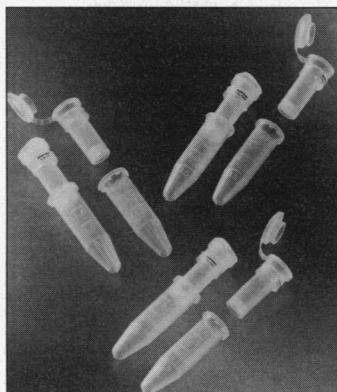


Low Protein Binding Membranes

Increased capacity and reduced hold-up volume are some of the benefits of new centrifuge filtration devices. The devices filter up to 700 μ l of sample, reducing the amount of sample lost when two 400- μ l filters are used. Filters containing 0.2- and 0.45- μ m porosity polysulfone and solvent-resistant PVDF and 0.2-, 0.45-, 0.65, and 5.0- μ m porosity cellulose acetate membranes provide a choice for preparing a wide variety of samples. For example, fil-



ters containing polysulfone or cellulose acetate membranes can be used for low protein binding applications such as the removal of cells and particulates and the purification of proteins, enzymes, nucleic acids, and virus suspensions. Filter devices containing PVDF membranes can be used for low protein binding, clarification of acidic or basic samples, and samples containing organic solvents. **Whatman. Circle 138.**

RNA Isolation and mRNA Enrichment

RNA NOW provides 60-min isolation of total RNA and mRNA that, without subsequent manipulation, is suitable for polymerase chain reaction, molecular cloning, ribonuclease protection assay, and in vitro translation. The isolated RNA is guaranteed to be free of DNA. The method includes homogenizing the sample in the reagent and adding chlo-

roform to effect phase separation. Following centrifugation, the homogenate separates into an organic and aqueous phase. The RNA remains in the aqueous phase, while DNA, proteins, and cellular debris are sequestered in the organic phase and interphase. The method is reproducible across many different animal, plant, yeast, and bacteria genera. **Biogentex. Circle 139.**

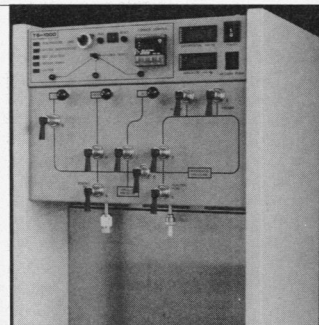
Monoclonal Antibodies

New mouse, rat, and human monoclonal antibodies (mAbs) to adhesion molecules and cell surface markers include anti-human P-selectin (CD62), anti-mouse ICAM-1 (CD54), anti-mouse and anti-rat β 2 integrin (CD18), anti-rat NKR-P1, anti-rat LFA-1 α (CD11a), anti-rat VLA-4 α (CD49d), anti-rat cell-CAM 105 (C-CAM), and anti-rat dipeptidyl peptidase IV (CD26). The mAbs are available in a carrier- and additive-free formulation. For researchers interested in multicolor analysis by flow cytometry, the manufacturer also provides antibody directly labeled with biotin or fluorescein. **Endogen. Circle 140.**

HLA-B27 mAb is conjugated to fluorescein isothiocyanate for use in direct labeling of whole blood for flow cytometry analysis. This mAb (clone HLA-ABC-m³) detects HLA-B27 molecules on lymphocytes in patients with ankylosing spondylitis, acute anterior uveitis, and Reiter's disease. **AMAC. Circle 141.**

Tritium Labeler

TRI-SORBER is a self-contained system that stores large volumes of gaseous tritium and delivers measured quantities for labeling



reactions. Up to 1000 curies can be held and then released as required. It eliminates the substantial waste experienced with conventional tritiuming techniques. Excess tritium not used in the reaction can be quantitatively stored. Composed of welded stainless steel components, the system is vacuum-tight to better than 1×10^{-4} torr for safe operation. **IN/US Systems. Circle 142.**

Estuarine Contaminant Software

ECOS is a program to simulate the fate of contaminants in estuaries. Users can determine the transport and dispersal of contaminants by the actions of tides and river flow, their attachment to suspended particles, and interactions with the bed of the estuary. It runs on IBM-compatible computers under DOS 3.2 or above with 450K of available memory, with a hard disk and VGA or EGA display. **Plymouth Marine Laboratory. Circle 143.**

Polymerase for High-Fidelity Cloning

UITma DNA Polymerase is a thermostable reagent designed to correct polymerase chain reaction (PCR) misincorporations and prevent misextensions while maintaining amplification efficiency. The enzyme is genetically engineered to achieve an optimal balance between proofread-

ing and polymerase activities and is guaranteed for PCR performance. Derived from *Thermotoga maritima*, UITma DNA Polymerase is optimized to repair 3' mismatches in PCR amplification, provide high yield of specific PCR products, and produce blunt-ended PCR products suitable for cloning and gene expression. **Perkin-Elmer. Circle 144.**

Literature

Cellstar Laboratory CO₂ Incubators describes a line of microprocessor-controlled instruments that features automatic gas control and deep-drawn seamless interiors. **Queue Systems. Circle 145.**

Amprep: Minicolumns for Sample Preparation details the use of these columns. **Amersham. Circle 146.**

MicroSelect: Basics for Biochemistry and Molecular Biology describes a line of chemicals that includes amino acids, buffers, chelators, denaturation reagents, precipitation reagents, salts, density gradient centrifugation chemicals, and detergents. **Fluka. Circle 147.**

The Waters Chromatography Handbook for 1993-1994 includes applications and selection guides, technical theory, a chemistry overview with illustrations and chromatograms, and specifications on 100 new products. **Millipore. Circle 148.**

A New Method for Amplification of 5'-cDNA Ends is a brochure on the 5'AmpliFINDER RACE Kit, a reagent kit for polymerase chain reaction amplification of unknown sequences at the 5' end of cDNAs. **Clontech. Circle 149.**

Mass Detector describes model 950/14, a universal detection system for high-performance liquid chromatography and gel-permeation chromatography. **Applied Chromatography Systems. Circle 150.**

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.

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POSITIONS OPEN

ASSISTANT PROFESSORS—BIOCHEMISTRY

The Department of Biochemistry at the Albert Einstein College of Medicine offers tenure-track positions; appointment of a senior position is possible for qualified candidates. Resources to initiate research programs are generous. Research strengths of the Department include enzymology and logical inhibitor design, protein structure including crystallography, protein-DNA interactions, regulation of gene expression, membrane signaling and metabolic regulation. Applicants with research interests in these areas are preferred but research excellence in related areas of biochemistry will also be considered. Send curriculum vitae and the names of three or more references to: **Ms. Joan Savastano, Administrator, Department of Biochemistry, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461.** Applications should be received before December 1, 1993. *An Equal Opportunity Employer.*

RISK ASSESSMENT. Interdisciplinary environmental studies program offering M.A. degree seeks a tenure-track **ASSISTANT** or **ASSOCIATE PROFESSOR** beginning August 15, 1994. Ph.D. in the natural sciences, environmental engineering, or an equivalent subdiscipline. Responsibilities: teach risk assessment and environmental technology and policy, and supervise graduate research. Secondary areas: solid waste, air and water quality. Review of applications will begin November 1, 1993, and continue until position is filled.

Send letter of application describing teaching and research interests, curriculum vitae, and names of three references to: **Environmental Studies Search Committee, 322 Public Affairs Center, Sangamon State University, Springfield, IL 62794-9243.**

Sangamon State University is an Affirmative Action/Equal Employment Opportunity Employer. Persons with disabilities, women, and minorities are encouraged to apply.

ASSISTANT PROFESSOR, ANIMAL BEHAVIOR—University of Nebraska. The Nebraska Behavioral Biology Group invites applications for an Assistant Professor position with emphasis on the mechanisms of behavior. The successful candidate will conduct research at the interface between mechanistic and evolutionary accounts of behavior. Specific research area is open, but candidates whose research focuses upon the genetics or phylogeny of behavior or whose research uses comparative approaches to the study of behavioral mechanisms are particularly encouraged to apply. The successful candidate will have departmental affiliation with, and teach undergraduate and graduate courses in biological sciences and/or psychology and will be part of the Nebraska Behavioral Biology group. Scientists with a Ph.D. and postdoctoral experience may apply by sending letter of application, curriculum vitae, and names of three references by November 1, 1993, or until suitable candidate is found, to: **Dr. Alan C. Kamil, Nebraska Behavioral Biology Group, Manter Hall, University of Nebraska, Lincoln, NE 68588-0118.** *The University of Nebraska-Lincoln is committed to a pluralistic campus community through Affirmative Action and Equal Opportunity and is responsive to the needs of dual-career couples. If you require a reasonable accommodation in order to apply or interview for this position, please contact Dr. Alan C. Kamil at the above address.*

VERTEBRATE ZOOLOGIST. Tenure-track position, **ASSISTANT PROFESSOR**, beginning August 1994. **ALBION COLLEGE** is searching for a broadly trained vertebrate zoologist. In addition to courses in the area of specialty, the successful candidate will be expected to teach a course in the natural history aspects of vertebrates, comparative vertebrate anatomy, and to share responsibilities in introductory biology courses. Modern facilities include controlled temperature chambers, a teaching collection of skins and specimens, a special collection of Indian birds, and a 130-acre nature center adjacent to campus. A research program involving undergraduate students is expected. A Ph.D. is required and teaching experience is preferred. Located in south-central Michigan, Albion College is a selective residential liberal arts college of approximately 1600 undergraduates. Interested candidates should send a letter of application, current curriculum vitae, copies of all academic transcripts, and three letters of references to: **Dr. Ruth E. Schmitter, Chair, Biology Department, Albion College, Albion, MI 49224,** by October 15, 1993. *Albion College is an Equal Opportunity Employer and encourages applications from women and minority candidates.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF GENETICS

The Department of Botany and Plant Sciences, University of California, Riverside, announces a position available July 1, 1994. The position is an 11-month, tenure-track appointment in the College of Natural and Agricultural Sciences and in the Agricultural Experiment Station. The successful candidate will be expected to develop a vigorous, innovative, independent research program in basic quantitative genetics with applications to crop improvement. Opportunities are available for interacting with researchers in other disciplines such as statistics, population or molecular genetics, plant physiology, plant pathology, and entomology. The successful candidate will be expected to offer an advanced course in Quantitative Genetics and Biometrics and contribute to the departmental undergraduate teaching program. He/she must be willing to serve as major professor to graduate students. A Ph.D. in Genetics or a related field is required. The position requires a strong background in quantitative genetics and statistics with experience in plant systems. Send letter of application, curriculum vitae, statement of research interest, and transcripts, and arrange to have at least three confidential letters of reference sent to: **Dr. R. T. Leonard, Chairman, Department of Botany and Plant Sciences, University of California, Riverside, CA 92521-0124.** (Telephone: (909) 787-4413; FAX: (909) 787-4437). The application deadline is November 1, 1993. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

MOLECULAR BIOLOGIST

The Department of Biology at Davidson College plans to appoint a molecular biologist with an interest in immunology. This is a tenure-track position at the rank of **ASSISTANT PROFESSOR**. The successful applicant will teach in the introductory course sequence and will develop courses in his/her specialty. Start-up funds are available. The appointment is expected to start August 1, 1994. Interested persons should send curriculum vitae, a statement of teaching philosophy, selected reprints and three letters of reference to: **Dr. Verna Miller Case, Department of Biology, Davidson College, P.O. Box 1719, Davidson, NC 28036** by October 18, 1993. *Davidson College is an Equal Opportunity/Affirmative Action Employer.*

MATERIALS. Applications/nominations for position of **ASSISTANT/ASSOCIATE PROFESSOR**, Division of Biomaterials, Department of Restorative Dentistry at the University of Texas Health Science Center at San Antonio are invited. Position requires teaching predoctoral/postdoctoral dental students and performing independent research. A Ph.D. is preferred and a history of successful research will be strongly considered. Candidates must be able to work effectively with other departments. Experience and training in biology and biomaterials interface desirable but not essential. *The University of Texas Health Science Center is an Equal Employment Opportunity/Affirmative Action Employer.* Application deadline is October 31, 1993. Applicants should send letters indicating their interest along with curriculum vitae, three or more references and a statement of their areas of research interest. Address applications, inquiries and/or nominations to:

John O. Burgess, D.D.S., M.S.
 Department of Restorative Dentistry
 UTHSCSA Dental School
 7703 Floyd Curl Drive
 San Antonio, TX 78284-7890
 (FAX: 210-567-6354)

ANIMAL PHYSIOLOGIST

Full-time, tenure-track **ASSISTANT PROFESSOR**, begins August 1994. Teach upper-division comparative/general animal physiology course with lab and participate in freshman-level biology courses. May participate in interdisciplinary "Science in Context" course. Faculty are expected to develop research programs that actively involve undergraduate students in the research process. Research utilizing marine organisms preferred; research interests at the system or cellular level will be considered. Ph.D. in the biological sciences, and commitment to liberal arts and science education and cultural diversity required. Submit interest letter, curriculum vitae and three reference letters by October 15, 1993, to: **Animal Physiology Search, University of Puget Sound, P.O. Box 7297, Tacoma, WA 98407.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR and RESEARCH ASSOCIATE POSITIONS

The Department of Environmental and Occupational Health, Graduate School of Public Health, University of Pittsburgh, invites applications for 5 positions to participate in ongoing sponsored research. Participation in teaching and training of graduate students is expected of the 3 faculty positions. Opportunities for independent research will be available.

Three Assistant Professorships outside the tenure stream are available:

- (1) The individual should have expertise in **Toxicology and Risk Assessment**. A Ph.D. or equivalent degree in Toxicology is required. In addition, the applicant should have several years of postdoctoral training in Biostatistics or a Ph.D. in Biostatistics with several years postdoctoral training in Toxicology. Responsibilities include determination of animal models for risk assessment, risk assessment methodology, mathematical/statistical techniques for risk assessment, and physiologically based pharmacokinetics.
- (2) Candidates are expected to have expertise in **Health Hazard/Exposure Assessment**. A Ph.D. or equivalent degree with several years of postdoctoral training in the field of Chemistry is required; specialization in toxicology is preferred. Responsibilities include the determination in modeling of the potential environmental transformations of chemicals present in the environment and the workplace.
- (3) The individual should have expertise in **Biostatistics/Modeling**. A Ph.D. or equivalent degree is required. Responsibilities include computer modeling, database management, modeling of exposed worker populations, statistical analysis of data, and quality control procedures.

Two research associate positions are also available. A Ph.D. degree or equivalent is required for each position.

- (1) This position requires an expert in SAR modeling of **Toxicology**. Experience and/or postdoctoral training in toxicology and/or chemistry for modeling of toxicological activities including familiarity with computer work is preferred. Responsibilities include applying structural concepts to the action of noxious chemicals; establishing, validating and maintaining data bases used in the research and creating toxicological profiles of the chemicals.
- (2) Expertise in **Health Hazard/Exposure Assessment** is required for this position. Experience and/or postdoctoral training in the field of Chemistry with specialization in toxicology is preferred. Responsibilities include the determination in modeling of the potential environment transformations of chemicals present in the environment and workplace.

These positions are available immediately. Applicants should send a curriculum vitae, a summary of research activities and plans, together with three letters of recommendation to: **Herbert S. Rosenkranz, Ph.D., Chairman, Department of Environmental and Occupational Health, Graduate School of Public Health, University of Pittsburgh, RIDC Park, 260 Kappa Drive, Pittsburgh, PA 15238** or facsimile to (412) 624-1020. Please be certain to indicate the position of interest: Assistant Professor Toxicology, Assistant Professor Health Hazards, Assistant Professor Biostatistics/Modeling, Research Associate Toxicology or Research Associate Health Hazards.

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TWO ENDOWED CHAIRS IN PHYSICAL CHEMISTRY

University of California,
San Diego

The Joseph E. Mayer Chair of Theoretical Chemistry and the Distinguished Chair of Physical Chemistry have been established at the Chemistry Department of the University of California, San Diego. Both are full, tenured professorships, salaries to be commensurate with experience and University of California salary scale. Applications, indications of interest, and recommendations of others who should be considered are most welcome. Please submit to **Professor Katja Lindenberg, Chair, Department of Chemistry, University of California, San Diego, La Jolla, CA USA 92093-0332.** All areas of physical chemistry, including applications of physical chemistry to other branches of chemistry and to other fields of science, including physical, biological, material, and environmental sciences, will be considered. All applications received by November 30, 1993 or thereafter until position is filled will be assured consideration. *Affirmative Action/Equal Opportunity Employer.*

Postdoctoral Opportunities In The Biomedical Sciences.

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

Developmental Gene Regulation

Sheryl M. Sato, PhD

The functional role of a family of neural-specific transcription factors, the products of Class III POU domain genes, is being investigated in vertebrate embryos using a combination of molecular and embryological approaches. The regulation of anterior-posterior patterning in the early vertebrate embryo is also under investigation. Less than five years postdoctoral training, and experience in a field such as molecular biology, biochemistry, or developmental biology, are required. Genetics and Biochemistry Branch (OE-38), NIDDK, Building 10, Room 8N315.

Ion Channel Physiology and Modulation

Jerrel L. Yakel, PhD

The structure-function aspects of ligand-gated (serotonin 5-HT₃ and glutamate) and voltage-gated calcium channels are being studied in neurons, cell lines, and transfected mammalian cells and *Xenopus* oocytes. The intracellular signal transduction pathways modulating the physiological properties of these channels are also being explored. Experience in electrophysiological techniques is required and experience in molecular biology is desirable. Applicants must have less than five years postdoctoral training. Laboratory of Cellular and Molecular Pharmacology (OE-38), NIEHS, P.O. Box 12233, MD 19-04, Research Triangle Park, NC 27709.

Ion Homeostasis and Cell Injury

Elizabeth Murphy, PhD

Changes in ion transport and homeostasis are involved in cell injury caused by environmental toxins or stressors such as anoxia. Fluorescent and NMR measurements of intracellular calcium, pH, sodium and magnesium changes in injured isolated cells and perfused organs are ongoing. Alterations in signal transduction pathways which are responsible for the ionic alterations are also under study. Candidates should have experience in the use of fluorescent or NMR-sensitive indicators and less than five years postdoctoral training. Laboratory of Molecular Biophysics (OE-38), NIEHS, P.O. Box 12233, MD 4A01, Research Triangle Park, NC 27709.

Peptide Neurochemistry

L.H. Lazarus, PhD

The structure and function of highly selective opioid peptides and their respective receptors are being studied and molecular models of these ligands and their receptors are being developed. Future studies will utilize molecular biological approaches to identify receptor domains that are important for ligand binding and biological activity. Applicants must have a strong background in the use of molecular biology techniques. Laboratory of Integrative Biology (OE-38), NIEHS, P.O. Box 12233, Building 101, Room C356, Research Triangle Park, NC 27709.

Protein-Nucleic Acid Interactions

Peggy Hsieh, PhD

The kinetics of DNA branch migration and the role of recombination proteins in promoting branch migration are being investigated to

better understand the role of DNA structure in the process of homologous recombination. Additional projects seek to characterize other enzymes involved in recombination and DNA repair in eukaryotes. Genetics and Biochemistry Branch (OE-38), NIDDK, Building 10, Room 9D15.

Protein Sorting and Molecular Recognition

Harris Bernstein, PhD

The targeting of proteins to the secretory pathway is being studied using a combination of *in vivo* and *in vitro* approaches. Current projects focus on the mechanism by which the signal recognition particle identifies signal sequences, the regulation of protein targeting by a new family of GTPases, and the function of recently discovered prokaryotic homologs of components of the eukaryotic targeting machinery. Genetics and Biochemistry Branch (OE-38), NIDDK, Building 10, Room 9D15.

Signal Transduction and Eicosanoids

Thomas Eling, PhD

As growth factors stimulate the catalytic formation of oxygenated lipids by lipoxygenases and/or prostaglandin H synthase, the role of these lipid mediators in mitogenic signal transduction is being determined. The interaction of these oxygenated lipid products with tyrosine kinases and phosphatases is ongoing and future studies will seek to isolate, clone and sequence relevant genes which are regulated by the kinases and phosphatases. Applicants must have less than five years postdoctoral training. Laboratory of Molecular Biophysics (OE-38), NIEHS, MD B3-01, P.O. Box 12233, Research Triangle Park, NC 27709.

Additional Postdoctoral Fellowship Opportunities

For an on-line listing of additional postdoctoral openings you may access the NIH EDNET Bulletin Board's POSTDOC conference by Internet (cu.nih.gov) or via modem (1,301-402-2221 or 1,800-358-2221). The settings for modem access are "7,Even,1". When connected to NIH, type in "vt100" at the connect message, "F5E" at initial, and "AJL1" at account.

The Postdoctoral Research Fellowship Opportunities catalog may be requested from the address below. An electronic version of the catalog may be accessed via the network-based (Internet) Gopher Information System. To access the NIH Gopher server, Gopher client software (available via anonymous ftp "boombox.micro.umn.edu") must be running on your computer and configured to point to "gopher.nih.gov", port "70". Select *Information for Researchers* to reveal the *NIH Office of Education* directory. Those interested in receiving information on other postdoctoral opportunities, clinical training opportunities, or accessing Gopher may contact the Office of Education, Building 10, Room 1C129. Phone: 301-496-2427.

To Apply

If you hold a graduate doctoral degree (e.g., PhD, MD/PhD) or a professional degree (e.g., MD, DO, DDS, or DVM) accompanied by previous laboratory research experience, and would like to be considered for one of these positions, please send a cover letter, *curriculum vitae*, bibliography, and statement of research interests to the address listed with each position. In addition, please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.



National Institutes Of Health

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POSITIONS OPEN

ELECTROPHYSIOLOGIST IN CARDIOVASCULAR SCIENCES. The Department of Physiology, Faculty of Medicine, University of Manitoba, invites applications for one contingent faculty position at the level of **ASSISTANT PROFESSOR** in the Division of Cardiovascular Sciences. Applicants should have M.D. or Ph.D. degree in any of the medical sciences with 2 or more years of postdoctoral experience in electrophysiology. Candidates are expected to establish an independent research program in the area of cardiovascular electrophysiology and teach both medical and graduate students. The selected individuals will join the MRC Group in Experimental Cardiology to study ischemic heart disease. In addition to start-up funds, operating funds will be available through the MRC Group grant until June 1999. *The University of Manitoba encourages applications from qualified women and men, including members of visible minorities, aboriginal people and persons with disabilities. The University offers a smoke-free environment save for specially designated areas. In accordance with Canadian Immigration, this advertisement is directed to Canadian citizens and permanent residents.* Please send your résumé and statement of research goals and arrange for three letters of reference by October 10, 1993, to: **Dr. N. S. Dhalla, Division of Cardiovascular Sciences, St. Boniface General Hospital Research Centre, 351 Tache Avenue, Winnipeg, Manitoba, Canada, R2H 2A6.**

ASSISTANT/ASSOCIATE PROFESSOR OF PHARMACOLOGY (Lipids/Lipoproteins/Atherogenesis)

The Department of Pharmacology at the University of Tennessee, Memphis, invites applications for a currently available tenure-track position at the Assistant or Associate Professor level. Candidates should possess the Ph.D. or M.D. degree, with postdoctoral training in biochemical, cellular, and molecular aspects of plasma lipids/ lipoproteins and atherogenesis. Faculty are expected to develop extramurally funded research programs and to participate in the teaching activities of the Department. Candidates for Associate Professor should have an established funded research program. The Department of Pharmacology has active research programs in lipid metabolism, molecular biology, autonomic, cancer, cardiovascular, endocrine and neuropharmacology. *Applications from minority candidates and women are strongly encouraged.* Please submit curriculum vitae, a description of research interests and future plans, and the names of three references to: **Dr. Henry G. Wilcox, Chairman, Lipoprotein Search Committee, Department of Pharmacology, The University of Tennessee, Memphis, College of Medicine, 874 Union Avenue, Memphis, TN 38163.** The search will continue until the position has been filled. *The University of Tennessee, Memphis, is an Equal Employment Opportunity/Title IX/Section 504/ADA/Affirmative Action Employer.*

FACULTY POSITIONS IN CELLULAR AND MOLECULAR PHYSIOLOGY

The Department of Cellular and Molecular Physiology of the Pennsylvania State University College of Medicine invites applications for tenure-track faculty positions at the **ASSISTANT/ASSOCIATE PROFESSOR** rank to begin during the 1993-94 academic year. The Department presently has fifteen full-time, well-funded faculty who are working in the general area of cellular and molecular physiology. We are seeking candidates with substantial research experience at the postdoctoral level or above, who are applying molecular biology and recombinant DNA techniques to one or more of the following areas: metabolic regulation, mechanisms of hormone action, membrane receptors, signal transduction mechanisms, and regulation of expression of eukaryotic genes. Significant research accomplishment and ability to obtain independent funding are essential. Excellent opportunities exist for research collaboration, teaching in a medical school curriculum, and participation in one or more graduate programs.

Applicants should submit, prior to December 1, 1993, curriculum vitae, reprints, statement of current and planned research interests, and letters from at least three references to: **Dr. Leonard S. Jefferson, Chairman, Department of Cellular and Molecular Physiology, College of Medicine, The Pennsylvania State University, P.O. Box 850, Hershey, PA 17033.** *We are an Equal Opportunity/Affirmative Action Employer and encourage minority and female applicants to apply.*

POSITIONS OPEN

THE UNIVERSITY OF MANITOBA, DIABETES RESEARCH AND TREATMENT CENTRE. The Diabetes Research and Treatment Centre, an interdisciplinary centre within the Faculty of Medicine at the University of Manitoba invites application for two contingent faculty positions at the level of **ASSISTANT** or **ASSOCIATE PROFESSOR**. Applicants should have a Ph.D., M.D. or equivalent and 3 years of postdoctoral experience in Diabetes Research. Preference will be given to applicants with research interests in the area of molecular genetics or diabetic complications. The primary appointment will be in the Department of Medicine with the possibility of a conjoint appointment in an appropriate basic Science Department. The successful candidate will be expected to direct independent research projects and teach both graduate and medical students. Salary will be commensurate with qualifications and experience. *The University of Manitoba encourages applications from qualified women and men, including members of visible minorities, Aboriginal people and persons with disabilities. The University offers a smoke-free environment save for specially designated areas. Priority consideration will be given to Canadian citizens and permanent residents.* Please send your résumé, statement of research goals and names of three referees by **November 30, 1993**, to: **Dr. L. J. Murphy, Director, Diabetes Research and Treatment Centre, Faculty of Medicine, University of Manitoba, Room 435, Basic Medical Science Building, 730 William Avenue, Winnipeg, Manitoba, Canada R3E 0W3.**

ASSISTANT PROFESSOR: Applications are invited for a position at the level of assistant professor (tenure-track) in the Department of Chemistry at Stanford University, with primary research and teaching interests in the general area of either organic or physical chemistry. This appointment would commence on September 1, 1994, and is subject to final approval. Applicants must be strongly motivated toward creative research and have a commitment to teaching at the undergraduate and graduate levels. In applying, please send curriculum vitae, list of publications, a brief statement of research interests (three pages or less) and, in addition, have three letters of recommendation sent to: **Professor Robert Pecora, Chairman, Department of Chemistry, Stanford University, Stanford, CA 94305.** *Stanford is committed to Equal Opportunity through Affirmative Action in employment, and we are especially eager to identify minority persons and women with appropriate qualifications.* Applications should be received by November 1, 1993.

MICROBIOLOGIST

The Department of Civil Engineering at Stanford University is seeking a microbiologist for a tenure-line **ASSISTANT PROFESSOR** position with the Environmental Engineering and Science (EES) program. Applicants with interests in environmental microbiology; microbial ecology; contaminant movement, fate, and biodegradation; reaction kinetics and thermodynamics; and/or environmental biotechnology; and having experience with modern molecular biology procedures are especially welcome. Send a résumé, undergraduate and graduate transcripts, a description of teaching and research interests, and a list of potential references by **October 31, 1993**, to: **Prof. Perry L. McCarty, Department of Civil Engineering, Stanford University, Stanford, CA 94305-4020.** *Stanford is an Equal Opportunity/Affirmative Action Employer.*

BRANDEIS UNIVERSITY ASSISTANT PROFESSOR, NEUROBIOLOGY

The Center for Complex Systems and the Department of Biology seek a tenure-track Assistant Professor in neurobiology. Exceptional candidates at the rank of associate professor will also be considered. We are especially interested in identifying persons with research interests in the functional analysis of the central nervous system using electrophysiological, biophysical, and/or computational methods. Interested candidates should send curriculum vitae, a statement of research interests and arrange for three letters of recommendation to be sent to: **Dr. Eve Marder, Neurobiology Search Committee, Biology Department, Brandeis University, Waltham, MA 02254-9110.** The deadline for receipt of application is October 25, 1993. Further information can be obtained from: **Drs. Eve Marder, Chair Search Committee or Irwin Levitan, Director, Center for Complex System.** *Women and minorities are encouraged to apply. Brandeis University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

BRANDEIS UNIVERSITY ASSISTANT PROFESSOR, MAMMALIAN MOLECULAR GENETICS

The Department of Biology and the Rosenstiel Basic Medical Sciences Research Center, aided by a grant from the Howard Hughes Medical Institute, seek a tenure-track Assistant Professor interested in mammalian molecular genetics. We are especially interested in, but not restricted to, candidates with a strong research background in the following areas: genetics and molecular biology of human diseases or their mouse models; regulation of mammalian development and differentiation; molecular virology. Candidates should submit curriculum vitae including a description of research interests and arrange for three letters of recommendation to be sent to: **Drs. Ranjan Sen, Michael Rosbash, Pieter Wensink or Neil Simister, Mammalian Genetics Search Committee, Rosenstiel Center, Brandeis University, Waltham, MA 02254-9110.** The deadline for receipt of application is October 31, 1993. *Women and minorities are encouraged to apply. Brandeis University is an Affirmative Action/Equal Opportunity Employer.*

THE DEPARTMENT OF ANATOMICAL SCIENCES has a tenure-track position in **NEUROSCIENCE** available at the **ASSOCIATE PROFESSOR** level for appointment beginning on or before July 1, 1994. Applications are invited from individuals with a Ph.D., M.D., or equivalent degree and at least two years of postdoctoral training. The successful candidate is expected to have an established independent and funded research program in Neuroscience. Teaching responsibilities will be in Microanatomy to professional and graduate students. Candidates should have sufficient experience in teaching Microanatomy to become the course director within two years. Applicants should submit curriculum vitae, a summary of past and proposed research interests and names of three references to:

**Raymond E. Papka, Ph.D.
Chairman of Search Committee
Department of Anatomical Sciences
University of Oklahoma Health Sciences Center
Post Office Box 26901
Oklahoma City, OK 73190**

Review of applicants begins immediately and will continue until the position is filled.

Equal Opportunity/Affirmative Action Employer.

The Seattle Biomedical Research Institute (SBRI) and the University of Washington, with which it is affiliated, invite applications for the position of **SENIOR SCIENTIST** or **STAFF SCIENTIST** at SBRI and a parallel appointment as **ASSISTANT** or **ASSOCIATE PROFESSOR** in the UW Department of Pathobiology. The candidate will be expected to develop an independent, externally funded program in immunoparasitology and to participate in graduate student training. Postdoctoral experience and independence demonstrated by publications and/or competitive grant proposals are required. SBRI conducts basic research on molecular parasitology, immunology, and extracellular receptors in a cooperative, scientist-oriented environment. Please send curriculum vitae, a statement of proposed research, and three letters of reference by **November 1, 1993**, to: **Search Committee, Seattle Biomedical Research Institute, 4 Nickserson Street, #200, Seattle, WA 98109-1651.** *The University of Washington and SBRI are Equal Opportunity/Affirmative Action Employers.*

DEVELOPMENTAL BIOLOGIST

The Department of Biological Sciences at the University of Illinois at Chicago (UIC) invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. We seek applications from individuals whose research emphasizes molecular and genetic approaches to the understanding of animal development. Interests may include, but are not limited to, development of the nervous system, organization of embryonic axes, and cell interactions affecting developmental decisions. Review of applications will begin November 1, 1993, and will continue until the position is filled. Send curriculum vitae, a brief statement of research plans and three letters of reference to: **Developmental Biologist Search Committee, c/o Dr. Sidney B. Simpson, Jr., Head, Department of Biological Sciences, University of Illinois at Chicago, 845 West Taylor Street, Chicago, IL 60607.** *UIC is an Affirmative Action/Equal Opportunity Employer.*

International Program of Research Grants

Selected Countries of Eastern Europe and the Former Soviet Union

The Howard Hughes Medical Institute announces a program of biomedical research grants for the following selected countries: Belarus, Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Russia, Slovak Republic, and Ukraine. The total program budget will be about \$3 million annually for five years, with two types of research grants awarded: (1) grants for the research of scientists at their own institutions in the selected countries, and (2) grants for the joint research of scientists in the selected countries and collaborating scientists in other countries.

Research at the Scientist's Own Institution

About 40–60 grants will be awarded for research by eligible scientists at their own institutions in the selected countries of Eastern Europe and the Former Soviet Union. The five-year grants will be in the range of \$10,000–\$75,000 (U.S.) annually. The research must probe basic biological processes and disease mechanisms, in such fields as cell biology and regulation, genetics, immunology, neuroscience, and structural biology. Clinical trials and research on health education, health care delivery, or health services are not eligible for support under this initiative.

To be considered eligible, scientists (1) must reside in a selected country (or, if they currently live abroad, must plan to return to assume academic or research appointments at institutions in the selected countries), (2) must have made significant contributions to fundamental biomedical research, (3) must have published at least one scientific article in a peer-reviewed international English language journal or must provide a preprint in English of a publication arising from recent collaborative research with an established laboratory abroad, and (4) must not have major administrative responsibilities.

Research Involving International Collaboration

About 40–60 grants will be awarded for collaborative research conducted jointly by an eligible scientist in one of the selected countries and a collaborating scientist in another country. The five-year grants will be in the range of \$10,000–\$75,000 (U.S.) annually. The research must probe basic biological processes and disease mechanisms, as noted above.

For collaborative research awards, the applicant in the eligible country must meet the eligibility criteria described above for research at the scientist's own institution. The collaborating scientist must be an established researcher at an institution that is in a country other than the selected countries of Eastern Europe and the Former Soviet Union. The application must be submitted jointly.

Applications and Awards

Awards, which will be announced in the fall of 1994, will be based on peer review of submitted applications. The deadline for application is December 1, 1993.

To request the program announcement and application, provide to the Institute your name, address, telephone number (including country code), fax number, and e-mail address:

Howard Hughes Medical Institute
Office of Grants and Special Programs
International Program
4000 Jones Bridge Road
Chevy Chase, MD 20815-6789
United States of America
Telephone: 1-301-215-8884
Fax: 1-301-215-8888
Internet: hhmigfil@class.org

The Howard Hughes Medical Institute welcomes applications from all qualified candidates and encourages women and members of minority groups to apply.

BIOCHEMIST ONCOLOGY

Innovative research at Sandoz has been enhancing medicine around the world for over 100 years. Our products have extended and improved the quality of life for countless individuals and revolutionized basic scientific concepts within the transplantation and mental health fields.

Our Oncology department is looking for an individual to work in a biochemistry laboratory where the primary emphasis is on purification and characterization of proteins from natural and recombinant sources that are important for cellular control of oncogenesis.

To qualify the selected individual should possess a MS or equivalent in Biochemistry or Cell Biology and a minimum of two years' experience working in a biochemistry laboratory. Candidates with experience in tumor biology preferred. Hands-on experience in protein and peptide purification, electrophoresis and protein analytics are essential. Additionally, tissue culture skills would also be helpful.

Being part of the research team at Sandoz has its advantages. Our salaries and benefits programs are designed to attract top candidates and provide them with the resources to produce their best. Comprehensive health, dental, and savings plans as well as fitness and athletic facilities are all provided at our attractive location in northwest New Jersey, which also allows for outstanding academic, cultural, and outdoor pursuits. For confidential consideration respond to position **#2682DJ** by forwarding your curriculum vitae or resume and salary requirements to:

SANDOZ PHARMACEUTICALS CORP

Staffing Department
Building 122/3
East Hanover, NJ 07936

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POSTDOCTORAL FELLOWSHIPS NEUROSCIENCE AND AGING INSTITUTE Loyola University Stritch School of Medicine

The Neuroscience and Aging Institute of Loyola University Chicago is now recruiting Postdoctoral Fellows. Recent recipients of a Ph.D. and/or M.D. degree seeking further training in Neuroscience are encouraged to apply. Stipends are competitive, and appointments are for two years.

Successful applicants will select a mentor from among the more than 30 members of the Neuroscience and Aging Institute. These members include faculty from the Departments of Cell Biology, Neurobiology and Anatomy, Molecular and Cellular Biochemistry, Neurology, Pharmacology, Physiology and Psychiatry, and also from the Parmlly Hearing Institute and the Hines VA Hospital.

The major areas of research focus are:

NEURODEGENERATIVE DISEASES *Alzheimer's disease, Parkinson's disease, Substance abuse, Stroke, Epilepsy*

NEURODEVELOPMENT *Alcohol, Drugs of abuse, Altered function in aging*

NEUROENDOCRINOLOGY/NEUROIMMUNOLOGY *Stress, Sexual differentiation, Growth and reproduction*

NEUROREGENERATION/NEUROPLASTICITY

Spinal cord injury, Neural tissue transplantation, Axoplasmic transport, Neurotrophic factors, Protein expression

NEUROTOXICITY *Alcohol, β -carbolines, MPTP, AF64A*

NEUROTRANSMITTERS/NEUROPEPTIDES RECEPTOR SYSTEMS

SENSORY NEUROSCIENCE *Electrophysiology and psychophysics of visual and auditory systems in humans and animal models*

A listing of Neuroscience faculty and their particular research interests is available upon request. Candidates should forward a letter of interest, including future research interests and career goals, curriculum vitae, and names, addresses and phone numbers of three references to:

Neuroscience and Aging Institute Fellowships Committee
c/o Paula Griffin, Building 117, Room 29
Loyola University Medical Center
2160 South First Avenue
Maywood, Illinois 60153
(708) 216-6755

Information must be received and files complete by October 15, 1993.

Loyola University Chicago employs without regard to race, color, age, sex, national or ethnic origin, or religion, and is an equal opportunity employer. Qualified persons are not subject to discrimination on the basis of handicap.

FACULTY POSITIONS IN HUMAN MOLECULAR GENETICS AND VIROLOGY

DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS

UMDNJ-NEW JERSEY MEDICAL SCHOOL

The Department of Microbiology and Molecular Genetics seeks applications for tenure-track position in human molecular genetics and virology. We are looking for outstanding highly motivated individuals who will develop independent research programs and participate in teaching graduate and medical students. While primarily looking to make these appointments at the level of Assistant Professor, distinguished applicants at senior levels will also be considered. The department has 16 full-time faculty who carry out research in various aspects of microbiology and molecular genetics, including control of cell growth; cellular aging; transcriptional, post-transcriptional and translational regulation; mutagenesis; DNA replication and recombination; chromosome structure and segregation; and molecular pathogenesis. We are full equipped for molecular biological research, cell genetics and virology and are associated with the newly established Center for Human Genetics. New Jersey Medical School is part of the medical university of the state of New Jersey and is located in the University Heights section of Newark, NJ, minutes from both pleasant suburbs and downtown New York City.

Send a complete curriculum vitae including future research plans and arrange to have three letters of recommendation sent to Dr. Harvey L. Ozer, Chairman, Department of Microbiology and Molecular Genetics, UMDNJ-New Jersey Medical School, 185 South Orange Avenue, Newark, NJ 07103-2714.

UMDNJ is an Affirmative Action Equal Opportunity Employer M/F/H/V and is a member of the University Health System of New Jersey



New Jersey Medical School

A Clear-Cut Advantage.

Cell Biologists

At CV Therapeutics, a growing biopharmaceutical company focused on cardiovascular diseases, we have a clear-cut advantage in the development of novel drugs. Our proprietary technology and scientific team put our research efforts at the forefront of the industry. We currently have several opportunities available for PhD Cell Biologists to contribute to our research and product development efforts at our San Francisco Bay location.

Your research will focus on understanding the mechanism of protein facilitated cholesterol transport in intestinal cells. Accordingly, you will develop and provide routine maintenance of a cell culture assay for the uptake of cholesterol. You will also initiate a drug discovery program to find candidates to block cholesterol absorption.

Requirements include a PhD degree and 2+ years' postdoctoral or industrial experience, primarily in mammalian cell biology; especially preferred in relationship to signal transduction and lipid metabolism. Some familiarity with molecular biology and protein purification desirable.

Learn more about all of the professional and personal advantages we offer our people. Send your CV and the names of three references along with a cover letter to Pat Donchin, CV Therapeutics, Inc., JC: CB, 1615 Plymouth St., Mountain View, CA 94043. EOE.



Opportunities in Medical Research

Global Resources,

The Medical Research Division of American Cyanamid Company,

Global Programs,

combines the resources of a global organization with

Global Results

the dedication of world class scientists to achieve results that have changed our industry. If

you're dedicated to innovation and are interested in the kind of support only a leader in medical research can provide, consider the following opportunities:

Research Chemist/Chemical Process Research & Development

Works in chemical process research and development department on new clinical leads. Responsible for laboratory and pilot plant development of safe, efficient processes for the preparation of bulk drug substances.

Ph. D. with a strong organic synthesis background. Process development experience preferred. Respond to: Dept. #9650.

Research Scientist/Biotechnology Development

Responsible for monoclonal antibody drug conjugate formulation development, optimization and scale up for production.

Ph.D./M.S. with experience in biochemistry and immunology required. Background with proteins and their freeze-drying preferred. Respond to: Dept. #9702.

Molecular Neuroanatomy Scientist/Central Nervous System Biological Research

Responsible for molecular neuroanatomy research focused on neurodegeneration and memory using modern neuroanatomical techniques to identify targets for therapeutic drugs.

M.S. or B.S./B.A. and expertise in *in situ* hybridization histochemistry, *in vitro* radioligand binding, quantitative autoradiography or immunocytochemistry. Experience in small animal surgery, tissue sectioning, and computer assisted data analysis is also desirable. Respond to: Dept. #9697.

Neuropsychopharmacology Scientist/Central Nervous System Biological Research

Participates in research focused on *in vitro* and *in vivo* experimental studies emphasizing a multi-disciplinary approach to CNS drug discovery.

M.S. or B.A./B.S. in neuroscience, pharmacology, biology, or related discipline, and one or more years of industrial/academic experience. A background in one or more of the following areas is essential: receptor binding, second messenger system assays and methodology involving quantification of neurochemical parameters. Additionally, the individual will have excellent computer skills and be familiar with computer-assisted data analysis. Experience with cell/tissue culture techniques, small animal surgery and/or animal-handling is desirable. Respond to: Dept. #9696.

Molecular and Cellular Neurobiology Scientists/Central Nervous System Biological Research

Two positions are available in the Alzheimer's Disease Program which focuses on the cellular trafficking and processing of Amyloid Precursor Protein to develop innovative strategies targeting the prevention of both β -amyloid peptide generation and its neurotoxicity.

Ph.D. (post-doctoral) with expertise in cell biology, preferably with a strong background in protein biochemistry and/or molecular biology. M.S. or B.A./B.S. degree in neuroscience, pharmacology, biology or related discipline and one or more years of industrial/academic experience. Respond to: Dept. #935.

Research Protein Chemist/Molecular Angiogenesis

Responsible for research focused on molecular mechanisms of endothelial cell proliferation and capillary blood vessel formation. Emphasis is placed on a multidisciplinary approach to the detailed molecular investigation of proteins that are essential to angiogenesis and may be potential targets for drug development.

M.S. (+1-3 years) or B.S. (+3-5 years) in protein chemistry, molecular biology, or cell biology research. Instrumentation/computer skills are preferable. Respond to: Dept. #9670.

Our state-of-the art facilities are located in a stimulating campus environment just 30 miles from New York City. We offer a competitive salary and flexible benefits program. For consideration, please forward your resume to:

Medical Research Division, Personnel, Lederle Laboratories, 401 N. Middletown Road, Building 140, Room 224, Pearl River, NY 10965. An equal opportunity employer.



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POSITIONS OPEN

FACULTY POSITIONS IN THE DEPARTMENT OF MOLECULAR GENETICS, BIOCHEMISTRY AND MICROBIOLOGY

We are presently searching for two tenure-track faculty members at the **ASSISTANT PROFESSOR** level. We are particularly interested in individuals who work in eukaryotic cellular or viral systems with an emphasis on signal transduction or transcription factors. More senior candidates whose program provides a unique fit with our program will also be considered. The department currently has 25 full-time members with strong research programs. We are the lead department in the NHLBI-sponsored Program of Excellence in Molecular Biology and are presently developing a structural biology unit in conjunction with the Cardiovascular Center. We maintain a strong and active graduate program, plus core facilities in microbiology, cell culture, DNA synthesis and sequencing, production of transgenic and knockout mice. All these factors contribute to an excellent research atmosphere. Generous start-up funds and space are available. *We are particularly interested in identifying women and minority candidates.* Applicants should submit curriculum vitae, brief description of anticipated research and the names of three qualified references to: **Jerry B. Lingrel, Ph.D., Professor and Chair, Department of Molecular Genetics, Biochemistry and Microbiology, University of Cincinnati College of Medicine, Cincinnati, OH 45267-0524.**

Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS IN STRUCTURAL BIOLOGY

The Department of Molecular Genetics, Biochemistry and Microbiology and the Cardiovascular Center of the University of Cincinnati College of Medicine announce the opening of two faculty positions; one at the **ASSOCIATE PROFESSOR** level and the other at the **ASSISTANT PROFESSOR** level. The department currently has 25 full-time members with strong research programs and is the lead department in the NHLBI-sponsored Program of Excellence in Molecular Biology of the Heart and Lung. We maintain a strong and active graduate program, plus core facilities in microbiology, cell culture, DNA synthesis and sequencing and production of transgenic and knockout mice. We are now developing a major structural biology program with generous support from the Marion-Merrell Dow Foundation. We seek to identify investigators who are using physical techniques such as NMR, X-ray or electron diffraction to understand basic questions related to the structure and function of biological macromolecules. Priority will be given to applicants whose research programs also include molecular genetic approaches and emphasize molecules of special significance in the cardiovascular system. *We are particularly interested in identifying women and minority candidates.* Applicants should submit curriculum vitae, brief description of anticipated research and the names of three qualified references to: **Jerry B. Lingrel, Ph.D., Chair Search Committee, Department of Molecular Genetics, Biochemistry and Microbiology, University of Cincinnati College of Medicine, Cincinnati, OH 45267-0524.**

Affirmative Action/Equal Opportunity Employer.

CELL BIOLOGY: ASSISTANT PROFESSOR Yale University School of Medicine

The Department of Cell Biology invites applications for a position at the rank of Assistant Professor starting in 1994. Candidates must hold the degrees of M.D. and/or Ph.D. and have at least two years of postdoctoral experience. Candidates should have research expertise in cell or developmental biology, in molecular biology applied to study of cell function, or in cellular or molecular neurobiology. Successful candidates will be expected to develop independent, externally funded research programs and to participate in the teaching and training of medical students, graduate students, and postdoctoral fellows. Applicants should send curriculum vitae, a statement of research accomplishments, research plans and teaching interests, and names of three referees before November 15, 1993:

**Chair, Department of Cell Biology
Yale University School of Medicine
P.O. Box 208002
New Haven, CT 06520-8002**

Yale University is an Equal Opportunity/Affirmative Action Employer. Women and minority group members are encouraged to apply.

POSITIONS OPEN

ASSISTANT PROFESSOR OF GENETICS Harvard Medical School and Dana-Farber Cancer Institute

The Dana-Farber Cancer Institute and the Department of Genetics, Harvard Medical School, invite applications for a tenure-track position of Assistant Professor of Genetics. Candidates should have strong credentials in specialized areas of eukaryotic molecular genetics such as cell cycle, differentiation, tumor suppression or gene regulation. Major responsibilities will include supervision of an active research program and participation in the teaching of genetics and molecular biology to graduate and medical students. Applicants should submit a research summary, curriculum vitae and three letters of reference by November 30, 1993, to: **Dr. Priscilla A. Schaffer, Chairperson of the Search Committee, Dana-Farber Cancer Institute, B406, 44 Binney Street, Boston, MA 02115.** *Harvard Medical School and the Dana-Farber Cancer Institute are Equal Opportunity/Affirmative Action Employers. Women and minority candidates are encouraged to apply.*

RESEARCH ASSISTANT PROFESSOR

Immediate opening for a molecular neurobiologist. Requires a Ph.D. with at least four years of postdoctoral experience in analysis of ion channel gene expression and in molecular cloning of channels. Thorough familiarity with techniques such as EMSA, RNase protection and primer extension assays, DNase footprinting, expression-cloning, and protein purification is essential. Closing date September 30, 1993. Curriculum vitae and 3 letters of reference to: **Robert L. Barchi, M.D., Ph.D., Chair, Department of Neuroscience, 215 Stemmler Hall/6047, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6074.** *Affirmative Action/Equal Opportunity Employer.*

PATHOLOGY RESEARCH PROFESSOR

The Department of Pathology, SUNY Health Science Center at Syracuse, is accepting applications and nominations for **ENDOWED RESEARCH PROFESSOR**. The successful candidate should have an M.D. or Ph.D. degree (in one of the basic biological sciences), and a distinguished record of achievement in research and demonstrated excellence in education. The applicant is expected to maintain a vigorous and productive research program, facilitate the research programs of the department and contribute to the training of young investigators in biomedical research and molecular pathology. The department has diverse research interest and faculty collaborate with members of other departments. Rank listed as Associate Professor/Professor, depending on qualifications and experience. Review of applications will begin immediately to fill position available January 1, 1994, and will continue until position is filled. Send curriculum vitae, supporting information and names of three references to: **Frederick Davey, M.D., Chair of Endowed Research Professor Committee, Department of Pathology, SUNY Health Science Center at Syracuse, 750 East Adams Street, Syracuse, NY 13210. Telephone: (315) 464-5739.** *SUNY HSC is an Equal Employment Opportunity/Affirmative Action/ADA Employer strongly committed to achieving excellence through cultural diversity. Nominations of women, persons of color and members of other underrepresented groups are encouraged.*

ASSISTANT PROFESSORS

(Microbiology/Immunology and Biochemistry/Molecular Biology)—The Microbiology/Immunology and Biochemistry/Molecular Biology Departments of The Philadelphia College of Osteopathic Medicine have 4 Assistant Professor-level tenure-track positions available and invite professionals with a commitment to excellence in teaching medical and graduate students to apply. Applicants must have a Ph.D., D.O., M.D., or equivalent degree, postdoctoral experience as well as demonstrated ability to obtain support for productive research. Applicants should send curriculum vitae, brief statement of current and future research plans, and names/addresses of three references to: **Walter S. Ceglowski, Ph.D., Chairman, Department of Microbiology/Immunology or Eugene Mochan, Ph.D., D.O., Chairman, Department of Biochemistry/Molecular Biology, PHILADELPHIA COLLEGE OF OSTEOPATHIC MEDICINE, 4170 City Avenue, Philadelphia, PA 19131-1696.** *Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITIONS West Virginia University School of Medicine

The Department of Biochemistry invites applications for one or two tenure-track, 12-month positions at the level of **ASSISTANT, ASSOCIATE or FULL PROFESSOR**. Applicants at the Assistant Professor level should have a doctoral degree, significant postdoctoral research experience and a strong record of research accomplishments. Applicants at the Associate or Full Professor level must have a doctoral degree and nationally recognized and funded research program and an ability to work effectively with students, faculty, staff and administration. The successful candidate is expected to develop or maintain an independent research program which addresses important biological problems, to interact with other research programs in the Health Sciences Center and to participate in graduate and medical education. Candidates in all areas of Biochemistry are encouraged to apply; however, special consideration will be given to those using molecular biological or physical-biochemical approaches in their research. Excellent start-up funds and salaries are available. Applicants should send curriculum vitae, including brief description (2 to 3 pages) of research accomplishments and future research plans, and three names, addresses and telephone numbers for reference to be sent to: **Dr. Andrew Shienk, Department of Biochemistry, WVU Health Sciences Center, P.O. Box 9142, Morgantown, WV 26506-9142.** Evaluation of candidates will begin October 1, 1993, and will continue until the positions are filled. *West Virginia University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

Massachusetts Institute of Technology Department of Biology

Applications are sought for a tenure-track faculty position at the level of **ASSISTANT PROFESSOR** in any area of molecular, cell, or structural biology.

Applicants should have significant research accomplishments, the ability to establish and maintain a vigorous research program, and a commitment to excellence in education at the undergraduate and graduate levels.

Applicants should provide curriculum vitae, a summary of research accomplishments and proposed research, and copies of key publications or preprints. Applicants should arrange that at least three letters of recommendation be sent from scientists who can evaluate their accomplishments and future research and teaching. Applications should be sent to:

**Biology Search Committee
Attention: Marilyn T. Smith
Massachusetts Institute of Technology
77 Massachusetts Avenue
Building 56-111
Cambridge, MA 02139**

MIT is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are especially encouraged to apply.

ELECTROPHYSIOLOGIST IN CARDIOVASCULAR SCIENCES. The Department of Physiology, Faculty of Medicine, University of Manitoba, invites applications for one contingent faculty position at the level of **ASSOCIATE PROFESSOR** in the Division of Cardiovascular Sciences. Applicants should have M.D. or Ph.D. degree in any of the medical sciences with 2 or more years of faculty experience in electrophysiology. Candidates are expected to establish an independent research program in the area of cardiovascular electrophysiology and teach both medical and graduate students. The selected individuals will join the MRC Group in Experimental Cardiology to study ischemic heart disease. In addition to start-up funds, operating funds will be available through the MRC Group grant until June 1999. *The University of Manitoba encourages applications from qualified women and men, including members of visible minorities, Aboriginal people and persons with disabilities. The University offers a smoke-free environment save for specially designated areas. In accordance with Canadian Immigration, this advertisement is directed to Canadian citizens and permanent residents.* Please send your résumé and statement of research goals and arrange for three letters of reference by October 10, 1993, to: **Dr. N. S. Dhalla, Division of Cardiovascular Sciences, St. Boniface General Hospital Research Centre, 351 Tache Avenue, Winnipeg, Manitoba, Canada, R2H 2A6.**

Howard Hughes Medical Institute

Fellowships for Biological and Biomedical Sciences

The Howard Hughes Medical Institute announces the 1994 competitions for fellowship programs that support training in fundamental biological and biomedical research. Awards, based on international competitions, focus on research directed to understanding basic biological processes and disease mechanisms. Fellowships may be held at academic or not-for-profit research institutions.

Predoctoral Fellowships in Biological Sciences

Up to five years of support for full-time graduate study toward a Ph.D. degree in biostatistics, cell biology and regulation, epidemiology, genetics, immunology, neuroscience, or structural biology. Applicants must not have completed the first year of postbaccalaureate graduate study in biology. *Application deadline: early November.*

Postdoctoral Research Fellowships for Physicians

Three years of support for training in fundamental research subsequent to at least two years of postgraduate clinical training and no more than two years of postdoctoral research training. *Application deadline: early January.*

Research Training Fellowships for Medical Students

An opportunity for medical students in the United States to explore a burgeoning interest in fundamental research. Support is awarded for one year of full-time fundamental research in a laboratory at the student's medical school or another institution (except NIH). *Application deadline: early December.*

Research Scholars at the National Institutes of Health

Under this joint HHMI-NIH program, medical students in the United States spend an intensive year in research in the intramural program at the NIH in Bethesda, Maryland. Residence is provided at the Cloister on the NIH campus. *Application deadline: early January.*

For Program Announcements and Applications

For Predoctoral Fellowships:

Hughes Fellowship Program
The Fellowship Office
National Research Council
2101 Constitution Avenue
Washington, D.C. 20418
United States of America
(202) 334-2872

For Other Programs:

Howard Hughes Medical Institute
Office of Grants and Special Programs
Department AL94
4000 Jones Bridge Road
Chevy Chase MD 20815-6789
United States of America
(301) 215-8889

The Howard Hughes Medical Institute, an Equal Opportunity Employer, welcomes applications from all qualified candidates and encourages women and members of minority groups to apply.

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on the quality of
the resources.

SENIOR PRINCIPAL SCIENTIST GENERAL TOXICOLOGY

There are a number of components to success in the pharmaceutical research process. The most important is our people. At Schering-Plough, we hire the best talent in our industry. Then, we provide them with the technical resources they need to do their best work: the most advanced instrumentation; the latest computerized systems; modern lab facilities. We spend over \$500 million annually on R&D, and have just occupied a \$300 million R&D facility.

Commitment of this scope has helped us achieve \$4 billion in annual sales around the world. To maintain our leadership position as a pharmaceutical firm with a very rich product pipeline, we are seeking a Senior Principal Scientist to join our Safety Evaluation Center in Lafayette, New Jersey. Lafayette is a rural, northwestern New Jersey community, set among rolling hills and dairy farms.

Reporting to the Director, General Toxicology, you will lead drug safety programs. This will involve planning, implementing, reporting and interpreting animal toxicology studies; and integrating the results with information from other groups, such as Drug Metabolism and Pharmacokinetics. You will serve as Study Director for drug safety studies; and actively participate on multidisciplinary drug development teams for human pharmaceuticals.

Requirements for this pivotal position include a PhD in Toxicology (or related discipline), certification by the American College of Toxicology and 3+ years of relevant experience. A background interacting with governmental regulatory authorities and

demonstrated project management skills for studies conducted in third-party contract laboratories would be decided assets.

Schering-Plough Research Institute offers a comprehensive compensation package that includes a salary commensurate with your experience and education, a generous benefits program and an attractive relocation policy. For confidential consideration, please send your curriculum vitae and salary requirements to: Mr. William E. Decker, Human Resources Manager-Research Department 1772, Schering-Plough Research Institute, 2015 Galloping Hill Road, Kenilworth, New Jersey 07033. We are an equal opportunity employer.



Schering-Plough
Research Institute

Using Science for Human Advantage

ANIMAL BEHAVIOR: INTERDISCIPLINARY TRAINING AT THE UNIVERSITY OF CALIFORNIA, DAVIS

Opportunities are available for Postdoctoral Training, Graduate Training and Undergraduate Summer Fellowships through the Research Training Group in Animal Behavior, supported by the National Science Foundation. The aim of the program is to provide broadly interdisciplinary training for outstanding students to address problems in the study of animal behavior. A second explicit aim of the program is to increase representation of under-represented groups in the behavioral and biological sciences. Selection will be based on academic accomplishment and promise of ability to benefit maximally from interdisciplinary training.

POSTDOCTORAL TRAINING: 2-year appointment, starting stipend \$18,600 plus medical benefits and limited research funds. **DEADLINE:** December 15, 1993 (or until filled).

GRADUATE TRAINING: 4 years of support, annual 9-month stipend of \$9,324 plus payment of tuition and educational fees (applicants must apply separately to a graduate program at UC Davis). **DEADLINE:** December 15, 1993.

UNDERGRADUATE SUMMER FELLOWSHIPS: 2-month research internships, \$750 stipend plus room, board and roundtrip transportation to Davis. **DEADLINE:** January 15, 1994. All applicants must be US citizens or permanent residents. The University of California is an Equal Opportunity/Affirmative Action Employer. To receive an application contact: Jeni Trevitt, Animal Behavior Program, University of California, Davis, CA 95616, Phone (916) 752-4863, fax (916) 752-8391, e-mail jmtrevitt@ucdavis.edu (please specify postdoctoral, graduate or undergraduate application).

MOLECULAR IMMUNOLOGISTS/ CELL BIOLOGISTS

Gwen Knapp Center for Lupus and
Immunology Research
The University of Chicago

The Gwen Knapp Center for Lupus and Immunology Research of the University of Chicago is seeking applicants at the Assistant and Associate Professor levels to join the newly formed Center. The Center is committed to developing a strong program in molecular immunology. We are seeking outstanding individuals who are using the approaches of molecular biology and cell physiology to examine basic immune mechanisms and/or disorders such as signal transduction, gene regulation, and antigen processing. Existing immunology programs at the University of Chicago include: lymphocyte development, B and T cell activation, antigen presentation, tumor immunology, transplantation, and autoimmunity. Candidates should have sufficient research experience to demonstrate both significant accomplishment and outstanding promise. Faculty appointments will be tenure-track in the most appropriate academic department where the candidate will be expected to exercise full membership. New state-of-the-art laboratory space will be located within the Institute for Molecular Medicine which is now being formed. This Institute will also house programs in molecular oncology, vascular biology, human genetics, and neurobiology. Letters of application including curriculum vitae, bibliography, a brief statement indicating research interest, and the names of 3 references should be sent to: Dr. Craig B. Thompson, Director, Gwen Knapp Center for Lupus and Immunology Research.



THE UNIVERSITY OF CHICAGO
5841 S. Maryland Avenue, MC1028
Chicago, IL 60637

The University of Chicago is an Affirmative Action Equal Opportunity Employer

National Institute of Allergy and Infectious Diseases
National Institutes of Health

NIH Seeks 2 Scientists/Physicians

The Division of Allergy, Immunology and Transplantation is seeking outstanding physicians (M.D.), scientists (Ph.D.), or persons with equivalent experience for Chief of the Immunoregulation Section and Chief of the Host Defense and Inflammation Section. Candidates should have a strong research background in the fields of basic and/or clinical immunology.

Each position offers the challenging opportunity to creatively direct an extramural scientific research program. Possibility of some time for bench and/or clinical research. We offer a competitive salary and outstanding benefits.

These are GS-14 positions with a salary range between \$66,067 and \$83,059 per annum for physicians and between \$56,627 and \$73,619 per annum for non-physicians. Physicians comparability allowance up to \$20,000 may be applicable.

Please send resume or your Application for Federal Employment (SF-171) to:

Dr. Robert A. Goldstein
DAIT, NIAID
Solar Building, Room 4A18
National Institutes of Health
Bethesda, Maryland 20892
Telephone: (301) 496-1886
Fax: (301) 402-2571



U.S. Citizenship Required • NIH is an Equal Opportunity Employer

RESEARCH OPPORTUNITIES ONCOLOGY

Innovative research at Sandoz has been enhancing medicine around the world for over 100 years. Pioneering drugs have extended and improved the quality of life for countless individuals and revolutionized basic scientific concepts. We are currently looking for Scientists to become a part of our research team.

SCIENTIST

The selected candidate will participate directly in cellular and molecular oncology research which includes studies of the mechanisms of cell growth, differentiation and transformation, the roles played by nuclear receptors, oncogenes and tumor suppressant genes. Responsibilities will also include assisting in laboratory management, including preparation of stock solutions, maintenance of tissue culture lines.

To qualify you must possess a MS/BS in biological science or equivalent with a minimum of 3-5 years of relevant experience respectively. Experience with mammalian tissue culture and molecular biology a must.

Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and an excellent benefits package. Our campus-like facilities are conveniently located in northern New Jersey. For prompt confidential consideration, respond to position #2677DJ and forward your resume and salary requirements in confidence to:

SANDOZ PHARMACEUTICALS CORP

Staffing Department
Building 122/3
East Hanover, NJ 07936

An Equal Opportunity Employer M/F/D/V



SANDOZ

bringing research to life

SCIENTIFIC OFFICERS I AND II

SCIENTIFIC OFFICER I -

A position for a director of a molecular biology division in a large hospital laboratory is available immediately. Institutional funds are available to provide technical support, equipment and supplies. This individual will be expected to establish his or her own research program, and also to serve as a consultant to the Department of Laboratories.

Applicant should have a Ph.D. or equivalent degree with experience in molecular biology.

SCIENTIFIC OFFICERS II -

Positions are available for individuals possessing a Ph.D. degree in the biological sciences to serve as director or clinical laboratory sections.

Duties of these positions include monitoring proficiency testing, quality control, supervision of laboratory personnel, training of pathology residents, and financial management of their section.

Send resumes to:

Chairman, Department of Pathology
and Laboratory Medicine
Cook County Hospital
1835 W. Harrison Street
Chicago, IL 60612
or fax 312/633-3364



Equal Opportunity Employer

RESEARCH SCIENTISTS/ENGINEERS Vaccine Development

Merck Research Laboratories is involved in multi-national collaborations to develop combination pediatric vaccines as well as new vaccines. These collaborations focus on purification, formulation and analytical characterization of protein and carbohydrate antigens from a variety of bacterial and viral sources as well as development of polysaccharide-protein conjugate and nucleic acid-based vaccines. These efforts require a staff that is diverse in experience, technically strong and highly motivated, with exceptional organizational and communication skills. The open positions are described below.

Bio-Process Engineers to perform vaccine product development using state-of-the-art technology, process characterization and validation, manufacture of clinical materials, technology transfer and preparation of regulatory support documents. Lab and project experience desired. One position for Ph.D. and one for B.S./M.S. in chemical engineering, biochemistry or equivalent.

Bio-Analytical Chemists to provide analysis of new vaccine products using state-of-the-art technology for characterization of vaccine components.

Experience with a broad range of physical, chemical, biological and/or immunological methods for analyzing biological macromolecules. Strong emphasis on methods development. One position for Ph.D. and one for B.S./M.S. in analytical chemistry, biochemistry or equivalent.

Immunologists/Microbiologists to develop novel in vitro and in vivo biological assays to monitor vaccine interactions and immunogenicity in appropriate animal models as well as other biochemical assays for newly developed vaccine products. Ph.D. in immunology or microbiology or equivalent with post-doctoral experience. Additional background in biochemistry desired.

The above positions will be located in West Point, PA located approximately 25 miles northwest of Philadelphia. Merck & Co., Inc. a world leader in pharmaceutical and vaccine research and America's Most Admired Corporation for the past seven years, provides excellent salary and benefits programs as well as a stimulating, growth-oriented research environment.

Please send curriculum vitae with cover letter and the names of three references to **Personnel Manager, Ad #C-14, MRL Human Resources WP 42-2, Merck Research Laboratories, P.O. Box 4, West Point, PA 19486.** EEO/AA/V/Employer.



MERCK

Research Laboratories

POSITIONS OPEN

IMMUNOLOGIST/ASSISTANT, ASSOCIATE or FULL PROFESSOR. Department of Microbiology, Montana State University. Doctoral degree required, M.D. preferred, 2 to 3 years of postdoctoral experience preferred. Desired start date June 1 to July 30, 1994. Supported by Department of Microbiology and WAMI Regional Medical Educational Program providing first-year medical school curriculum at Montana State University for 20 medical students enrolled in University of Washington School of Medicine. Primary teaching responsibilities in general pathology; participation in immunology or infectious disease. Successful candidate will establish vigorous independently funded research program. Individuals with research interests in cellular and molecular immunology, inflammation or infectious disease are preferred. Teaching component about one-third funded by Montana State University instructional budget; research component, about two-thirds, funded by candidate's extramural program. Send letter of application, curriculum vitae and names and telephone numbers of four references to: **Search Committee Chair, Department of Microbiology, Montana State University, Bozeman, MT 59717. Telephone: (406) 994-2373.** Screening begins November 30, 1993. Contingent upon availability of funds. *American Disabilities Act/Affirmative Action/Equal Opportunity and Veterans Preference Employer.*

AUDITORY PHYSIOLOGIST

The Department of Otolaryngology at the University of Minnesota is searching for an Auditory Physiologist. This is a tenured position at the level of **ASSOCIATE PROFESSOR or PROFESSOR.** Priority will be placed on applicants with demonstrated interest in neurophysiological coding issues related to sensation and perception in normal and impaired auditory systems. Responsibilities include development of a productive research program related to mechanisms of auditory dysfunction, maintenance of that research program through external funding, and education of residents and graduate students in clinical and basic-science disciplines.

Submit current curriculum vitae, statement of research interests, representative publications, and list of potential references to: **David A. Nelson, Ph.D., Search Committee Chair, Department of Otolaryngology, Room 221 Lions Research Building, 2001 Sixth Street S.E., Minneapolis, MN 55455.** The last date for receipt of applications is October 1, 1993. *The University of Minnesota is an Equal Opportunity Educator and Employer.*

CELL BIOLOGIST

The Department of Biological Sciences at the University of Notre Dame invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level. The successful candidate is expected to develop and maintain an active research program in an area of modern cell biology. Teaching responsibilities will be one course per semester and will include an advanced undergraduate lecture and laboratory course in cell biology. The University of Notre Dame offers competitive salary, generous seed money, and state-of-the-art research facilities. Applicants should submit curriculum vitae and letters from three references by October 15, 1993, to: **Dr. Joseph E. O'Tousa, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556.** *The University of Notre Dame is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR ORGANIC CHEMISTRY

The CITY COLLEGE of CUNY seeks applicants for a tenure-track position in **ORGANIC CHEMISTRY.** It is anticipated that the appointment will be made at the level of **ASSISTANT PROFESSOR or ASSOCIATE PROFESSOR.** Postdoctoral experience is expected. Persons who are interested in teaching at both undergraduate and graduate levels and in building an active, funded research program are invited to apply.

Curriculum vitae, selected reprints, a statement of research interests, and names of at least three references should be sent to: **Prof. Michael Green, Department of Chemistry**

City College of New York
Convent Avenue at 138th Street
New York, NY 10031

An Affirmative Action/Equal Opportunity Employer, M/F.

POSITIONS OPEN

SMALL GRAINS PATHOLOGY ASSISTANT/ASSOCIATE PROFESSOR

A 12-month, tenure-track/tenured, research/teaching faculty position. Expected to develop an independent research program in small grains pathology and collaborate/cooperate with small grains breeders/scientists. Advising graduate students and teaching undergraduate/graduate courses in Plant Pathology. Success in competing for outside grant funds from commodity groups/other competitive sources expected. Ph.D. by date of appointment in a discipline relevant to plant pathology with an emphasis on disease management. Evidence of publication in refereed journals and experience in teaching. Strong background in resistance breeding of cereal crops; skills and interest in public communications; postdoctoral research experience. Send curriculum vitae, college transcripts, statement of research, teaching and career interests and goals, and have three letters of recommendation sent by December 1, 1993, to: **Dr. Roger K. Jones, Search Committee Chair, Department of Plant Pathology, 495 Borlaug Hall, University of Minnesota, St. Paul, MN 55108. Telephone: (612) 625-6290, FAX: (612) 625-9728.**

The University of Minnesota is an Equal Opportunity Educator and Employer.

ASSISTANT PROFESSOR OF CHEMISTRY, RICE UNIVERSITY. (Tenure-track.) Imaginative and energetic candidates are sought in any area of "physical" chemistry. Innovative research programs in fields which complement those of the department are desired, with emphasis on areas which transcend traditional boundaries. Candidates should send letters of recommendation, a résumé, and a description of their proposed research program to: **Prof. Philip R. Brooks, Faculty Search Committee, Chemistry Department, Rice University, Houston, TX 77251-1892.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

NEUROBIOLOGIST

The Department of Biological Sciences at the University of Illinois at Chicago (UIC) invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. We seek a neurobiologist interested in understanding integration in neural systems using cellular or computational approaches. Interests may include, but are not limited to, sensorimotor integration in invertebrates or vertebrates, and modulation of synaptic function relevant to behavior. Review of applications will begin September 15, 1993, and will continue until the position is filled. Send curriculum vitae, a brief statement of research plans, and three letters of reference to:

Neurobiology Search Committee
c/o Dr. Sidney B. Simpson, Jr., Head
Department of Biological Sciences
University of Illinois at Chicago
845 West Taylor Street
Chicago, IL 60607

UIC is an Affirmative Action/Equal Opportunity Employer.

CHAIR

Department of Biology
The University of Texas at Arlington

Applications and nominations are invited for the position of Professor and Chair of the Department of Biology beginning fall 1994. The successful candidate must have a Ph.D. in a relevant field, leadership abilities and a record of accomplishment in teaching and research. The Chair is expected to provide intellectual and administrative leadership for 22 faculty, with diverse research interests in the ecological, organismal and molecular aspects of biology, and will be responsible for faculty/staff personnel affairs, budget management and coordination of teaching programs. The department has teaching responsibilities for 1300 undergraduate majors and 60 graduate students, and offers the M.S. in Biology and the Ph.D. in Quantitative Biology. The University of Texas-Arlington is located midway between Dallas and Ft. Worth and, with 24,000 students, is the second largest university in the University of Texas System. Send curriculum vitae, statements of administrative philosophy and career goals, and names, addresses and telephone numbers of five references to: **Chair Search Committee, Department of Biology, Box 19498, The University of Texas at Arlington, Arlington, TX 76019-0498.** Evaluation of applications will begin October 15, 1993. *An Equal Employment Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSOCIATE DIRECTOR—GENTEST Laboratories, Inc., a state-of-the-art DNA analysis lab located in the New Orleans Metropolitan Area, has an immediate opening for an Associate Director in the Paternity Testing Department. Applicants should have a Ph.D. in molecular biology or a related field. Prior experience in paternity testing is highly desirable. Send curriculum vitae and three letters of recommendation to: **Operations Manager, GenTest Laboratories, Inc., 3101 West Napoleon Avenue, Suite 200, Metairie, LA 70001.**

THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER AT DALLAS

CHAIR, DEPARTMENT OF BIOCHEMISTRY

The University of Texas Southwestern Medical Center at Dallas invites applications and nominations for the position of Chair, Department of Biochemistry. Applicants should have an outstanding record of research accomplishments and demonstrated ability to provide leadership for this excellent department, which includes more than 30 faculty and over 100 fellows and students. Established research programs include major areas of molecular biology, genetics, developmental biology, and structural biology. There is opportunity for significant expansion, and the Chair will be responsible for recruiting, in addition to oversight of the research and the graduate and medical teaching functions of the department. Institutional support is from both state funds and generous endowments. Applications should be submitted by November 1, 1993, although the search will proceed until the position is filled. Send curriculum vitae to: **Dr. Alfred G. Gilman, Department of Pharmacology, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235.** *The University of Texas Southwestern Medical Center is an Equal Opportunity/Affirmative Action Employer.*

ADMINISTRATIVE POSITIONS at the College of Veterinary Medicine, University of Missouri—Columbia: **ASSOCIATE DEAN FOR ACADEMIC AFFAIRS; CHAIR, DEPARTMENT OF VETERINARY BIOMEDICAL SCIENCES; CHAIR, VETERINARY MICROBIOLOGY.** Candidates must have a D.V.M. or equivalent degree and/or Ph.D. and demonstrated research and teaching abilities commensurate with an appointment as Professor to merit tenure, as well as outstanding administrative traits such as leadership, organizational and communication skills.

Qualified applicants are invited to submit a letter of application, current curriculum vitae, and names of 3 references prior to December 1, 1993. Inquiries, nominations or applications should be sent to: **Dr. Gerald M. Buening, Office of the Dean, College of Veterinary Medicine, University of Missouri, Columbia, MO 65211.** *The University of Missouri is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION UNIVERSITY OF VERMONT NMR SPECTROSCOPIST

The Department of Biochemistry of the University of Vermont College of Medicine has available a full-time (12-month appointment) tenure-track position. We are seeking an NMR spectroscopist with demonstrated expertise in structural biology, for example, in the characterization of macromolecules. There are identified funds available for the purchase of a high field NMR spectrometer with 2-D and multinuclear capabilities. The individual selected will be expected to maintain an externally funded, independent research program, to participate in the teaching programs of the Department, and to assume appropriate administrative obligations. We anticipate that the appointee will assume a leadership role in the development of a central facility for studies in the area of structural biology. Rank and salary are negotiable and commensurate with experience and accomplishments. Please send a résumé, including a description of research interests, career goals, present and past research support, and the names of three references to: **Chair, Search Committee, Department of Biochemistry, Given Building, University of Vermont, College of Medicine, Burlington, VT 05405-0068.** *The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and people from diverse racial, ethnic and cultural backgrounds are encouraged to apply. Applications will be accepted until the position is filled.*



AMERICAN ASSOCIATION FOR CANCER RESEARCH SCIENTIFIC CONFERENCES: 1993-1994

NOVEMBER 7-11, 1993

***Molecular Approaches to
Cancer Immunotherapy***

Chairperson: Ralph A. Reisfeld, San Diego, CA
Grove Park Inn, Asheville, NC

NOVEMBER 9-13, 1993

***Interactions of Cancer Susceptibility
Genes and Environmental Carcinogens***

Joint Meeting with International Agency for
Research on Cancer (IARC)
Chairpersons: Frederick P. Li, Boston, MA, and
Ruggero Montesano, Lyon, France
IARC, Lyon, France

DECEMBER 5-9, 1993

Cell Signalling and Cancer Treatment

Joint Meeting with British Association for
Cancer Research and European
Organisation for Research and Treatment
of Cancer (PAMM Group)
Chairpersons: Garth Powis, Tucson, AZ;
Paul Workman, Macclesfield, England
El San Juan Hotel, San Juan, PR

JANUARY 17-22, 1994

***Risk Assessment in Environmental
Carcinogenesis***

Co-Sponsored by the
Environmental Mutagen Society
Chairpersons: Philip C. Hanawalt, Stanford, CA;
James A. Swenberg, Chapel Hill, NC
Whistler Resort and Conference Center, Whistler,
B.C., Canada

JANUARY 31-FEBRUARY 5, 1994
***Molecular Genetics of Progression
and Metastasis***

Chairperson: Lance A. Liotta, Bethesda, MD
Big Sky Resort, Big Sky, MT

FEBRUARY 19-24, 1994

***Cancer: Perturbations in Cell Cycle
Control and Genomic Integrity***

Chairpersons: Thea D. Tlsty, Chapel Hill, NC;
Lawrence A. Loeb, Seattle, WA
Banff Springs Hotel, Banff, Alberta, Canada

MARCH 5-11, 1994

Growth Factors, Development, and Cancer

Joint Meeting with Friedrich-Miescher Institut
Chairpersons: Harold L. Moses, Nashville, TN;
Bernd Groner, Basel, Switzerland
Congress Center, Interlaken, Switzerland

APRIL 10-13, 1994

85th Annual Meeting

Chairperson: Karen S. H. Antman, New York, NY
Moscone Convention Center, San Francisco, CA

OCTOBER 16-20, 1994

***Transcriptional Control of Cell Growth
and Differentiation***

Chairpersons: Eric N. Olson, Houston, TX; Bruce
M. Spiegelman, Boston, MA
Chatham Bars Inn, Chatham (Cape Cod), MA

NOVEMBER 7-11, 1994

***Modern Developments in Cancer
Therapeutics***

Joint Meeting with Academia Sinica
Chairperson: Yung-chi Cheng, New Haven, CT
Academia Sinica, Taipei, Taiwan, R.O.C.

AACR members will receive brochures on the
above special conferences as soon as they are
available. Nonmembers should call or write:

American Association for Cancer Research
Public Ledger Building
620 Chestnut Street, Suite 816
Philadelphia, PA 19106-3483
215-440-9300 • 215-440-9313 (FAX)

PATHOLOGIST/MOLECULAR BIOLOGIST

The Laboratory of Experimental Pathology, Division of Cancer Etiology, National Cancer Institute, NIH, is accepting applications for a position of pathologist with extensive research experience in experimental and human pathology, molecular biology and carcinogenesis by crystalline silica. The candidate will be expected to conduct independent original research on the pathogenesis of fibrosis-associated lung cancer, using experimental exposures to silica and other mineral particles, in animal and cellular models. The candidate will investigate the histopathogenesis and molecular basis of silicosis and silica-induced lung cancer, using experimental animal species of different specific susceptibility and related human tissues, in order to identify the localization and role of molecular markers (cytokines, growth factors and specific gene products). He/she will also investigate cellular models and mechanisms for silica uptake, toxicity and neoplastic transformation and will characterize cell lines transformed by silica and/or transfected oncogenes or regulatory genes, as well as cell lines derived from related tumors. Experience is required in: **A)** Human and experimental pathology (including pulmonary pathology), immunohistochemistry, electron microscopy, immunoelectronmicroscopy and energy-dispersive X-ray spectrometry; **B)** Recombinant DNA methodology, including Northern and Southern analyses, RNA-PCR, single strand conformational polymorphism techniques, sequencing of PCR products and immunoblotting of specified proteins; and **C)** Small animal surgery and necropsy techniques. The candidate is expected to provide consultation and collaboration to the Laboratory's research program in the above-listed areas of expertise. Preference will be given to candidates with the following qualifications: **1)** MD degree and academic pathology experience; substantial track record of research in human and experimental pathology, recombinant DNA technology, immunohistochemistry and electron microscopy; and experience in the field of silicosis research. **2)** Strong interest in the development of a research program for the detection of altered gene expression and molecular markers in cells and tissues, related to respiratory dust diseases. **3)** A strong record of publications in the scientific literature. Salary range: \$75,000 - \$80,000. U.S. citizenship is required. Candidate must communicate fluently and effectively in English, both orally and in writing. Candidates should send CV, bibliography and a resume of research interests, by **September 27, 1993**, to:

**Dr. Umberto Safflotti, Chief
Laboratory of
Experimental Pathology
Division of Cancer Etiology
National Cancer Institute
Bldg. 41, Room C-105
9000 Rockville Pike
Bethesda, Maryland 20892-0041
Fax: 301-402-1829**

NIH is an Equal Opportunity Employer



**UNIVERSITY OF DUBLIN
TRINITY COLLEGE**

CHAIR OF PHYSIOLOGY (1922)

Applications are invited for the position of Professor of Physiology. The position is available immediately and the University welcomes applications from suitably qualified candidates in any of the broad areas of physiology.

The Department of Physiology is responsible for teaching physiology (including histology) to undergraduate students in the various schools within the Faculty of Health Sciences (Medicine, Dental Science, Clinical Speech and Language Studies, Physiotherapy, Occupational Therapy) and the Faculty of Science (Pharmacy, Natural Sciences). It offers an honors degree in physiology to science students and to students in medicine following an intercalated year.

The successful candidate should have a strong record in research, proven skills in academic leadership and departmental administration, and the ability to attract research funding from external sources. The College expects the appointee to build a strong research group and to establish complementary interactions with the research activities of the existing personnel. Areas of current research include neurophysiology, human movement, muscle physiology, cell proliferation, energetics, thermoregulation and reproductive biology. Some of these projects involve collaborative work with colleagues in the Department of Pharmacology and Therapeutics, Biochemistry, Anatomy and Microbiology.

The College's intention is that the Department of Physiology and the Department of Pharmacology and Therapeutics will function as a unit. The new Professor of Physiology, who will be expected to act as Head of Department in accordance with College regulations, should have the energy, drive and interpersonal skills to help bring this aspiration to fruition.

Salary is in the range IR£39,461-IR£44,882.

Further particulars are available from:

**Michael Gleeson,
Secretary to the College,
West Theatre,
Trinity College,
Dublin 2.**

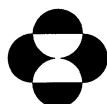
Tel: (01)7021123/FAX: (01)6710037

to whom formal applications may be sent, preferably *before 29th October 1993*.
Trinity College is an Equal Opportunities Employer

BS/MS BIOCHEMIST

The Biochemistry Department of Merck Research Laboratories is seeking a Biochemist to conduct basic research on mechanisms of therapeutically important enzymes and rational design of enzyme inhibitors. The research involves protein purification, enzyme kinetic studies, and molecular biology. Applicants should possess a BS or MS in Biochemistry or the equivalent.

Merck Research Laboratories is located in Rahway, New Jersey, approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Interested applicants should submit a curriculum vitae to: **Christine L. Cantone, Merck & Co., P.O. Box 2000, AD #136, Rahway, New Jersey 07065.** EEO/AA/VH Employer.



MERCK
Research Laboratories

THE STATE UNIVERSITY OF NEW JERSEY RUTGERS

FACULTY POSITION DEVELOPMENTAL GENETICIST

Applications are invited for a tenure-track faculty position at the Waksman Institute with a joint appointment in the Department of Molecular Biology and Biochemistry. The Waksman Institute has been at the center of a major initiative to transform Rutgers University and the adjoining University of Medicine and Dentistry of New Jersey into a major, world class research center. One hundred new faculty members in the biomedical area alone have been recruited during the past eight years. The Waksman Institute has added 12 members during this period with emphasis on four areas: molecular developmental genetics, microbial genetics, plant molecular genetics, and structural biology. Candidates are sought to further expand the developmental genetics group. The successful applicant will be expected to conduct a vigorous independent research program and to participate in instructional activities. Recently renovated laboratory space and generous start-up funds are available.

Candidates should send a biographical sketch (with a list of publications and a description of research interests) and request that three letters of reference be sent to: **Dr. Joachim Messing, Director, The Waksman Institute, Rutgers, The State University of New Jersey, P.O. Box 759, Piscataway, NJ 08855-0759.**

*An Affirmative Action/
Equal Opportunity Employer*

PHARMACOKINETICIST

Greenwich Pharmaceuticals is seeking a self-motivated, top performing individual who has a keen interest in the discovery, development and marketing of novel carbohydrate drugs.

The successful candidate will be responsible for the design and implementation of ADME studies from discovery through early Phase II development in support of IND submissions. A working knowledge of typical pharmacokinetics software packages, such as PCNONLIN, database programs and current knowledge of regulatory PK/PD requirements and trends are essential. Ph.D. in Pharmaceutical Science or equivalent is required. Industrial experience would be preferred.

Compensation is highly competitive and includes salary and benefits. Candidates interested in contributing to the development of therapeutically differentiated carbohydrate drugs, should mail or fax resume to: **Human Resources Department, Greenwich Pharmaceuticals Incorporated, 501 Office Center Drive, Ft. Washington, PA 19034. FAX: 215-540-9696.** Equal opportunity employer.



**GREENWICH
PHARMACEUTICALS
INCORPORATED**

U.S. ARMY BREAST CANCER RESEARCH OPPORTUNITY

The Congress has directed the Department of Defense to create and manage a special new medical research program for breast cancer, a disease that attacks nearly 10% of women and continues to resist efforts to improve its treatment and prevention. This \$210 million appropriation represents an exciting opportunity to make new progress in the prevention, diagnosis, and treatment of breast cancer. The program is designed in consonance with the Institute of Medicine recommendations to supplement ongoing research efforts with new approaches and resources, and to recruit talented scientists into the field. The program hopes to stimulate innovative ideas, develop interdisciplinary approaches to problems of diagnosis and treatment, expand the availability of shared resources, and reward relevant scientific excellence in all disciplines.

The U.S. Army Medical Research and Development Command is soliciting proposals for investigator-initiated research projects, for infrastructure enhancement projects such as data bases and tumor registries, and for training programs. Fellowships and training programs are available at predoctoral, postdoctoral, career development, and mid-career sabbatical levels. It is important to encourage those with relevant skills and ideas, especially younger scientists and individuals not previously engaged in cancer research, to seek participation in the effort to bring breast cancer under control. Scientists of all disciplines may also nominate themselves or others to serve on peer-review panels.

A Broad Agency Announcement (BAA) describing the Defense Department's Breast Cancer Research Program will be published o/a 15 September 1993. Those who have previously submitted a Letter of Intent to the Breast Cancer Program will automatically receive a copy of the BAA. The BAA may also be obtained from:

**U.S. Army Medical Research
and Development Command
ATTN: SGRD-PLF
Fort Detrick
Frederick, MD 21702-5012
or telephone (301) 619-7075/76**



Postdoctoral Opportunities at Pfizer

The field of pharmaceuticals and health care is more rewarding than ever as new products create a healthier world population. As one of the leaders in this dynamic industry, Pfizer Inc, a Fortune 100 company, is committed to continuing its remarkable growth. Our primary R&D facility is located in a southeastern Connecticut shore community, giving easy access to the well known academic and cultural centers of the Northeast, and offers the attractions of a New England lifestyle.

Currently, the Central Research Division of Pfizer Inc offers two unique postdoctoral positions, each comprising a 3 year appointment that includes 18 months in our laboratories followed by 18 months in an academic laboratory.

Novel Immune G-Protein Coupled Receptors

This study, to be carried out in the Department of Molecular Genetics at Pfizer and at Yale University School of Medicine with Dr. Charles Janeway, will focus on the functional characterization of a newly identified hematopoietic G-protein coupled receptor in transgenic and knockout models. This position requires a PhD in Molecular Biology, Immunology or a related area. Publication of results is expected.

Steroid Receptor Action

This study will seek to elucidate the mechanisms of tissue specific gene activation by steroid/thyroid hormone receptors. The approach will include the identification of genes that are transcriptionally regulated by steroid hormones and steroid hormone analogs. Candidates must have a PhD in Molecular Biology, Biochemistry or related area. Publication of results is expected.

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



Central Research
Bringing science to life

POSITIONS OPEN

NEUROSCIENCE AND CELL BIOLOGY. Robert Wood Johnson Medical School. New **TENURE-TRACK POSITIONS AT THE JUNIOR RANK** are available in neuroscience and cell biology at the University of Medicine and Dentistry of New Jersey (UMDNJ)—Robert Wood Johnson Medical School. Investigators with interests in molecular neurobiology, cellular neurobiology and the relationship of biology to behavior and mentation are encouraged to apply. Positions will be available beginning January of 1994. Please submit curriculum vitae, summary of scientific interests and goals, and three letters of reference to: **Ira B. Black, M.D., Professor and Chairman, Department of Neuroscience and Cell Biology, UMDNJ—Robert Wood Johnson Medical School, 675 Hoes Lane, Piscataway, NJ 08854-5635.** UMDNJ is an Affirmative Action/Equal Employment Opportunity Employer, M/F/D/V, and a member of the University Health System of New Jersey.

FACULTY POSITIONS THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER

The Department of Biochemistry and Molecular Biology invites applications for several tenure-track faculty positions in the area of Eukaryotic Developmental Biology. Our department consists of a group of highly interactive cell, developmental, and molecular biologists with vigorous graduate and postgraduate training programs. We are seeking individuals who will actively contribute to this research environment. We are especially interested in applicants with research interests and expertise in (1) developmental genetics using *Drosophila*, *C. elegans*, or mice, and (2) mechanisms involved in signal transduction. The department offers excellent start-up opportunities with minimal teaching and administrative responsibilities. Applicants should have a Ph.D. or M.D. and a proven record of accomplishments as a postdoctoral fellow or faculty member. For consideration, candidates should send curriculum vitae, brief description of research directions, and the names of three references by December 1, 1993, to: **Dr. Robert A. Schulz, Chairman, Faculty Search Committee, The University of Texas M. D. Anderson Cancer Center, Department of Biochemistry & Molecular Biology (Box 117), 1515 Holcombe Boulevard, Houston, TX 77030.**

Equal Opportunity/Affirmative Action Employer.
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OCEANOGRAPHY FACULTY. Teach oceanography to undergraduates, teachers and high school students and be **CHIEF SCIENTIST** aboard our sailing, research vessels in the North Atlantic and Caribbean. Renewable, 9-month appointment; full benefits. Sea time: 14 weeks per year. **Qualifications:** Ph.D. in Oceanography/Marine Science; good teaching and communication skills; ability to work as a collaborating member of an instructional team; strong organizational skills. Send letter of interest, résumé, name, address and telephone of 3 references to: **Dr. John J. McMahon, Dean, Sea Education Association, Box 6, Woods Hole, MA 02543** by October 1, 1993.

PHARMACOLOGY—UNIVERSITY OF PENNSYLVANIA. The Department of Pharmacology is recruiting **2 TO 3 TENURE-TRACK FACULTY** who have an interest in the broad area of **Pharmacological Chemistry**. Potential areas of research include: (i) structure and function of biomolecules using analytical techniques (e.g., NMR, EPR, MS, molecular modeling, affinity labeling and mutagenesis); (ii) enzyme-inhibitor/receptor-ligand design; and (iii) drug, carcinogen or second-messenger metabolism (e.g., of arachidonic acid and inositol phosphates). The successful candidates will participate in a newly established pre- and postdoctoral training program in pharmacological chemistry. Applicants should have postdoctoral research experience and the ability to develop a strong extramurally funded research program. Renovated laboratory space and start-up funds are available. *Applications from women and minorities are especially encouraged.* Inquiries should include curriculum vitae, list of publications, reprints or preprints of selected papers and a statement of research interests. Résumés and three letters of recommendation should be sent to: **Dr. Trevor M. Penning, Department of Pharmacology, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6084.** The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN



FACULTY POSITIONS DEPARTMENT OF CHEMISTRY

WAYNE STATE UNIVERSITY DEPARTMENT OF CHEMISTRY invites applications for three faculty positions beginning in the fall of 1994. It is anticipated that the appointments will be in the broad areas of **BIOLOGICAL, INORGANIC and PHYSICAL** chemistry. Applications from people whose interests span two or more traditional subdisciplines are encouraged. Although the department is anxious to expand its emphasis on materials and bio-related research, all outstanding candidates will be considered. Successful candidates will be expected to demonstrate a commitment to teaching in our program from the undergraduate through the graduate level and to establishing an outstanding program of original research. As many as two of the appointments may be at a senior (full or associate professor) level. We are particularly interested in a more senior person for the biological chemistry position. Each candidate should send curriculum vitae, a proposed research program and arrange to have three letters of recommendation sent to: **Chairman, Faculty Search Committee, Department of Chemistry, Wayne State University, Detroit, MI 48202.** An initial deadline for receipt of applications is October 15, 1993. *Wayne State University is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.*

Two **POSTDOCTORAL POSITIONS** are available to study G-protein-coupled receptors. Current projects are concerned with molecular biology of alpha-adrenergic receptors (with **Dr. Schwinn**) and substance P/opiate receptors (with **Dr. Kwatra**). Applicants should be recent Ph.D.'s with strong background in molecular biology. Please submit curriculum vitae to: **Drs. D. A. Schwinn/M. M. Kwatra, Departments of Anesthesiology & Pharmacology, Duke University Medical Center, Box 3094, Durham, NC 27710.** *An Equal Opportunity/Affirmative Action Employer.*

TRANSMEMBRANE SIGNALLING

POSTDOCTORAL POSITION. Available to study G protein regulation of ion exchangers using genetic, pharmacological and physiological approaches. Projects entail characterizing signalling mechanisms by structure-function analysis of mutant and chimeric hormone receptors and GTP-binding proteins, as well as kinetic analysis of receptor-regulated ion transport properties. Prior experience in transmembrane signalling mechanisms preferred. Send curriculum vitae, description of research interests and three letters of reference to: **Diane L. Barber, Ph.D., Box 0512, University of California, San Francisco, CA 94143.**

POSTDOCTORAL POSITION, available immediately to study signal transduction mechanisms in trypanosomes. Ongoing research includes regulation of calcium homeostasis, inositol phosphate/diacylglycerol signaling pathway, role of calcium in intracellular invasion. Candidates with strong background in molecular and cell biology or enzymology and protein purification and an interest in parasitology are encouraged to apply. Send curriculum vitae, summary of research experience, and names of three references to: **Dr. Roberto Docampo, Division of Microbiology and Immunology, College of Veterinary Medicine, University of Illinois, 2001 South Lincoln Avenue, Urbana, IL 61801.**

Two **POSTDOCTORAL POSITIONS** in Molecular and Cellular Neurobiology to investigate the action of proto-oncogenes encoding tyrosine kinases and phosphatases in neuronal development. One project is to clone and analyze the function of novel receptor-like tyrosine kinase and phosphatase genes in developing retina and brain. Another focuses on the role of tyrosine kinases in cell adhesion molecule signaling in growth cones (experience in biochemistry or video-enhanced DIC microscopy desired). Send curriculum vitae and names of three references to: **Dr. Patricia Maness, Department of Biochemistry and Biophysics, CB#7260, University of North Carolina at Chapel Hill, School of Medicine, Chapel Hill, NC 27599.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study the nucleotide sequence variation in metabolic genes from microorganisms isolated from the deep subsurface. Applicants should have a background in molecular evolution, with an emphasis on phylogenetic analysis, PCR technology and/or DNA sequence analysis. For fullest consideration application should be received by September 22, 1993. Send curriculum vitae and three letters of reference to: **Brian P. Nichols, Department of Biological Sciences, M/C 067, University of Illinois at Chicago, 845 West Taylor Street, Chicago, IL 60607-7060.** *UIC is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION: HUMAN MOLECULAR GENETICS

Analysis of the spontaneous mutational process in humans and animals. Projects may explore the implication of spontaneous mutation for disease causation or for evolution. The factor IX and p53 genes are the major models for study of human spontaneous germline and somatic mutation, respectively. The relationship between somatic mutation and both cancer and neurodegenerative disease is being explored with the aid of transgenic mouse system. **Recent review:** Steve S. Sommer, "Assessing the underlying pattern of human germline mutations: lessons from the factor IX gene," *FASEB J.* 6:2767, 1992. Applicants should submit curriculum vitae, reprints of 1 to 3 papers, and names of three references to: **Steve S. Sommer, M.D., Ph.D., Department of Biochemistry and Molecular Biology, Mayo Clinic/Foundation School of Medicine, Rochester, MN 55905.** *Mayo Foundation is an Affirmative Action and Equal Opportunity Educator and Employer.*

POSTDOCTORAL POSITIONS/BACULOVIRUSES. Two positions are available for studies of (a) Baculovirus gene expression/transcriptional regulation; (b) Functional characterization of a viral membrane fusion protein. Studies involve *in vitro* mutagenesis and functional assays. Experience and background in virology, molecular/cellular biology, or protein biochemistry is preferred. Send complete curriculum vitae, relevant publication reprints, and names and addresses of three references to: **Dr. G. Blissard, Boyce Thompson Institute at Cornell University, Tower Road, Ithaca, NY 14853-1801.** Telephone: 607-254-1234; Email: gwb1@cornell.edu.

POSTDOCTORAL POSITION available to pursue the positional cloning of a second gene for autosomal dominant polycystic kidney disease. Emphasis on YAC contig assembly and isolation of expressed sequences. Submit curriculum vitae, statement of research interests/experience, and names of three references to: **Stefan Somlo, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.** FAX: (718) 824-2765. *Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIP Washington University School of Medicine

Position available immediately as part of an NIH Training Grant to study human molecular genetics. Emphasis will be on complex genetic traits and technology development. Ph.D. or M.D. required. Experience in molecular, biochemical, and computational techniques desirable. Applications to: **Pui-Yan Kwok, M.D., Ph.D., 660 South Euclid Avenue, Box 8123, St. Louis, MO 63110.** *NIH Training Grant requires U.S. citizenship or permanent residency.*

POSTDOCTORAL FELLOW:

Research involving the supramolecular organization of protein-ligand complex assemblies. We are using two physiological models: bone formation and blood coagulation. Bone studies are directed toward understanding extracellular matrix deposition and the interaction of soluble bone-related proteins with collagen proteoglycans and minerals. Blood coagulation research involves studies of the formation of enzyme complexes on membranes. A broad range of talent can be accommodated extending from synthetic organic to solution physical chemistry and from cell to molecular biology. Send curriculum vitae, selected papers and names of three references to: **Kenneth G. Mann, Ph.D., Professor and Chair, Department of Biochemistry, University of Vermont College of Medicine, Given Building, Burlington, VT 05405-0068.**

National Institutes of Health Endocrinologist

The Growth and Development Section, Molecular and Cellular Endocrinology Branch, National Institute of Diabetes and Digestive and Kidney Diseases, seeks outstanding candidate with M.D. or Ph.D. with at least 3 years of postdoctoral research training and experience to participate in a research program on insulin-like growth factor binding proteins. Applicant should have research interest and preferably experience in applying methods of biochemistry, cell biology, and molecular biology to investigate the transcriptional regulation of the IGF-binding protein genes and the mechanisms by which they modulate IGF actions. Applicant should be familiar with the methods of molecular genetics, cell biology, protein purification and characterization (FPLC, affinity chromatography, radioligand assays), and have general computer skills (data base searching and DNA/protein analysis). Applicant should have a substantial record of publication of original work. Starting salary approximately \$47,500 commensurate with qualifications and experience. Interested candidates should submit curriculum vitae, several reprints, summary of research interests, and names of three references to:

Matthew M. Rechler, M.D.
National Institutes of Health
Building 10, Room 8D14
9000 Rockville Pike
Bethesda, MD 20892



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Myles H. Thaler Center for AIDS and Human Retrovirus Research The University of Virginia

FACULTY POSITION

We seek an individual with experience in the area of HIV replication or pathogenesis for a tenure-track assistant professor position in the Department of Microbiology. Individuals working with other retroviruses will also be considered. Applicants should have postdoctoral experience and should be capable of establishing a strong independent research program. Some teaching in the graduate and medical education programs of the Department is also expected. Endowment funds are available to facilitate startup and the purchase of equipment. The University of Virginia provides an outstanding environment and support facilities for basic research including active interdisciplinary research and training programs in Immunology, Cell and Molecular Biology, Infectious Disease and Cancer Research.

POSTDOCTORAL POSITIONS

Several positions are available in the areas of HTLV, HIV and EBV gene expression and regulation in the laboratories of either Dr. Marie-Louise Hammarström or Dr. David Rekosh. Projects include: the role of HIV *rev* and HTLV *rex* in viral gene regulation, cellular factors involved in RNA transport and signal transduction by the EBV LMP protein. In addition, a project studying the role of HTLV in neurological disease is being initiated with funding from the Charles H. Ross Jr. endowment. Candidates should have a background in molecular biology or virology, but previous work with HIV, HTLV or EBV is not required.

Applicants should submit curriculum vitae, a brief statement of research interests and the names of three references to: **Ms. Dawn Martin, Administration Assistant, Thaler Research Center, Box 441, The University of Virginia, Health Sciences Center, Charlottesville, VA 22908**

We strongly encourage applications from women and minority groups. The University of Virginia is an Affirmative Action/Equal Opportunity Employer.

Join Us At The Forefront Of Pharmaceutical Discovery.

Since 1888, Abbott has been at the forefront of pharmaceutical discovery. Last year alone, we committed more than \$770 million to R&D to answer some of today's most important scientific questions. As we continue our work, the Neuroscience Research Area of our Pharmaceutical Products Division has the following opportunities for individuals to work on an interdisciplinary team involved in the study of neurodegeneration in Alzheimer's disease.

CELL BIOLOGIST (PhD)

You will conduct biochemical and pharmacological assays on neuronal and astrocytic cell cultures including the implementation of cytotoxicity assays. This position requires a PhD in cell biology/neurobiology or a related discipline, with at least 2 years of postdoctoral experience. Experience in culturing primary neuronal cells and/or glial cells required. Immunohistochemistry and/or neuropathology experience a plus. **Reply to Job# CML65512.**

RESEARCH ASSOCIATES (BS/MS)

Cell Biology - You will maintain neuronal and glial cell cultures, as well as design and conduct biochemical and pharmacological assays on these cultures. This will include implementation of cytotoxicity assays. Experience culturing primary neuronal cells and/or glial cells would be a definite advantage. **Reply to Job# CML65515.**

Molecular Pharmacology - You will design and conduct experiments involving molecular cloning procedures, biochemical analysis of proteins, and pharmacological analysis of drug actions. Experience in molecular biology techniques, and immunological and pharmacological assays would be a definite advantage. **Reply to Job# CML65515A.**

Both Research Associate positions require an MS in Neurobiology, Cell Biology, Molecular Biology, Biochemistry or Pharmacology. We will also accept a BS and 2-3+ years of related lab experience. Both positions are responsible for reporting research results through written and oral presentations.

Abbott provides an excellent salary and benefits package including profit sharing and a stock retirement plan. We are located in an attractive suburban area approximately 30 miles north of Chicago. For confidential consideration, please send a resume and salary history (indicating appropriate job#) to: **Patricia Handy, Dept. 583, AP6D, Abbott Laboratories, One Abbott Park Rd., Abbott Park, IL 60064.** Abbott is an Affirmative Action Employer/Smoke-Free Environment.

ABBOTT LABORATORIES



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UNIVERSITY OF OXFORD

In association with Somerville College

UNIVERSITY LECTURERSHIP IN ANATOMICAL SCIENCE

Applications are invited for the above post tenable in the Department of Human Anatomy from 1 October 1994. Stipend will be according to age on the scale of £13,601 to £26,803. The post is open to candidates who have carried out advanced research in developmental biology, neuroscience, neuroendocrinology, cell biology or related subjects and have particular competence to teach in these areas to medical student during the three years of their pre-clinical studies. The successful candidate may be offered a tutorial Fellowship at Somerville College.

Further details of both the University Lecturership and College Fellowship may be obtained from Professor R.W. Guillery, Department of Human Anatomy, South Parks Road, Oxford, OX1 3QX, to whom applications (nine typed copies, or one from overseas applicants) with a full curriculum vitae and summary of research interests (please star five most important publications) should be sent by 30 October 1993, together with the names of three referees who have agreed to send their opinions without further requests by the same date.

The University is an Equal Opportunity Employer

Post-Doctoral Positions for Cardiovascular and Pulmonary Research

Our Pharmaceutical Research Center has 3 post-doctoral training positions for scientific researchers having a PhD degree in the following fields

- **Biochemistry and Pathophysiology of connective tissue in the venous wall** (extracellular matrix - culture of vascular smooth muscle cells).
- **Molecular and Cellular Biology - Pathophysiology of the vascular wall** (endothelial dysfunction, proliferation of vascular smooth muscle cells)
- **Electrophysiology of vascular smooth muscle**, in particular in the field of pulmonary circulation (function of the endothelial cells, interaction endothelium/smooth muscle, patch clamp).

If you are interested in one of these positions, which are 18 month period, than please write to PUBLIVAL an add your CV and a photo.

PUBLIVAL/9093 - 27, Route des Gardes
92190 MEUDON (FRANCE)



Lecturer in the Radioisotope Unit (Ref. 93/94-5)

Applications are invited for a 50% fractional Lectureship in the Radioisotope Unit. The appointment will be made on a fixed-term basis for the period January 1, 1994 to December 31, 1996.

Applicants should possess expertise in the areas of Radiation Dosimetry and Earth Science/Geochronology. The appointee will be required to supervise research students and to teach relevant courses offered by the Unit.

Annual salary (under review) [non-superannuable but attracting 15% (taxable) terminal gratuity] is calculated by multiplying the appropriate salary on the following 11-point scale with the appointment fraction (i.e. 50%), with starting salary depending on qualifications and experience: HK\$343,680 - HK\$574,140 (approx. US\$44,062 - US\$73,608; US Dollar equivalents as at August 16, 1993). At current rates, salaries tax will not exceed 15% of gross income. Children's education allowances, leave, and medical benefits are provided; housing or tenancy allowances are also provided in most cases at a charge of 7.5% of salary.

Further particulars and application forms may be obtained from the Appointments Unit, Registry, The University of Hong Kong, Hong Kong (fax: (852) 559 2058; E-mail: APPTUNIT@HKUVM.HKU.HK). Closes **8 October 1993**.

Vice President of Research & Development

Suburban Philadelphia Based

We are a rapidly growing, private biotechnology company developing proprietary affinity separation and analysis technologies for high value diagnostic and therapeutic applications.

Immunicon Corporation is located in an attractive northern suburb of Philadelphia. Our recent, significant growth has led to the creation of this new critical position which reports to the CEO. If you are the right candidate, you will lead a diverse group of highly motivated scientists and engineers in separation, detection, processing methods which support clinical cell transplantation therapy. You will also represent the Company in scientific, academic and commercial forums. As a top Executive, you will also be involved in developing global partnership strategies for scientific and commercial applications.

We require a PhD in Biochemistry, Cell/Molecular Biology or a related discipline, or an MD with an appropriate research emphasis, 7-12 years of postdoctorate experience, including involvement with cell transplantation technology and clinical products. If you bring a record of significant success in technical project management and personal leadership and would like to explore a truly unique challenge, please reply to: BHA Box 34VP, 555 Madison Avenue, New York, NY 10022.

All inquiries will be handled with the utmost confidentiality. We will provide the successful candidate with an attractive compensation package including a meaningful equity option position. We are an equal opportunity employer and promote a drug free environment.

Immunicon

Henry Ford Medical Group

Nuclear Magnetic Resonance Scientist for NMR Center in Henry Ford Health Sciences Center's Department of Neurology. Houses a 3 Tesla 80cm and a 7 Tesla 20cm bore magnet for clinical and experimental studies and two GE 1.5-Tesla clinical systems. Part of NIH-funded Stroke Center, including study of human and experimental brain ischemia. Funded to study vascular dementia, Parkinson's and demyelinating disease. Candidate should be senior NMR scientist at Associate or Full-Professor level, experienced in NMR techniques and biological application. Will develop and participate in current and independent research, and supervise graduate students. Joint appointment in Radiology Department available. We are a major teaching affiliate of Case Western Reserve University. Send letter, curriculum vitae with references to:

**K.M.A. Welch, M.D.
William T. Gossett
Chair of Neurology
Henry Ford
Health Sciences Center
2799 W. Grand Blvd.
Detroit, MI 48202**

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The Applied Biosystems Division of The Perkin-Elmer Corporation has an outstanding opportunity available in our PCR Customer Support Organization, based in Norwalk, Connecticut.

TECHNICAL SPECIALIST PCR Customer Support

In this key position we will rely on you to provide direct telephone applications support to Molecular Biologists, perform PCR-related techniques, as well as develop technical documentation, product support literature and articles for publications. In addition, you will be required to travel approximately 10%, presenting technical PCR seminars and workshops to customers and sales professionals.

Your background should include a minimum of a BS degree in Molecular Biology or Biochemistry (advanced degree preferred) and 1-3 years lab experience utilizing techniques for DNA isolation, manipulation, separation, amplification, and optical detection.

In exchange for your technical expertise, we offer a highly competitive salary package, an impressive roster of benefits, and decisive advancement potential. Interested candidates are requested to forward a resume and salary requirements in confidence to: Mr. E. K. Hutten, Senior Manager, Human Resources, The Perkin-Elmer Corporation, 761 Main Avenue, Norwalk, CT 06859-0325.

We Are An Equal Opportunity Employer M/F/D/V

PERKIN ELMER

MICROBIOLOGY RESEARCH

Research Scientist

The Cancer & Infectious Diseases Unit, Upjohn Laboratories Discovery Research, has an opportunity available for a microbial physiologist. The successful candidate will participate in infectious diseases research programs studying the role of bacterial metabolic pathways in disease pathogenesis and evaluating new targets for chemotherapeutic intervention. The position involves interaction with a diverse team of scientists in developing mechanism-based screens for the discovery of novel chemical entities as antibiotics.

We seek an individual with a Ph.D. and a minimum of two years of postdoctoral experience having a strong background in molecular biology and bacterial pathogenesis. Preference will be given to candidates with prior experience in the molecular biology of gram-positive organisms.

Living in the Kalamazoo area, a mid-sized Southwestern Michigan community, provides immediate access to an excellent mix of cultural/recreational pursuits. Upjohn offers a competitive salary commensurate with experience and a comprehensive benefits package. For confidential consideration, please send your CV to: **THE UPJOHN COMPANY, Corporate Recruiting, Position #176, 7000 Portage Road, Kalamazoo, MI 49001.** EEO/AA Employer.

Upjohn

POSTDOCTORAL SCIENTIST

SmithKline Beecham Pharmaceuticals has an immediate opening in its Department of Physical and Structural Chemistry for a postdoctoral fellow with experience in microscale protein isolation, purification, and characterization using techniques such as 2-D gels, electroblotting, and Edman degradation.

The qualified individual will join a multi-disciplinary team of scientists employing matrix-assisted laser desorption and electrospray mass spectrometry to characterize primary sequence and posttranslational modifications at the picomole level and below of a variety of phosphorylated and glycosylated proteins of therapeutic interest. Experience with microbore HPLC and mass spectrometry is desirable, but not required. This is an excellent opportunity for a biochemist to crosstrain in mass spectrometry which is revolutionizing the analysis of proteins.

SmithKline Beecham's postdoctoral scientists are afforded a stimulating and challenging work environment and are strongly encouraged to publish their results in leading research journals.

Our research facilities are located in suburban Philadelphia, near Valley Forge, PA. We offer a competitive compensation/benefits/relocation package. Please submit your CV to: SmithKline Beecham Pharmaceuticals, Employment Administrator, #H0213, PO Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer. M/F/D/V.

SB

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POSITIONS OPEN

POSTDOCTORAL POSITION CORNELL UNIVERSITY MEDICAL COLLEGE

A postdoctoral position is available immediately to study antibiotic proteins from human phagocytic cells. Research program includes the biochemistry and mechanism of action of these proteins, and a genetic analysis of their functional sites. Applicants should have a strong background in Molecular Biology and/or Biochemistry. Salary is competitive and commensurate with experience. Send letter of application, curriculum vitae, and name, address, and telephone number of three references to: Dr. Joelle E. Gabay, Box 125, Department of Medicine, Cornell University Medical College, 1300 York Avenue, New York, NY 10021.

THE HEBREW UNIVERSITY OF JERUSALEM JERUSALEM, ISRAEL POSTDOCTORAL FELLOWSHIPS

The Hebrew University of Jerusalem invites applicants for the Golda Meir (and other) Postdoctoral Fellowships in Humanities, Social Sciences, Natural and Applied Sciences, Agriculture and Medicine for the 1994-95 academic year. Candidates may apply at an early stage of their professional career (not later than 3 years after completion of their doctoral dissertation). The fellowships are tenable for one academic year and may be extended for another year. The fellowship provides a 12-month stipend (with COL adjustments), rent allowance and return ticket to Israel. Application forms can be obtained from: University Grants Office, P.O. Box 1255, Jerusalem, 91904, Israel. Completed application forms must be returned by December 1, 1993.

POSTDOCTORAL FELLOW in neurobiology at major, public university in southeastern Ohio.

Applicants must have one year of experience in research in neurobiology of aging, including isolation of ribonucleic acid, designing primers for polymerase chain reaction, subcloning of deoxyribonucleic acid, making probes, doing Northern blots, screening cDNA libraries, isolating clones, expressing in xenopus oocytes, culturing neuronal cells and studying ion transport. Applicants must also have one year of experience in writing new research grants, planning and performing experiments, critical analysis of experimental data, writing manuscripts for publication in scientific journals, participation in group laboratory meetings and seminars and attendance at symposia and presentation of papers. Ph.D. in Molecular Biology with an emphasis in aging required. Experience must include one year of dissection of rat brain and isolation of neuronal cells, as well as one or two months of general use of computers. Hours per week: 9:00 to 5:00, five days a week, salary: \$19,700 per year. Applicants must have proof of legal authority to work indefinitely in the United States. Send résumé in duplicate (no calls) to: J. Davies, JO#1392869, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.

POSTDOCTORAL FELLOWSHIPS— Regulation of Eukaryotic DNA Replication

Two NIH-funded postdoctoral positions available to study initiation of DNA synthesis and cell cycle regulation of gene expression in yeast and mammalian cells. Please send curriculum vitae and the names of three references to: Nicholas Heintz, Department of Pathology, University of Vermont College of Medicine, Burlington, VT 05405. (Telephone: 802-656-2210; FAX: 802-656-8892).

POSTDOCTORAL FELLOWSHIP

Postdoctoral position is available for an individual interested in the study of the molecular mechanisms of nuclear hormone receptors with special emphasis on vitamin A and "orphan" receptors and their potential ligands. Other projects will include investigation of the roles of these receptors during development and in the adult. Qualified individuals should possess an M.D. or Ph.D. in an appropriate life science and have less than three years of previous postdoctoral experience. A background in molecular biology, protein biochemistry and/or organic reverse phase HPLC analysis is essential. Serious consideration will be given to applicants who send curriculum vitae and three letters of recommendation to: Dr. David Mangelsdorf, University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9050. An Equal Opportunity Employer.

POSITIONS OPEN

THE HEISER PROGRAM FOR RESEARCH IN LEPROSY AND TUBERCULOSIS

Support for research in leprosy and tuberculosis is being continued. Beginning **POSTDOCTORAL RESEARCH FELLOWSHIPS** available in amounts up to \$28,000 per year, plus other allowances, and **RESEARCH GRANTS** in amounts up to \$20,000. Applicants should have M.D., Ph.D., or equivalent degree. Applications by 1 February 1994 for awards to be activated July through December 1994. For information write: The Heiser Program, 450 East 63rd Street, New York, NY 10021. Telephone: 212-751-6233, or FAX: 212-688-6794.

POSTDOCTORAL RESEARCH POSITION available immediately for studies on fundamental mechanisms of transcriptional activation, using *S. cerevisiae* as a model system. Ph.D. or M.D. required. Experience in molecular and biochemical techniques desirable. Send curriculum vitae and names of three references to: Shelley Berger, Ph.D., THE WISTAR INSTITUTE, 3601 Spruce Street, Philadelphia, PA 19104. Equal Opportunity Employer.

POSTDOCTORAL SCHOLAR position to conduct research on the regulation of the choline acetyltransferase gene using cell culture and transgenic animal models. Applicant should have a Ph.D. with experience in molecular biology. Send curriculum vitae and letters of recommendation to: Dr. Louis Hersch, Department of Biochemistry, MS607 Medical Center, University of Kentucky, Lexington, KY 40536-0084. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL SCHOLAR/RESEARCH ASSOCIATE. Projects focus on structure-function relationships involved in the cytotoxic activities of tumor necrosis factor and diphtheria toxin (*Science* 246:1165; *Science* 255:1427; *J. Bacteriol.* 174:2032; *Infect. Immun.* 58:2644). Expertise required in protein chemistry (enzymology, protein-DNA or protein-membrane interactions) or in molecular and cellular biology. Send résumé and three recommendations directly to: Dr. B.J. Wisniewski, 609 Circle Drive East, 1602A Molecular Sciences Building, UCLA, Los Angeles, CA 90024. FAX: 310-206-5231.

RESEARCH ASSOCIATE to investigate gene transfer/therapy approaches in the brain using viral vectors. Involves manipulation of genetic information found in herpes viruses, insertion of novel genetic information, determination of effectiveness and amplification of the resultant vector. In addition, requires expertise in a number of neurobiological techniques, including generation of primary neuronal cultures, measuring glucose uptake both *in vitro* and *in vivo* (i.e., the 2-deoxyglucose autoradiographic technique) and quantification of neuron death with various histological techniques. A Ph.D. in virus and its pathology in rodents, and familiarity with all techniques of modern molecular biology. \$35,000 per annum; apply to: Carol Killian, Department of Biological Sciences, Gilbert 109, Stanford University, Stanford, CA 94305-5020.

RESEARCH ASSOCIATE to conduct research on atmospheric circulations through numerical modeling; develop a numerical mesoscale model for detailed studies of orographic gravity waves; develop an advanced parameterization scheme for orographic gravity waves for use in large-scale models of the atmosphere; implement the parameterization scheme into a General Circulation Model (GCM); modify and improve the physics of the GCM as required by changes in the vertical structure and surface boundary condition of the GCM; compare results simulated by the GCM with observations and assess the impact of model physics on climate prediction.

Requirements: Ph.D. in Atmospheric Sciences with expertise in gravity-wave dynamics and parameterization of orographic gravity waves for large-scale numerical models of the atmosphere. Demonstrated abilities in numerical modeling for both mesoscale and large-scale atmospheric circulations. Experience in computer programming with FORTRAN and C on VM, MVS, and UNIX systems, and familiarity with PC and Macintosh computers.

Job location/interview: Los Angeles, \$32,581 per year. Send this ad and résumé to: Job #WS12030, P.O. Box 269065, Sacramento, CA 95826-9065.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Position immediately available to participate in the study of the molecular basis of drug resistance and breast cancer. Candidates should have experience in molecular biology. Qualified individuals are encouraged to apply by sending curriculum vitae and 2 letters of recommendation to: L. J. Goldstein, M.D., c/o Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. Equal Opportunity Employer.

RESEARCH ASSOCIATE IN BEHAVIORAL PHARMACOLOGY

Applications are invited for a Research Associate position in the Department of Psychiatry and Human Behavior at the University of Mississippi Medical Center. Candidates should have a Ph.D. in Psychology, Pharmacology or Neuroscience with expertise in behavioral and/or neuropharmacology. The successful candidate will be expected to supervise technicians, prepare reports and manuscripts for publication and will have limited administrative responsibilities. Salary will be commensurate with experience. Applicants should send curriculum vitae, a statement of current and future research goals and names of three references to: William L. Woolverton, Ph.D., Department of Psychiatry and Human Behavior, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216. Equal Opportunity Employer, M/F/D/V.

RESEARCH ASSOCIATE for university in central Ohio. Conducts design and synthesis of biologically active chemicals as antitumor agents; analyzes and evaluates experimental results; co-authors scientific papers and publications and presents research results at scientific meetings. No experience required in above duties but applicants will qualify with M.S. in Organic Chemistry and 2 years of experience in organic synthesis and peptide chemistry, operation of analytical instruments (NMR, IR), purification of organic compounds by means of chromatography (column, GC and HPLC), distillation and crystallization, design and synthesis of enzyme inhibitors; experience may be gained before, during or after degree. Forty hours per week, 8 a.m. to 5 p.m., Monday through Friday, \$22,560 per year. Must have proof of legal authority to work indefinitely in the United States. Send résumé in duplicate (no calls) to: T. Do, JO#1333283, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.

RESEARCH SPECIALIST

The Howard Hughes Medical Institute conducts scientific research in laboratories affiliated with leading academic medical centers throughout the United States. We are seeking a postdoctoral scientist to participate in ongoing research in developmental genetics at our facility at Stanford University.

The work involves performing experiments in molecular biology and developmental genetics. Will assist postdoctoral fellows and graduate students with the preparation of monoclonal antibodies and transgenic mice, and assist in the organization of a smoothly operated laboratory. Must have substantial experience with cell culture, mouse embryology, molecular biology, and/or transgenic animal technology.

HHMI offers an excellent salary and benefits. Please send résumé or curriculum vitae and three letters of reference to: Howard Hughes Medical Institute, Attention: Dr. Matthew Scott, Beckman Center, Room B300, Stanford University Medical Center, Stanford, CA 94305-5428. Equal Opportunity Employer.

HOWARD HUGHES MEDICAL INSTITUTE

RESEARCH INVESTIGATOR

East Side biomedical research organization seeks investigator to carry out formulation and animal studies, and to interact with laboratory and clinical investigators, regulatory agencies, and pharmaceutical companies. Individual will be a member of a group working to develop vaginal formulations which inhibit sexual transmission of human immunodeficiency virus. Qualifications: Pharm.D., Ph.D., or M.D., good communication skills, and postdoctoral experience related to product development.

Send curriculum vitae to: Dr. David Phillips, Center for Biomedical Research, The Population Council, Box 273, 1230 York Avenue, New York, NY 10021. An Equal Opportunity Employer, M/F.

POSTDOCTORAL SCIENTIST

ZENECA Pharmaceuticals Group (formerly ICI Pharmaceuticals Group), ranked among the top pharmaceutical research organizations in the world, has an exciting opportunity for a postdoctoral scientist. The position is part of a new interdisciplinary task force created to elucidate the three-dimensional molecular structure of G-protein coupled receptors.

The postdoctoral scientist will play a key role in protein chemistry as a member of an interdisciplinary team of physical chemists, biochemists, pharmacologists, and molecular biologists. Major responsibilities will be to carry out photoaffinity labeling studies of membrane-bound receptors and purify the labeled proteins for structural characterization, using immunoaffinity techniques.

Candidates should have a background in one of the following main areas, and preferably some additional experience with techniques in the others: membrane protein extraction and purification on small scale, protein fragmentation and peptide analysis, radioisotopes, and immunochemical methods.

If you are interested in joining a team of scientists from a broad range of disciplines in an industrial pharmaceutical research environment, please submit a c.v. and arrange for two letters of reference to be sent to: **Melanie M. Lewis, Human Resources Department, ZENECA Pharmaceuticals Group, 1800 Concord Pike, Wilmington, DE 19897.** An Equal Opportunity Employer M/F.

ZENECA Pharmaceuticals Group

ZENECA Pharmaceuticals/Stuart Pharmaceuticals
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Environmental Ecologist Department of Biological Sciences University of Notre Dame

We seek applicants for a new tenure-track assistant professor position in environmental ecology for appointment in the fall of 1994. Research responsibilities include the development of an active and funded research program that will complement and enhance those of present faculty in ecology and allied areas. Research areas of particular interest include: (i) landscape ecology; (ii) wetlands or riparian ecology; (iii) ecology of the land-water interface; (iv) terrestrial plant ecology; and (v) environmental toxicology. Applicants with a botanical orientation and interest in field work are particularly encouraged to apply. Teaching responsibilities include one undergraduate course in the Environmental Sciences Program and one graduate course per year. Modern laboratory and exceptional computer facilities, and the 3000-hectare University of Notre Dame Environmental Research Center (a protected study area in the Upper Peninsula of Michigan) provide unique opportunities for ecological and environmental research.

Submit curriculum vitae, list of publications, three letters of recommendation, and statements of teaching and research interests to: **Ronald A. Hellenthal, Chair, Environmental Ecologist Search Committee, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556-0369** by 15 October 1993. The University of Notre Dame encourages applications from women and members of minority groups.

JOHANNES GUTENBERG- UNIVERSITY Faculty of Medicine MAINZ/GERMANY

The Boehringer Ingelheim Foundation supports the establishment of a research group in association with the Sonderforschungsbereich 311 "Immunpathogenese".

Applications are invited for the position of a

Research Group Leader

who studies genetic model systems for the pathogenesis or therapy of human diseases. Candidates should have a proven record of independent research activities in the field of molecular genetics, cell biology, immunology or related areas. The group is initially funded for six years (DM 750.000, --per year). Salary according to qualification. 'Habilitation' optional.

Please send CV, list of publications with three selected reprints, an outline of research plans and names of three referees to: Prof. Dr. K.-H. Meyer zum Büschenfelde, I. Medizinische Klinik und Poliklinik, Langenbeckstrasse 1, D-55101 Mainz/Germany.

Applications close on 31st October 1993.



ASSOCIATE VICE PRESIDENT FOR RESEARCH

ASSOCIATE VICE PRESIDENT FOR RESEARCH is a new position in the recently established Office of the Vice President for Research, with broad responsibilities for research and creative activity throughout the University at Buffalo (UB).

The OFFICE OF THE VICE PRESIDENT FOR RESEARCH is responsible for: research policy and planning; administration of organized research units; administration of externally funded research, training, and public service grants and contracts; the Office of Technology Transfer Services; industrial relations; human subjects review boards and committees responsible for oversight of various other compliance areas; the University's technology business incubator facility; and the Buffalo Materials Research Center. In addition, this office shares responsibility for economic development and federal relations.

The **ASSOCIATE VICE PRESIDENT** will be a key participant in policy formulation and in setting future directions for research at UB. Working with faculty, deans, other senior administrators and the UB Foundation, the successful candidate will provide leadership in developing and organizing collaborative and consortial research initiatives, assist in identifying and securing funding for such initiative, and help advance research and public service programs that enhance the region's and the state's economic development and quality of life. Other responsibilities include administration of organized research units, institutional grants programs, and administration of core research and research support facilities.

QUALIFIED CANDIDATES will have experience at a university or research organization as an independent investigator, a record of research accomplishment, demonstrated success in securing research funding, strong administrative and leadership abilities, experience with and knowledge of relevant government funding agencies, high ethical standards and a commitment to excellence.

THE UNIVERSITY AT BUFFALO, a member of the Association of American Universities, is a major public research university with more than 25,000 students, more than 100 post-baccalaureate degree programs, approximately 6,000 faculty and staff, and an annual volume of externally sponsored research and training exceeding \$120 million. Located in Western New York, Buffalo is a dynamic community with affordable housing, excellent schools, and a rich cultural climate.

APPLICATIONS and nominations will be assured full consideration if received prior to November 15, 1993, by: Chair, Search Committee for Associate Vice President for Research, University at Buffalo, 516 Capen Hall, Box 601611, Buffalo, NY 14260-1611.

THE UNIVERSITY AT BUFFALO is an Equal Opportunity, Affirmative Action Employer. Applications from members of minority groups and women are encouraged.

UNIVERSITY AT BUFFALO

State University of New York

FACULTY POSITIONS CANCER CENTER

Completion of the new 125,000 sq. ft. Cancer Center is scheduled for the summer of 1994. This state-of-the-art facility will house ambulatory clinical services as well as a major basic research laboratory component. In support of our emphasis on translational research, applications are solicited for tenure track faculty positions at the Assistant, Associate and Professor levels in the following program areas:

BIOLOGICAL RESPONSE MODIFIERS

The Program Director position is available at the rank of Professor to develop this cancer immunology program. Associate and Assistant Professor level appointments are also available.

LYMPHOMA BIOLOGY

The Program Director position is available at the rank of Professor to develop this program. Appointments at Associate and Assistant Professor ranks are also available.

MOLECULAR ONCOLOGY

Associate and Assistant Professor faculty positions are being recruited to contribute to this program led by Dr. Manuel Diaz.

VIRAL ONCOLOGY

Dr. Lutz Gissmann is seeking Associate and Assistant Professor level faculty to lead projects in this program area.

DRUG RESISTANCE

This program, led by Dr. Leonard Erickson, is seeking applications for Associate and Assistant Professor level faculty.

Interested applicants should submit a current Curriculum Vitae, three professional references, and a description of current and future research, with funding history, to the address below by **November 1, 1993**.

Loyola University Chicago is an equal opportunity employer/educator.



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Richard I. Fisher, M.D., Director
Leonard C. Erickson, Ph.D., Associate Director
Loyola University Cancer Center
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2160 South First Ave., Maywood, IL 60153

ENTOMOLOGIST

FMC CORPORATION, a Fortune 150 leader in Agricultural Chemical R&D, is seeking a PhD Entomologist to join the research team in the discovery of insecticides.

Working closely with Chemists and Biologists, the position is responsible for conducting laboratory testing for the screening and evaluation of new insecticide leads. The successful candidate will have the ability to generate new ideas, define projects and to supervise their implementation. Superior written communication and interpersonal skills would be expected.

A PhD in Entomology or Economic Entomology, including hands-on experience in the evaluation of insecticides in the laboratory, is required. A background in the use of statistical procedures and their application to experimental design and data analysis for agricultural chemicals preferred. Some knowledge of toxicology, biochemistry and physiology would be valuable. Three to 5 years of directly applicable industry experience desirable.

FMC offers a professional environment and state-of-the-art equipment at its Princeton location. Salary commensurate with experience, excellent benefits. Please send resume to **S.G. Snyder, FMC CORPORATION, Box 8, Princeton, NJ 08543**. Equal Opportunity Employer, M/F/D/V.



Scientist/ Molecular Biologist

Ciba-Geigy's Pharmaceutical Division is recognized internationally as a leader in scientific research. And to provide the resources necessary for pharmaceutical breakthroughs, we recently occupied our new, state-of-the-art Life Science Building.

The successful candidate will have an MS or BS in Biology or Molecular Biology, along with a minimum of 1-3 years of experience in recombinant DNA methodology including gene cloning, mammalian cell expression and tissue culture.

We offer a salary commensurate with experience and education, a generous benefits package and the resources to facilitate your best work. For confidential consideration, please send your resume to: **Staffing Center, Dept JN305, CIBA-GEIGY Corporation, 556 Morris Avenue, Summit, New Jersey 07901**. We are an equal opportunity employer M/F/D/V.

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Postdoctoral Fellow Gene Therapy Research

The Clinical Neuroscience Branch, National Institute of Mental Health, National Institutes of Health, is seeking to recruit a molecular biologist with less than five years postdoctoral experience to join in a collaborative effort directed toward developing more effective gene therapy for Gaucher disease and related disorders. The research will focus on the development of improved gene transfer procedures, with emphasis on gene transfer to both transgenic mouse models of Gaucher disease and human patients. Applicants should have an M.D. or Ph.D. with previous experience in molecular biology, virology and/or hematology, relevant to utilizing retroviral vectors for gene transfer into stem cell populations.

Send curriculum vitae and the names of three references to:

**Dr. Edward Ginns
Clinical Neuroscience Branch
NIMH, NIH
Building 49, Room B1EE16
9000 Rockville Pike
Bethesda, MD 20892**

Initial Salary Range: \$25,000 - \$38,000

NIMH is an Equal Opportunity Employer

THE NEUROSCIENCES INSTITUTE

La Jolla, California

INSTITUTE MEMBER, NEUROPHARMACOLOGY

The Neurosciences Institute (NSI) invites applications for a senior position as **Institute Member** from candidates with research interests in *neuropharmacology* or *cellular neurophysiology*. Applicants should have research experience equivalent to that expected of a tenure-track professorial appointment and should have demonstrated scientific excellence and the ability to lead innovative research.

The NSI is an international center for distinguished visiting neuroscientists as well as the home of the Neurosciences Research Program. An independent organization, the NSI is located on the campus of The Scripps Research Institute in La Jolla, California. New laboratory facilities will be completed in the autumn of 1994.

The NSI is beginning an in-house research program in experimental neurobiology designed to increase understanding of brain processes at several organizational levels from the molecular to the cognitive. Laboratory research will be carried out in areas such as molecular biology, cellular neurobiology, neuropharmacology, neuroanatomy, functional brain imaging, and psychophysics. The experimental program will complement the in-house program in theoretical neurobiology, which has been aimed at developing biologically based, experimentally testable models of neural systems.

Institute Members will be provided with adequate financial support to equip laboratories and to maintain ongoing independent research programs. They will have opportunities for scientific interactions with Senior and Junior Fellows in Experimental Neurobiology as well as with Fellows in Theoretical Neurobiology.

Applications containing a statement of research interests, a curriculum vitae, and the names of three references should be sent to **Dr. Gerald Edelman, Director, The Neurosciences Institute, 3377 North Torrey Pines Court, La Jolla, California 92037.**

Academic Position in Environmental Health Sciences

Applications are invited for a tenure-track position at the assistant professor level in the environmental health sciences with an emphasis on toxicology and health risk assessment. Interested candidates should have a strong background in analysis, in combination with health-related training in the life sciences, for the purposes of developing novel methods of contaminant exposure assessment, biomarkers, molecular dosimetry and toxicity-directed analytical approaches. The position will be affiliated with the Eco-Research Chair in Environmental Risk Management, located within the Environmental and Occupational Health Programs of the Department of Health Services Administration and Community Medicine, Faculty of Medicine.

Candidates will be expected to develop an active laboratory-based research program, perform in a collaborative inter-disciplinary research environment, teach in the areas of environmental toxicology and risk assessment and participate in the training of inter-disciplinary graduate students. The current salary range for assistant professor rank is \$40,035 to \$57,003 with the appointment level being commensurate with qualifications and experience.

A letter of application accompanied by a full curriculum vitae, a description of research interests and full names, addresses, telephone and fax numbers for three referees should be directed to: **Dr. Steve E. Hrudef, Eco-Research Chair in Environmental Risk Management, Environmental Health Program, Faculty of Medicine, 13-103 Clinical Sciences Building, University of Alberta, Edmonton, Alberta T6G 2G3, Telephone (403) 492-6807; Fax (403) 492-0364.**

The closing date for complete applications is November 30, 1993. Effective date of employment is expected to be January 1, 1994.

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

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

NRC-CMRC

NRC is Canada's principal science and engineering organization. We work with industry partners to improve Canada's competitiveness. Currently, NRC's Plant Biotechnology Institute is looking for a Research Officer who will provide the leadership required to further enhance our record of excellence.

Research Officer Saskatoon, Saskatchewan

Your Challenge

You will initially work in the legume biotechnology group on the development and use of transgenic crop legumes. Major duties will include the planning, managing and reporting of independent research within an integrated group project, but participation in overall project planning, support of general institute activities and development of interactions outside the project are expected.

Your Credentials

You must have a PhD in an area related to plant biotechnology and extensive research experience in plant molecular genetics. A good understanding of molecular biology, biochemistry and genetics in relation to crop improvement, and a strong record of research publication are expected. You must possess experience in the production of transgenic plants and in molecular identification of genes and/or regulation of gene expression in plants. This position also requires high levels of scientific creativity and judgement, an ability to function well both individually and as a team member or leader, combined with good verbal and written communication skills in English. A security screening will also be required.

The salary being offered will be commensurate with your qualifications, and relocation expenses, if any, will be negotiated.

Applications, clearly marked **competition number PB-93-03-SC**, should include a curriculum vitae, a statement of research interests and the names and addresses of three referees, and must be received on or before **October 29, 1993**, by the Human Resources Officer, National Research Council Canada, 435 Ellice Ave., Winnipeg, Manitoba R3B 1Y6. Tel.: (204) 984-6081

NRC is an equal opportunity employer.

Vous pouvez obtenir ces renseignements en français.



National Research Council Canada
Conseil national de recherches Canada

Canada

POSITIONS OPEN

HEALTH SERVICES RESEARCH ANALYST

Memorial Mission Hospital is seeking a Research Scientist to direct its Cardiovascular Research program. The successful candidate should have an established record in clinical cardiovascular research, computer science or database management, as well as administrative experience. This is an excellent professional opportunity for an individual with leadership qualities to work in a new facility and live in a quality community. Candidates should send curriculum vitae, a statement of research interests and three references to: **Elena Donaldson, Professional Recruiter, Memorial Mission Hospital, 509 Biltmore Avenue, Asheville, NC 28801-4690.** *Mission Hospital is an Equal Opportunity/Affirmative Action Employer.*



RESEARCH DAIRY SCIENTIST RESEARCH GENETICIST (ANIMAL)

The Gene Evaluation and Mapping Laboratory, Beltsville Agricultural Research Center, Beltsville, Maryland, seeks a permanent staff member to map genes related to productivity and health in dairy cattle. Must have knowledge and skills in application of molecular, biological and cytogenetic techniques to the genetic or physical mapping of genes. Ph.D. desired. GS-11/12/13 (\$33,623 to \$62,293). Salary commensurate with experience. Submit SF-171, transcripts, and copy of curriculum vitae to: **J. Harrington, Personnel Division, USDA, ARS, 6305 Ivy Lane, Greenbelt, MD 20770.** Responses to this announcement should be marked 3E010 and must be mailed by October 4, 1993. For information about the position, call **Dr. Rexroad at 301/504-8534.** *ARS is an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

Private international **VENTURE CAPITAL** firm managing over \$200 million seeks qualified individual responsible for early-stage biotechnology and life sciences-related investments. M.D./MBA/Industry/Venture Capital Industry experience preferred. Please send all inquiries to: **Box 38, Science Classified Advertising, 1333 H Street N.W., Suite 813, Washington, DC 20005.**

RESEARCH PHYSICIST Laboratory of Structural Biology Division of Computer Research and Technology National Institutes of Health Bethesda, Maryland

Position available for a Research Physicist responsible for planning and conducting multidisciplinary theoretical and applied research in mathematics, physics, and chemistry in areas related to structural biology. The incumbent serves as an independent research investigator who originates, plans, and conducts original theoretical and experimental research in physics of biomolecular interactions.

Candidates must have a Ph.D. or an equivalent doctoral degree, completed postdoctoral training, and work experience that demonstrates independent research in biomolecular interactions, particularly hydration forces and their role in specific assembly processes. Salary: \$40,298 to \$47,920.

Qualified candidates should send curriculum vitae and SF-171 to: **Vozken A. Parsegian, Ph.D., NIH—Building 12A/2039A, 9000 Rockville Pike, Bethesda, MD 20892.**

Applications must be received by October 15, 1993.

*NIH is an Equal Opportunity Employer.
U.S. Citizenship Required.*

SCIENCE EXHIBIT DEVELOPER Museum of Science and Industry

Research topics in science, technology, and medicine and develop them into exhibits understandable, relevant, and fun for the public. As part of a project team, the developer will contribute to design direction; originate/evaluate exhibit content; and develop incredible interactive. Must have strong management skills and excellent communication abilities.

Send letter, curriculum vitae, 2-page description of exhibit interests, and 3 references to: **Barry Aprison, Ph.D., Museum of Science & Industry, 57th Street & Lake Shore Drive, Chicago, IL 60637.**

POSITIONS OPEN

PSYCHIATRIST ALCOHOL DISORDERS

BIRMINGHAM—UAB Department of Psychiatry seeks academically oriented, BC/BE psychiatrist to develop and direct operation of an alcohol disorders program. Ideal candidate should demonstrate interest and expertise in patient care, teaching and research in area of alcohol disorders. Highly competitive salary and benefits. Assistant/Associate Professor level. Application and curriculum vitae to: **Robert O. Friedel, M.D., Chairman, Department of Psychiatry, University of Alabama at Birmingham, 1700 7th Avenue South, Birmingham, AL 35294-0018.** *Affirmative Action/Equal Opportunity Employer.*

MOLECULAR BIOLOGIST—The Deborah Research Institute, a private non-profit research institute, has a position available for a Molecular Biologist to work in the cardiovascular system and muscle. This person must have a Ph.D., preferably in cell biology, biochemistry or molecular biology with at least two years of postdoctoral experience in a molecular genetics laboratory. The person must have capability of developing an independent active research program, as well as collaborating with other basic and clinical scientists. Interested persons should submit current curriculum vitae, three published papers or manuscripts, and addresses of three references. Beginning date: January 1, 1994. Send information to: **C. D. Ianuzzo, Ph.D., Director, Deborah Research Institute, Trenton/Pine Mill Roads, Browns Mills, NJ 08015-1799.** Telephone: (609) 893-1016, FAX: (609) 893-2441. *An Equal Opportunity Employer.*

ELECTROCHEMISTRY SPECIALIST: A position is available immediately for a Ph.D. with a strong background in electrochemistry/analytical chemistry, to work on the development of novel sensors for the HPLC/life science marketplace. Candidates having experience with HPLC, electrochemical detectors, modified electrodes and biosensors would be preferred. Send curriculum vitae with names/telephone numbers of 3 references to: **Debra Ayer, Personnel, ESA Inc., 45 Wiggins Avenue, Bedford, MA 01730.**

ANNOUNCEMENTS

RESEARCH AWARDS

The International Life Sciences Institute, Risk Science Institute will award grants in 1994 of up to \$50,000 per year for 2 years to support research relevant to human health risk assessment. Research proposals (due 1 November 1993) are encouraged in the areas of immunotoxicity, reproductive/developmental toxicity, and non-genotoxic mechanisms of carcinogenicity. Direct requests for information (mail or FAX only) to: **Ms. Stephanie Carter, ILSI-RSI, 1126 16th Street N.W., Washington, DC 20036.** FAX: (202) 659-8654.

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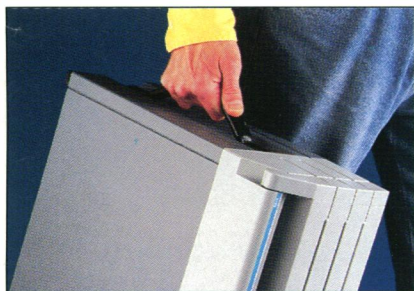
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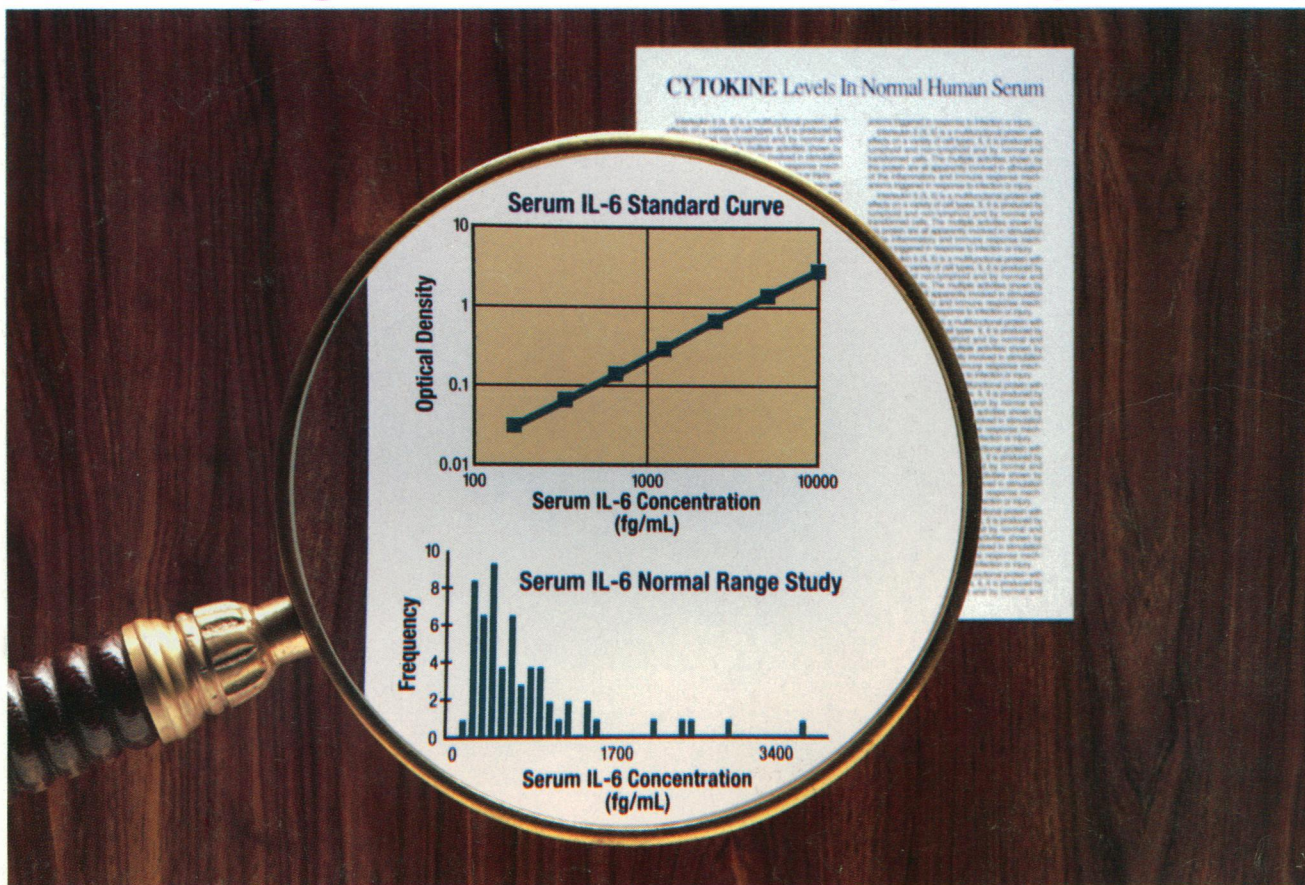
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