

Products & Materials

The 42nd Annual Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy will be held from 4 through 8 March at McCormick Place-on-the-Lake in Chicago. These are some of the new products that will be introduced there.

Electroelution Apparatus

The Genzomed Electroelutor is an apparatus for the elution of proteins and nucleic acids from polyacrylamide and agarose gels and polyvinylidene fluoride and nitrocellulose membranes. The sample is collected in a chamber with a predetermined volume (10 to 1000 μ l) and dialyzed to remove salts. The unit is available with pre-cut membranes with molecular mass cutoffs between 100,000 and 500,000 daltons. Two, four, or more samples can be eluted simultaneously with high yield. Genzomed Biotech. Circle 550.

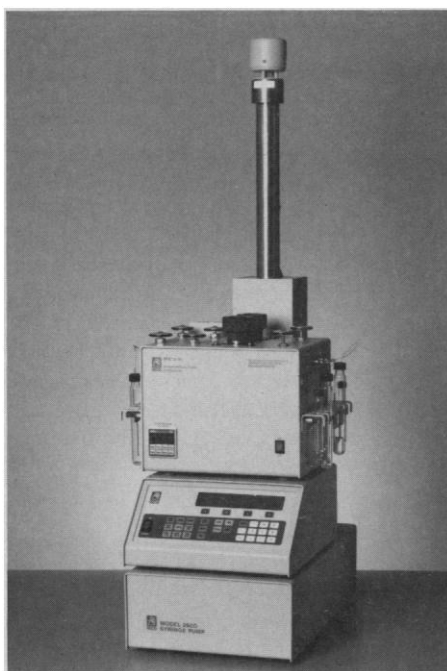
Peptide Synthesis and Purification

New products for peptide synthesis and purification include a solid-phase reactor (PL-SPR) developed for the fully automated synthesis of peptides at the gram level, based on technology designed for both very low cross-linked synthesis resins and supported rigid material. The manufacturer offers a combination of peptide synthesis resins, instrumentation, and polymeric high-performance liquid chromatography purification media. Polymer Laboratories. Circle 552.

SFE Sample Preparation System

The Supercritical Fluid Extraction (SFE) system provides a fast alternative to liquid-solvent extraction in preparing chromatography samples. SFE makes use of inexpensive, nontoxic solvents, such as pressurized carbon dioxide at moderate temperature, to

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.



selectively extract target analytes from a wide range of sample matrices. Sample cartridges hold from 0.5 to 10 ml and require no tools for setup. Extractants can be collected in a small volume of solvent or routed to a user-supplied interface for on-line analysis. Isco. Circle 557.

Laser Desorption Mass Spectrometer

Model 2000 is a laser desorption time-of-flight mass spectrometer that identifies molecular masses of subpicomole quantities of proteins, peptides, oligonucleotides, and other biological polymers in complex biological samples. The integrated system includes a linear time-of-flight mass spectrometer with a 2-m flight path, two-stage 40-kV acceleration, and a 20-stage focused mesh electron multiplier detector. High-performance, matrix-assisted laser desorption ionization, coupled with state-of-the-art data acquisition and processing, can determine molecular masses to within 0.01% up to 20,000 daltons and to within 0.1% up to 200,000 daltons. Vestec. Circle 553.

Purge and Trap Concentrator

PeakMaster is a sample concentrator for environmental, food, and polymer samples that features a compact, unified design with options previously unavailable in purge and trap devices. Modular sampling attachments provide for analysis of liquid samples by frit or impinger sparging; air and solid samples

are analyzed by thermal desorption either to a sorbent trap or directly to a gas chromatograph. A user-selectable water elimination trap permits the insertion of an ambient-temperature or heated water trap between the sample and the organic collection trap. CDS Instruments. Circle 562.

Personal Integrator for Chromatography

Model 1020 Personal Integrator for chromatography provides analysts with a screen for real-time viewing and manipulation of chromatograms and a hard disk for long-term data storage. It is compatible with personal computers and larger systems and can be used with all commercial liquid and gas chromatographs. The model's screen windows and prompts allow parameter editing. The chromatographer may view one or two real-time plots and change attenuation at will. Stored or sampled chromatograms can be examined in detail and compared with reference standards. The unit occupies only 5 cm of bench space. Perkin-Elmer. Circle 556.

Cylindrical Draft Chamber Balances

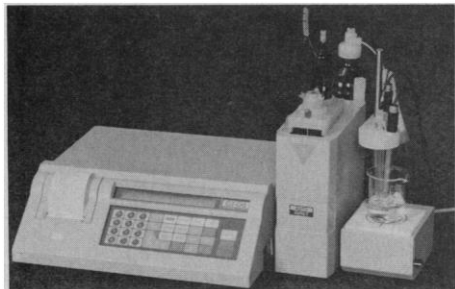
The RC research series balances feature a cylindrical motorized draft chamber. Three models offer an assortment of capacities. The RC balances achieve stabilization times of just 10 s for mass resolutions of 20 million digits. The tall cylindrical glass draft



chamber allows hands-free operation, permits sample viewing from all angles, and contains a variable aperture that can be set to the size desired to minimize draft. Sartorius Instruments. Circle 565.

Equilibrium Titrator

The Mitsubishi Model GT-06 is a microprocessor-controlled equilibrium titrator. The built-in printer displays the titration curve, as well its first derivative, data, results, and calculations. All parameters, calculations, and sample information can be easily



programmed by the user. The GT-06 can automatically operate up to four burettes and can connect to a balance, a sample changer, a full-size graphics printer, or a solvent dispenser. The instrument features an RS-232 interface for communicating with a microcomputer. Rosa Instrument Corp. Circle 568.

Luminescence Spectrometer

The Series 2 Luminescence Spectrometer is the only instrument in its class to offer both continuous and pulsed-light sources. It is as suited for fluorescence measurements as for phosphorescence measurements. The sample compartment supports a wide variety of sample-handling equipment and other accessories. Flexible software features a graphical user interface, multitasking capabilities, and a comprehensive set of application routines. SLM-AMINCO. Circle 560.

Electrochemical Detector for HPLC

The Cuolochem II Multi-Electrode Detector combines the patented multi-electrode technology of the Coulochem 5100A Detector with three modes of operation and advanced features for the analysis of compounds for neurochemical, pharmaceutical, environmental, and biological applications. The programmable modes of operation are as follows: the DC Mode for the detection of most oxidizable and reducible compounds uses coulometric electrodes; the Pulse Mode detects compounds such as alcohols, carbohydrates, and other complex sugars; and the Scan Mode determines if a compound is oxidizable, reducible, or both. ESA. Circle 564.

Tunable Absorbance Detector

The 486 Tunable Absorbance Detector provides the highest sensitivity of any multiwavelength ultraviolet-visible light detector on the market. The instrument offers tunable detection from 190 to 600 nm, allowing the selection of the optimum wavelength for each analysis. It is appropriate for applications that include methods development, research, and quality control. It offers automatic calibration that eliminates the need for manual realignment of lamps and gratings. Waters Division of Millipore. Circle 567.

Curve-Fitting Software

TABLECURVE software helps researchers find the best equation to fit their data. It performs rapid, one-pass curve-fitting to 221 candidate equations and ranks the equations by best fit. The user can examine equations graphically and view standard errors, *F*-statistics, and prediction/confidence tables. Data can be entered manually or imported from Lotus 1-2-3, Quattro, dBase, ASCII, and other file formats. The program runs on IBM compatible computers. Jandel Scientific. Circle 559.

Variable Wavelength Detector

The 117 UV (ultraviolet) Detector is a programmable variable wavelength detector with three operating modes. Other features are its digital signal processor for a low noise



level and its easy-to-change flow cells. The model detects in a range of 190 to 380 nm. The three operating modes are "single wavelength" for high sensitivity, "dual wavelength with ratio" for purity checks, and "scan" for determination of absorbance maximums and minimums. Any parameter can be programmed to change during runs. Gilson Medical Electronics. Circle 561.

Universal HPLC Autosampler

Model 738 Autosampler can inject from 1 μ l to 1 ml of up to 96 different samples without any loss of sample. It fits any high-performance liquid chromatograph (HPLC) or ion chromatograph. The unit can make an unlimited number of injections from any single sample and requires no accessory gas-



es for operation. Other features include programmable, variable injection volumes; pre-column derivatization; and reagent dilution. The software allows on-the-fly programming and priority sample interrupt. A refrigerated and heated autosampler is also available. Alcott Chromatography. Circle 558.

Chromatography Workstation Software

Version 2.02 of the APEX Chromatography Workstation is a substantial upgrade from past versions. APEX is a DOS program that runs in a fast windowing environment controlled by either the keyboard or mouse. With APEX the user can build sample tables and methods, acquire and integrate chromatograms, create calibration curves, customize reports, and export data to laboratory information management systems, all from only two screens. Autochrom. Circle 563.

Nylon Blotting Membranes

The Blotting-Nylon 66 Membrane type A, with an amphoteric surface, has a high binding capacity for most biomolecules and shows greater sensitivity and greater nucleic acid retention than nitrocellulose does. The strongly cationic surface of Blotting-Nylon Membrane type B is maintained over a broad pH range (pH 3 to 10) and promotes strong ionic binding of nucleic acids and negatively charged proteins. This membrane provides support for rapid nucleic acid transfer techniques. Fluka Chemie. Circle 554.

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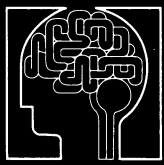
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Darwin L. Cheney (Washington, DC)

Plenary Address

Zbigniew Bankowski (Geneva, Switzerland)

Session I

Misrepresentation of Data: U.S. Perspectives

Paul J. Friedman (La Jolla, CA)

Patricia Woolf (Princeton, NJ)

Jules V. Hallum (Bethesda, MD)

Allan C. Mazur (Syracuse, NY)

Session II

Role of Authorship

Edmund D. Pellegrino (Washington, DC)

Paul Anderson (New York, NY)

Eleanore Butz (Washington, DC)

Sharon Boots (Washington, DC)

Addeane Caellegh (Washington, DC)

Edward J. Huth (Philadelphia, PA)

Session III

Misrepresentation of Data: International Perspectives

Paul J. Friedman (La Jolla, CA)

Albin Eser (Freiburg, F.R.G.)

Vittorio Sgaramella (Pavia, Italy)

Raymond Hoffenberg (Oxford, UK)

April 30, 1991

Session IV

Conflict of Interest

David Korn (Stanford, CA)

Roger Porter (Bethesda, MD)

Adil E. Shamoo (Baltimore, MD)

Barbara Mishkin (Washington, DC)

William Neaves (Dallas, TX)

Barbara Hansen (Baltimore, MD)

Session V

Scientific Response to External Pressures

Frederick Goodwin (Bethesda, MD)

Use of Embryos and Fetuses

Clifford Grobstein (La Jolla, CA)

James Bopp (Terre Haute, IN)

Use of Animals

T. David Marshall (Ottawa, Canada)

Mark Matfield (London, U.K.)

General Information

Site:

The Georgetown University Conference Center and Guest House (Thomas and Dorothy Leavey Center) located on Campus.

Registration Fee:

US \$100.00; US \$50.00 for students and post-doctoral fellows; no charge for press. Registered participants are entitled to printed materials of the symposium and working lunches on the two days of the symposium.

Accommodations:

A number of rooms have been reserved for participants at the Georgetown University Conference Center and Guest House.

Proceedings:

Symposium proceedings will be available in the "Fidia Research Foundation Symposium Series."

Further information can be obtained from: Fidia Research Foundation, 1640 Wisconsin Avenue, N.W., Suite 2, Washington, DC 20007. Phone: 202/337-7185; Fax: 202/337-7188.



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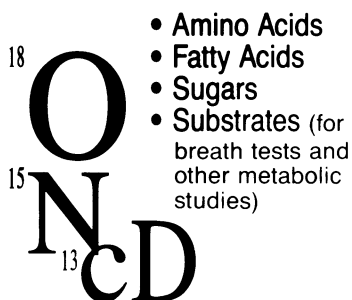
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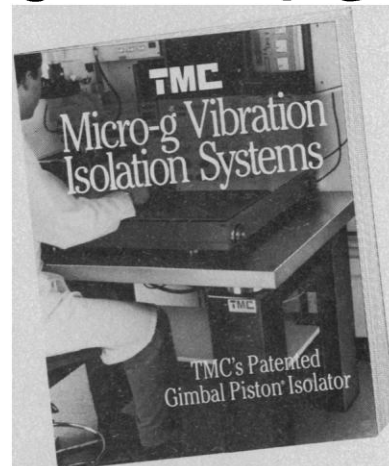
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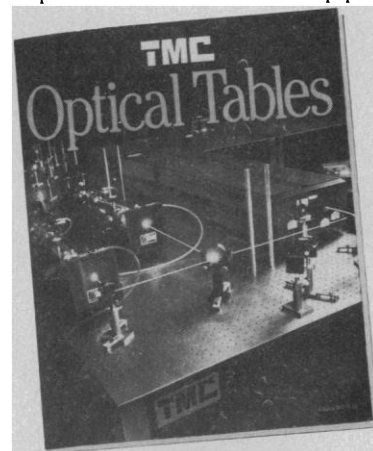
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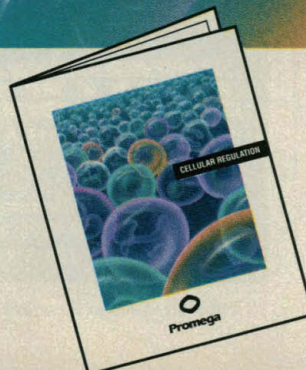
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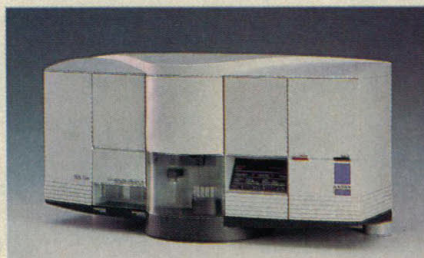
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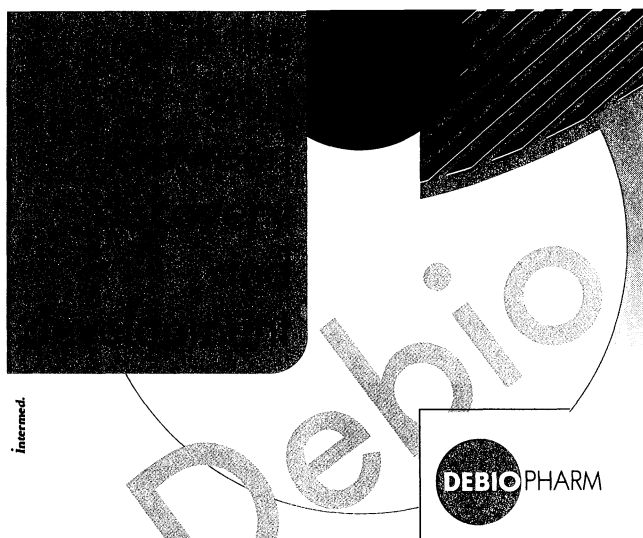
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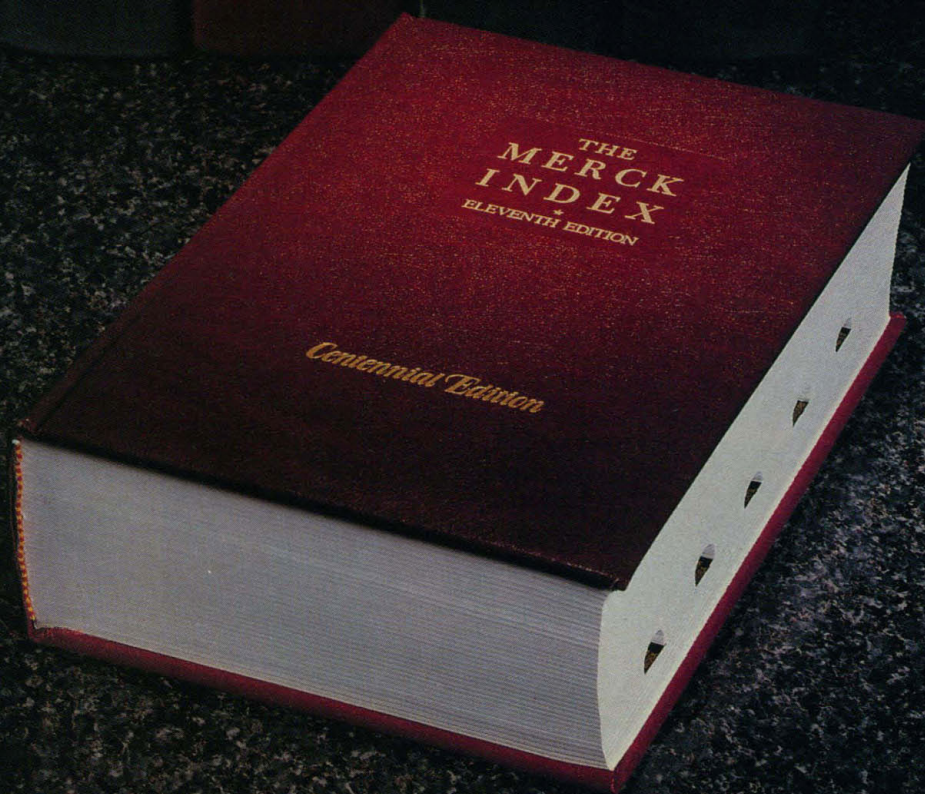
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POSITIONS OPEN

ASSISTANT PROFESSOR. The Department of Pharmacology and Molecular Sciences has a tenure-track position at the assistant professor level available for the fall of 1991 in the area of bio-organic chemistry with special reference to the mechanism of drug action and drug design and synthesis. Applicants should have a strong background in organic chemistry and an interest in its application to biological problems. Responsibilities will include teaching graduate level courses in bio-organic chemistry and the basic mechanisms of drug action. The department provides an excellent research environment, with facilities which include the Eastern Regional Mass Spectrometry Center. There is also access to a 600 MHz high field NMR facility. Send curriculum vitae and several letters of support to: **Dr. Thomas August, Department of Pharmacology, The Johns Hopkins University (JHU), School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205.** JHU is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR

The Division of Cellular and Molecular Biology at the Dana-Farber Cancer Institute and the Department of Biological Chemistry and Molecular Pharmacology at Harvard Medical School are conducting a search for an assistant professor. We would like to identify applicants who are addressing contemporary issues in cell and animal development using model systems that are amenable to genetic or biochemical analysis. In addition to developing a basic research program, the successful candidate will be expected to participate in educational activities at the Dana-Farber Cancer Institute and Harvard Medical School. Interested candidates should submit curriculum vitae, brief research description, and three letters of reference to: **Professor Charles D. Stiles, Search Committee Chairman, Division of Cellular and Molecular Biology, Dana-Farber Cancer Institute, Mayer Building, Room 830, 44 Binney Street, Boston, MA 02115.** The Dana-Farber Cancer Institute and Harvard Medical School are Equal Opportunity/Affirmative Action Employers. Women and minority candidates are particularly encouraged to apply.

The Department of Pediatrics, University of California, San Diego (UCSD), is recruiting one **ASSISTANT PROFESSOR** (ladder rank) in the Division of Immunology/Allergy. Applications are invited for an M.D. or Ph.D. interested in developing a research program in molecular immunology related to the mechanism of allergic disorders. Position is primarily a research position; however, participation in a clinical pediatric immunology and allergy division as well as performing clinical investigation is desired but not required. Candidates will participate in the existing divisional teaching program of fellows, residents, and medical students. License or licensable to practice medicine in the State of California. Salary commensurate with skills, knowledge, and University of California policy. Candidates with completed postdoctoral education in molecular biology/immunology are asked to send curriculum vitae, list of three references and research plan by 1 April 1991 to: **Hans L. Spiegelberg, Head, Division of Immunology and Allergy, Department of Pediatrics, UCSD School of Medicine, 9500 Gilman Drive, 0609-D, La Jolla, CA 92093-0609.** Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR, ANATOMICAL SCIENCES. Applications invited for tenure-track appointment as assistant professor in the Department of Anatomy, College of Veterinary Medicine, Cornell University. Candidates must have strong background in morphological sciences and a productive research program. Research in the department includes cartilage biology, functional morphology of muscle, craniofacial development, and neurocytology/neuropathology. Collaborative opportunities exist, in cancer biology, exercise physiology, reproductive biology, and molecular biology. New TEM/SEM/LM and image analysis facilities available. Candidates should have teaching experience in the morphological sciences and commitment to teaching in veterinary anatomy curriculum. Ph.D. degree required: D.V.M. and postdoctoral experience desirable. Send curriculum vitae, description of teaching and research accomplishments and goals, and names of three references to: **Dr. Cornelia Farnum, Department of Anatomy, College of Veterinary Medicine, Cornell University, Ithaca, NY 14853-6401.** Deadline: 10 April 1991; starting date: August 1991. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR, GENETICS TENURE TRACK

Tenure-track position for September 1991. Ph.D. required. Teaching duties to include a course in genetics, an advanced course in specialty, and participation in the freshman course. The successful candidate will be expected to maintain an ongoing research program. The biology department consists of nine faculty and offers the bachelor's in biology.

Submit résumé, statement of teaching and research goals, and three letters of reference postmarked no later than 22 March 1991 and mail to:

Dr. Thomas Knight
Department of Biological Sciences
University of Southern Maine
Re: 101
96 Falmouth Street
Portland, ME 04103

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

BIOLOGICAL SCIENCES. Starting 15 September 1991. Tenure-track position at the rank of **ASSISTANT PROFESSOR**. Ph.D. required, postdoctoral experience preferred. Specialty areas include, but are not limited to, animal behavior, environmental science, and microbial ecology. Responsibilities include teaching environmental science, developing upper division and graduate courses in specialty, and conducting an active research program. Send résumé, transcripts, reprints, names and addresses of three references, and a statement of teaching philosophy and research interests by 1 April 1991 to: **Chair, Biology Search Committee, Department of Biological Sciences, Youngstown State University, Youngstown, OH 44555.** (Appointment of this position is subject to availability of funds and/or position.) Youngstown State University is an Equal Opportunity/Affirmative Action Employer.

PHYSIOLOGIST, ASSISTANT PROFESSOR

The Department of Physiology invites applications from individuals with at least 2 years of postdoctoral experience for a tenure-track position. Cardiovascular research is emphasized but all qualified applicants will be considered. Successful candidates will establish an independent research program, seek extramural funding, and participate in teaching medical physiology. Send curriculum vitae; brief description of teaching experience, current research activities, and career goals; and names of three references to: **D. Fred Peterson, Ph.D., Chairman, Department of Physiology, Kirksville College of Osteopathic Medicine, Kirksville, MO 63501.**

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BROWN UNIVERSITY ASSISTANT PROFESSOR OF MEDICAL SCIENCE ARTIFICIAL ORGANS, BIOMATERIALS AND CELLULAR TECHNOLOGY

For a full-time, regular position as assistant professor of medical science we are seeking an experimental surgeon with a specialty in microsurgery whose research interests are in the development of artificial organs. An M.D. degree is required and postdoctoral research and teaching experience are preferred. The position is in the Section of Artificial Organs, Biomaterials, and Cellular Technology, a multidisciplinary group of faculty and graduate students with interests in tissue-material interactions, biocompatible polymers, and polymer protected tissue transplants. Candidates should have the potential to develop an independent, externally funded research program. The position requires teaching microsurgery and anatomy to graduate and undergraduate students and hospital residents, collaboration in the teaching of seminar courses in the field of artificial organs, guidance of Ph.D. and M.D.-Ph.D. student research, and supervision of animal surgical procedures. The appointment can begin on 1 July 1991 or at a later date if mutually convenient.

Applicants should submit curriculum vitae and a concise description of research interests and goals, and should arrange for three letters of reference to be sent to: **Professor Elizabeth H. Leduc, Division of Biology and Medicine Box G-B5, Brown University, Providence, RI 02912.** We shall begin the review of applications on 18 March 1991. We encourage applications from women and minority candidates. Brown is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR, NEUROANATOMIST

The Department of Biological Sciences, Neurobiology Section, and the Program in Neural, Informational, and Behavioral Sciences (NIBS) invite applications for a tenure-track faculty position in mammalian neuroanatomy. Preference will be given to individuals whose research interests focus on the organization and chemistry of circuits underlying behavior. The candidate will be expected to develop an independent research program and to participate in graduate and undergraduate teaching within the College of Letters, Arts, and Sciences. The successful candidate will be housed in the newly completed Hedco Neurosciences Building. The Program in NIBS is multidisciplinary, with groups interested in computational, cognitive, behavioral, systems, cellular, and molecular neuroscience. Applicants should submit by 15 March 1991 a letter of interest, curriculum vitae, a description of planned research, and the names of three references to: **Dr. L. W. Swanson, Chair-Neuroanatomy Search Committee, Department of Biological Sciences, Hedco Neuroscience Building, mc 2520, University of Southern California, Los Angeles, CA 90089-2520. Women and minorities are especially encouraged to apply.**

MOLECULAR BIOLOGIST. Department of Pathology, Tufts University School of Medicine/New England Medical Center Hospital, Boston, Massachusetts. Applications are invited for a tenure-track faculty position in the Department of Pathology at the **ASSISTANT PROFESSOR** level. Applicants are expected to hold Ph.D. and/or M.D. degrees and have postdoctoral research experience. The department is particularly interested in individuals whose research utilizes molecular biological approaches to the study of one or more of the following: (i) the regulation of cell proliferation and differentiation in normal and neoplastic cells; (ii) growth factor or cytokine expression and function; or (iii) transcriptional regulation. Applicants should send current curriculum vitae and a brief statement of research plans and should have three letters of reference sent to: **Dr. Martin Flax, Professor and Chairman, Department of Pathology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111.** Applications will be accepted until the position is filled.

Tufts University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR

New position, begin now or late August 1991. Experienced faculty member, Ph.D. in biology with research experience, expected to do some teaching of biology majors; histology/embryology. Primarily be a mentor and role model for funded undergraduate science minority students on training grants; serve as their research coordinator to professionally develop them for graduate school. Experience in small college setting desirable. Send letter stating interests, complete résumé, transcripts, and three letters of reference by 15 March 1991 to: **Sister John Karen Frei, Associate Vice President, Biological and Biomedical Sciences, Barry University, Miami, FL 33161.**

ASSISTANT OR ASSOCIATE PROFESSOR. Department of Pharmacology and Toxicology, University of Texas Medical Branch (UTMB) at Galveston. Applications are invited for up to two tenure-track positions to be filled over the next 1 to 2 years. Special attention will be given to individuals with experience and interest in applying molecular biological techniques to the investigation of pharmacological or toxicological problems. Research interest in the cardiovascular, nervous, or endocrine systems is desirable but other areas will be considered. Associate professor applicants should have an established, independent research program and an outstanding publication record, while assistant professor applicants will be expected to establish such a program based on solid postdoctoral experience. Duties will include teaching medical graduate students. We offer an environment conducive to teaching and research in one of the four University of Texas System health science centers. Interested persons should send curriculum vitae, statement of research interests, three representative publications, and the names of three references to: **Dr. Cary W. Cooper, Chairman, Department of Pharmacology and Toxicology, UTMB, Galveston, TX 77550.** UTMB is an Equal Opportunity M/F/H/V Affirmative Action Employer. UTMB hires only individuals authorized to work in the United States.

POSITIONS OPEN

TWO ASSISTANT PROFESSORSHIPS. The Department of Biochemistry and Molecular Biology at the University of Arkansas for Medical Sciences (UAMS) is committed to a major expansion of its faculty. The department will occupy expanded quarters in a new building in 1992. In 1991 we are soliciting applications for two new full-time (12-month) tenure-track assistant professorships in all areas of biochemistry/molecular biology. Positions are state-funded. Candidates should have a Ph.D. and/or M.D. degree, postdoctoral experience, and a demonstrated record of excellence in research. Successful candidates will be expected to develop a funded research program and contribute to teaching medical and graduate students. Applicants should submit curriculum vitae, a brief statement of proposed research, and the names and addresses of three references to: **Chair, Search Committee, Department of Biochemistry and Molecular Biology, Slot 516, College of Medicine, University of Arkansas for Medical Science, 4301 West Markham, Little Rock, AR 72205, by 15 March 1991. UAMS is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSISTANT PROFESSOR

Applicants for this position should possess a Ph.D. and have demonstrated experience in immunological techniques, including (but not limited to) protein purification, antibody production and purification, and protein structure. Experience in calcium-binding proteins desirable. Candidates should be able to write grants, design new projects, and publish in high-quality journals. Submit curriculum vitae and letters of reference to:

**Nicholas Sperelakis, Ph.D.
Physiology and Biophysics
College of Medicine
University of Cincinnati
Cincinnati, OH 45267-0576**

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

RESEARCH INSTRUCTOR. The Department of Medicine Division of Medical Oncology at The University of Texas Health Science Center at San Antonio invites applications for a non-tenure-track position. Highly qualified candidates with a Ph.D. in biochemistry with at least 3 years of postdoctoral experience in growth factors and their receptors in human breast cancer using transgenic mice as a model system are encouraged to apply. Teaching will also be required. Preference will be given to candidates with at least 2 years of research experience in development of transgenic mice with TGF alpha/EGF receptor and knowledge in growth factor suppression using Antisense RNA. Salary according to qualifications with a minimum of \$24,000 per year. Starting date is 1 April 1991. Send résumé and names and addresses of two references to: **Ms. Minerva De La Garza, Medicine/Medical Oncology, University of Texas Health Science Center, San Antonio, TX 78284-7884.**

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NEUROSCIENCE ASSISTANT/ASSOCIATE PROFESSOR. Applications are invited for an assistant professor (tenure track) or associate professor (tenure) position in the Department of Physiology in the field of cortical/subcortical visual physiology. Applicants with innovative research programs using molecular, cellular and/or systems approaches to the study of visual function are especially encouraged to apply. Applicants must have a Ph.D., M.D., or foreign equivalent, with a minimum of 2 years of postdoctoral training desirable. The successful applicant will be expected to conduct a vigorous, independent research program and to participate in teaching and graduate education in the department. The level of appointment will be commensurate with experience. Last date for receipt of applications is 1 May 1991. Send curriculum vitae, one-page description of research interests, and three letters of reference to: **J. Soechting, Department of Physiology, 6-255 Millard Hall, 435 Delaware Street S.E., University of Minnesota, Minneapolis, MN 55455.** The University of Minnesota is an Equal Opportunity Educator and Employer.

PERSONNEL PLACEMENT ADS in our line classified columns can be boxed for higher visibility. Call **SCIENCE** at 202-326-6555 for details.

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR

Louisiana State University (LSU) is conducting a search for an assistant/associate professor (tenure track) to apply modern biotechnological research approaches (molecular genetics, protein chemistry, cell biology, etc.) to study infectious agents and/or agent/host interactions of warmwater fish. Qualified applicants will have a Ph.D. in microbiology, molecular biology, fish pathology, or a related field. To apply, send a letter of application, curriculum vitae, and the names of three references to: **Dr. Ron Thune, Department of Veterinary Science, Louisiana State University, 111 Dalrymple Building, Baton Rouge, LA 70803. Telephone: 504-346-3308, FAX: 504-346-5715. LSU is an Equal Opportunity/Affirmative Action Employer.**

PLANT PHYSIOLOGIST. The Department of Biology invites applications for a tenure-track faculty position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. Candidates must possess the Ph.D. A strong commitment to teaching and research involving undergraduate students is required. Teaching responsibilities include plant physiology, general botany, and general biology. Applicants should submit curriculum vitae, a statement of teaching and research interests, reprints of recent publications, and the names of three references by 15 March 1991 to:

**Dr. James W. Smiley, Chair
Department of Biology
College of Charleston
Charleston, SC 29424**

An Equal Opportunity/Affirmative Action Employer.

ANESTHESIOLOGIST

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

ENVIRONMENTAL GEOLOGIST (ASSISTANT/ASSOCIATE PROFESSOR). Tenure track, beginning September 1991. Duties include coordination of undergraduate environmental sciences program, undergraduate/graduate teaching, and research. A Ph.D., knowledge of soil and ground water assessment, geostatistics, remediation, and practical experience with regulations and compliance issues are required. Experience with GIS systems desirable. Send letter of application, curriculum vitae, and three letters of recommendation by 8 April 1991 to: **Dr. Henry Voegeli, Chairman, Department of Biology and Environmental Sciences, University of New Haven, 300 Orange Avenue, West Haven, CT 06516.** An Equal Opportunity/Affirmative Action Employer.

PLANT SYSTEMATIST. The University of Texas at Austin is reopening the search for a plant systematist in order to solicit applications at the **ASSOCIATE PROFESSOR** level. Candidates must be able to demonstrate competence in monographic systematics as evidenced by the publication of monographic work and must have a proven record of research in macromolecular systematics. Candidates are expected to have been successful at obtaining extramural funding and training of graduate students and postdoctoral fellows. The successful candidate will be expected to teach undergraduate and graduate courses in plant systematics. Applicants should submit a detailed statement of research accomplishments and goals, a complete résumé, and letters of recommendation from eight individuals. Complete applications, due 1 March 1991, are to be addressed to: **Chairman, Selection Committee, Department of Botany, The University of Texas, Austin, TX 78713.** The University of Texas is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR Cancer Research Center The University of Chicago

The Division of The Biological Sciences of The University of Chicago is soliciting nominations and applications for the position of Director of its Cancer Research Center, which is supported by the National Cancer Institute. The research conducted under the aegis of the center encompasses a wide range of cancer related modern experimental biology, as well as clinical oncology.

The Director should be an accomplished basic biological scientist with a record of notable contributions to cancer research. Precise biological science discipline is flexible. The Director will play a central role in the recruitment of a group of molecular oncologists to a new Institute of Molecular Medicine, located in the Jules Knapp Research Building. The Center for Molecular Oncology is one of five biomedical research centers in this building, the others being devoted to the study of human genetics, molecular cardiology, neurobiology and molecular immunology. The Center for Molecular Oncology will have 10,000 square feet of newly constructed research space which has been planned to house six investigators. Funding is available for the establishment and initial support of this major new research program. The activities of the Center will complement ongoing programs in cancer research and molecular oncology at The University. Please address expressions of interest and suggestions, accompanied by resumes and other relevant information to:

Dr. G.S. Getz
Chairman, Search Committee
Department of Pathology
5841 S. Maryland Ave./Box 414
Chicago, IL 60637



**THE UNIVERSITY
OF CHICAGO**

An Affirmative Action Equal Opportunity Employer

Assistant Professorships in Pathology: Yale University



The School of Medicine is seeking two clinician/scientists (MD, MD/PhD, or PhD) for full time appointment at the rank of Assistant Professor. Successful candidates will develop an independent investigative program, participate in the teaching of graduate students, medical students, and residents, and contribute to collaborative investigations with other members of the research and clinical faculty. Applicants with demonstrated creativity, research productivity, and training in molecular genetics, biochemistry, or cell biology, and an interest in problems related to human biology are preferred. Board certification in Anatomic Pathology desirable.

Send current curriculum vitae, and the names of three references to: **Dr. Jon S. Morrow, M.D., Ph.D., Professor and Chairman, Department of Pathology, Yale University School of Medicine, 301 Cedar St. New Haven, CT 06510.**

Yale University is an equal opportunity, affirmative action employer. Minority and women candidates are urged to apply

FACULTY POSITIONS IN BIOCHEMISTRY AND MOLECULAR BIOLOGY DEPARTMENT OF BIOCHEMISTRY UNIVERSITY OF MISSOURI-COLUMBIA

Applications are invited for **two tenure-track positions** at the rank of **assistant professor**. We seek exceptional candidates in **any area** of biochemistry and molecular biology. **Special attention** will be given to candidates whose interests focus upon the biochemistry and molecular biology of plants, microbial physiology and genetics; and physical biochemistry. Applicants should have excellent graduate training in biochemistry and/or molecular biology with a record of accomplishment at the postdoctoral level. **MU** is a land-grant institution and faculty are expected to excel in research and teaching: Departmental teaching programs encompass undergraduate, graduate and professional curricula. **We specifically invite applications from women and minorities.**

The Biochemistry Department is administered through the College of Agriculture, Food and Natural Resources and the School of Medicine. Excellent support facilities are available and the Department is a major participant in the University Eminence Programs: **FOOD FOR THE 21ST CENTURY** and **MOLECULAR BIOLOGY**. Numerous opportunities occur for collaboration with faculty and students in the Interdisciplinary Plant Group, the Animal Reproductive Biology Group, and the Nutrition Area Program as well as with clinical and other basic science faculties.

Applicants should provide a curriculum vitae including a summary of research interests and arrange to have three letters of reference sent to **Faculty Search Committee, c/o Dr. Doug Randall, 117 Schweitzer Hall, Columbia, MO 65211 FAX: 314-882-5635.**

Screening of applications will begin April 1st and continue until the positions are filled.

An Equal Opportunity Institution

CELL PHYSIOLOGY WASHINGTON UNIVERSITY MEDICAL SCHOOL

The Department of Cell Biology & Physiology, Washington University in St. Louis is expanding its commitment to Cellular Physiology and Biophysics. We are searching for individuals whose research interests focus on the biophysical aspects of membranes, particularly as it relates to physiological processes, and who wish to develop innovative approaches to fundamental questions in a multidisciplinary environment. Both entering and senior scientists will be considered. Candidates, who hold a M.D. or Ph.D., should send a curriculum vitae, the names of 3 references and a brief synopsis of research interests to:

**Dr. Philip Stahl
Department of Cell Biology and Physiology
Washington University Medical School
660 South Euclid Avenue
St. Louis, MO 63110**

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You should be skilled in the conduct/interpretation of all *in vitro* cytotoxicity/genotoxicity studies and *in vivo* genotoxicity studies employed in drug risk assessment. Requires 2-5 years in genetic toxicology, a PhD in a biological science, and familiarity with GLP procedures and regulatory issues. In addition, an interest in *in vitro* toxicology and immunotoxicology would be desirable.

We offer a competitive salary, outstanding benefits, and an attractive semi-rural living environment. Please send resume to: Mr. W. Decker, Schering-Plough Research, 60 Orange Street, Bloomfield, NJ 07003. We are an equal opportunity employer.

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A TIME FOR ACHIEVEMENT

The opening of Glaxo Inc.'s \$350 million Girolami Research Center in Research Triangle Park, NC represents a monumental commitment in the pharmaceutical industry to the discovery of drugs for unmet patient needs. Scientists engaged in Glaxo's expanding research and development programs at the Center have a premier facility in which to work. The following opportunity is now available:

TEAM LEADER

Bone Cell Biology

We seek an experienced Bone Cell Biologist to head a research group focusing on the discovery of new drugs to treat bone diseases. Emphasis will be on building an interdisciplinary approach between groups working in osteoclast-macrophage cell biology.

The successful candidate will have demonstrated an energetic approach to the challenges of innovative research, a commitment to drug discovery, and have a track record of achievement and team leadership in research. This scientist will be provided with the resources to turn ideas into action and will be encouraged to publish basic research results.

Qualifications must include a Ph.D. or M.D. plus a minimum of five years of relevant post-doctoral experience.

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

Send your resume, including salary history, to: Human Resources Department, Job # 9125B110-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.



NEUROGENETIC CORPORATION

Neurogenetic Corporation is a rapidly growing biotechnology company involved in the discovery and cloning of neurotransmitter receptors and other sites of drug action. By pioneering advances in the basic neurosciences we are creating a pathway to the next generation of neuro-psychiatric treatments. Current expansion of our Molecular Biology and Neuroscience Programs has created opportunities for Ph.D. scientists with postdoctoral experience in the following areas:

Molecular Biologist:

Candidates should have experience in genomic cloning and construction of cDNA libraries; experience in expression cloning is particularly desirable. (dept 102)

Molecular Biologist:

Candidates should have experience in PCR amplification, site directed mutagenesis, sequencing and cloning. (dept 103)

Adrenergic Pharmacologist:

The successful candidate will have an in-depth understanding of adrenergic pharmacology and expertise in receptor binding and "in vitro" response models. A strong research interest in the pathophysiology of adrenergic receptors and their effectors is desirable. (dept 104)

Career opportunities are also available for candidates with an MS/BS or equivalent in the following area:

Senior Research Associate:

receptor binding and second messenger systems and radio immuno-assays including expertise in computer assisted data analysis; 3-5 years of relevant academic or industrial experience is required. (dept 105)

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Please include department code with application. For consideration, please submit your curriculum vita, three references to:

Human Resources Manager
Neurogenetic Corporation
215 College Road
Paramus, NJ 07652

DRUG METABOLISM RESEARCH

Drug Discovery Support

Bristol-Myers Squibb Company is a worldwide leader in the development and marketing of sophisticated pharmaceutical, medical care consumer and nutritional products. Our Wallingford, Connecticut research facility contains state-of-the-art laboratories and an interactive and interdisciplinary scientific environment with a commitment to drug discovery. Current expansion within our Metabolism and Pharmacokinetics Department has created the following career opportunities for qualified individuals who desire to directly participate in the drug discovery process.

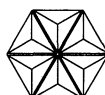
Senior Scientist

Responsibilities will include interacting closely with drug discovery scientists and supporting their research efforts by providing metabolic and pharmacokinetic information on new drug candidates. Requirements include a PhD and a minimum of two years postdoctoral experience using various *in vitro* and *in vivo* techniques in drug metabolism studies. A working knowledge of current analytical methodologies as applied to drug metabolism studies, experience in conducting non-clinical pharmacokinetic studies, and use of radioisotopes also required.

Associate Research Scientists

Responsibilities include performing non-clinical pharmacokinetic studies and developing assay methods for new drugs and their metabolites in biological fluids. Requirements include a BS/MS degree and 2 to 4 years related research experience. Knowledge of analytical techniques (HPLC, GC), laboratory data analysis and computer based data handling systems is essential.

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Pharmaceutical Research Institute, Dept. TZ-MAP, P.O. Box 5101, Wallingford, CT 06492-7661. Equal Opportunity Employer, M/F/H/V.



Bristol-Myers Squibb Company

POSITIONS OPEN

MOLECULAR BIOLOGIST: ASSOCIATE OR FULL PROFESSOR. The Mott Center of the Department of Obstetrics and Gynecology, Wayne State University, occupies about 50,000 square feet of laboratory space and has an immediate opening for a molecular biologist to establish a strong basic sciences program in the molecular biology of reproductive processes, molecular genetics, or developmental genetics. The department is well funded and supports a wide range of research relating to reproduction and development. The successful candidate will be expected to complement and extend existing research strengths in cytogenetics, early embryogenesis, and reproductive toxicology.

Applicants should possess an M.D. or Ph.D. degree and have a strong track record in research. Salary is very competitive with excellent benefits, commensurate with background and experience.

Send curriculum vitae with names, addresses, and telephone numbers of three references to: **Dr. Ernest Abel, Department of Obstetrics and Gynecology, C. S. Mott Center for Human Growth and Development, 275 East Hancock, Detroit, MI 48201.** *Wayne State University is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR NEUROBIOLOGIST

The Department of Psychiatry of Indiana University School of Medicine is searching for a scientist with a proven record to institute a program of research in molecular neurobiology with special reference to neuropsychiatric illness. The laboratory would be housed at the Institute of Psychiatric Research. It is anticipated that the successful candidate would be eligible for a tenure-track appointment as an **ASSOCIATE OR FULL PROFESSOR** in the Department of Psychiatry as well as a joint appointment in the appropriate basic science department. Indiana University School of Medicine has a commitment to research excellence in both molecular biology and the neurosciences and a graduate training program in medical neurobiology.

Send curriculum vitae to: **Hugh C. Hendrie, M.B., Ch.B., Chairman of Department of Psychiatry and Albert E. Sterne, Professor, Indiana University School of Medicine, 534 Clinical Drive, Cottages 110, Indianapolis, IN 46202-5110. Telephone: 317-274-4012.**

Indiana University is an Equal Opportunity/Affirmative Action Employer and Contractor, M/F.

DIRECTOR, HISTOCOMPATIBILITY TESTING LABORATORY

The Cleveland Clinic Foundation is seeking an experienced individual to direct its Histocompatibility Testing Laboratory. The laboratory supports multiple renal and non-renal transplant programs in northeastern Ohio and West Virginia. Applicants must qualify as director/technical supervisor according to the *Standards of the American Society for Histocompatibility and Immunogenetics*. Preference will be given to individuals who enjoy collaborative activities in clinical, transplantation research. Please send curriculum vitae to: **Gerald A. Hoeltge, M.D., Chairman, Department of Blood Banking and Transfusion Medicine, The Cleveland Clinic Foundation, One Clinic Center, 9500 Euclid Avenue, Cleveland, OH 44195-5133.**

INTERNATIONAL DEVELOPMENT SENIOR PROGRAM OFFICER

The Board on Science and Technology for International Development of the National Research Council is seeking a senior program officer to manage technical support for research projects in developing countries on control of vector-borne diseases. Responsibilities include coordinating project review and evaluation, monitoring research progress, assisting with publication of results, and providing scientific advice. Substantial time traveling in Third World expected. Requires a Ph.D. or equivalent related to vector biology and entomology, familiarity with applied molecular genetics techniques and with current research on control of vector-borne diseases, and at least 4 to 6 years research and administrative experience including interaction with scientists in developing countries. Previous overseas positions and experience with technical assistance programs for developing countries in malaria research and control highly desirable. Applications must be received by 15 March 1991. Please send a résumé in confidence to: **NRC/BOSTID, HA 476 (JH-#222.126), 2101 Constitution Avenue, N.W., Washington, DC 20418.** *Equal Opportunity Employer.*

POSITIONS OPEN



ENDOWED CHAIR IN MOLECULAR GENETICS

The Division of Agriculture and Natural Resources at Clemson University is seeking applications and nominations for the Robert and Lois Coker Chair in Molecular Genetics. Mr. Coker for many years was president of Coker Pedigreed Seed, a leading company in the development and marketing of cotton varieties, and a life trustee of Clemson University.

We are seeking a molecular geneticist with an outstanding record of research achievement in plant biology or a plant-related discipline. This individual will have the opportunity to play a significant role in the development of molecular genetics at Clemson University. The appointment is a 12-month faculty position with research and teaching responsibilities. Clemson University, the land grant institution of South Carolina, has graduate programs in all prominent areas of the agricultural sciences. The successful candidate will have the choice of departmental affiliations and is expected to conduct an active research program with extramural support.

For further information, contact: **Dr. Albert Abbott, Chairman, Coker Search Committee, Department of Biological Sciences, 132 Long Hall, Clemson University, Clemson, SC 29634-1903. Voice: 803-656-3060. FAX: 803-656-0435.** Applications and nominations should be submitted to: **Coker Chair Search Committee, Agricultural Experiment Station, 104 Barre Hall, Clemson University, Clemson, SC 29634-0351.** Applicants should submit curriculum vitae and a statement of research goals and interests. Applicants and nominees may request that their candidacy remain confidential. Position will be available 1 July 1991. Applications and nominations will be accepted until 3 May 1991 or until a suitable candidate is identified. *Clemson University is an Affirmative Action/Equal Opportunity Employer.*

CHAIR DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY AND DIRECTOR OF FELS CANCER RESEARCH INSTITUTE TEMPLE UNIVERSITY SCHOOL OF MEDICINE

A search for the combined position of the chair of the Department of Biochemistry and Molecular Biology and the director of the Fels Cancer Research Institute has been initiated. Candidates should have proven leadership ability and must be nationally recognized for their scientific contributions to biochemistry and molecular biology with special interest in cancer research.

The successful candidate must have demonstrated interest and ability in effective teaching and the capability of providing the administrative leadership to continue and extend the department's and the institute's established strengths in research, teaching, and service. An excellent opportunity exists to expand an already strong department which now will merge with the Fels Cancer Research Institute. The department and the institute also have a close relationship to the Comprehensive Cancer Center and the Thrombosis Research Center.

Applications will be accepted until 1 May 1991 and should include curriculum vitae, a summary of current research, a description of teaching and administrative experience, and the names, addresses, and telephone numbers of three or more references. Mail applications to: **Robert W. Colman, M.D., Chair of the Search Committee, Thrombosis Research Center, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, PA 19140.**

Temple University is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and members of minority groups.

UNIVERSITY OF CHICAGO

DIRECTOR for Department of Psychiatry's functional brain imaging program. Tenure-track position to develop research program using PET and SPECT facilities. Rank commensurate with experience. M.D. or Ph.D. applicants invited. Contact: **Stuart Yudofsky, M.D., Professor and Chairman, Department of Psychiatry, University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.**

POSITIONS OPEN

THE SCHOOL OF MEDICINE UNIVERSITY OF WASHINGTON

Invites applications and nominations for the position of **CHAIRPERSON** of the Department of Biochemistry. The School of Medicine seeks a scientist with an outstanding research program who is committed to the education of students in biochemistry and the health professions. Letters of application should be received by: 15 March 1991, and should contain at least five references.

The application should be accompanied by current curriculum vitae and bibliography. Address replies to: **H. Richard Winn, M.D., Professor and Chairman, Department of Neurological Surgery, ZA-86, Chairman, Biochemistry Search Committee, University of Washington, Seattle, WA 98195.** *The University of Washington is an Affirmative Action/Equal Opportunity Employer.*

TRANSPLANT IMMUNOLOGIST. Full-time faculty position at the University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma, for M.D. or Ph.D. pathologist with training in HLA and paternity testing, to be the **DIRECTOR** of Clinical HLA/Tissue Transplant Laboratory. Participation in teaching of medical and undergraduate students and residents. Ample time and facilities for research. Send curriculum vitae with names and telephone numbers of three references to: **Ronald Gillum, M.D., Chair, CP Search Committee, Department of Pathology, BMSB 451, P.O. Box 26901, Oklahoma City, OK 73190.** *The University of Oklahoma is an Affirmative Action/Equal Opportunity Employer.*

United States Biochemical Corporation's Custom Sequencing Service is accepting applications for a **MANAGEMENT LEVEL** position. The successful applicant will be required to direct technicians involved in a variety of DNA sequencing projects, including sequencing large fragments of DNA. Experience in deletion methods, DNA preparation cloning, and data management is essential. USB™ offers competitive salaries and benefits as well as excellent, newly renovated facilities. Please submit résumés, including publications, and names and telephone numbers of references to:

**Manager of Personnel Services, JC-2
United States Biochemical Corporation
P.O. Box 22400
Cleveland, OH 44122**

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DIRECTOR ROBERT ALLERTON PARK AND CONFERENCE CENTER UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Continuing Education and Public Service invites applications/nominations for Director of Robert Allerton Park and Conference Center. Park includes 1500 acres of forest, woodlands, formal gardens, and residential conference center.

Full-time. Responsible for education, research, and public service missions, with annual budget of about \$1 million. Coordinate educational and research activities, direct major capital improvements, increase revenue sources, and maintain liaison with the campus and general public.

Master's required, doctorate preferred, in natural sciences, business, education, park management, or related areas. Prefer at least 5 years of senior-level experience in natural area, budget, conference, or similar higher education management. An adjunct appointment possible.

Salary negotiable. 21 August 1991 appointment. Applications/nominations due 30 March 1991 but accepted until position is filled. Direct inquiries to: **Chair, Director's Search Committee, Office of Continuing Education and Public Service, 302 East John Street, Suite 202, Champaign, IL 61820.**

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

Make A Difference In The Quality of Life

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

SCIENTIST IV Protein Characterization (Dept. LD/C-4)

We seek an individual with demonstrated expertise in the characterization of proteins, with emphasis on the development of structural and functional studies. Experience in the investigation of posttranslational modifications will be expected. Applicants must be thoroughly familiar with all aspects of current protein chemistry and biochemistry. Individuals with PhD in biochemistry or related field are encouraged to apply.

SCIENTIST III Protein Characterization (Dept. LD/C-3)

We seek an individual to participate in the characterization of proteins under investigation. Experience in a variety of protein characterization methods (e.g. chromatography, protein chemistry and sequencing, carbohydrate analysis, mass spectrometry) is desired. Individuals with MS in biochemistry or related field are encouraged to apply, though applicants with relevant BS degree and industrial experience will be considered.

SCIENTIST IV Molecular Biology (LD/MB-4)

The successful candidate will have demonstrated skill in the cloning, engineering and expression of proteins. Experience with immunoglobulin genes or chimeric proteins preferred. Individuals with an interest in helping to establish this new department are encouraged to apply. A PhD with relevant graduate or postdoctoral experience is required.

SCIENTIST III Molecular Biology (DEPT. LD/MB-3)

We seek a self-motivated individual proficient in the analysis and construction of plasmids, and blotting and hybridization of nucleic acids. Familiarity with tissue culture would be an advantage. BS/MS Scientists with at least 3 years laboratory experience (including work towards MS) in Molecular Biology are encouraged to apply.

SCIENTIST III or IV Cell Culture Process Development (DEPT. BF/CC)

The selected candidate will be responsible for maintaining viable working cultures, adapting them to serum-reduced and/or defined media, selecting and optimizing process conditions for maximizing product, and the operation of small and large bioreactors for cell culture supernatant production as needed. You will analyze experimental data and prepare reports. You will also assist other personnel in the scale-up of the cell culture process. A BS in biology or biochemical engineering is required; an MS degree in cell biology or biochemical engineering is preferred. 3-5 years of work experience in a cell culture or fermentation laboratory or pilot plant is essential.

Baxter Healthcare Corporation, a Fortune 100 company, is synonymous with products, systems and services devoted to improving health care throughout the world. We provide a smoke-free environment, competitive compensation and benefits. Please send your resume in confidence (*indicating on the outer envelope the Dept. Code for your position of interest*) to: **Baxter Hyland Division, Human Resources Dept., 4501 W. Colorado Blvd., Los Angeles, CA 90039.** An Affirmative Action/Equal Opportunity Employer.

Hyland

Baxter

ANALYTICAL CHEMISTS

Battelle, a world leader in contract research and technology application, has three excellent opportunities for experienced chemists as described below:

DEPARTMENT MANAGER—This position, reporting directly to Battelle's Vice President of Product Registration and Evaluation, will direct the Dose Preparation and Analytical Chemistry Department. The manager will supervise a staff of 15-20 chemists and technicians and provide technical leadership in the development and application of assays for test chemical purity, stability, and concentration in dose mixtures and biological matrices. Staff from this department are an integral part of our toxicology and pharmacology study teams. Background should include a PhD in chemistry or a related discipline and at least 3 years of experience or a Master's and at least 6 years of experience. Requires broad knowledge of analytical techniques to identify and quantitate organic and inorganic substances and a working knowledge of GLP regulations.

RESEARCH SCIENTIST (two positions) — These positions, in our Environmental Fate Department, involve directing environmental fate chemistry studies and interacting with clients to develop new projects and monitor ongoing work. Successful candidates will have a PhD in chemistry or biochemistry; experience with radiotracers, TLC, and HPLC; and the ability to develop protocols of metabolism and environmental fate studies to support registration with EPA. Familiarity with EPA, FIFRA, and GLP requirements would be very desirable.

Battelle offers competitive salaries, comprehensive benefits, and opportunities for career growth and advancement. If interested in the positions presented above, please send your resume to: **Mr. Richard Shaw, Battelle, Dept. 235, 505 King Avenue, Columbus, Ohio 43201-2693.** An Equal Opportunity/Affirmative Action Employer M/F/H/V.



Battelle

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VICE PRESIDENT

Research & Development

Research Biochemicals is an international leader in the manufacture and marketing of innovative neurochemicals for today's neuroscience researchers. The dramatic success of our broad product line has created an opportunity for an exceptional Ph.D. scientist to manage and expand our efforts in key neuroscience areas.

The ideal candidate must have a talent for identifying novel chemical tools, along with extensive experience managing senior scientists in organic chemistry, biochemistry, or pharmacology in an industrial or academic setting. Experience with CNS research in the pharmaceutical industry is preferred. Conferring with world-renowned scientists, the successful candidate will initiate and manage a variety of government- and industry-sponsored research programs.

At RBI's new research and corporate headquarters near Boston, you will enjoy outstanding opportunities for professional recognition and career growth, along with an excellent compensation and benefits package.

Send your resume, in confidence, to: **President, RBI, 1 Strathmore Road, Natick, MA 01760.** An Equal Opportunity Employer.

RBI

RESEARCH BIOCHEMICALS INCORPORATED

AGRICULTURAL MICROBIOLOGY

W.R. Grace & Co.-Conn., a Fortune 100 Company and the world's largest specialty chemical company, has an exceptional opportunity for a microbiologist in its Biological Control Program.

This position requires a BS or MS degree in Microbiology, Plant Pathology or Mycology with 2 to 5 years industrial experience in microbial product R & D. Experience handling fungal cultures using sterile microbiological techniques is essential.

You will be involved in the development of microbial inoculants including maintenance of pure microbial cultures, formulation evaluation, in vitro and plant bioassays of biological control agents, and product characterization.

Grace offers an attractive salary, excellent benefits program and a rewarding growth-oriented career. We actively encourage the publication of technical papers. The Washington Research Center is located midway between Baltimore and Washington, DC in the picturesque community of Columbia, Maryland. Please send resume and salary history, in confidence, to: **Manager, Employment, Department 1043, W.R. GRACE & Co.-Conn., Washington Research Center, 7379 Route 32, Columbia, MD 21044.** We are an equal opportunity employer M/F/H/V.

GRACE

TWO POSITIONS AVAILABLE

ASSISTANT PROFESSOR MOLECULAR BIOLOGY

DEPARTMENT OF LABORATORY MEDICINE AND PATHOLOGY UNIVERSITY OF MINNESOTA

Two tenure-track faculty positions in molecular biology as it relates to diagnostic pathology are available for candidates with an M.D. or Ph.D. degree who have a minimum of two years post-graduate experience in the field of molecular biology. Demonstration of scholarly achievement and research productivity is necessary.

Successful candidates will be expected to develop an independent research program in an area of molecular biology related to pathology or clinical laboratory science. Responsibilities will include didactic teaching/training of residents, medical students, graduate students and post-doctoral fellows. These persons will also assist in the direction of a clinical molecular diagnostic laboratory, and will develop and implement new molecular-based diagnostic tests.

Deadline for receipt of applications is April 30, 1991. Applicants please send curriculum vitae, names of three references, and a brief synopsis of research activities to:

Diane C. Arthur, M.D.
Chair, Molecular Diagnostics
Search Committee
Department of Laboratory Medicine &
Pathology
Box 198 UMHC, 420 Delaware St. SE
Minneapolis, MN 55455

The University of Minnesota is an equal opportunity educator and employer.

Assistant Associate or Senior Scientist

The Department of Biology is seeking a BIO-OPTICAL OCEANOGRAPHER. A tenure-track position is available on the Scientific Staff of the Biology Department which currently numbers 27 and has diverse research interests. We seek applicants with experience in bio-optical properties of the upper ocean and/or remote sensing of ocean color. Applicants should have a Ph.D. Collaborative research with staff in the Institution's other departments, Chemistry, Physical Oceanography, Geology and Geophysics, and Applied Physics and Ocean Engineering is encouraged. Teaching opportunities exist in the WHOI/MIT Joint Program in Biological Oceanography.

Send resume with the names of 3 professional references to: Chairman, Biology Department, Box 54P.



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Cancer Therapy Research

Pfizer Inc is an international leader in the research and development of health care products. The Cancer Research Department of the Central Research Division is committed to exploiting recent advances in the understanding of cell growth regulation to discover novel drugs for the treatment of cancer. We currently are focusing on new strategies to alter the function of oncogenes and antioncogenes with pivotal roles in human tumor development.

You are particularly encouraged to apply for this position if you have a PhD and postdoctoral study in cell or molecular biology. Experience in the biochemistry of oncogenes or antioncogenes or in transcriptional regulation of growth regulatory genes is desirable.

Our approach to drug discovery encourages individual creativity as an important element in guiding a team effort toward a therapeutic target. Scientific growth and development are stimulated by frequent interactions with prominent scientists in academia and medicine as well as with members of the research community within Pfizer.

In addition to a stimulating research environment and an excellent opportunity for professional recognition and advancement, we offer a competitive salary/benefits package and the opportunity to live in an attractive Connecticut shore community. Qualified applicants should submit their resume and references in confidence to: Dr. Jerry K. Larson, Assistant Director, Employee Resources, Central Research Division, Pfizer Inc, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



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Equal opportunity in employment is University policy

- Lecturer (Tenurable/fixed term)
- Anatomy

- The appointee will contribute to the teaching of Comparative Anatomy to Veterinary students. Additional teaching may be required in one of the subjects offered to science students in embryology, neuroanatomy or histology. Active involvement in an individual or group research programme is essential.

- Higher degree in a field of study appropriate to the responsibilities of the position. Preference will be given to veterinary science graduates. Applicants should have demonstrated a research capability in an area of comparative anatomy of biology.

- The salary range for a lecturer is Australian \$33,163; \$34,584; \$36,003; \$37,420; \$38,841; \$40,257; \$41,677; \$43,096 per annum.

CLOSING DATE: 8 MARCH 1991

- Applications quoting Reference No. 01291 must be forwarded to: The Director, Personnel Services, University of Queensland, St. Lucia, Brisbane, Queensland, Australia, 4072

Postdoctoral Research Fellowship Neuroscience

There exists an immediate opening for a neuroscientist interested in neuronal calcium channels and their pharmacologic characterization using relevant in vitro methods including radioligand binding, ion flux and neurotransmitter release. The candidate will be encouraged to take advantage of a multidisciplinary research environment. An opportunity also exists for participation in the strategy of designing both novel peptide and nonpeptide compounds.

Applicants should be recent PhD graduates in Pharmacology or Neuroscience; experience in neuropharmacological and neurobiological techniques is desirable.

Appointment is for one year, renewable for a second year. Compensation includes a \$32,000 annual salary with relocation expenses and an attractive benefits package. Our modern research facilities are located adjacent to the University of Michigan in an outstanding living and working environment. Send letter of application with curriculum vitae and names of three references to **Box JDM PD0040, Human Resources, PARKE-DAVIS Research Division, Warner-Lambert Company, 2800 Plymouth Road, Ann Arbor, MI 48105. "Smoke-Free Work Environment"**

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Director of Technology Planning

Mallinckrodt Medical, Inc., one of the nation's leaders in health care products, has an immediate opening for the Director of Technology Planning in its Science & Technology Division.

Responsibilities include directing the technology planning activities for the medical imaging businesses in order to integrate technical and business issues into decisions on future products. The successful candidate will direct activities to target, screen, evaluate and recommend outside product opportunities for license and/or acquisition and will also manage external research projects in academia and private industry.

Qualifications include a Ph.D. in a biotechnology field, biochemistry or chemistry and significant experience in the management of technology based organizations or R&D groups, including research organizations in academia. Must have extensive contacts in the biotechnology or biomedical communities including both industry and academia.

This position is located in our attractive world headquarters facilities in suburban St. Louis County, Missouri. Mallinckrodt Medical offers an excellent salary and benefits package. Those interested are invited to submit a resume, including salary history and requirements, in confidence to:

Sara E. Hamlin, Manager of Human Resources

Mallinckrodt

MALLINCKRODT MEDICAL, INC.
675 McDonnell Blvd.
P.O. Box 5840
St. Louis, MO 63134

Equal Opportunity Employer M/F

POSITIONS OPEN

The Health Effects Research Laboratory of the U.S. Environmental Protection Agency (EPA) conducts intramural studies in toxicology, pharmacokinetics and dosimetry, biostatistics, and epidemiology on mixtures and individual pollutants. We anticipate openings in the near future in the following areas: developmental and reproductive toxicology, genetic toxicology, neurotoxicology, toxicology of other target organs, pharmacokinetics, biostatistics, and epidemiology (both infectious disease and chemical). **PRINCIPLE INVESTIGATOR** and **TECHNICAL SUPPORT** openings are anticipated in these areas. Special consideration will be given to persons with experience in drinking water toxicology. Please send curriculum vitae and three references to: **Dr. John R. Fowle III, c/o Ramona Litowsky, HRMD (MD-29), U.S. EPA, Research Triangle Park, NC 27711** by 20 April 1991. *EPA is an Equal Opportunity Employer. Only U.S. citizens are eligible.*

DEPARTMENT OF VETERANS AFFAIRS VETERANS HEALTH SERVICES AND RESEARCH ADMINISTRATION HEALTH SCIENCE SPECIALIST

VA's Office of Research and Development, Medical Research Service, is seeking applicants for the position of health science specialist under the Intergovernmental Personnel Act (IPA). Under the IPA, the health science specialist would remain a faculty member at his/her current university and VA would reimburse the University for salary and benefits. The assignment will be for 2 years, with the possibility of extension. Responsibilities included participation in the development of policy and procedural directives, analysis of research proposals, recruitment of expert reviewers for research proposals and scientific review boards, supervision and/or preparation of research summary statements, arrangement and participation in site visits of research programs, and analysis and preparation of program and budgetary data related to scientific reviews, results, and trends. Applicants should have a Ph.D. or equivalent and some research and administrative experience.

Qualified applicants are invited to send curriculum vitae, bibliographies, and the names, addresses, and telephone numbers of three references by 30 March 1991 to: **Richard J. Greene, M.D., Assistant Chief Medical Director for Research and Development (142), Department of Veterans Affairs, 810 Vermont Avenue, N.W., Washington, DC 20420**. Further information may be obtained from the same address or by calling: **Dr. Leroy Frey, Chief Program Review Division, 202-233-5065, or the Recruitment and Examining Division, VA Central Office, 1-800-368-5629**. *Equal Opportunity Employer.*

CORRECTION: MOLECULAR BIOLOGIST INFORMATION SPECIALIST

Please note correction of the application deadline for this position at the NIH National Library of Medicine (NLM), which was advertised in the 4 and 11 January 1991 issues of this publication. Publication, in error, listed closing date as 1 July 1991. Actual closing was 22 January 1991. Direct questions to: **Ms. Apolito, NLM, Building 38, Room 2N17, 8060 Rockville Pike, Bethesda, MD 20894**.

COLBY COLLEGE

SABBATICAL REPLACEMENT POSITIONS, BIOCHEMISTRY AND PHYSICAL CHEMISTRY. The Chemistry Department of Colby College invites applications for two 1-year sabbatical replacement positions, one in biochemistry and one in physical chemistry. The candidate should have a Ph.D. in the respective discipline and an interest in teaching undergraduates. Colby is recognized for excellence in undergraduate education and for close student-faculty interaction. The department is well-equipped with modern instrumentation including a JEOL GSX-400 MHz NMR. Curriculum vitae, transcripts, and three letters of recommendation should be sent to: **Professor Thomas W. Shattuck, Chair, Department of Chemistry, Colby College, Waterville, ME 04901**. Applications received before 15 March 1991 will be given first consideration. *Colby is an Affirmative Action/Equal Opportunity Employer and strongly encourages applications from women and minorities.*

POSITIONS OPEN

TENURE-TRACK FACULTY POSITIONS IN MOLECULAR PHARMACOLOGY (ASSISTANT PROFESSOR, ASSOCIATE PROFESSOR, AND PROFESSOR) UNIVERSITY OF MINNESOTA

Applications are invited for several positions of assistant professor (tenure track) in the Department of Pharmacology, Medical School. Successful candidates are expected to establish an outstanding independent research program in the area of molecular neuropharmacology and to participate in departmental teaching responsibilities. Requirements include a Ph.D. in pharmacology, biochemistry, cell biology, or related field, or an M.D., and 2 years of postdoctoral research experience. Candidates with a strong research background and experience using recombinant DNA technology for studying pharmacological problems and/or molecular biology of the CNS are preferred. Applicants must have demonstrated involvement in quality research published in peer-reviewed journals.

Appointment as associate professor (tenured) or full professor (tenured) may be considered for applicants with professional distinction in published research and who have demonstrated effectiveness in teaching and advising. Appointment at these ranks must meet the minimum qualifications established by the University of Minnesota.

Applicants should send curriculum vitae, significant reprints, a statement of research plans, and three names for reference purposes to: **Dr. J. W. Miller, Professor and Chairperson of Search Committee, Department of Pharmacology, 3-249 Millard Hall, University of Minnesota, 435 Delaware Street, S.E., Minneapolis, MN 55455**. Deadline for receipt of applications is 15 April 1991.

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HIGHER EDUCATION POSITION IN PUERTO RICO

Invites applications and nominations for the following positions:

• **FULL-TIME INSTRUCTOR.** Mathematics department. M.S. in Mathematics and 2 years of college-level teaching experience required. Classes to be taught in Spanish; 15 credit-hours course load. Starting salary of \$18,960 plus fringe benefits. Five positions available.

• **FULL-TIME ASSISTANT PROFESSOR.** Mathematics department. Ph.D. in mathematics and 5 years of college-level teaching experience required. Classes to be taught in Spanish; 15 credit-hours course load. Starting salary of \$25,320 plus fringe benefits. One position available.

• **FULL-TIME VISITING PROFESSOR.** Electrical Engineering and Electronics. Ph.D. in electrical engineering and electronics and 3 years of college-level teaching experience required. Classes to be taught in Spanish; 15 credit-hours course load. Starting salary of \$28,620 plus fringe benefits. One position available.

Deadline April 1991. Send résumé and academic credentials to:

**Inter American University of Puerto Rico
Central Administration
Office of Human Resources
Box 363255
San Juan, PR 00936-3255**

Inter American University of Puerto Rico, a nonprofit private institution, is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION, IMMUNODERMATOLOGY. In Department of Pathology, The University of Michigan. A **POSTDOCTORAL FELLOWSHIP** and an **ASSISTANT RESEARCH SCIENTIST** (non-tenure-track) faculty position are immediately available to study the role of HIV-1 in psoriasis with emphasis on dermal dendrocytes [*Science* 243, 1736 (1989)], and the cytokine network [*Am. J. Pathol.* 138, 129 (1991)]. A 3-year appointment is available for candidates with either a Ph.D. or M.D. degree and a background in cellular immunology involving macrophages, TNF-alpha, and/or molecular virology. *Individuals should be U.S. citizens or permanent residents.* Send curriculum vitae and names of references to: **Brian J. Nickoloff, M.D., Ph.D., M4232 Medical Science I, Box 0602, 1301 Catherine Road, Ann Arbor, MI 48109**.

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BIOTECH UPDATE

**World-class research leads
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Extraordinary growth at the Agricultural Research Division of American Cyanamid Company has created a broad range of opportunities for talented research scientists. At our 640-acre campus-like Princeton headquarters, your research activities will be supported by the resources of a company whose research budget tripled in the last decade. Working just minutes from Princeton University, you'll find a deep commitment to employing advanced biotechnology and the highest quality science in an atmosphere where ideas are encouraged and talent is recognized and rewarded.

ANIMAL DISCOVERY

Research Molecular Biologists

Working in our Molecular Genetics Group, the successful candidate will analyze specific G-protein linked receptors through their functional expression in microbial systems. The goal of these studies, the identification of novel receptor ligands, will be pursued through an interactive program involving biochemists, molecular biologists, chemists and fermentation microbiologists. This position requires a Ph.D. in molecular biology/genetics/biochemistry and appropriate research experience in the area of G-protein linked receptor biology. Dept. DK1

A second position is available in our Molecular & Cellular Group for a Ph.D. Research Biologist to conduct research in the area of receptor molecular biology. The successful candidate will be involved in a program to determine structure-function relationships between various receptors and their ligands using molecular biology/genetic approaches. This program is highly interactive, involving numerous scientists in other areas. Several years of postdoctoral experience in molecular biology, biochemistry and genetics are required; background in G-protein linked receptor biology and pharmacology desired. Dept. DC1

Research Molecular Parasitologist

Working in our Biochemistry & Physiology Group, you will develop an independent research program exploring new targets in parasite control for the advancement of animal health. The successful candidate will have a Ph.D. in molecular biology, molecular parasitology, parasite physiology, or a related discipline. Postdoctoral experience in applying state-of-the-art techniques to one or more of the following areas is desirable: parasite resistance, host evasion, host-parasite pathophysiology, or molecular genetics of parasites. Publication in both referred journals and the patent literature will be encouraged. Dept. PH1

Molecular Biologist/Biochemist

We are seeking a BS/MS level scientist to study the biosynthesis of the fungal cell wall using genetically manipulable species as model systems. The ideal candidate will have experience with biochemical, enzymological, genetic and molecular biology techniques, as well as *S. cerevisiae* molecular genetics. Those techniques will be employed to identify novel processes in the synthesis of the fungal cell wall which will be exploited for the discovery of antifungal agents. Dept. DK2

Microbiologist

We are seeking a BS Microbiologist to work interactively with our Natural Products unit, to screen fermentations and chemical bank compounds. This position involves the manipulation of microbiological assay organisms as well as the utilization of laboratory robotics systems for sample handling. Training in microbiology is required and experience with natural products, screening and/or laboratory robotics is desirable. Dept. DK3

PLANT BIOTECHNOLOGY

Molecular Plant Biologists

We are seeking a Ph.D. scientist with postdoctoral experience for our Plant Biotechnology Group. You will develop heterologous expression systems for expressing plant genes in microorganisms. Dept. RC1

Our Plant Biotechnology Group is also seeking individuals at both the Ph.D. and BS/MS levels. Here, you will clone and modify plant genes by applying molecular techniques, as well as develop vectors for gene expression and plant transformation. Dept. RC2

Molecular Plant Pathologist

We're seeking an individual with a BS/MS degree in the biological sciences for an exciting program in molecular plant pathology that has recently been initiated in our Plant Biotechnology section. Genetic, molecular, and cytological techniques will be applied to a fungal phytopathogen to elucidate the specific developmental processes involved in the infection by that pathogen of a plant host. Training and experience in microbial (preferably fungal) genetics, molecular biology, and biochemistry are desirable. Dept. RC3

In addition to our unique interdisciplinary environment and history of new product innovations, American Cyanamid Company offers a competitive salary and excellent benefits, including a 401K Savings Plan. We invite you to forward your resume and salary history to: Employment Office, American Cyanamid Company, Agricultural Research Division, P.O. Box 400, Princeton, NJ 08543-0400. Please be sure to indicate the appropriate department code. An Equal Opportunity Employer M/F/H/V.





ImmuLogic is a growing company dedicated to the creation of novel therapeutic and diagnostic products to modulate and monitor the human immune system. We employ state-of-the-art techniques and proprietary knowledge in immunology, biochemistry, and molecular biology to develop products in the vaccine, allergy, and autoimmune disease areas. We collaborate with world leaders in the pharmaceutical industry and in academic institutions and are already recognized as a leading force among companies focusing on immunology. ImmuLogic provides an outstanding working environment and a unique opportunity to broaden your scientific and technical knowledge. We offer competitive salaries and benefits as well as equity participation through an incentive stock option program.

RESEARCH ASSISTANTS/ASSOCIATES

PROTEIN CHEMISTRY

This individual will serve as a **SENIOR TECHNICAL MEMBER** in our Protein Chemistry Group. He or she will be involved in the development of purification of native and recombinant human allergens and the chemical characterization of recombinant and modified proteins. The position requires a Master's degree or a Bachelor's degree and at least five years relevant experience. Expertise in HPLC, LC and gel electrophoresis is required. A background in immunoassay, protein modification and other biophysical techniques is a plus.

MOLECULAR IMMUNOLOGY

This individual will join a research team examining the role of T lymphocyte derived cytokines in the human allergic immune response. Minimum requirements for the position include a Master's degree with 1-2 years relevant experience or a Bachelor's degree and at least 2 years relevant experience. Prior experience with recombinant DNA techniques, including isolation and analysis of mRNA, is required. Familiarity with PCR and T cell culture is preferred.

Please send cover letter and resume to: **ImmuLogic Pharmaceutical Corporation, One Kendall Square, Building 600, Cambridge, MA 02139, ATTN: Human Resources Department**

IMMULOGIC
Pharmaceutical Corporation



Equal Opportunity Employer.

POSITIONS OPEN

ENVIRONMENTAL STUDIES

Gettysburg College invites applications for a **TENURE-TRACK POSITION** in environmental studies to commence with the 1991-92 academic year. Candidates should have a Ph.D. degree in one of the natural sciences and will be affiliated with the department most closely allied with her/his field of expertise. Initial responsibilities will include teaching courses in environmental science. In addition, the successful applicant will chair an Environmental Studies Committee and direct its efforts in developing an environmental studies curriculum, be responsible for preparing the annual budget, and participate in writing grant proposals for environmental studies. Gettysburg College is rated as a highly selective liberal arts college and is located 1½ hours from the Washington/Baltimore area. *Gettysburg College is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.* Submit letter of application, curriculum vitae, and three letters of recommendation to: **A. R. Cavaliere, Chair, Search Committee, Gettysburg College, Gettysburg, PA 17325.** Review of completed applications will begin 15 March 1991 and continue until the position is filled.

STOCKTON STATE COLLEGE

TENURE-TRACK POSITIONS, ASSISTANT PROFESSOR (\$30,175 to \$34,711) or **INSTRUCTOR** (\$24,840 to \$28,550), fall of 1991. **Biology:** To teach physiology, neuroscience, animal behavior/animal science, introductory biology, and courses for nonmajors. A.B.D. require; Ph.D. preferred. **Environmental Science:** To teach natural resources management (excluding forestry and fisheries) with emphasis on modelling and GIS, or pollution management with emphasis on control technology and environmental regulation; could include preparing students for secondary education. Master's degree plus experience in government agencies or business/industry or Ph.D. required. Excellence in teaching and supervision of undergraduate research required; modest research support available; newly renovated science laboratories. Stockton is an undergraduate liberal arts and sciences college located in the New Jersey Pine Barrens, near Atlantic City and Philadelphia. Screening begins 1 March 1991. Send résumé and three letters of recommendation to: **Dr. Barbara Byrne, Dean, Faculty of Natural Sciences and Mathematics, Stockton State College, AA29, Pomona, NJ 08240.** Stockton is an *Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.* **R102390.**

PHYSICAL OR BIOLOGICAL SCIENTISTS (THREE POSITIONS); Ph.D., Ed D., or M.D. (individuals at dissertation stage considered for appointment while completing degree). At least 27 quarter credits in graduate-level science courses. Teach introductory science courses, expand program for helping minority and educationally at risk students prepare for non-science majors as well as science and math-intensive majors, and carry out research in a lower division unit of a research university; teaching experience or scientific research required; application deadline is 1 May 1991, but application review will begin 1 March 1991, and continue until an adequate pool is developed; starting date can be 16 September 1991, or thereafter. For a complete position description, contact: **Ms. Alice Ross, Search Secretary, 340 Appleby Hall, 128 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455. Telephone: 612-625-5529.**

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

MICROBIOLOGY/MOLECULAR BIOLOGY

Applications are invited for a 1-year leave replacement in the Department of Biology starting 1 September 1991. Teaching responsibilities include one course, with accompanying laboratories, each term: an upper-level course in microbiology, one in molecular biology, and a nonmajors course; and participation in senior integrative exercises. Ph.D. preferred. *Women and minorities are strongly encouraged to apply.* Send curriculum vitae, undergraduate and graduate transcripts, a statement of teaching philosophy, and three letters of recommendation to: **Dr. G. J. C. Hill, Biology Department, Carleton College, Northfield, MN 55057-4025.** Evaluations will begin on 15 March 1991 and continue until position is filled. *Carleton College is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

SIGNAL TRANSDUCTION DEPARTMENT OF BEHAVIORAL NEUROSCIENCE

Applications are invited to fill a new **TENURE-TRACK POSITION** available 1 September 1991. The appointee will be expected to develop and maintain a funded research program focusing on the analysis of signal transduction mechanisms and their effect on cell physiology. Collaborative research efforts are widespread in the department and the large neuroscience community in the university and are strongly encouraged. Some teaching at both the graduate and undergraduate level is expected. Applicants should have a Ph.D. or M.D. and some postdoctoral experience. Applicants should send curriculum vitae, a one-page statement of research goals, three representative publications, and have three letters of recommendation sent to:

Faculty Search Committee
Department of Behavioral Neuroscience
University of Pittsburgh
Pittsburgh, PA 15260

All materials must be received by 15 March 1991.

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

INDUSTRIAL HYGIENE FACULTY POSITION

The Department of Preventive Medicine and Environmental Health of The University of Iowa invites applications for a faculty position at the level of **ASSOCIATE, ASSISTANT PROFESSOR OR ASSOCIATE PROFESSOR**. Applicants holding a Ph.D. degree in industrial hygiene or an equivalent closely related field will be considered. It is desirable that the applicant possess focused experience or research interest in a specialized aspect of industrial hygiene compatible with the research and programmatic interests of the Division of Occupational and Environmental Health. The position will include responsibilities for outreach industrial hygiene services and education/training of predoctoral and postdoctoral candidates.

Salary will depend upon academic background, evidence of scholastic achievement, and experience. Please respond with curriculum vitae and the names of three references to: **James A. Merchant, M.D., Dr. P.H., Institute of Agricultural Medicine and Occupational Health, The University of Iowa, Iowa City, IA 52242, Attention: Recruiting Specialist.** Women and members of minorities are encouraged to apply. *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK APPOINTMENT IN QUANTITATIVE ENVIRONMENTAL ASSESSMENT

Environmental Science and Engineering Program and Department of Environmental Health Sciences, University of California, Los Angeles (UCLA), School of Public Health. Tenure-track faculty member in environmental assessment. Demonstrated ability to teach and conduct interdisciplinary research, with rigorous quantitative capabilities, including statistical and mathematical modeling skills. Potential research areas are environmental and/or public health risk assessment, risk management, resource economics, and regulatory policy. Candidates should have an earned doctorate with several years of experience preferred. The selected individuals will serve as one of four core faculty members in the Environmental Science and Engineering Program, which is entirely at the doctoral level and emphasizes pedagogical skills as well as research ability. Level of appointment is open; rank and salary commensurate with qualifications. *UCLA is an Affirmative Action/Equal Opportunity Employer.* Interested applicants should submit résumés by 15 May 1991 to: **Chair, Search Committee for Environmental Assessment, Environmental Science and Engineering Program, School of Public Health, University of California, Los Angeles, CA 90024.**

POSTDOCTORAL ASSOCIATE. Full-time position available for a recent Ph.D. to work on projects involving human genome mapping and molecular analysis of human cancers in the laboratory of Dr. Joseph R. Testa. Prior training in recombinant DNA and molecular cloning techniques preferred. Interested candidates please send résumé to: **Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** *Equal Opportunity Employer.*

RESEARCH ASSOCIATES MOLECULAR BIOLOGY

Amgen has emerged as a creative and innovative leader in the applications of biotechnology to human disease. A key component of our success is our continuing commitment to research and to providing the resources necessary for scientists to develop their full potential. As a result of this commitment and our growth, we have several opportunities for Research Associates with experience in molecular biology and mammalian cell culture.

Responsibilities for these positions include the development of mammalian expression systems, construction of cDNA libraries, and heterologous gene expression. Qualified candidates for these positions must have a BS or MS in Molecular or Cellular Biology with a minimum of one year's experience in basic molecular biology and tissue culture skills. Experience with general methods for the analysis of proteins is highly desirable.

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

AMGEN, INC.
Recruitment, Dept. #573
Amgen Center
Thousand Oaks
CA 91320-1789

Equal
Opportunity
Employer

AMGEN

Postdoctoral Fellowships in New Drug Development

The Department of Clinical and Scientific Affairs (CSA) of Pfizer Pharmaceuticals, in New York City, is announcing its annual competition for Postdoctoral Fellowships in New Drug Development.

The Department of Clinical and Scientific Affairs has a broad range of activities. It is responsible for designing and conducting non-clinical and clinical development programs, as well as investigating and developing new claims and indications for marketed drugs. CSA also designs and conducts the clinical development programs for new formulations and dosage forms of existing products.

Participants in the Postdoctoral Fellowship Program in New Drug Development will become members of project teams and gain experience in developing non-clinical as well as clinical research programs. While no laboratory or clinical studies are actually conducted at Pfizer in New York, Fellows will interact with specialists in their chosen field to have studies performed at contract laboratories and universities, or with individual investigators.

A total of two awards will be given annually for non-clinical and clinical research related to new drug development in the fields of cardiovascular medicine, central nervous system, microbiology, pharmacology, pharmacokinetics, drug metabolism, or toxicology. Salaries will be determined by the qualifications and experience of the applicant. The deadline for submitting applications is April 1, 1991. Announcement of the awards will be made in early June, 1991.

For further information contact: Postdoctoral Fellowship Program in New Drug Development, Clinical and Scientific Affairs Department, Pfizer Pharmaceuticals, 235 East 42nd Street, New York, NY 10017, Attn: Charlene Mirette, Personnel Manager. Pfizer is an equal opportunity employer.



Bringing science to life.

POSITIONS OPEN

POSTDOCTORAL POSITION IN MAIZE DEVELOPMENTAL GENETICS. To work on the molecular characterization of the *dek1* locus. Background in molecular biology and proficiency in cloning of genomic and cDNA, and sequencing. Opportunity to study maize genetics and embryo development. Apply with curriculum vitae, statement of research training and interests, one letter of reference from your Ph.D. sponsor, and names of three references to: Professor William F. Sheridan, Department of Biology, University of North Dakota, Grand Forks, ND 58202-8238. Telephone: 701-777-2621.

Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY OF TUMOR IMMUNITY

Ph.D. with experience in tumor and molecular biology to study the enhancement of host immune responses in tumors using transfection or infection with alien genes. Experience with retroviral vectors preferred. Interested applicants please send curriculum vitae and letters of reference by 1 May 1991 to: Philip Frost, M.D., Ph.D., Department of Cell Biology, University of Texas M. D. Anderson Cancer Center, 1515 Holcombe Boulevard, Box 173, Houston, TX 77030.

We are an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS. NIH-funded postdoctoral research fellowships of medicine and pharmacology, Case Western Reserve University, are available immediately to study the molecular and cell biology of platelet-derived growth factor expression, with a particular emphasis on transcriptional control mechanisms, or to study the molecular mechanisms of cytokine-activated signalling pathways, with emphasis on Type II phospholipase A₂ gene regulation expression. Applicants must possess Ph.D. or M.D. Please address inquiries/curriculum vitae to:

Michael J. Dunn, M.D.
Professor of Medicine
Chief, Division of Nephrology
2074 Abington Road, 8124 Lakeside
Cleveland, OH 44106

POSITIONS OPEN

POSTDOCTORAL POSITION, ENVIRONMENTAL TOXICOLOGY. Immediate position available in the Department of Biochemistry/Institute for Environmental Studies. Candidate should have documented expertise in measuring biochemical responses to chemical pollution, in vitro genotoxicity, and xenobiotic metabolism assays. Use of analytical instrumentation (e.g., HPLC, GC) desirable. Send curriculum vitae and have three letters of recommendation sent to: Dr. Jay C. Means, Professor, Institute for Environmental Sciences, Louisiana State University, Baton Rouge, LA 70803.

POSTDOCTORAL POSITIONS, DEPARTMENT OF MICROBIOLOGY. Thomas Jefferson University has several full-time postdoctoral positions beginning February 1991 to study molecular mechanisms of oncogenesis, with emphasis on the role of the neurofibromatosis type 1 gene production in normal and abnormal development. Experiments in molecular biology techniques preferred, but not required. Send curriculum vitae and three letters of reference to: Dr. Arthur M. Buchberg, Department of Microbiology and Immunology, Thomas Jefferson University, Room 334 Jefferson Alumni Hall, Philadelphia, PA 19107. *We are committed to a smoke-free environment. Equal Opportunity Employer.*

POSTDOCTORAL POSITION: PLANT ECOLOGY. Available immediately to study methods for enhancing revegetation success in semiarid environment, to participate in design and evaluation of protective barriers for hazardous waste management areas, and to participate in study of competition between cheatgrass and a perennial bunchgrass. Fieldwork will be conducted at the Idaho National Engineering Laboratory. Expertise in soil-plant water relations and/or soil chemistry and physics desirable; U.S. citizenship required. Salary: \$24,000. Submit curriculum vitae, a short summary of research interests and relevant courses/experience, and names of three references to: Dr. Jay Anderson, Department of Biological Sciences, Idaho State University (ISU), Pocatello, ID 83209. For more information, call: 208-236-3145. *ISU is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available, spring 1991, to study the molecular interactions of a mycoplasma (SUPERANTIGEN (SA) with MHC and TCR molecules, and to determine the role of SA in disease and autoimmunity. Candidates need strong molecular biology/cellular immunology background. Send statement of interests, curriculum vitae, and three references to: Dr. Barry C. Cole, Division of Rheumatology, Department of Internal Medicine, University of Utah School of Medicine, 50 North Medical Drive, Salt Lake City UT 84132. *Equal Employment Opportunity/Affirmative Action Employer.*

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE

TWO POSTDOCTORAL POSITIONS. Available immediately to investigate (i) effects of ultraviolet-B radiation on plant membrane structure and function (with Dr. Charles Caldwell) and (ii) metabolic and physiological responses of crop plants to elevated CO₂ (with Dr. Steven Britz). Salary range \$31,116 to \$37,294 per annum depending on experience. For additional information, contact: Dr. Caldwell or Dr. Britz, USDA-Climate Stress Laboratory, Building 046-A, Beltsville Agricultural Research Center West, Beltsville, MD 20705. Telephone: 301-344-3607. FAX: 301-344-4626. Requests should indicate ad number 1E016. *ARS is an Equal Opportunity Employer.*

POSTDOCTORAL FELLOW. A position is available immediately for a postdoctoral fellow to participate in studies using in situ hybridization to explore human vascular disease. The goal of these studies is to define factor(s) synthesized locally in the vessel wall which contribute to smooth muscle differentiation and/or proliferation in atherosclerotic plaques and postangioplasty restenosis lesions [*J. Clin. Invest.* 82, 1134 (1988); *Proc. Natl. Acad. Sci. U.S.A.* 86, 2839 (1989)]. Previous experience in molecular biology, pathology, and/or cell biology is desirable. Send curriculum vitae and names of three references to: Dr. Josiah N. Wilcox, Division of Hematology/Oncology, Drawer AR, Department of Medicine, Emory University, Atlanta, GA 30322. *We are an Equal Opportunity/Affirmative Action Employer.*

THE AARON DIAMOND FOUNDATION POSTDOCTORAL RESEARCH FELLOWSHIPS IN THE BIOMEDICAL AND SOCIAL SCIENCES

The Aaron Diamond Foundation in New York City announces the establishment of 25 postdoctoral research fellowships in the biomedical and social sciences focusing on AIDS or drug abuse. The purpose of the fellowships is to attract promising investigators to academic and research institutions in New York City and to encourage increased research into understanding and solving two of today's most pressing public health problems.

Fellows are paid annual stipends beginning at \$36,000. Each fellowship is for two years, with an option for a third year. Applicants must have an M.D. or Ph.D. in the biomedical or social sciences. M.D.s should have completed at least two years of clinical training and received their degrees no earlier than 1984. Ph.D.s are eligible immediately after graduation. The fellowships are open to all U.S. citizens and qualified foreign applicants who have applied for U.S. citizenship. Women and members of minority groups are encouraged to apply. Applications are accepted through mentors at New York City institutions who have agreed to sponsor a particular applicant. Mentors participating in the fellowship program are listed in the application materials. The mentor's institution receives \$30,000 to cover the fellow's fringe benefits, travel and research costs.

For further information and application forms contact: New York State Health Research Council, Office for the Aaron Diamond Foundation Postdoctoral Research Fellowships, 5 Penn Plaza, Room 308, New York, NY 10001; (212) 613-2525.

DIRECTOR

Gwen Knapp Center for Lupus and Immunology Research

The Division of the Biological Sciences of The University of Chicago is soliciting nominations and applications for the position of Director for the Gwen Knapp Center for Lupus and Immunology Research, one of five biomedical research centers to be located in the Institute for Molecular Medicine, housed within the Jules Knapp Research Building. The other research centers will be devoted to the study of human genetics, molecular cardiology, neurobiology, and molecular oncology. The Gwen Knapp Center is committed to immunological and molecular biological research with the ultimate goal of understanding the cause and treatment of systemic lupus erythematosus. The Center will have 10,000 square feet of newly constructed research space which has been planned to house six investigators. The Director will be responsible for the development of this program and for recruitment of the five additional Center faculty members who will have primary academic appointments in an appropriate department. Generous funding is available for the establishment and initial support of this major new research program. The activities of the Center will complement ongoing programs in immunology at The University of Chicago. Please address expressions of interest and suggestions, accompanied by resumes and other relevant information (closing date: May 1, 1991) to:

Dr. Frank Firch
Chairman, Search Committee
5841 S. Maryland Ave./Box 424
Chicago, IL 60637



THE UNIVERSITY OF CHICAGO

An Affirmative Action Equal Opportunity Employer

INSTITUTE OF HUMAN GENETICS University of Minnesota

The Institute of Human Genetics at the University of Minnesota will be hiring faculty at the rank of Professor (tenured), or Associate Professor (tenured), or Assistant Professor (tenure-track) in the area of higher eukaryotic molecular genetics. Although all areas of eukaryotic molecular genetics will be considered, there is a particular interest in expanding developmental and cancer genetics. Candidates will be expected to develop a vigorous, independent research program that complements the research being conducted by other University faculty and leads to external funding; participate in teaching and advising; and interact with other members of the Institute in its development and programs.

Candidates at the Assistant Professor level will have a doctoral degree (M.D. or Ph.D.), at least 2 years of relevant postdoctoral experience, and demonstrated productivity in quality research accepted or published in peer-reviewed journals. Candidates at the Associate Professor level will have a doctoral degree, at least 5 years of professional experience beyond the degree, distinction in funded research and writing, and demonstrated effectiveness in teaching and advising. Candidates at the Professor level will have a doctoral degree, at least 8 years of professional experience beyond the degree, a national reputation in funded research and writing, and demonstrated effectiveness in teaching and advising. Salary and rank will be commensurate with education and experience, and tenure will be granted in the appropriate University department.

Please send a current curriculum vitae, a brief description of current and future research interests, and 3 letters of recommendation to:

Chair, Search Committee
University of Minnesota Medical School
Institute of Human Genetics
Box 206 UMHC
Harvard Street at East River Road
Minneapolis, MN 55455

The last date for receipt of applications is 06/30/91.

The University of Minnesota is an equal opportunity educator and employer.

UQAR
CRÉATRICE
D'AVENIR

L'Université du Québec à Rimouski is a french speaking university located near the St. Lawrence estuary in Canada and oriented towards the marine sciences and the regional development. We seek applications for:

POSTDOCTORAL SCHOLARSHIPS 1991-1992

Description

The postdoctoral scholarships of the Université du Québec à Rimouski entitle the searchers who recently obtained a Ph.D. to increase their experience in a specialized research field by participating to the works of a unit or a UQAR group of searchers performing inside the following departments: Biology and Health Sciences, Economics and Management, Literature, Mathematics and Computing, Oceanography, Education, Humanities, and Religious Studies and Ethics.

UQAR is part of the UQ network. This institution offers at the graduate level many teaching programs in about all above mentioned departments, postgraduate programs in maritime affairs, regional development, education, ethics, project management, maritime resources management, literature, and in oceanography. The university also offers a Ph.D. in oceanography and in education.

Applicants from any country are admissible.

Applicants must have obtained their Ph.D. degree between July 1st 1989 and January 1st 1992. Ensuing the first year some scholarships may be renewed for a second year.

The research stage may begin at any moment of the year between September 1st 1991 and August 31st 1992 and obligatorily after the scholar has satisfied to the requirements of his Ph.D. program. Excluding the usual one month vacation, the scholars must be engaged exclusively on the works they agreed to on their arrival.

The scholar receives 25,000 \$ for a full time year studies.

Modality of the request and the latest date

For requesting a postdoctoral scholarship, it is obligatory to present at UQAR the request form duly completed with the required statements as stipulated. The University must receive the requests at the latest April 5th 1991.

To obtain the request form, the appropriate documentation or any other information about this concourse, we invite you to write to:

Monsieur Pierre Couture, D.Sc.
Doyen des études avancées et de la recherche
Université du Québec à Rimouski
300, allée des Ursulines
Rimouski (Québec) G5L 3A1
Téléphone: (418) 724-1540



Université du Québec à Rimouski

PHYSIOLOGIST OR PHARMACOLOGIST

XOMA Corporation, a leader in the development of targeted protein therapeutics, has an immediate opening for a Ph.D. level Physiologist or Pharmacologist. The successful candidate will design, conduct and interpret studies with new products in development for the treatment of septic shock.

Candidates should have a Ph.D. in Physiology, Pharmacology or related discipline with 1-3 years of post-doctoral training. Background in animal modeling, hemodynamics, cardiovascular regulatory mechanism, and/or inflammation, as well as computer use and technical supervision, are desirable.

We offer competitive salaries and benefits, plus plenty of room for growth. Please send your resume with salary history to: XOMA Corporation, Attn: Technical Recruiter, 2910 7th Street, Berkeley, CA 94710. EOE.

XOMA

Dean — College of Engineering and Applied Sciences

The University at Stony Brook invites candidates for the position of Dean of the College of Engineering and Applied Sciences. The Dean is the chief academic and executive officer of the college and must provide the leadership, vision, and energy for the continued development of the College. The College consists of approximately 110 faculty in six departments: Electrical Engineering, Applied Math and Statistics, Computer Science, Materials Science and Engineering, Mechanical Engineering, and Technology and Society. The Dean reports directly to the Provost of the University, who is the University's Chief Academic Officer.

Candidates should possess the following characteristics: A distinguished record as a scholar demonstrating commitment to research and education; a demonstrated administrative ability; a demonstrated success in obtaining sponsored research support; a record of working effectively with industry; a demonstrated ability and interest in fund raising activities, and a commitment to continuing and cooperative education.

The University at Stony Brook is located on Long Island's North Shore in the heart of one of the nation's most rapidly growing high technology regions. It is approximately 15 miles from the Brookhaven National Laboratory and 50 miles from Manhattan. The University, a Type I Research University, is Long Island's major research university, and has a total sponsored research budget of more than \$70 million. The University is well positioned to take a major leadership role in developing new partnerships and in strengthening existing partnerships with industry.

The position will be available 1 July 1991. Review of applications will begin in February and continue until the position is filled. It is anticipated that the selection will be made by May 1991. Salary and benefits are competitive.

Applications can be sent to: J.R. Schubel, Chairperson, Search Committee for Dean, College of Engineering and Applied Sciences, c/o Office of the Provost, Administration 407, The University at Stony Brook, Stony Brook, NY 11794-1401.

The University at Stony Brook is an equal opportunity employer.



STONY BROOK

National Institutes of Health Public Health Service

National Cancer Institute, Division of Cancer, Treatment, Clinical Oncology Program, Radiation Oncology Branch

Position Title: Physicist-EPR Specialist

Job Description: The position will entail studies determining the chemical/biological effects of ultrasound, ionizing radiation, and photoexcited triplet states.

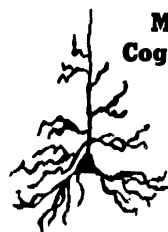
Qualifications: Ph.D. with cell biology/animal experience with the intention of coupling Electron Paramagnetic Resonance (EPR) measurements of living systems. Should be able to interface EPR spectrometers with computer modelling/imaging. The applicant should have physics/chemistry training specializing in EPR with at least 5 years experience, which must include studies on chemical and biological effects of ultrasound, radiation chemistry, and photochemistry. Experience in the analysis of radiation-induced DNA damage is desirable. Applicant should specifically have experience in transition metal chemistry. A strong computational background is required.

Salary: Depended upon experience and qualifications.

Location of Position: Building 10, National Institutes of Health, Bethesda, Maryland

If interested, please send a cover letter and your Curriculum Vitae to: **Angelo Russo, M.D., Ph.D., Radiation Oncology Branch, National Cancer Institute, Building 10, Room B3-B69, 9000 Rockville Pike, Bethesda, Maryland 20892 by March 1, 1991.**

NIH is an Equal Opportunity Employer



McDonnell-Pew Center for Cognitive Neuroscience at MIT

POSTDOCTORAL FELLOWSHIPS IN COGNITIVE NEUROSCIENCE

Fellowships are available for postdoctoral study at the Center for Cognitive Neuroscience in the Department of Brain and Cognitive Sciences at the Massachusetts Institute of Technology. This Center is composed of faculty at MIT from the disciplines of Neuroscience, Computational Neuroscience, and Cognitive Science and is dedicated to multidisciplinary approaches to the study of higher brain function with special emphasis on visual and motor systems. Interested postdoctoral candidates should identify MIT faculty members with whom they wish to work and submit a two-page project proposal, CV, and three letters of reference by March 30, 1991 to: **Judith Rauchwarger, Department of Brain and Cognitive Sciences, MIT (E25-406), 77 Massachusetts Avenue, Cambridge, MA 02139, USA.** Proposals for interdisciplinary projects are especially welcome. Awards will be announced, and fellowships can begin, on April 15, 1991. Candidates may obtain further information and Department brochures by writing to the above address.

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

Massachusetts Institute of Technology

Pilot Plant Operations Manager Protein Purification

An internationally recognized research facility has a rewarding and challenging career opportunity for a qualified individual to lead the operations of a small, fast-paced group engaged in the purification of proteins for therapeutic use.

This position requires a knowledgeable professional with an MS or Ph.D. in Biochemistry or allied fields, and 5 years experience in protein purification. Knowledge of column chromatography, GMPs, aseptic filling and lyophilization will be essential.

In addition to managing the day-to-day operations of the R&D pilot plant under GMPs, you will be responsible for directing the activities of employees in R&D, as well as scale up of purification of plasma protein of clinical interests. You will also design and execute experiments, produce small lots of proteins and process experimental data.

We offer an excellent salary and an outstanding benefit package including medical/dental, tuition reimbursement and liberal vacation. If you meet the qualifications above, submit resume, which must include salary history/requirements, to: **Manager of Human Resources, The New York Blood Center, 150 Amsterdam Ave, New York, NY 10023.** Equal opportunity employer M/F/H/V.



Lindsley F. Kimball Research Institute

A Division of the New York Blood Center

Where concern for the community comes first.

RESEARCH OPPORTUNITIES IN BIOTECHNOLOGY

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

Project Leader, Tissue Specific Expression - Ph.D. or equivalent in the area of molecular biology. The successful candidate will have three to five years experience in construction and screening of genomic and cDNA libraries and/or subtractive hybridization methods for the isolation and characterization of plant genes and regulatory regions. Direct experience in maize is preferable. The position will involve both direct laboratory research and supervisory responsibilities.

Lab Coordinator, Vector Construction - M.S. Degree in molecular biology or equivalent with five years direct experience in gene expression. The successful candidate will be responsible for designing and constructing plasmids for proper expression in plants. This position will involve both direct laboratory research and supervisory responsibilities.

Applications received by March 10, 1991 will be assured of consideration. However, applications will be considered until positions are filled. Pioneer Hi-Bred International is an Equal Opportunity/Affirmative Action Employer. Send resume including the names of three references and the position for which you are applying to:



Pioneer Hi-Bred International, Inc.

Plant Breeding Division

Attn: Lisa Hall

7300 N.W. 62nd Avenue • P.O. Box 38
Johnston, Iowa 50131

WORLD AIDS FOUNDATION

The World AIDS Foundation (WAF) announces its intent to support research and education relating to AIDS in the developing world. The goal of the WAF is to facilitate information exchange and to assist developing countries to respond to the AIDS pandemic.

The Foundation is particularly interested in projects that are catalytic, and once in place could have a multiplicative effect. The WAF is specifically interested in supporting:

- A) short-term, in-country training for clinicians, allied health professionals and technicians;
- B) fellowships to support training for national experts;
- C) development and testing of new concepts and demonstrations for preventing the spread of HIV; and
- D) highly focused workshops which enhance the scientific process and transfer knowledge needed in the effort against HIV infections and AIDS.

The limit of any single funding request to the Foundation is \$200,000.

Application procedures:

Concept letters and applications may be prepared in either English or French. Applicants should submit concept letters for initial consideration. Following review of concept letters, applicants may be invited to submit complete proposals. The annual deadline for receipt of concept letters is April 1.

Concept letters, full applications and inquiries concerning the programs of the World AIDS Foundation should be directed to either:

**World AIDS Foundation
Assistant Secretary for Health
c/o Director, Fogarty International Center
National Institutes of Health
Building 31, Room B2C39
9000 Rockville Pike
Bethesda, Maryland 20892
U.S.A.**

or

**World AIDS Foundation
c/o Director
Institut Pasteur
28 rue du Docteur Roux
75724 Paris, Cedex 15
FRANCE**

POSITIONS OPEN

POSTDOCTORAL POSITION

The Dana-Farber Cancer Institute seeks to fill research positions at the postdoctoral level to study the ability of T-cell products to regulate the immune response. Joint appointment to be held in an appropriate department of Harvard Medical School. Send curriculum vitae and three references to: **Dr. Harvey Cantor, Laboratory of Immunopathology, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115.**

POSTDOCTORAL POSITIONS, DEPARTMENT OF MICROBIOLOGY. Thomas Jefferson University has several full-time postdoctoral positions beginning February 1991 to study mammalian development. Project involves classical genetic and molecular biological analyses. Send curriculum vitae, and the names, addresses and telephone numbers of three references to: **Dr. Linda D. Siracusa, Department of Microbiology and Immunology, Thomas Jefferson University, Room 334 Jefferson Alumni Hall, Philadelphia, PA 19107.** We are committed to a smoke-free environment. *Equal Opportunity Employer.*

POSTDOCTORAL TRAINING POSITIONS IN RESEARCH OF THE NEUROBIOLOGY OF AGING UNIVERSITY OF CALIFORNIA, IRVINE

The University of California, Irvine, anticipates filling several postdoctoral NIH training grant research positions in the area of successful aging and age-related dementias, particularly Alzheimer's disease, by 31 August 1991. Positions will be available in a wide variety of research areas, including synaptic plasticity, neurotrophic factors, amyloid precursor protein function, protease and protease inhibitor regulation, and excitatory amino acid receptors or magnetic resonance imaging. Participating faculty include Carl Cotman, Ph.D.; Ralph Bradshaw, Ph.D.; Richard Chamberlain, Ph.D.; Ben Choi, M.D.; Dennis Cunningham, Ph.D.; James Fallon, Ph.D.; Charles Glabe, Ph.D.; Edward Jones, M.D., Ph.D.; Mary-Louise Kean, Ph.D.; Michael Leon, Ph.D.; Ira Lott, M.D.; Gary Lynch, Ph.D.; John Marshall, Ph.D.; James McGaugh, Ph.D.; Orhan Nalcioglu, M.D.; Rachael Neve, Ph.D.; Arnold Starr, M.D.; and Stanley van den Noort, M.D.

Salaries for training positions are commensurate with education and experience. To be considered, applicants must possess a Ph.D. (proof of final degree required) and must be citizens or permanent residents of the United States.

Address inquiries and/or curriculum vitae to:

**Carl W. Cotman, Ph.D.
Director, Postdoctoral Training Grant
Department of Psychobiology
University of California
Irvine, CA 92717**

The University of California is an Equal Opportunity/Affirmative Action Employer. The department encourages female and minority applicants.

POSTDOCTORAL FELLOWSHIP. Position is available to join research group using in vivo microdialysis and cytochemistry to study the neurochemistry of pain modulatory systems in the brainstem and spinal cord. Candidates should have experience with HPLC and/or microdialysis. Salary is in accord with NIH stipends. Applications, including curriculum vitae, description of current research, and names of three references, should be submitted to: **A. J. Basbaum, Keck Center for Integrative Neurosciences, University of California, San Francisco, Box 0452, San Francisco, CA 94143.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOWSHIP IN SPEECH MOTOR CONTROL. The Stuttering Center Speech Motor Control Laboratory, Department of Neurology, Baylor College of Medicine/The Methodist Hospital has the above position available for someone interested in the dynamics of the speech motor control system. This person should have a Ph.D. in bioengineering with interests in motor control and digital signal processing, and/or a background in speech science with an emphasis on the acoustic processing of the speech signal, and an interest in stuttering. Please send curriculum vitae and the names of three references we may contact to: **H. B. Nudelman, Ph.D., Stuttering Center, Department of Neurology Baylor College of Medicine, 6501 Fannin NB302, Houston, TX 77030.** *Baylor is an Equal Opportunity Employer.*

POSITIONS OPEN

INTERNATIONAL CANCER RESEARCH FELLOWSHIP

The Hayashibara Foundation, a nonprofit-making organization within the Hayashibara Group, announces a fellowship program. Fellowship will be taken at the Fujisaki Cell Center which is devoted to basic and applied research related to the problems in human cancer. The fellowship is normally made for 1 year and is renewable for up to 5 years. The fellowship will be expected to commence within 6 months of the announcement of the awards. No fixed deadline for application is set throughout the year. The awards are for high-quality research work in one of the three categories described below:

- Fundamental leukemia-lymphoma research
- Cytokine-lymphokine research
- Hematopoietic cell lines

Qualified person who is holding a Ph.D., M.D., or equivalent qualifications should make inquiry for additional information and application forms from: **Jun Minowada, M.D., Director, Fujisaki Cell Center, 675-1, Fujisaki, Okayama 702, Japan.**

POSTDOCTORAL RESEARCH ASSOCIATE

Available for a recent Ph.D. to study the regulation of dihydrodiol dehydrogenases involved in the detoxication of polycyclic aromatic hydrocarbons. Previous experience in recombinant DNA techniques required. Career advancement possible. Send curriculum vitae and names of three references to: **Dr. Trevor M. Penning, Department of Pharmacology, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6084.**

BIOCHEMISTRY. University of North Texas invites applications for a **POSTDOCTORAL RESEARCH ASSOCIATE**, available immediately to work on cloning and expression of growth factors. Experience with molecular cloning and/or immunoassay desirable. Please send curriculum vitae and two letters of reference to: **Personnel Office, University of North Texas, P.O. Box 13497, Denton, TX 76203.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE IN MEDICAL/VETERINARY ENTOMOLOGY. Available immediately to investigate the immune response mechanism to ectoparasitic mites, to determine the mechanism for induced immunity (resistance), and to isolate and characterize the relevant antigens responsible for resistance. Candidates should have some background in one or more of the following: medical/veterinary entomology, immune assays, protein purification/characterization techniques, or histology. Deadline is 15 April 1991 or until a qualified candidate is selected. Send curriculum vitae and names of three references to: **Dr. Larry G. Arlian, Department of Biological Sciences, Wright State University, Dayton, OH 45435.** *Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSOCIATE/POSTDOCTORAL

A position is currently available to study genotoxic stress responses in mammalian cell. Emphasis will be given to a recently isolated group of novel DNA-damage-inducible genes that play a role(s) in negative growth control. Studies will also focus on the regulation of HIV-1 expression by genotoxic stress and on HIV-1 regulatory features shared with cellular stress-response genes. Experience in molecular biology and/or protein biochemistry, such as the purification and characterization of DNA-binding proteins, is desirable. Salary for a postdoctoral fellow (more than 3 years of experience) or a research associate (up to 5 years of postdoctoral experience) is commensurate with experience. Send curriculum vitae and names of three references to: **Dr. A. J. Fornace, Laboratory of Molecular Pharmacology, Building 37, Room 5C09, National Institutes of Health, Bethesda, MD 20892.** email: fornace@fcrfvl.ncicfcrf.gov.

An Equal Opportunity/Affirmative Action Employer.

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.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Available immediately for study of the role of signal transduction in the regulation of cell differentiation in filamentous fungi. A strong background in molecular biology is preferred. Send curriculum vitae, description of research experience, and three letters of recommendation to: **Dr. John Linz, Departments of Food Science and Human Nutrition, and Microbiology and Public Health, 234B Food Science Building, Michigan State University, East Lansing, MI 48824.** Deadline: 10 April 1991. *An Affirmative Action/Equal Opportunity Employer.* Position Numbers AG1247 and AG1248.

POSTDOCTORAL RESEARCH ASSOCIATE

Study the physiology and genetics of hydrogen metabolism in legume symbioses. Candidates should have experience in microbiology, molecular biology, and/or plant physiology. Salary is \$31,100. Please send a résumé and names of three references to: **Dr. Peter van Berkm, Soybean and Alfalfa Research Laboratory, USDA-ARS, Building 011, HH-19, Beltsville Agricultural Research Center, Beltsville, MD 20705.** *ARS is an Equal Opportunity Employer.*

OPTICAL PHYSICIST

The Laboratory for Laser Energetics at the University of Rochester is seeking an optical physicist to work within the Optics and Imaging Sciences Group in support of its Laser Fusion program. The successful candidate will be involved in optical design and modeling of laser beam propagation, focusing, and imaging. Extensive use of optical modeling codes is required for this position. The individual will be responsible for concept development, analytical evaluation and numerical evaluation of optical systems using geometrical, physical, and nonlinear optics computer codes. This work includes detailed dimensional tolerancing, optical fabrication specification, and experimental prototyping of laser-based optical systems. Experience in experimental optics including set-up, data-acquisition, and data analysis is required. Additionally, computer experience including code utilization on CRAY, SUN, VAX, and personal computers is essential. Candidates must possess a masters degree in optics or optical engineering and have at least 2 years of experience in mathematical modeling. Starting salary is \$33,000 per year. Application deadline 29 March 1991; send résumés to: **Search Committee, Optics and Imaging Science Group, Laboratory for Laser Energetics, 250 East River Road, Rochester, NY 14623-1299.** *Equal Opportunity Employer, M/F.*

The Life Sciences Division of the Los Alamos National Laboratory is inviting applications for a **STAFF MEMBER** position in the Biochemistry and Structural Biology Group. The successful applicant will be expected to conduct an independent research program in biomolecular structure and function with an emphasis on studies of protein folding and protein-DNA interactions and to obtain financial support for that research. We are seeking someone to expand existing x-ray facilities to establish the capability for protein crystallography and to establish molecular modeling capabilities to address problems in biomolecular structure and function. The person will be expected to collaborate with existing staff in research on biomolecular structure and function and to utilize the laboratory's unique x-ray and neutron sources for crystallography and scattering measurements as well as unique computing facilities. The person would be encouraged to participate in the planning and execution of the expansion of the current structural biology program at Los Alamos. The successful applicant should have the ability, demonstrated by both research accomplishments and publication record, to conduct an independent research program in biomolecular structure and function. The applicant's technical background should include demonstrated experience in protein crystallography and biomolecular modeling. The applicant should have effective oral and written communication skills and the ability to collaborate with other investigators in a multidisciplinary environment. The applicant should have a Ph.D. degree in a relevant life sciences discipline. To formally apply for this position, you must reference **Job Number 10023-B** on your résumé. Interested candidates should forward a résumé to: **Molly Birely (MS P280), Personnel Services Division, Los Alamos National Laboratory, Los Alamos, NM 87545.** *Affirmative Action/Equal Opportunity Employer. Must be able to obtain a Department of Energy security clearance.*

Opportunities In Analytical Sciences

Discover a bright and rewarding future at Sterling Research Group, the worldwide research and development organization of Sterling Drug Inc. As we continue to expand our ANALYTICAL SCIENCES PROGRAM, we offer exciting opportunities at our Great Valley, PA facility conveniently located near Philadelphia.

We currently have several positions open:



RESEARCH INVESTIGATOR NATURAL PRODUCTS CHEMISTRY

The successful candidate will be part of a team involved in the discovery of biologically active compounds derived from natural sources.

The primary responsibility of this position includes the development of analytical and spectroscopic methods for dereplication and characterization of bioactives from microbial sources, and rapid identification and isolation of compounds for biological evaluation. The position will require establishing HPLC with photodiode array and integrating spectroscopic techniques for rapid evaluation of bioactive metabolites in crude mixtures. Knowledge of computer systems, NMR and Mass Spectrometry will be a plus.

This position requires a Ph.D. in Organic Chemistry or Analytical Chemistry/Biochemistry. A Master's degree with relevant experience in Natural Products will be considered. Position code GV-111-90.



RESEARCH INVESTIGATOR(S) ANALYTICAL BIOCHEMISTRY

The successful candidate(s) will be a team player interacting with discovery and development programs.

The position(s) involve the development and validation of analytical methods for the characterization and quantification of small and macro molecular drug substances and drug products. Other responsibilities include the monitoring of results for the release and stability monitoring of preclinical and clinical supplies. Knowledge of automation or computer systems is an advantage.

These positions require a Ph.D. in Analytical Chemistry, Protein Chemistry or Analytical Immunology or a Master's degree with relevant experience. Previous experience in the pharmaceutical industry with either macro or small molecules is desired.

Excellent interpersonal skills and the ability to interact in a team atmosphere are essential. Excellent communication skills are a prerequisite and publications are encouraged as part of career growth. Position code GV-109+110-90.

You will discover that we offer a very competitive salary and benefits package. Please specify position code and send resume to: Human Resources Dept., Sterling Research Group, 9 Great Valley Parkway, Malvern, PA 19355. An Equal Opportunity Employer M/F/H/V.



**STERLING
RESEARCH
GROUP**

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Biogen has reported its second consecutive profitable year with significant increases in net income and total revenues. Our efforts to become a fully integrated biopharmaceutical company are right on schedule with products in basic research and development, human clinical trials and actual sales in many countries. Our Cambridge, MA, location, adjacent to MIT, is at the heart of the country's biotechnology industry.

Process Scientist — Cell Biology

You will be responsible for research leading to the development and improvement of mammalian cell lines used for production of human therapeutic proteins. This position will also be an integral part of a team investigating methods for optimization of cell culture methods, including culture media development and will provide support to the Process Development groups through maintenance of bioassays. The ideal candidate will have a PhD in Cellular Biology or Immunology or related field with 3+ years' postdoctoral experience. You must have working knowledge of molecular biology of recombinant mammalian cells, cell culture methods, secretory and post-translational pathways, and relevant cell factors. You must be a team player willing to collaborate across departmental lines and across disciplines.

Quality Control Manager — Biotechnology

As our QC Department moves with the company toward product and establishment licensure, significant challenges and opportunities await this QC professional. You will assume responsibility for the operation of our QC chemistry laboratory. Specifically, you'll schedule lab activities including raw material, in-process, bulk and final dosage chemistry testing, special projects and stability evaluations; coordinate IND, PLA, DMF, etc., characterization testing; and review production records. A BS/MS in Chemistry or Biochemistry and at least 3-5 years' pharmaceutical environment experience are essential. Familiarity with cGMPs, validation and documentation, as well as proven supervisory experience are a must. Strong communication and interpersonal skills are required.

Our compensation and benefits package is one of the best in the industry, and is designed to attract and retain the finest talent available. Our Relocation Assistance is only one example of the benefits you can look forward to at Biogen.

Please send your resume to Biogen, Inc., Ref. SMPS222, 14 Cambridge Center, Cambridge, MA 02142. Biogen is an equal opportunity employer.

BIOGEN

Clinical Associate or Senior Staff Fellow

The Laboratory of Clinical Studies, National Institute on Alcohol Abuse and Alcoholism, Public Health Service, invites applications for a position to study alcoholism and its complications. Unique opportunity to become a member of a multi-disciplinary team working in a 10-bed research ward and outpatient clinic at the National Institutes of Health Clinical Center, Bethesda, Maryland. State-of-the-art equipment and experienced technical support available. The salary range is \$40,000 to \$52,000 per annum commensurate with qualifications. Interested candidates must be board certified or eligible internists who are U.S. citizens or permanent residents. Position information and qualification requirements may be obtained by contacting:

Ted George, M.D.
National Institute on Alcohol
Abuse and Alcoholism
Laboratory of Clinical Studies
Building 10, Room 3B-19
9000 Rockville Pike
Bethesda, Maryland 20892
Telephone Number 301-496-9705



Submit Curriculum Vitae and names of three references to Dr. George. The position is available now.

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STRUCTURAL BIOLOGY

Two opportunities exist in the Structural Biology Department of Monsanto Corporate Research Laboratories to join a vigorous team of physical chemists and structural biologists closely allied with a fully integrated, multidisciplinary effort in discovery research. Active projects that focus on pharmaceutical and agricultural applications are currently underway.

Qualifications include a Ph.D. (post-doctoral experience would be welcome) and expertise in any of the following:

**Protein NMR Spectroscopy
Protein Crystallography
Computational Chemistry**

Attractive salaries and benefits combine with the resources of a multi-billion dollar company and state-of-the-art research facilities, located in wooded suburban west St. Louis, to make these opportunities particularly appealing.

Please send your résumé with references and a summary of significant accomplishments to Monsanto Company, BB5B-SPA, 700 Chesterfield Village Parkway, St. Louis, MO 63198. An equal opportunity employer, m/f/h/v.

*Opportunity.
We've got it down to a science.*

Monsanto

ENZYMOLOGIST/ BIOCHEMIST

The Virology group within the Department of Virus and Cell Biology has an opening for an Enzymologist/Biochemist. A Ph.D. and relevant, original postdoctoral research experience are required.

The position will involve mechanistic and structural analysis of enzymes and proteins critical for the replication, infectivity or pathogenicity of human viruses. The identification of potential drug targets and the development of approaches to inhibition of the function of those targets is a central part of our efforts.

Strong training in chemistry or biochemistry is desired, while experience in virology is not necessary. Experience in subcloning and mutagenesis is not required, but certainly useful.

Excellent salary and benefit programs accompany this position at our West Point Laboratories 25 miles northwest of Philadelphia.

Please send curriculum vitae with cover letter to: **Personnel Manager, Ad #B-5, Research Personnel, WP42-2, MERCK SHARP & DOHME RESEARCH LABORATORIES, West Point, PA 19486.**

EEO/AA/VH/EMPLOYER



Merck & Co., Inc.

POSITIONS OPEN

CHEMIST, GS-12 or GS-13, (\$37,294 to \$48,481 or \$44,348 to \$57,650). The U.S. Environmental Protection Agency (EPA) Environmental Monitoring Systems Laboratory, Las Vegas, Nevada is seeking an experienced masters or Ph.D. level individual in the area of analytical methods development for environmental contaminants and biomarkers. Individual must have recent laboratory experience. Individual should have an interest in the development of immunoassays and the integration of immunochemistry with other analytical methods. Experience in developing, formulating, validating and use of immunoassay for small molecules as well as chemical synthesis is desirable. Individual would perform laboratory functions, field evaluations of methods, and report writing. The selected candidate would work under the direction of the immunoassay technical program manager and be responsible for individual projects. The EMSL-LV has ongoing projects in both immunoassay development and evaluations. *EPA is an Equal Opportunity Employer. Applicants must be a U.S. citizen.* All inquiries should be sent to: **U.S. EPA, Human Resources Office, P.O. Box 98516, Las Vegas, NV 89193-8516** postmarked by 22 March 1991.

RESEARCH FELLOW. Establish and direct research group to develop inhibitors of the c-myc oncoprotein. Research related to interaction of nuclear oncoproteins; transformation, DNA-binding, and transcription assays; and statistical analysis of clinical research. Synthesis and characterization of oligonucleotides and analysis of transcriptional regulatory mechanisms. Studies on genetic basis of cancer and biochemical reactions. R&D pharmacological agents with therapeutic application for treatment of cancer in humans. Requires Ph.D. genetics or microbiology with clinical degree or experience and at least 1 year of postdoctoral experience in genetics and molecular biology with state-of-the-art background in c-myc oncoprotein, cellular transformation, DNA-binding, and transcription assays. Must have research in site-directed mutagenesis, in vitro protein translation, and statistical analysis of clinical research data. Ability to perform molecular biology techniques. Forty hours per week; \$4396.00 per month; send résumé or curriculum vitae to: **Philadelphia Job Bank, 444 North 3rd Street, 3rd Floor, Philadelphia, PA 19123, JO #4344923.**

The Southeastern Forest Experiment Station (SE-FES), U.S. Department of Agriculture (USDA) Forest Service, is recruiting for two positions: (i) **RESEARCH PLANT ECOLOGIST OR BOTANIST** position of office at Clemson University, Clemson, South Carolina, will be responsible for planning and performing independent research to assess responses of plant ecosystems to changes associated with timber harvesting and other practices. Special emphasis will be given to development, implementation, and evaluation of management strategies to conserve listed, candidate and sensitive plant species within a multiple-use framework. Starting salary for this position will range from \$37,294 to \$44,348 depending upon qualifications of selected applicant. (ii) **RESEARCH FISHERIES BIOLOGIST** position of office at Virginia Polytechnic Institute in Blacksburg, Virginia, will be responsible for planning and performing independent research to assess the responses of cold-water fish to changes in habitat resulting from forest management, road construction, and other human-caused disturbances. Salary range for this position is \$44,348 to \$57,650 depending upon qualifications of selected applicant.

Qualified individuals should send a one-page résumé to: **Nathan Presley, Early Alert Notice 91-39, SEFES, P.O. Box 2680, Asheville, NC 28802. Telephone: 704-257-4380.** Applications will be accepted through 15 March 1991.

RESEARCH SCIENTIST. Molecular yeast geneticist, Assistant Specialist I, position available for integrated research in molecular genetics concerning genes associated with heavy metal resistance, meiotic recombination, and aneuploidy mechanisms in yeast. The successful candidate will construct genomic libraries from yeast, clone the various genes, determine DNA sequence, and characterize the corresponding proteins from yeast. A Ph.D., degree in genetics or related biological sciences, with 3 years of postdoctoral experience in molecular genetics and expertise in yeast genetics are essential. Salary: \$31,000 per year with benefits. Send this ad, your résumé, and three reference letters to: **Job #CR4097, P.O. Box 9560, Sacramento, CA 95823-0560** no later than 10 March 1991. Job site and interview: Berkeley, California. *An Equal Opportunity Employer.*

POSITIONS OPEN



Agricultural Research Service
United States Department of Agriculture

RESEARCH GENETICIST (PLANTS) FIELD CROPS RESEARCH UNIT AMES, IOWA

ARS is seeking a research geneticist with emphasis in plants to join a team that conducts research directed toward enhancement of maize germplasm and development of techniques for maize improvement. Successful candidate will be responsible for developing research to determine factors in maize plants that improve physical kernel quality after harvesting and handling, improve maize for food, feed, and industrial uses, and improve other value added traits of primary importance in maize.

Ph.D. in genetics with training in statistics, computer science, plant breeding, and molecular biology is desired.

Must be U.S. citizen. Salary is commensurate with experience (\$31,116 to \$48,481). For information on the research program and/or position, contact: **Dwayne R. Buxton at 515-294-9654.** For information on application procedures/forms contact: **Janie Carr at 301-344-4569.** Applications in response to the advertisement should be marked 1NO23.

Applications must be postmarked by 29 March 1991. Mailing Address.

**USDA, ARS
Personnel Operations Branch
6305 Ivy Lane
Room 325
Greenbelt, MD 20770
An Equal Opportunity Employer.**

Baxter Diagnostics, Inc., MicroScan Division, develops and manufactures sophisticated computer controlled electronic instrumentation and disposables used in the clinical microbiology laboratory.

We have **IMMEDIATE OPENINGS** for individuals to work in our research and development section. The individuals we seek will possess Ph.D.'s in bacteriology or microbiology with a molecular emphasis. At least 2 years of postdoctoral experience is needed. In addition, some experience in probe identification and characterization, hybridization techniques, and target amplification is preferred.

Baxter Diagnostics, Inc., MicroScan Division, is a leader in the healthcare industry and offers excellent salaries and benefits. If your experience and expertise fall within our requirements, please submit your résumé and salary history to: **Human Resources Department 1A, Baxter Diagnostics, Inc., MicroScan Division, 1584 Enterprise Boulevard, West Sacramento, CA 95691.** *We are an Equal Opportunity Employer, M/F/H/V.*

RESEARCH ASSOCIATE

Opportunity to join an exciting research program investigating the molecular biology of the mammalian visual system. Areas of interest include: structure/function studies of visual pigments, control of gene expression in the retina, and inherited variation in human vision (*Science* 232, 193, 203; *Science* 245, 831; *Biochemistry* 29, 9764). Strong background in molecular biology or biochemistry is essential. Send curriculum vitae and the names of three references to: **Dr. Jeremy Nathans, 805 PCTB, Department of Molecular Biology and Genetics, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205.** *Equal Opportunity Employer.*

RESEARCH ASSOCIATE. Position in anatomy/physiology available immediately. The Department of Rehabilitation Medicine, Jefferson Medical College, Thomas Jefferson University, seeks a Ph.D. level neuroanatomist/physiologist with an interest in spinal cord contusion to conduct research in the animal laboratory of an existing federally funded spinal cord injury center, devoted to the investigation of neural recovery and functional enhancement. The individual hired will perform research to determine the course of recovery after spinal cord contusion using physiological and histological procedures. Other responsibilities will include the occasional teaching to medical students, residents and allied health professionals. Send curriculum vitae and the names and telephone numbers of three references to: **G. J. Herbison, M.D., 1015 Walnut Street, Room 617, Curtis Building, Jefferson Medical College, Thomas Jefferson University, Philadelphia, PA 19107-5099.** *We are committed to a smoke-free environment. Equal Opportunity Employer.*

POSITIONS OPEN

TEMPORARY ASSIGNMENTS FOR RESEARCH SCIENTISTS UNDER THE INTERGOVERNMENTAL PERSONNEL ACT

ERL-Corvallis is seeking candidates for temporary assignments at the laboratory for periods up to 2 years as research scientists or research project leaders. These assignments would be under the Intergovernmental Personnel Act, for full-time, part-time or intermittent periods. Research scientists who are full-time employees of public or private institutions of higher education, state or local governments, Indian tribal governments, and certain other nonprofit organizations are eligible. The following specific assignments are currently being considered.

• **WETLANDS ECOLOGIST:** senior scientist established in the scientific community to develop regional scale indicators for monitoring wetlands condition.

• **FOREST ECOLOGIST:** senior scientist established in the scientific community to develop regional scale indicators for monitoring the condition of forest ecosystems.

• **ECOLOGIST:** to assist development of a research program to address EPA's role in measuring and protecting biodiversity in managed ecosystems.

• **TERRESTRIAL ECOLOGIST:** senior scientist to lead a new research project on ecological restoration.

• **MICROBIAL ECOLOGIST:** senior scientist to lead a project on assessing the risks from genetically engineering organisms released into the terrestrial environment.

• **MAMMALIAN OR ANIMAL ECOLOGIST:** to lead a project for evaluating the effects of pesticides on small mammal populations, using a newly developed 1/4 acre field mesocosm facility.

• **PLANT ECOLOGIST:** to develop a project for determining ecological effects at contaminated land sites.

• **ECOLOGICAL ECONOMIST:** to develop a project for valuing ecological resources as a basis for ecological risk assessment.

• **LANDSCAPE ECOLOGIST:** scientist with skills in land management and decision modeling to lead a project on optimizing regional land use.

• **PLANT ECOPHYSIOLOGIST:** scientist with experience on effects of airborne chemicals on natural and agricultural vegetation.

• **PHYSICAL SCIENTIST:** scientist with experience in hydrology, climatology, or meteorology, to lead project on quantifying vegetation distribution, surface energy balance, and vegetation response to climate change. Strong skills needed in GIS, numerical modeling, and raster data management.

Candidates should submit a résumé and letter of interest to: **Robert T. Lackey, Deputy Laboratory Director, U.S. Environmental Protection Agency, 200 S.W. 35th Street, Corvallis, OR 97333, or call Dr. Lackey at: 503-757-4601.**

RESEARCH POSITIONS IN EXPERIMENTAL CARDIOVASCULAR PATHOLOGY. The Department of Pathology, University of Alabama at Birmingham (UAB), is seeking postdoctoral and faculty level scientists for basic research in cardiovascular disease mechanisms. Postdoctoral appointees will work within established funded research programs. Experience in cellular or molecular biology is desirable. Replies and curriculum vitae should be mailed to: **Jay McDonald, M.D., Chairman, Department of Pathology, UAB Station, University of Alabama at Birmingham, Birmingham, AL 35294. UAB is an Affirmative Action/Equal Opportunity Employer.**

ASSISTANT RESEARCH MOLECULAR IMMUNOLOGIST. The Liver Transplant Division, Department of Surgery invites applications for an individual to conduct research in the molecular and immunological mechanisms of allograft rejection. The appointee will use molecular approaches to monitor transplant patients as well as establish an experimental transplant model in SCID-Hu mice. Ph.D. and postdoctoral experience, and a strong publication record in molecular immunology, whole organ transplantation, and SCID-Hu mice are required. Send curriculum vitae, research plan, and names of three references to: **Nancy Ascher, M.D., Ph.D., Department of Surgery, Box 0780, University of California, San Francisco, CA 94143. An Equal Opportunity Employer.**

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

22 FEBRUARY 1991

Protein NMR Spectroscopist

The PARKE-DAVIS Pharmaceutical Research Division of Warner-Lambert Company has an immediate opening for an NMR spectroscopist in the Analytical Research Section. Applicants should have a PhD in Chemistry, Biochemistry or a related field, with 0-5 years post-doctoral experience in the application of multi-dimensional NMR methods to the elucidation of protein structure or to the interaction of ligands with biological macromolecules. The scientist will develop and apply methods to solve the three dimensional structures of proteins, peptides and ligand-target complexes of interest in therapeutic areas such as diabetes, hypertension, heart failure, arthritis and cognition. The NMR laboratory includes a fully equipped AMX500, Sun and SGI workstations, and access to a 600 MHz instrument which will be located at the University of Michigan.

Our modern facilities will include of a new laboratory building with space specifically designed for high field NMR. The successful candidate will have the opportunity to become part of a dynamic research team at PARKE-DAVIS which benefits from rapidly growing efforts in computer aided drug design, biotechnology, biological chemistry and signal transduction. The open environment at Parke-Davis and our close proximity to the University of Michigan encourage a strong academic style of research. Please send CV and references in confidence to **Box JDM 91009, Human Resources, PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, MI 48105. "Smoke-Free Work Environment".**

"Equal Opportunity in Action"

PARKE-DAVIS



A DIVISION OF **WARNER LAMBERT**

RESEARCH UPDATE

Interdisciplinary research key factor in successful new product innovations.

At American Cyanamid Company's Agricultural Research Division you'll be part of a winning team that has produced 17 new products in 4 years. We have a long-range commitment to discovering ways to increase worldwide crop and livestock production through chemical, biochemical and biological research. This commitment is evidenced by our expanding research budget which has tripled over the last decade.

Animal Product Development Managers

Currently, we have several openings for Animal Product Development Managers. In these positions, you'll coordinate several projects involving dairy and beef cattle, swine and poultry products. Duties include designing efficacy and safety studies, coordinating efforts with Discovery, Product Development and Marketing Departments, providing technical advice on assigned projects and monitoring various studies required in an animal drug submission. Requirements include a DVM or PhD degree in Physiology, Parasitology, Biology, Nutrition or Biochemistry. Post doctoral experience is a plus with knowledge of U.S. registration procedures highly desirable.

American Cyanamid Company offers an excellent compensation and benefits package which includes 401(k) savings plan, flex-time work schedules and a convenient location one hour from New York City or Philadelphia. If interested and qualified, please send your resume and reference contacts to: Employment Office, Dept. AD, American Cyanamid Company, Agricultural Research Division, P.O. Box 400, Princeton, NJ 08543-0400. An Equal Opportunity Employer.



POSITIONS OPEN

DESIGN PHYSICIST of metal halide lamps for manufacturer of lighting products in Northeastern Ohio to design, develop, test, and debug new high intensity metal halide lamps to satisfy performance objectives using knowledge of light source chemistry, gas discharge theory, and plasma theory; assist quality control function in the solving of production problems and analysis of life test data; design light intensity, light output, and lamp distribution to meet illuminating objectives; conduct experimental tests to determine chemical components, weight, and wall-loading of arc tubes, electrodes, dimensions, and filling gas pressure; measure electrical and photometric characteristics of lamps; modify existing lamp designs to meet performance objectives.

Requirements for the job position are: M.S. degree in physics. No experience required but must have educational courses in the following theories (i) light source chemistry; (ii) gas discharge theory; (iii) plasma theory; and the following instrumentation (i) photometry sphere; (ii) vacuum system; (iii) oscilloscope; (iv) spectrometer; and (v) ionization gauge and at least one university course in the following areas: cathode electronics, experimental spectroscopy, chemistry of light sources, gas discharge light resources, experiments in gas discharge and gas discharge physics. Forty hours per week, 8:30 a.m. to 5:30 p.m., Monday to Friday; \$32,000 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé in duplicate (no calls) to: **J. Davies, JO #1255656, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

MEETINGS

STROMAL REGULATION OF HEMATOPOIESIS

21-22 JUNE 1991/BETHESDA, MARYLAND

An NIH symposium to address the role of bone marrow stromal cells, the extracellular matrix, and the hematopoietic microenvironment in the regulation of cellular differentiation and proliferation. Keynote address and symposium summary by Nobel laureate E. Donnall Thomas. Abstracts are being accepted (until 1 May 1991) for poster presentation. For registration, contact: **Prospect Associates, Conference Department, 301-468-MEET.** For information, contact: **A. Levine, NHLBI, at 301-496-5911 or D. Badman, NIDDK, at 301-496-7458.**

INTERNATIONAL CONGRESS OF PYTO-THERAPY, 16 to 19 October 1991 at Shilla Hotel, Seoul, Korea. Sponsors: Aloe Research Foundation U.S.A. and Pharmaceutical Society of Korea. The congress will be a forum for discussions and interactions between individuals from academia, industry, government, and business. Basic and clinical research studies of aloe, kampo and other plant medicinal substances as modifiers of neurologic, aging, immunologic, inflammatory, anti-microbial, and tumor activities will be presented. Invited presentations plus free communication platform and poster sessions are planned. Requests for abstracts (due July 1991) and congress information: **Dr. Wendell D. Winters, Congress Chairman, Department of Microbiology, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284-7758. Telephone: 512-567-3930 or FAX: 512-567-6612.**

SECOND INTERNATIONAL SYMPOSIUM ON NEUROTENSIN 6 TO 9 JULY 1991 THE BREAKERS HOTEL PALM BEACH, FLORIDA

An international meeting, to bring together researchers and clinicians interested in the endogenous neuropeptide, neurotensin, has been organized by Drs. Patrick Kitabgi (University of Nice) and Charles B. Nemeroff (Duke University). The meeting will consist of invited symposium presentations and poster presentations. Registration fee is \$250. For further instruction including meeting registration, hotel information, and abstract forms contact: **Patrick Kitabgi, Ph.D., University of Nice-Sophia Antipolis, 660 Route des Lucioles, 06560 Valbonne, France or Charles B. Nemeroff, M.D., Ph.D., Duke University Medical Center, Box 3859, Durham, NC 27710. Deadline to submit abstracts for poster presentation is 1 May 1991.**

ANNOUNCEMENTS

THE DOE HUMAN GENOME PROGRAM ANNOUNCEMENT OF SPECIAL RESEARCH GRANTS

In support of the Human Genome Program, the U.S. Department of Energy (DOE) announces its 1991 Special Research Grants Program Notices 91-7 and 91-8, Health Effects Research. Several research goals are encompassed supporting research and conferences for:

(1) Development of innovative technologies and resources necessary for the physical mapping of human chromosomes, including improvements in cDNA technologies and YAC technologies;

(a) The objective of the cDNA technology development is the identification of human DNA sequences, suitable for sequence tagged sites (STS) and having the added value of representing expressed loci (see 16 Nov 1990 *Science*, page 913). Appropriate subtopics include improved production of cDNA libraries, normalization of cDNA libraries, rapid assignment of cDNAs to chromosomes and subchromosomal regions so that optimally spaced cDNAs for STS definition can be chosen, limited or complete cDNA sequencing supporting identification of candidate STS sites, and validation of the utility of candidate sites. All participants in cDNA projects must contribute to a coordinated resource of data and materials which will serve to minimize redundant efforts by identifying already characterized cDNAs across distinct libraries.

(b) The objective of the YAC technology development is the creation of improved libraries of human YAC libraries with large stable inserts, the elaboration of better methods for the assignment of YACs to chromosome and chromosomal regions and related interlaboratory resource and information transfer.

(2) Development of advanced DNA sequencing technology, particularly innovative new approaches with potential for rapid, more economical sequencing;

(3) Development of data management systems for use in DNA mapping, and sequencing, including data structures, retrieval schemes, user interfaces, and advanced database theory;

(4) Addressing ethical, legal and societal issues that may arise from applications of knowledge and materials resulting from the Human Genome Program. For a more detailed description of issues and specific research topics to be addressed relative to this goal, please also see the announcement in the NIH Guide to Grants and Contracts, Vol. 19, No. 4, 26 January 1990, entitled "Ethical, Legal, and Social Implications of the Human Genome Initiative."

APPLICATION AND PREAPPLICATION INFORMATION: There are two application and review cycles. Formal applications that relate specifically to cDNA technology and are received by 22 March 1991, will be evaluated during May 1991. For the second review cycle which will cover all topics, potential applicants are encouraged to first submit a brief preapplication in accordance with 10 CFR 600.10(d)(2) which consists of two to three pages of narrative describing the research project objectives and method of accomplishment. These will be reviewed relative to the scope and the research objectives of the DOE Human Genome Program. Preapplications should be received by 19 April 1991, and sent to the following address: **Dr. Benjamin J. Barnhart, Office of Health and Environmental Research, ER-72 (GTN), Washington, DC 20585. Telephone: 301-353-5037. Telephone and telefax numbers are required to be part of the preapplication. A response to the preapplications discussing the potential program relevance of a formal application will be communicated within 45 days. Formal applications subsequently submitted must be received by 9 August 1991 to be accepted for an October 1991 review.**

Application kits and copies of 10 CFR Part 605 are available from: **The U.S. Department of Energy, Office of Energy Research, Division of Acquisition and Assistance Management, ER-64, Room G-236, Washington, DC 20585.** Formal applications submitted for the May 1991 review on cDNA technologies should reference **Program Notice 91-7.** Formal applications on all topics submitted for the September 1991 review should reference **Program Notice 91-8.** Applications should be addressed to: **U.S. Department of Energy, Office of Energy Research, Division of Acquisition and Assistance Management, ER-64, Room G-236, Washington, DC 20585, Attention: Program Notice 91-7 or 91-8.**

ANNOUNCEMENTS

CALL FOR RESEARCH PROPOSALS

Preproposals, in the form of one-page abstracts, are being solicited from scientists interested in devising cell and tissue culture test batteries to screen potential neurotoxic agents. Efforts are focused on developing and validating in vitro techniques that are rapid, cost-effective, and that use highly defined methodologies.

Selected applicants will be invited to participate in a workshop sponsored by The Johns Hopkins School of Public Health to be held in April 1991, and then to submit a full proposal for a 3-year grant (\$30,000 per year, total costs). Three awards will be made, and will start in February 1992. Send abstracts by 21 March 1991 to: **Joanne Zurlo, Ph.D., The Johns Hopkins School of Public Health, 615 North Wolfe Street, Room 7032, Baltimore, MD 21205-2179. Telephone: 301-955-3343. FAX: 301-955-0116.**

COURSES AND TRAINING

GRADUATE PROGRAM IN PHARMACOLOGY

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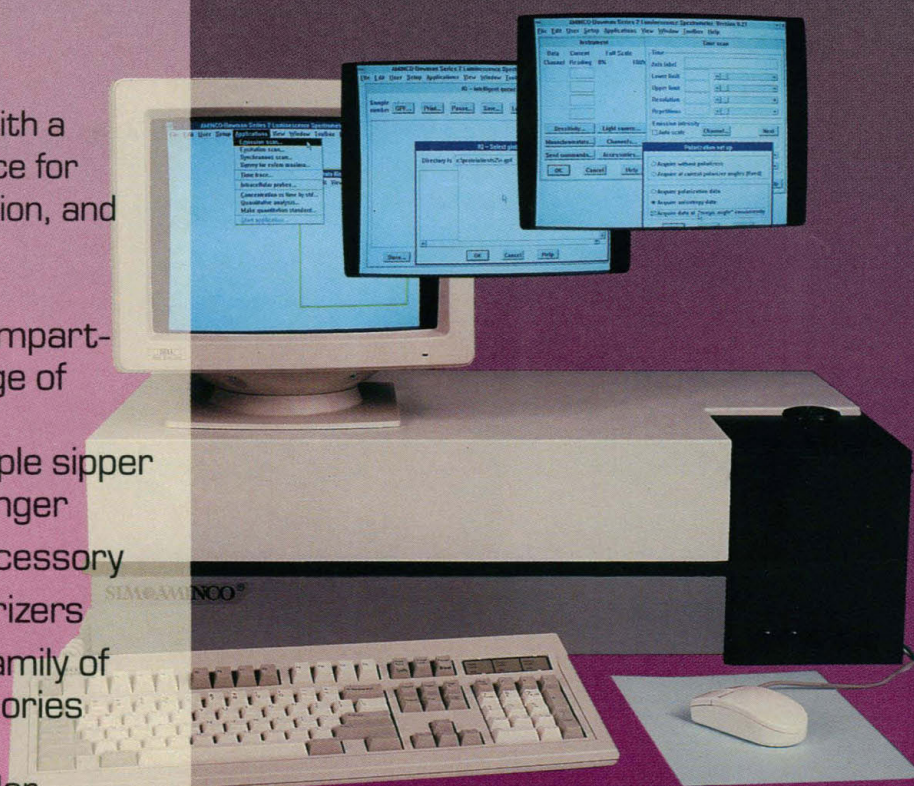
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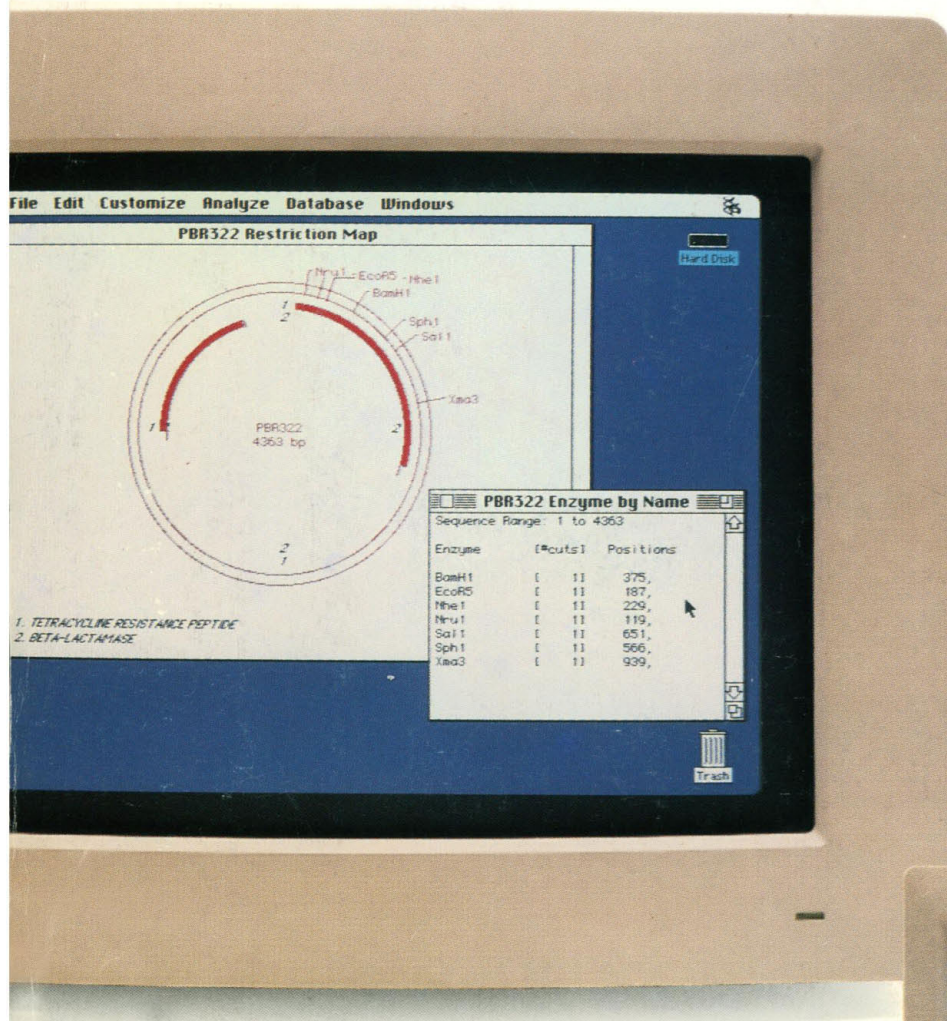
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