, Canadian WHMIS, etc. Additionally, this position will involve functioning as company representative on industry task groups and trade associations. Candidates need only respond who have a B.S. in life sciences and an M.S. in toxicology. A Ph.D. in toxicology is desired. In addition, 5 to 10 years of industrial work experience in product safety work in the chemical industry is preferred.

As a division of the Fortune 50 company Tenneco Inc., we offer a competitive salary and an excellent benefits package. Please send letter of interest, résumé, and salary requirements to: **Employee Relations, Albright and Wilson Americas, P.O. Box 26229, Richmond, VA 23260-6229. Equal Opportunity Employer, M/F/H/V.**

FACULTY POSITIONS IN MACROMOLECULAR STRUCTURE/ FUNCTION

The Florida State University (FSU) invites applications for two tenure-track positions at all levels from individuals with research interests in structural/functional aspects of biological macromolecules. Areas of expertise may include molecular biology, x-ray crystallography, NMR spectroscopy, and high resolution electron microscopy. Appointments to the newly established Program in Structural Biology will be made in the Departments of Biological Science and/or Chemistry and individuals will be physically located in the adjoining Institute of Molecular Biophysics. Eight new faculty members will be added to the program over the next several years and a grant from the Lucille P. Markey Foundation will provide the funds to establish state-of-the-art facilities required for the investigation of structure/function relationships in biological systems. Successful candidates will have the opportunity to interact with related programs at FSU such as the Supercomputing Computations Research Institute and the National High Magnetic Field Laboratory.

Applicants should send curriculum vitae, a brief statement of current and future research plans, and names and addresses of three references to: **Chair, Faculty Search Committee, The Institute of Molecular Biophysics B-165, The Florida State University, Tallahassee, FL 32306-3015. Florida State University is an Affirmative Action/Equal Opportunity Employer.**

FACULTY POSITIONS: BIOCHEMISTRY AND MOLECULAR BIOLOGY. The Department of Biochemistry and Molecular Biology is seeking applicants for tenure-track faculty positions, 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.**

POSITIONS OPEN

FACULTY POSITIONS IN MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY UNIVERSITY OF SOUTH CAROLINA

The Department of Biological Sciences at the University of South Carolina invites applications for tenure-track faculty positions in molecular, cellular, and developmental biology. The department is particularly interested in individuals using cellular and molecular approaches to address fundamental problems in biology, including: membrane receptors and signal transduction; molecular genetic mechanisms of cellular differentiation; and cell-cell interactions during development. The successful applicant will be expected to develop an active, extramurally funded research program, and to participate in the department's undergraduate and graduate teaching activities. The university maintains a wide range of biotechnological core facilities, including ones for monoclonal antibody and transgenic mouse production; these facilities are readily available to all faculty and promote a lively and interactive research environment. Attractive salaries and start-up packages are available. Interested individuals should send updated curriculum vitae, a description of research background and interests, and three letters of recommendation to: **Dr. Franklin G. Berger, Search Committee Chairman, Department of Biological Sciences, University of South Carolina, Columbia, SC 29208.** The search committee will begin reviewing applications on 1 October 1991.

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

FACULTY POSITIONS IN MOLECULAR MEDICINE AND EPIDEMIOLOGY FRED HUTCHINSON CANCER RESEARCH CENTER

Faculty positions at junior and senior levels will be available in the Program in Molecular Medicine in new laboratory facilities scheduled for completion in 16 months. We are seeking independent scientists with demonstrated capability in applying the tools of molecular and cellular biology to problems relevant to human disease. Areas of interest include, but are not limited to, molecular epidemiology, genetics, virology, immunology, gene therapy, stem cell biology, transgenic models, growth factor research and carcinogenesis. Interested scientists should send curriculum vitae, a brief summary of research interests and plans, and three letters of reference to:

**Search Committee
Program in Molecular Medicine, M120
Fred Hutchinson Cancer Research Center
1124 Columbia Street
Seattle, WA 98104**

Smoke-free environment. An Equal Opportunity Employer.

TARGETED DRUG DELIVERY POSITION. A full-time tenure leading position is available in the University of Nebraska College of Pharmacy for a faculty member with interests in the biological effects of drugs and chemicals who will provide expertise in biological approaches to targeted drug delivery. Biological approaches are broadly defined, but not limited, to include the areas of immunology, microbiology, molecular biology, physiology, toxicology, and pharmacology. Applicants with an earned doctorate and postdoctoral experience are sought, with preference being given to established investigators. Send curriculum vitae and names of three references to: **Chair, Search Committee, Position #1-6143, Department of Pharmaceutical Sciences, College of Pharmacy, University of Nebraska Medical Center, Omaha, NE 68198-6025. The University of Nebraska is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minorities.**

FREE PRODUCT INFORMATION SERVICE. Send a letter stating the specifics about your new laboratory and *Science* will put you in touch with the vendors whose products you will need. Write to: **SCIENCE New Lab Service Department, 1515 Broadway, New York, NY 10036.**



THE UNIVERSITY OF PAPUA NEW GUINEA

LECTURER/SENIOR LECTURER IN FISHERIES BIOLOGY (AQUACULTURE) - W021033/91

The appointee will be required to teach courses in Aquaculture and contribute to first and second year general biology courses.

Applicants should have a Ph.D. degree and/or relevant research experience and be prepared to supervise postgraduate students.

SENIOR LECTURER/ASSOCIATE PROFESSOR IN ENVIRONMENTAL SCIENCE - W061004/91

The University is seeking an experienced person to co-ordinate and teach in its inter-faculty Environmental Science programme. Applicants should have a Ph.D. or equivalent experience in Environmental Science or a related discipline. Research experience in tropical environments is highly desirable.

The appointee will also be expected to carry out research and to advise and assist at a senior level PNG and Pacific region government and non-government environmental organisations.

SENIOR TUTOR/LECTURER/SENIOR LECTURER IN MATHEMATICS - W121012/91, W121015/91

Applicants should hold an appropriate higher degree and have teaching experience at under-graduate level. Although applicants with specialisation in any branch of mathematics (including computer science) are invited to apply, the department reserves the right to appoint within a restricted area, depending on staffing circumstances. Detailed information may be obtained from the Head of Mathematics Department.

LECTURER/SENIOR LECTURER IN PHYSICAL CHEMISTRY - W031004/91

Applicants should hold a Ph.D. in Physical Chemistry; have relevant research and teaching experience to teach all areas of Physical Chemistry to undergraduates.

All staff contribute to general first year chemistry courses as well. The person appointed will also be expected to actively engage in the training of future Papua New Guinean staff. The appointment is for the 1992 academic year and preference will be given to those coming on sabbatical leave.

Salaries: Senior Tutor K19265-K24335 per annum plus 25% gratuity, Lecturer K21545-K24335 per annum plus 25% gratuity, Senior Lecturer K24335-K30405 per annum plus 25% gratuity, Associate Professor K34010-K36825 per annum plus 25% gratuity.

Applications will be treated as strictly confidential and should include a full curriculum vitae, the names and addresses of three referees and date of availability. In order to expedite the appointment procedure, applicants are advised to contact their referees to send confidential reports directly to the University without waiting to be contacted.

Applications should be forwarded to the Deputy Registrar (Staffing), P.O. Box 320, University Post Office, Papua New Guinea.

All applications close on 30th August, 1991.

T.I. TIOTI (MR), REGISTRAR

National Center for Research Resources
National Institutes of Health

CHIEF Library Branch

*Applications accepted from
August 12, 1991 to September 30, 1991*

The National Institutes of Health (NIH) is one of the largest biomedical research centers in the world, with a staff of about 13,000. The NIH Library, a component of the National Center for Research Resources, provides comprehensive library services to all of the institutes, centers, and divisions that constitute NIH. It is the focal point for the exchange of information in support of research and clinical activities conducted at NIH. The Library's collection consists of approximately 160,000 bound volumes of periodicals, 85,000 books, and 3,500 journal subscriptions. The staff is made up of 54 employees, 25 of whom are professionals, with additional contract and student support.

Candidates must have an ALA-accredited advanced library degree or equivalent professional experience. Background must demonstrate progressively higher administrative and supervisory responsibilities. A background of education in the biomedical sciences is desirable. Candidates should have knowledge of and involvement with current issues and developments in health sciences librarianship and advanced technological competence in library automation and electronic information management, including experience in networking applications and use of local and wide-area networks. Candidates must have been at a level of difficulty comparable to that of the next lower pay grade (GM-14) in the Federal Service for a period of at least one year. The grade of the position is GM-15 with a salary range of \$61,643 to \$80,138 per annum. The selectee may be required to serve a supervisory/managerial probationary period.

***Applications must be received by
September 30, 1991.***

Further information and qualification requirements can be obtained by contacting:

Mr. Ron Canada
National Center for Research Resources
National Institutes of Health
Building 31, Room 3B50
9000 Rockville Pike
Bethesda, Maryland 20892
Telephone: (301) 496-5621
Fax: (301) 402-6375



NIH is an Equal Opportunity Employer



THE SCIENCE RECRUITMENT "FOUR-DAY CLOSE"

Now you can see your ad in SCIENCE four days after submission

Scientific recruiters can now advertise positions almost as soon as the need arises. Instead of reserving space a month or more in advance, you can now place your ad four days before the magazine mailing date. **SCIENCE** is mailed on the cover date.

Film (right-reading, emulsion face down) or full camera-ready art and insertion order must reach: **SCIENCE, Short Close Desk, 1515 Broadway, New York, NY 10036** by NOON Mondays (except for legal holidays when material must reach New York by NOON Fridays). Because space is limited, the four-day close page will be reserved on a first-come, first-served basis, at a 15% premium. 1/4, 1/2 or full page only.

Now you don't have to wait to find the researchers you need immediately, nor must you advertise in a Sunday paper that pans a lot of sand but not much gold. Scientific employers know that **SCIENCE** ads fill the job better. Now they fill it faster too.

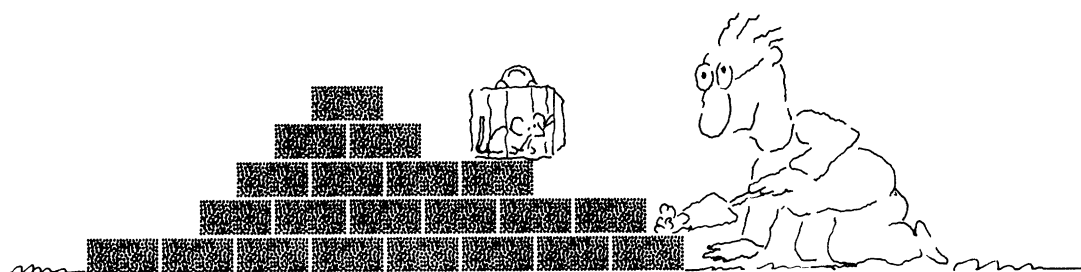
You can call it "INSTANT RECRUITMENT."

For further information, telephone Ed Keller, Recruitment Advertising Manager, or Gwen Cantor, Advertising Traffic Manager at **SCIENCE**: 212-730-1050, or write to:

SCIENCE, 1515 Broadway, NY, NY 10036

CURRENT DISTRIBUTION 160,000

We'll Help You Build A New Lab



Let the free Science product information service put you in touch with the vendors whose products you will need.

Simply write us a letter stating the specifics about your proposed lab and the instruments and supplies you need. We will do the rest.

Write to:

SCIENCE Magazine, New Lab Service Department
1515 Broadway, New York, NY 10036

The Global Weekly of Research
SCIENCE

IMMUNOLOGY

Wyeth-Ayerst Laboratories, a major division of Fortune 100 American Home Products Corporation, has the following opportunities in Immunology at its research facility in Princeton, NJ.

Associate Director

We are currently seeking an established investigator with expertise in cellular immunology or cell adhesion molecule research. The successful candidate will possess a proven track record of innovative research and will have a clear vision of future drug discovery opportunities in Immunology. Build upon our success with rapamycin to develop and manage research efforts in immunosuppression, autoimmunity, and cell adhesion molecules. You will be expected to collaborate with other investigators and maintain an active presence in the scientific community. Qualifications include a PhD in Immunology or related medical science, with a minimum of 8 years post-doctoral experience, a strong publication record in leading journals and well-developed interpersonal and verbal/written communication skills. **Position #379.**

Research Scientist

We are also seeking a creative immunologist with research experience in lymphocyte function, activation, and trafficking. The successful candidate will initiate collaborations with other scientists and work in a team environment to enhance our ability to identify new therapeutics for immunological disorders. Qualifications include a PhD in Immunology or related medical science, with a minimum of 3 years post-doctoral experience, well-developed interpersonal and communication skills, and the motivation to publish novel and innovative research findings. **Position #321.**

Wyeth-Ayerst offers an excellent compensation and benefits package in our highly professional environment. Our research laboratory is just minutes away from Princeton University and convenient to many other cultural, educational and leisure activities. Please forward resume with salary requirements (indicating position #) to: **WYETH-AYERST RESEARCH, Personnel Manager, CN 8000, Princeton, NJ 08643-8000.** An equal opportunity employer, M/F/H/V. Principals Only.



**The Perfect Environment
for the World's Most Advanced Research.**

We're Los Alamos.

Postdoctoral Fellowships

The Cell Growth, Damage and Repair Group in the Life Sciences Division of the Los Alamos National Laboratory is seeking postdoctoral fellows to perform basic cellular and molecular biology research in our Pulmonary Biology/Toxicology Program. Current areas of investigation include: mechanisms of acute lung injury, mechanisms of lung repair and pulmonary fibrogenesis, and lung defense mechanisms, with emphasis on pulmonary macrophage biology. We are particularly interested in candidates with experience and interest in growth factors and cell-cell dialogues in the context of cell proliferation, phenotypic expression and cell function. Individuals with backgrounds in mechanisms of acute injury and oxidative damage are also encouraged to apply. Applicants should have received their doctoral degree within the last 3 years. Postdoctoral appointments are for two years with renewal possibility for a third year. The FY'91 salary range is \$36,666 to \$38,619 per year. United States citizenship is required. For further information, contact Bruce E. Lehnert, Ph.D., Cell Growth, Damage and Repair Group, Life Sciences Division, MS M888, Los Alamos National Laboratory, Los Alamos, NM 87545. Telephone: (505) 667-2753.

To formally apply, please obtain an application form by calling (505) 667-0872 and have the completed application, resume, undergraduate and graduate transcripts and three external letters of reference sent to: Mary Anne With (MS P280), Human Resources Development Division PD-91-091, Los Alamos National Laboratory, Los Alamos, NM 87545. Affirmative Action, Equal Opportunity Employer.

Los Alamos
NATIONAL LABORATORY

Regulatory Affairs and Quality Assurance Opportunities

Bio-Rad Laboratories has the following positions available for candidates with excellent organizational, planning and communication skills:

Regulatory Affairs Associates

Prepare regulatory strategies and pert charts for new 510(k)'s, PMA's, IND's, PLA/ELA's and international product registration documents. Assure regulatory compliance with DEA regulations and import-export requirements. Participate with research and engineering to coordinate activities of instrumentation compliance. Requires BS degree or equivalent, chemistry degree preferred and 3+ years regulatory experience. Dept. D407A.

Compliance Training Officer

Assure Bio-Rad's Diagnostic Group and its suppliers are in compliance to US FDA CGMP, ISO 9000 and other regulatory requirements. Develop and administer the internal training program. Review product/process validation documents and maintain document change records as appropriate. Provide QA support in the Continuous Quality Improvement Process. Requires BS degree or equivalent and 5+ years Regulatory/Quality Assurance experience. Dept. 407B.

For consideration, please send resume and salary history to: **Bio-Rad Laboratories, Attn: Michelle Seaton, Appropriate Dept. #, 1000 Alfred Nobel Dr., Hercules, CA 94547.** An Equal Opportunity Employer, M/F/H.

BIO-RAD Bio-Rad Laboratories

POSITIONS OPEN

FACULTY POSITIONS. University of Puerto Rico (UPR) Medical Sciences Campus. Fully accredited research and teaching institution (teaching in Spanish or English) will fill six tenure-track positions in the next 2 years. **PHYSIOLOGY:** Two positions in cell/systems physiology. **MOLECULAR BIOLOGY:** Two positions at assistant professor level, area of research open. **NEUROBIOLOGY:** Biophysics/cellular neurophysiology, research in tropical invertebrates, or lower vertebrates. **ELECTRON MICROSCOPY:** Director of Central EM Unit, faculty appointment according to research area. Send curriculum vitae, reprints, and names of three references to: **Dr. Susan Opava-Stitzer, Director, RCMI Program, P.O. Box 365067, UPR Medical Sciences Campus, San Juan, PR 00936-5067.**

The Department of Molecular Biology and Biochemistry at Rutgers, New Brunswick (Busch Campus), invites applicants for a tenure-track **FACULTY POSITION**. The department is expanding in several areas, including RNA splicing, DNA replication, transcriptional control, receptors, and signal transduction. These processes may be studied in various systems, including higher eukaryotes, yeast, and viruses. Strong candidates in other areas will also be considered. This department which was recently established is an important part of the expanding program in molecular biology at the Busch Campus where the Center for Advanced Biotechnology and Medicine (CABM), the Waksman Institute, and the Robert Wood Johnson Medical School are also located. The position offered is highly competitive with regard to start-up funds, laboratory space, and salary. Candidates should have postdoctoral experience and demonstrate ability to develop an independent, imaginative research program. Please send curriculum vitae, list of publications, summary of research activities, a research plan, and three letters of recommendation to: **Dr. Robert M. Krug, Chairman, Department of Molecular Biology and Biochemistry, Rutgers University, CABM, 679 Hoes Lane, Piscataway, NJ 08855-1179.** Rutgers University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION RETROVIROLOGY

Applications are invited for a tenure-track faculty position in molecular retrovirology in the Department of Microbiology. The department has active funded research programs in molecular virology, immunology, and microbial pathogenesis, and our rapidly expanding cancer center is recruiting in the areas of gene perturbations, cytokine biology, and cellular immunology. The successful applicant is expected to maintain an independent research program. Faculty rank will be commensurate with qualifications. Candidates should submit curriculum vitae, statement of research interests and experience, and a list of three references to:

**Retrovirology Search Committee
Department of Microbiology
Medical College of Wisconsin
8701 Watertown Plank Road
Milwaukee, WI 53226
An Equal Opportunity Employer.**

MOLECULAR BIOLOGIST/BIOCHEMIST

One **RESEARCH INSTRUCTOR** and one **POSTDOCTORAL FELLOW** position is available at the University of Missouri-Kansas. Recombinant DNA techniques and eukaryotic expression systems (yeast, mammalian and insect cells) will be used to express chimeric and mutated complement C9 protein for structure-function studies. Experience in rDNA methodology and protein expression is essential for instructor position and desirable but not essential for postdoctoral position. Salary is competitive and commensurate with experience. Applicants should submit curriculum vitae and arrange for at least two reference letters to be sent to: **Dr. Alfred F. Esser, University of Florida, Box J-145/JHMC, Gainesville, FL 32610**, and after October 1991 to: **School of Basic Life Sciences, University of Missouri, Kansas City, MO 64110-2499.** Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITIONS at the University of California, San Francisco (UCSF), on the molecular biology of cytoadherence and antigenic variation in malaria. Two positions are available immediately to work with Drs. James Leech and Richard Nelson on the molecular biology and cell biology of cytoadherence and antigenic variation in *Plasmodium falciparum*. Projects include the molecular cloning and characterization of a cytoadherence ligand protein and investigation of the cellular and molecular aspects of antigenic variation. Experience in molecular biology and protein chemistry is required. To apply, please send curriculum vitae and the names of three references to: **Dr. James Leech, Box 0811, University of California, San Francisco, San Francisco, CA 94143-0811.** UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply. Starting salary depends on length of previous postdoctoral experience.

SEVERAL POSTDOCTORAL POSITIONS CENTER FOR GENETICS AND MOLECULAR MEDICINE EMORY UNIVERSITY

Several postdoctoral positions are available to investigate human DNA sequence variation, expression and regulation of mitochondrial and nuclear oxidative phosphorylation genes in pathological and control human population groups. Candidates should have well-developed skills in one or more of the following fields: molecular genetics, biochemistry, cell culture, population genetics and statistical analysis. Send detailed curriculum vitae, a summary of research interest and the names of three references to: **Dr. Douglas C. Wallace, Director, Center for Genetics and Molecular Medicine, Emory University, 1510 Clifton Road, Room 3031, Atlanta, GA 30322.** Closing date: 31 December 1991. Emory University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION IN EXPERIMENTAL THERAPEUTICS PROGRAM to study effects of DNA interactive antitumor agents on gene structure and function. Designing strategies to target specific transcribing and replicating regions of genomic DNA is a primary goal. Candidates should have a Ph.D. with a background in molecular biology. Applicants should send curriculum vitae, a brief statement of research interests and letters of reference to: **Dr. Terry Beerman, Roswell Park Cancer Institute, Elm and Carlton Streets, Buffalo, NY 14263.** Roswell Park is an Affirmative Action/Equal Opportunity Employer.

Massachusetts Institute of Technology. **TWO POSTDOCTORAL POSITIONS** available immediately for applicants with a background in translation-level gene regulation and RNA-protein interactions, or expression and structure-function relationships of eIF-2 α -protein kinases. Prior experience in biochemistry/molecular biology is desirable. Send curriculum vitae and names of three references by 12 September 1991 to: **Drs. Lee Gehrke/Jane-Jane Chen, HST Division, Massachusetts Institute of Technology, Cambridge, MA 02139.**

POSTDOCTORAL POSITIONS. Available immediately in molecular biology and biochemistry. Experience in molecular and biochemical techniques is required. Position (1): study of the molecular mechanisms of light-regulated gene expression in cyanobacteria. Position (2): study of the molecular mechanisms of microbial dehalogenation. Positions are for 2 to 3 years. Applicants should send curriculum vitae and letters of reference to: (1) **Dr. Nancy A. Federspiel**, or (2) **Dr. Cindy S. Orser, Department of Bacteriology and Biochemistry, University of Idaho, Moscow, ID 83843.** Telephone: 208-885-7966. FAX: 208-885-5741.

POSTDOCTORAL PLANT PHYSIOLOGIST. Immediate opening to investigate the spatial arrangement of metabolic activity within a leaf. Is the distribution of metabolic activity related to leaf microenvironments and how plants cope with high photon flux densities? Histochemical, spectroscopic (including chlorophyll fluorescence and microprobe optics), and biochemical techniques will be utilized. Experience in photosynthesis and plant biochemistry research desired. Please send curriculum vitae, statement of research interests, and names of three references to: **Dr. John N. Nishio, Department of Botany, University of Wyoming, P.O. Box 3165, Laramie, WY 82071.** Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION. Available January 1992, a 2-year appointment to develop a high resolution RFLP map in chrysanthemum. The successful candidate will work in a laboratory supported with funds awarded by Yoder Brothers, Inc., a leading producer of chrysanthemums. An option for permanent employment in their Technical Business Group in Fort Myers, Florida, will be available after the initial appointment. Qualifications include a Ph.D. in plant sciences or related field with specialized training in genetics and molecular biology. Send curriculum vitae, description of research interests, and names of three references by 1 November 1991 to: **Dr. Robert Ballard, Department of Biological Sciences, Clemson University, Clemson, SC 29634-1903.** Clemson University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION IN DEVELOPMENTAL NEUROBIOLOGY to study the role of NMDA receptors and visual input on formation of binocular maps in *Xenopus tectum* [Science 249, 669 (1990)]. Methods in use include electrophysiology, immunocytochemistry, electron microscopy, and axonal tracing techniques. Position available January 1992. Send curriculum vitae and names of three references to: **Dr. Susan Udin, Department of Physiology, State University of New York, Buffalo, NY 14214.** Equal Opportunity Employer.

POSTDOCTORAL POSITION. MOLECULAR VIROLOGY. A position is available to study the regulation of cytomegalovirus gene expression with emphasis on viral immediate early protein structure and function. Available January 1992. Please submit curriculum vitae, references and relevant reprints to: **Dr. Richard M. Stenberg, Department of Microbiology and Immunology, P.O. Box 1980, Eastern Virginia Medical School, Norfolk, VA 23501.**

POSTDOCTORAL FELLOW

Position available Fall 1991 to investigate maturation of the mechanisms regulating catecholamine secretion in fetal adrenal medulla. Includes study of neurotransmitter receptors, signal transduction mechanisms, and regulation of gene expression of catecholamine biosynthetic enzymes. Experience in molecular biology is required. Candidate should be U.S. citizen or permanent resident. Applicants submit letter stating interest, curriculum vitae, and names of three references to: **C. Y. Cheung, Department of Reproductive Medicine (0802), University of California, San Diego (UCSD), La Jolla, CA 92093-0802.** UCSD is an Affirmative Action/Equal Opportunity Employer. Salary related to rank and step of appointment is within the established salary schedule of the UCSD School of Medicine.

MEDICAL GENETICS FELLOWSHIPS

The Department of Molecular and Medical Genetics at Oregon Health Sciences University (OHSU) offers a postdoctoral program for those with an M.D. degree contemplating an academic career in clinical genetics. The OHSU Program is certified for training by the American Board of Human Genetics. Special expertise and research areas of our program include: clinical and research cytogenetics, including molecular cytogenetics, molecular genetics, diseases of metabolism and metabolic research specifically in muscle and mitochondrial genetics, dysmorphology, the ectodermal dysplasias, Fanconi's anemia and other disorders of DNA repair, the Marfan syndrome, and retinal dystrophies. Patients are seen in a general genetics clinic and three specialty clinics: metabolic clinic, prenatal clinic and the hemophilia clinic. Candidates should be Board-eligible or Board-certified in a clinical specialty. The specific program for each successful applicant will be individually tailored. For more information send curriculum vitae and outline of career plans to: **R. Ellen Magenis, M.D., Director Postdoctoral Clinical Genetics Training Program, Oregon Health Sciences University, Child Development and Rehabilitation Center, 707 S.W. Gaines Road, Portland, OR 97201-2998.** Telephone: 503-494-5289. OHSU is an Affirmative Action/Equal Opportunity Employer.

CLINICAL CYTOGENETICIST

Please see our display ad in the 2 August 1991 issue of Science. **Nichols Institute, 33608 Ortega Highway, San Juan Capistrano, CA 92690-6130.** Telephone: 1-800-NICHOLS, FAX: 714-728-4985. Equal Opportunity Employer.

DEAN Tufts University School of Medicine

Tufts University is seeking nominations and applications for the position of Dean of the School of Medicine. The Dean is the chief academic and administrative officer of the School. Nominees and applicants must hold an M.D. degree and demonstrate scholarly distinction appropriate for a tenured appointment in the School of Medicine. Candidates should understand and support the mission of the School in its roles of education, research, patient care and community service. Candidates also must possess administrative and management skills to lead a complex, multifaceted, professional School of Medicine and to interface effectively with affiliated teaching hospitals and the University. Nominations and applications will be accepted and reviewed beginning immediately.

Nominations and applications should be sent to:

Lorraine Caristo, Special Assistant, Office of the Dean, Tufts University School of Medicine, Sackler 8, 136 Harrison Avenue, Boston, MA 02111. An Equal Opportunity/Affirmative Action Employer.

TUFTS university
BOSTON

National Heart, Lung and Blood Institute
National Institutes of Health • Public Health Service
Department of Health and Human Services

SUPERVISORY VETERINARY MEDICAL OFFICER 5 RESEARCH COURT GENE THERAPY PROGRAM

The Division of Intramural Research, NHLBI, is seeking applicants for the position of Attending Veterinarian of the 5 Research Court Gene Therapy Program. The 5 Research Court Program, located in a new off-site facility, is a multi-laboratory program focusing on research on gene expression, transfer, and therapy in primates, rabbits and rodents. The successful applicant will be an integral participant in the research program with primary responsibility for all aspects of Animal Care and Use activities. This includes working with the individual investigators of each participating research laboratory to assure that scheduling of resources corresponds to research program priorities.

This is a Civil Service career-conditional appointment with a salary range of \$44,348 to \$61,141 per annum, depending upon qualifications. Applicants may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.

Minimum qualification requirements are Doctor of Veterinary Medicine or equivalent from an accredited AVMA School of Veterinary Medicine, board eligibility in laboratory animal medicine, and experience as a manager of a research animal facility. U.S. citizenship is required.

For additional information, contact Dr. Bryan Brewer, Chairman, Search Committee at 301-496-5095. **To apply for this position, submit curriculum vitae and the names of three references by October 15, 1991 to:**

H. Byran Brewer, M.D., Chief, Molecular Disease Branch, National Heart, Lung and Blood Institute, National Institutes of Health, Building 10, Room 7N117, 9000 Rockville Pike, Bethesda, Maryland 20892.

NIH is an Equal Opportunity Employer

FOR OVER 100 YEARS WE'VE BEEN COMMITTED TO RESEARCH & SCIENTISTS.

For more than a century, Abbott Laboratories has made scientific research a top strategic priority.

We're showing that commitment through the expansion of laboratories, facilities and projects. We invite you to learn more about the scientific environment we provide at our Corporate Headquarters.

In order to maintain our competitive advantage in markets throughout the world, Abbott Laboratories will commit more than \$500 million to R&D funding in 1991. We'll also offer highly visible challenges for the following professionals.

RESEARCH SCIENTIST— NEUROSCIENCE DRUG DISCOVERY Pharmaceutical Products Division

The selected candidate will be involved in the development and implementation of high-throughput in vitro assays for identification and characterization of new drug candidates. We require a PhD in Pharmacology or Biochemistry, and up to 3+ years of postdoctoral neuropharmacology experience. Background involving receptor binding or enzyme assays and drug screening is preferred. Reply to Dept. P.H., Job #46159.

PHD BIOCHEMIST - PROTEIN PURIFICATION/ REAGENT DEVELOPMENT Diagnostics Division

As part of our expanded Reagent Development Department, you'll help develop purification processes suitable for pilot scale production of proteins used in diagnostic immunoassays. You'll also develop processes for scale-up of purification of cell culture and/or microbial proteins. We require a PhD in Biochemistry or related field, with at least 2 years experience in protein purification. Reply to Dept. K.H., Job #1404.

Abbott provides an excellent salary and benefits package including profit sharing and a stock retirement plan. We are located in an attractive area approximately 30 miles north of Chicago. For consideration, please forward a resume to: **Corporate Placement, Abbott Laboratories, One Abbott Park Rd., Abbott Park, IL 60064.** (To facilitate the handling of your resume, please indicate the corresponding department code and job number on your cover letter or resume). Abbott is an Affirmative Action Employer in a non-smoking environment.

ABBOTT LABORATORIES



Quality
Health Care
Worldwide
1888-1991

Experience The Abbott Edge.

POSITIONS OPEN

CLEVELAND CLINIC FOUNDATION DEPARTMENT OF HEART AND HYPERTENSION RESEARCH POSTDOCTORAL POSITION

Available immediately to participate in the ongoing studies of receptor structure and function, and signal transduction using molecular and structural biology techniques including gene synthesis, site-directed mutagenesis, protein purification and reconstitution, and macromolecular modeling. Applicants must hold a doctoral degree and have prior strong training in molecular biology. Experience in protein biochemistry is also desirable. Send curriculum vitae to: **Dr. Robert M. Graham, Chairman, Department of Heart and Hypertension Research, Cleveland Clinic Foundation/FF3-20, 9500 Euclid Avenue, Cleveland, OH 44195-5071.**

Two POSTDOCTORAL POSITIONS available immediately to study protein phosphatases, their role in calcium release, cell cycle progression and tumor promotion using molecular, biochemical and cellular techniques. One position in molecular biology, one position in biochemistry/cell biology. Send curriculum vitae, statement of research interests, names of three references with telephone numbers to: **Alton L. Boynton, Ph.D., Pacific Northwest Research Foundation, 720 Broadway, Seattle, WA 98122. Telephone: 206-726-1234; FAX: 206-726-1217.**

POSTDOCTORAL SCIENTIST: SHRIMP BIOLOGIST

Full-time Hawaii Institute of Marine Biology. One year, with renewal dependent on continuation of funding. To work in the areas of shrimp nutrition and disease. Background in crustacean nutrition or lipid biochemistry desirable. Send curriculum vitae and the names of at least three references by 30 September 1991 to: **Dr. Chris Brown, Aquaculture Coordinator, Hawaii Institute of Marine Biology, Box 1346 Coconut Island, Kaneohe, HI 96744. Inquiries, call: 808-236-7445; FAX: 808-236-7423.**

FACULTY RESEARCH FELLOW SCIENCE AND PUBLIC POLICY PROGRAM UNIVERSITY OF OKLAHOMA

The Science and Public Policy Program (S&PP) invites applications for one tenure-track research fellow position at the assistant or associate professor level, with a joint appointment in an appropriate department of engineering, natural, social, or geosciences. S&PP is an interdisciplinary applied policy research program which focuses on energy, environmental, and science and technology policy. Responsibilities include: preparation of proposals for external funding and participation in the program's policy research projects, teach two courses per year, and service. Candidates must have a Ph.D. at time of appointment; a record of or potential for securing funded research; and commitment to team-oriented, interdisciplinary research. Preference will be given to applicants with applied policy research experience in energy, environmental, or science and technology policy. The position is available immediately; salary commensurate with qualifications. A letter of application, curriculum vitae, and at least three letters of reference should be sent to: **Dr. Tom James, Director, Science and Public Policy Program, University of Oklahoma, 100 East Boyd, R208, Norman, OK 73019.** Those applying for a position as an assistant professor must include a graduate transcript. Review of applications will begin 25 October 1991 and continue until the position is filled. *Women and minorities are encouraged to apply. Oklahoma University is an Equal Opportunity, Affirmative Action Employer and is responsive to the needs of dual-career couples.*

POSTDOCTORAL AND RESEARCH SCIENTISTS POSITIONS. Available immediately to study enzymatic catalysis in organic solvents. Specific projects include (not limited to) protein engineering to improve enzyme function in nonaqueous media, and enzymes as catalysts in polymer synthesis and modification. Expertise in biochemistry/enzymology, or polymer chemistry with a strong knowledge of polymer chemistry is highly desirable. Submit curriculum vitae and three letters of reference to: **Professor Jonathan Dordick, Department of Chemical and Biochemical Engineering, The University of Iowa, Iowa City, IA 52242. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

University of Colorado Health Sciences Center. Position available at the **RESEARCH ASSOCIATE OR POSTDOCTORAL** level for physical mapping studies of human chromosome 3 including relevant disease loci. Applicant should be skilled in molecular techniques. Send résumé to: **Drs. Harry Drabkin/Paul Erickson, University of Colorado Health Sciences Center, B-171, 4200 East 9th Avenue, Denver, CO 80262. Telephone: 303-270-4759/4781; FAX: 303-270-8825. Equal Opportunity/Affirmative Action.**

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION, MOLECULAR GENETICS OF NEURODEGENERATIVE DISORDERS. Two (2) positions are available. Applicants must have a Ph.D. or M.D. degree and have a strong background in molecular biology and molecular genetics. Experience with genetic and physical mapping techniques (PFGE/YACs) preferred. The positions are funded for a minimum of 2 years and the starting salary is between \$25,000 to \$30,000 depending on experience. Please send curriculum vitae and names and addresses of three references to: **Dr. Stefan M. Pulst or Dr. Julie Korenberg, Cedars-Sinai Research Institute, University of California, Los Angeles, 8700 Beverly Boulevard, Los Angeles, CA 90048. Telephone: 213-855-6451 or FAX: 213-967-0119.**

RESEARCH ASSOCIATE. Experienced molecular biologist sought to investigate interactions of extracellular matrix proteins with the fibrinolytic system. Familiarity with mammalian cell expression, PCR, and mutagenesis necessary. Experience with baculoviral expression very desirable. Salary commensurate with experience. Applicants must submit curriculum vitae, three letters of recommendation, and reprints of recent publications to: **David Sane, M.D., Box 3360, Duke University Medical Center, Durham, NC 27710.**

Duke University is an Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSOCIATE. Position in nephrology available. Applicant to participate in project involving cDNA cloning and expression of renal membrane proteins involved in Na⁺ transport, and study of their roles in hypertension and pathophysiologic states. Position requires an M.D. degree (or equivalent) with minimum of 2 years of postdoctoral training in nephrology, including at least 1 year of clinical nephrology and 1 year of laboratory research with proven experience in cell biology and biochemistry. Position is full time with \$34,500 annual salary. Qualified applicants must send résumé no later than 24 September 1991 to: **Peter S. Aronson, M.D., Section of Nephrology, Department of Medicine, Yale School of Medicine, 333 Cedar Street, New Haven, CT 06510. Applications from women and minorities are encouraged. Yale University is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT RESEARCH IMMUNOLOGIST

Program in Transplant Immunology is offering a position for a molecular/cellular immunologist with expertise in human immunogenetics and transplantation immunology. Candidate must have a Ph.D. degree with at least 2 years of postdoctoral employment. Responsibilities will include: Studies on human tolerance induction, regulation of HLA expression, and immune monitoring of transplant recipients. Salary range: \$41,600 to \$52,400 depending on experience.

Send curriculum vitae and reference to: **Marvin R. Garovoy, M.D., University of California, San Francisco (UCSF), 520 Health Sciences East, Third and Parnassus Avenue, San Francisco, CA 94143-0508.**

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

RESEARCH TECHNICIAN POSITION

Available immediately to conduct research on RFLP analysis of cereal crops. Applicants should have experience with standard molecular biology techniques. Familiarity with DNA sequencing and PCR technology is desirable. Candidates with a B.S. or M.S. in molecular biology and/or genetics are encouraged to apply. Please send your résumé to: **Sybil Paul, Crop and Soil Environmental Sciences Department, Virginia Polytechnic Institute and State University (VPI&SU), Blacksburg, VA 24061. Telephone: 703-231-6300. VPI&SU is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

INSTITUTE OF ZOOLOGY ZOOLOGICAL SOCIETY OF LONDON POPULATION/CONSERVATION GENETICS

POSTDOCTORAL RESEARCH ASSOCIATE in molecular conservation genetics required to develop and apply genetic techniques to questions of small population biology. Applicants should have a strong background in techniques of molecular biology including preparation and screening of genomic libraries with heterologous DNA probes, DNA sequencing and PCR amplification of recent and ancient DNA, restriction site mapping and analysis of mitochondrial and nuclear genes. Post available for 3 years initially at a salary, on University of London Lecturer scale, in range £13,971 to £17,910 inclusive of London Weighting. Further information from **Dr. R. K. Wayne or Professor A. P. F. Flint, telephone: 071-722 3333 (FAX: 071-483 4436).** Formal applications with full curriculum vitae, including names of three referees, to: **Administrative Assistant, Institute of Zoology, Zoological Society of London, Regent's Park, London NW1 4RY, UK by 13 September 1991.**

RESEARCH ASSOCIATE. Position is available for qualified applicants with a Ph.D. in physiology or a related field. The applicant should have been formally trained in microcirculatory physiology and prior experience (minimum of 2 years, pre- or postdoctoral) in studying microvascular permeability is essential. Required skills include microinjection techniques, quantitative fluorescence microscopy, computerized image analysis and mathematical modeling. The applicant will be expected to use these skills to develop techniques for measuring microvascular permeability in tumors, to conduct research on regulating brain microvascular permeability, and also to develop experimental procedures for studying leukocyte-endothelium interaction in tumor microcirculation and their hemodynamic impact on tumor blood flow. Annual salary will be \$22,350 plus fringe benefits. Working hours Monday to Friday, 8:30 a.m. to 5:00 p.m. Apply to: **Employment Security Commission, 516 North Mangum Street, Durham, NC 27701, or at your local job service office. Refer to job order number NC3010066, DOT code 090.227-010. Include curriculum vitae and names of three references. Non-U.S. citizen applicants must state their basis for work authorization in the United States.**

RESEARCH ASSOCIATE

Research Associate with at least a Master's degree. Must have a minimum of 4 years of experience with HPLC, gradient ultracentrifugation, gel chromatography and enzymatic assays. Salary: \$21,800. Send résumé and three letters of reference to: **Department of Human Resources, Beale Building, 178 Walnut, Memphis, TN 38163. The University of Tennessee, Memphis, is an Equal Employment Opportunity/Title IX/Section 504/Affirmative Action Employer.**

RESEARCH ASSOCIATE. Experimental investigation of the mechanical properties of rocks at high pressures and high temperatures using a gas-medium high-pressure vessel, high-resolution electron microscopy, and infrared spectroscopy. Minimum requirements: (1) Ph.D. in geophysics—thesis project related to an experimental study of high-temperature mechanical properties of rocks, and (2) 2 years as graduate research assistant—operation of a gas-medium high-pressure deformation apparatus, high-temperature, controlled oxygen environment deformation furnace, infrared spectrometer. Application deadline: 23 September 1991. Full-time, annual salary: \$29,000. Send résumé to: **Cheetham #1-133, MDJT Room 124, 390 North Robert Street, St. Paul, MN 55101.**

RESEARCH SCIENTIST. Plan and conduct research involving development of special hybridomas for monoclonal antibody production. Develop immunodiagnostic test reagents and ELISA and RIA kits. Ph.D. in pathology, cell biology or biochemistry plus 1 year of experience in job offered. Required knowledge in cell biology, pathology, protein biochemistry, reproductive biology and research technique in ELISA, RIA, immunization of animals (rats), hybridoma selection, immunoassays, maintenance of cell cultures, and characterization, purification and production of antibodies. Salary: \$40,000 per year. Job site and interview: Foster City, California. Send résumé with this ad to: **Job #LG1134, P.O. Box 9560, Sacramento, CA 95823-0560, no later than 7 September 1991.**

IMMUNEX®

SCIENTISTS EXPERIMENTAL HEMATOLOGY

Immunex Corporation, a Seattle biopharmaceutical company focused on the discovery, development, manufacture and marketing of products to treat immune system disorders, is seeking qualified candidates to join our Experimental Hematology group.

The successful candidates will be responsible for leading projects focused on the development of bioassays to detect novel hematopoietic growth factors. Projects will include working with lymphoid development and hematopoietic stem cell biology. These individuals will work closely with collaborators including members of our Protein Chemistry and Molecular Biology groups.

Scientists with Ph.D.s and/or MDs with post graduate training in cell biology, biochemistry and 3 to 5 years of cytokine research experience are encouraged to apply. Excellent communication skills and the ability to work in a collaborative environment are essential.

Immunex Corporation offers a fast paced, stimulating environment, competitive salaries and an excellent benefits package. For consideration, please submit C.V., names of three references, and list of publications to:

IMMUNEX CORPORATION
Attn: Human Resources Department
51 University Street
Seattle, WA 98101
Fax: (206) 587-0606.

Equal Opportunity Employer.

RESEARCH SCIENTIST INTRACELLULAR PROCESSING

Amgen has emerged as the leader in the development of human therapeutic products through applications of biotechnology. Our leadership position is directly related to the efforts of our Research and Development Groups and to our commitment to provide the resources and environment necessary to stimulate scientific creativity. Our continuing growth has created an immediate opportunity in our Cell Culture Process Development Group.

The individual selected will research the effects of environmental parameters on the biosynthesis and processing of proteins in both small and large scale recombinant mammalian systems. Collaboration is required with our molecular biology and vector development groups to devise novel approaches for the optimization of relevant intracellular processes. Candidates must have a PhD in Biochemical Engineering and relevant research experience in cellular biology or a PhD in Cell Biology and relevant experience in the scale-up of mammalian cell culture.

Amgen offers an excellent compensation and benefits package as well as a stimulating and challenging research environment. If you have the necessary skills and would like to be a part of a company that places a high priority on its human resources, please send a CV, in confidence, to:

AMGEN, INC.
Recruitment, Dept. #605
Amgen Center
Thousand Oaks
CA 91320-1789

Equal
Opportunity
Employer

AMGEN

Biological Sensor Research

At Molecular Devices, an interdisciplinary group of researchers is combining biology with silicon technology in novel and noteworthy ways. An important project involves the Silicon Microphysiometer, an instrument that uses MDC's silicon-based sensor to probe the physiology of living cells. Further information is contained in some of our recent publications: Hafeman *et al.* (1988) *Science* 240:1182; Parce *et al.* (1989) *Science* 246:243; Owicki *et al.* (1990) *P.N.A.S.* 87:4007.

We currently have the following immediate openings in our research group:

Postdoctoral Research Scientist — You should be a recent Ph.D. with an interdisciplinary background involving both biology and either physical science or engineering. Excellent instrumental skills are required for your extensive involvement in creating new forms of the microphysiometer for intriguing biological applications.

Cell/Tissue Culture Specialist — You will direct the research cell/tissue culture facility at MDC. We grow many types of mammalian cells using both standard and nonstandard techniques. Your primary function will be in service, with additional direct participation in research. A BS in biology is required (MS desirable). Applicants should also have several years' practical experience in the field, along with a thorough knowledge of basic cell biology.

Molecular Devices offers a competitive compensation and benefits package. Please send your resume including curriculum vitae to Molecular Devices Corporation, Attn: Dr. John C. Owicki, 4700 Bohannon Drive, Menlo Park, CA 94025. Fax (415) 322-2069. Principals only, please. EOE.

 **Molecular
Devices**

POSITIONS OPEN

ASSISTANT PESTICIDE CHEMIST. University of Hawaii, full time, tenure track, to begin approximately January 1992. Duties: develop a research program to determine the fate of xenobiotic chemicals in the Hawaiian environment; direct the activities of the Pesticide Residue Research Laboratory; teach an upper division/graduate course on pesticide analysis/environmental chemistry. Minimum qualifications: Ph.D. in analytical chemistry, environmental toxicology or equivalent. Two years of postdoctoral research experience in a relevant field. Desirable: experience in pesticide residue analysis, analytical methods development, mass spectrometry, laboratory supervision under GLP, regulation of pesticides in the United States. Minimum salary: \$37,860. To apply: send curriculum vitae and names/telephone numbers of three references to: **Search Committee, Department of Environmental Biochemistry, 1800 East West Road, University of Hawaii, Honolulu, HI 96822.** Closing date: 1 October 1991. *Equal Opportunity Employer.*

Ph.D. SCIENTIST MEMBRANE RESEARCH

The Liposome Company, a growing biopharmaceutical firm specializing in lipid-based drug delivery systems, is offering a challenging opportunity for a scientist with a background in liposomology, membrane biophysics or lipid physical chemistry, to conduct a broad-based research program as part of its innovative liposomology group. Ph.D. and 0 to 3 years of postdoctoral experience required.

The Liposome Company is an Equal Opportunity Employer offering competitive salaries, generous stock options, comprehensive benefits and a creative work environment.

Interested candidates please forward your résumé to:

Ms. Debra Pascale
Manager of Human Resources
The Liposome Company
1 Research Way
Princeton, NJ 08540

RESEARCH SCIENTIST MOLECULAR BIOLOGY/TRANSPLANTATION

The Transplantation Biology Research Laboratory in the Department of Surgery, Cedars-Sinai Medical Center, is seeking applicants for a full-time position at the research scientist level. The applicants should have a Ph.D., M.D., D.V.M. or equivalent degree with postdoctoral experience in molecular biology/immunology. The successful candidate will participate in the development of a transgenic program to study cell surface antigen modulation as it relates to transplant rejection. Incumbent should have experience in microinjection, transfection, gene targeting and embryonic stem cell culture. This is an excellent career opportunity with significant potential for long-term collaboration and it is expected that the successful candidate will develop his/her independent research program. The Department of Surgery has a long-term commitment to the development of basic research programs to support a large clinical multiorgan transplantation program and substantial research support, laboratory space and salary are available to the appropriate candidate.

Applicants should submit their curriculum vitae, research plans and three references to:

Phil Tusso, M.D.
Transplantation Biology
Research Laboratory
Cedars-Sinai Medical Center
150 North Robertson Boulevard, Suite 250N
Beverly Hills, CA 90211
Telephone: 213-855-2702

RESEARCH SCIENTIST INDUSTRIAL RESEARCH ASSOCIATE

To be responsible for designing of thin film deposition systems, development of plasma processing and thin film deposition techniques and their applications to materials and devices. Ph.D. (U.S. or foreign degree) in applied physics. One year of experience in the field. Excellent in oral and written English. Experience or coursework must include: thin film technology and applications, material sciences, operation of thin films deposition and characterization-related instrument. Salary: \$576 per week. Full time. Send curriculum vitae to: **Dr. Kambiz Pourrezai, Vice-President, PRD, Inc., 3401 Market Street, Suite 227, Philadelphia, PA 19104.** Must be U.S. permanent resident or citizen.

POSITIONS OPEN



Ecogen, Inc., an agricultural biotechnology company located in the Philadelphia area and specializing in microbial pesticide development and biological control, has immediate openings for the following positions:

- **Ph.D. RESEARCH SCIENTIST.** Analytical protein biochemist with experience in quantitative assay development including immunoassays.
- **Ph.D./M.S. POSTDOCTORAL ASSOCIATES/RESEARCH ASSOCIATES.** Cell physiology and biochemistry. (Postdoctoral research involves structure/function analyses of novel insecticidal proteins.)
- **M.S./B.S. RESEARCH ASSOCIATES/RESEARCH ASSISTANTS.** Microbial genetics. Pilot scale fermentation (microbiology or biochemical engineering background).

Interested candidates should submit a current résumé including the names, addresses, and telephone numbers of three references to:

Ecogen Inc.
Human Resource Department—SCI891
2005 Cabot Boulevard, West
Langhorne, PA 19047

Ecogen is an Equal Opportunity Employer.

ASSISTANT/ASSOCIATE RESEARCH MOLECULAR BIOLOGIST

Program in Transplant Immunology is offering a position for a molecular biologist/molecular immunologist. Position involves studies of HLA group gene regulation. DNA binding proteins and HLA allele definition utilizing molecular approaches to gain a better understanding of antigen presentation and tolerance induction. Candidates should have Ph.D. degree with at least 2 years of postdoctoral training. Salary range: \$41,600 to \$64,000 depending on experience, and qualifications.

Send curriculum vitae and references to: **Marvin R. Garovoy, M.D., University of California, San Francisco (UCSF), 520 Health Sciences East, Third and Parnassus Avenue, San Francisco, CA 94143-0508.**

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

SEPARATION CHEMIST. Research developing analytical methods and instrumentation to separate compounds in complex mixtures, explore new technologies. Apply all aspects of chromatography, fractionation and separation. Understanding of polymer/polymer phase behavior and effect of block and graft copolymers. Fractionation procedures based on fractional solution and precipitation. Characterization of complex polymer systems by variable temperature turbidimetric measurement in the solubility gap. Apply techniques including CG, HPLC, SFC, SFE, etc. and state-of-the-art knowledge of separation principles. Apply background in chromatographic column technology and MS flame ionization detection, electron capture detection, Fourier transformation infrared spectroscopy, computer applications, etc. Requirements: Ph.D. analytical chemistry and 2 years of experience with strong background in all aspects of chemistry and high resolution chromatographic and multidimensional techniques, e.g., SFC, SFE, CG, NMS. Background in deactivating and coding high quality chromatographic columns. Research experience in method development and realworld application for characterization and analysis using computer-interfaced high resolution chromatographic techniques. Proficiency in computerized chromatographic data handling, analysis and instrumentation techniques background. Forty hours per week; \$46,000 per year; résumés to: **Philadelphia Job Bank, 444 North 3rd Street, Philadelphia, PA 19123, JO#4383533.**

NEUROSCIENTIST

University of Miami seeks experimental Ph.D. psychologist or related neuroscientist as Coprincipal Investigator in large NICHD-funded study of familial dyslexia. Experience with dyslexia, imaging, psychophysical vision studies, etc. desirable. Also may participate in similar X-linked mental retardation study. Preference given to those with strong commitment to research. Full-time faculty appointment with opportunity to enter tenure-earning track. Send curriculum vitae to: **Herbert Lubs, M.D., Mailman Center for Child Development, P.O. Box 016820 (D-820), Miami, FL 33101.** Telephone: 305-547-5741. FAX: 305-547-3919.

MEETINGS

**MASSACHUSETTS GENERAL HOSPITAL
HARVARD MEDICAL SCHOOL
CUTANEOUS BIOLOGY RESEARCH CENTER
SYMPOSIUM
EPITHELIUM, MESENCHYME
AND THEIR INTERACTIONS
4 OCTOBER 1991
BOSTON, MASSACHUSETTS**

Speakers include: Pierre Chambon, Gerald Edelman, Werner Franke, Norton B. Gilula, Howard Green, Karen A. Holbrook, Richard Hynes, and Michael Sporn.

For more information and registration, please contact: **Maureen Ellis, Cutaneous Biology Research Center, MGH East, Building 149 Thirteenth Street, Charlestown, MA 02129.** Telephone: 617-726-5770. FAX: 617-726-2120.

MARKETPLACE

DNA SEQUENCING

- Fast. Accurate. Affordable.
- Definitive Nucleotide Sequence
- Subcloning, Mapping, *in vitro* Mutagenesis, Library Construction
- Complete Molecular Biology Services

Ambion 1-800-888-8804
1-512-445-7139 FAX

Circle No. 153 on Readers' Service Card

MYCOPLASMA TESTING SERVICES



**Cell Cultures
Sera
Media**

**Bioproducts
Vaccines
GLP Testing**

BIONIQUE TESTING LABORATORIES, INC.
RR 1, BOX 2 BLOOMINGDALE ROAD
SARANAC LAKE, NY 12983
518-891-2356 FAX: 518-891-5753

Circle No. 181 on Readers' Service Card

Custom DNA Synthesis

Because no other laboratory can match Keystone's quality and service, we can offer the industry's only complete satisfaction guarantee.

**COMPLETE
SATISFACTION
GUARANTEE**

**KEYSTONE
Laboratories, Inc.**
quality, service, price

1-800-788-4DNA

Circle No. 183 on Readers' Service Card

ARABIDOPSIS THALIANA SEEDS

**COLUMBIA & LANDSBERG PLUS 6 MORE WILD TYPES.
EMS MUTAGENIZED M2 SEED. CUSTOM MULTIPLICATIONS.**
602-544-0733 **LEHLE SEEDS**
FAX 602-624-7476 **TUCSON, AZ**

Circle No. 186 on Readers' Service Card

Custom DNA Purified and Delivered in 48 hours.

\$10.00 a base for the first 15 bases, \$7.50 for each additional base. No additional charges.

Research Genetics
1-800-533-4363

Circle No. 10 on Readers' Service Card

**Yesterday,
the ultimate life
science search system
was a fantasy.**

**Today, it's the
Life Science NetworkSM
from BIOSIS[®].**

Imagine that a single phone call could connect you (through your personal computer) to a comprehensive "library" of more than 80 life science databases. Next, fantasize that this powerful search system is remarkably easy to use, allowing you to find precisely the information you need by simultaneously "scanning" many databases in your subject area.

For good measure, imagine that this unique search system offers these convenient, user-friendly features:

- a simple, predictable pricing structure
- person-to-person online search assistance
- electronic document ordering
- a single monthly bill

What we've just described is the **Life Science Network** from BIOSIS, the new reality in life science information retrieval!

To find out more, contact BIOSIS, Marketing Department S891FT, 2100 Arch Street, Philadelphia, PA 19103-1399, or call toll free 1-800-523-4806 (USA except PA) or (215) 587-4800 (worldwide).



**Life Science
NetworkSM**

The **Life Science Network** is sponsored by BIOSIS, serving the life science community worldwide.
BIOSIS is a registered trademark of Biological Abstracts, Inc.

Circle No. 40 on Readers' Service Card

OMNISPENSE[®] & UNISPENSE[®]

**Easy to operate microprocessor
controlled automatic dispensers**

The New Generation

———— **One-step volume calibration** and self prompting LCD screen for quick and easy set-up

———— **Store up to ten set-ups** of routine filling operations for quick and easy retrieval

———— **Durable membrane keypad** for direct entry of volume, tubing size, automatic delay interval and dose count

———— **Variable pump speed** and reverse flow option for dispensing and aspirating operations featured with the Omnispense model



WHEATON

Manufacturers Since 1888

1501 N 10TH ST MILLVILLE NJ 08332-2093 USA

Call Toll-Free 1-800-225-1437, Ext. 2527

TLX: 55-1295 (WHEATON US)

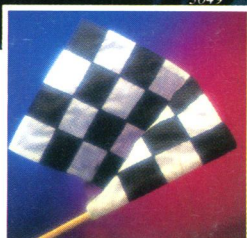
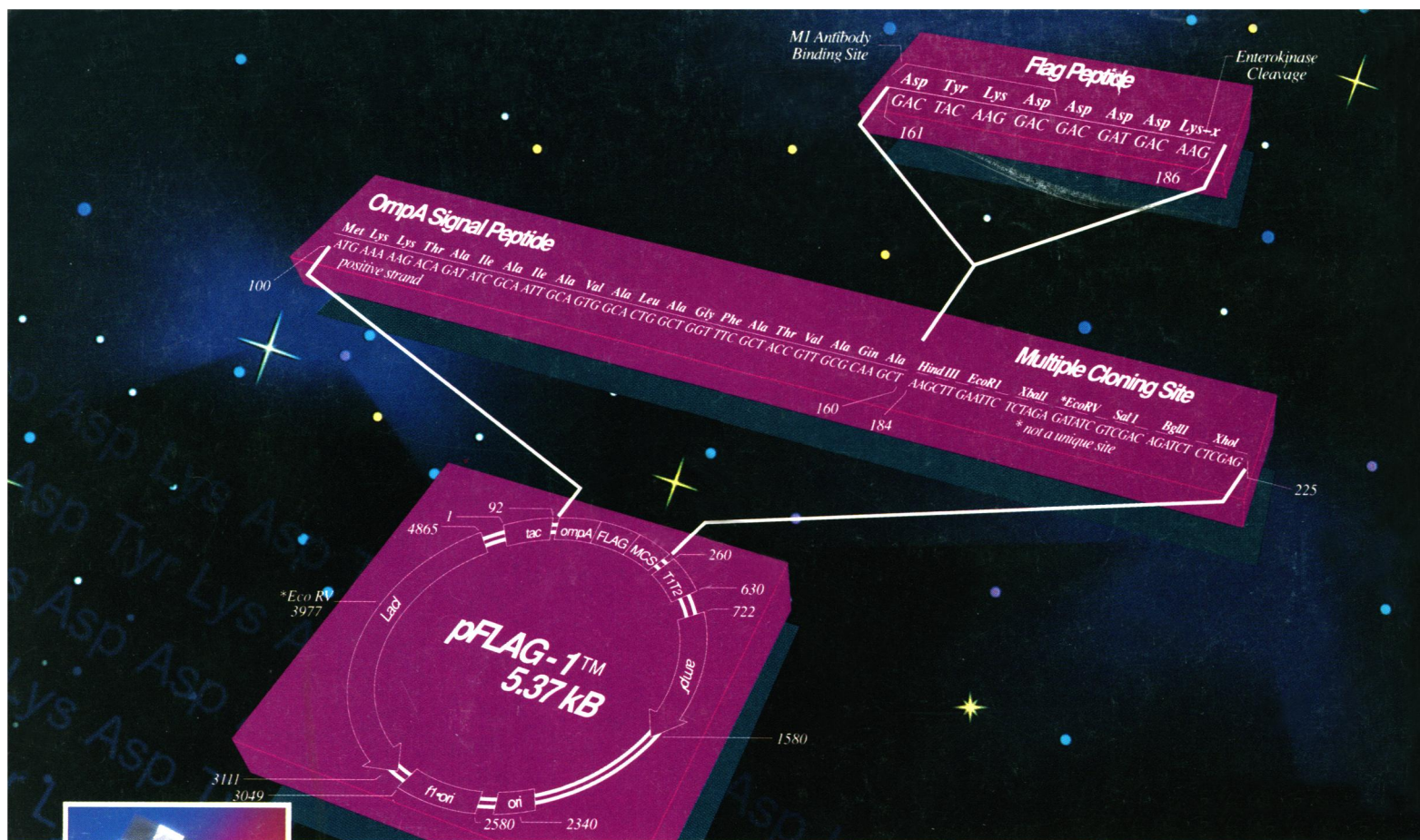
FAX: 1-609-825-1368



WHEATON

For a demonstration circle 150

For Literature circle 151



With FLAG™ Biosystem, The Only Surprise Is How Well It Works.

IBI Presents a Proven Technology for High-Yield Expression, Detection and Purification of Recombinant Proteins in E. coli.

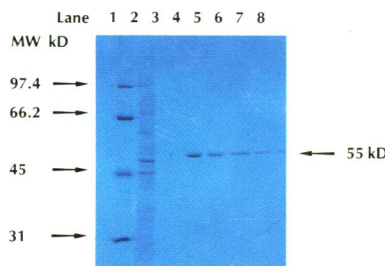
We've drawn on thousands of hours of research to assemble a highly reliable kit for high-yield purification of biologically active proteins.

The novel 8-amino-acid FLAG marker peptide is fused with virtually any protein for expression and secretion by the pFLAG-1 vector. The FLAG fusion protein is rapidly purified with the Anti-FLAG™ M1 affinity column. After that, the FLAG marker is easily removed with Enterokinase, and detected at any time with the Anti-FLAG™ M1 monoclonal antibody. With FLAG, you also get:

A Universal Marker for fast and efficient purification of any protein fused to the FLAG peptide.

High Yield due to the efficient expression and secretion of FLAG fusion proteins by the pFLAG-1 expression vector, and the fact that the small FLAG peptide does not affect biological activity.

Rapid Purification of a biologically active protein



Single-Step Purification: Lanes 2 and 3 show contaminating proteins eluted using CaCl₂ buffer, lanes 4-8 show the recovery of the 55 kD FLAG-BAP* fusion protein by washing with a mild buffer containing EDTA.

from a crude cell lysate in minutes with the anti-FLAG M1 affinity gel.

Recovery of Biologically Active Proteins as a result of mild conditions during affinity purification.

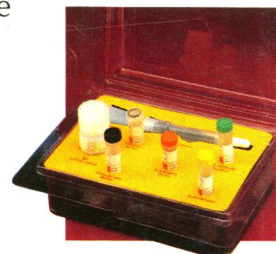
Efficient Detection because the FLAG peptide occurs on the protein surface for easy detection with the Anti-FLAG M1 monoclonal antibody.

Get Everything You Need to Flag a Protein Down. Order your complete FLAG Biosystem today (Cat. No. IB 13000) from

your VWR rep, or call IBI toll-free for a detailed six-page technical brochure: **1-800-243-2555**.

Kit includes: pFLAG-1 expression vector, Anti-FLAG M1 monoclonal antibody, Anti-FLAG M1 affinity gel, enterokinase, enterokinase buffer, pFLAG-1-BAP* control vector, chromatography column, and technical manual.

*Bacterial Alkaline Phosphatase



INTERNATIONAL BIOTECHNOLOGIES, INC.
Subsidiary of Eastman Kodak Company
P.O. Box 9558, New Haven, CT 06535

Circle No. 178 on Readers' Service Card