

**1990
AAAS/WESTINGHOUSE AWARD
for PUBLIC UNDERSTANDING of
SCIENCE AND TECHNOLOGY**

Nominations Invited

- An annual Award for working scientists and engineers from all disciplines who make outstanding contributions to public understanding of science and technology but are *not* members of the media.
- The Award will be presented during the AAAS Annual Meeting in Washington, D.C., February 14–19, 1991.
- The Award carries a \$2,500 prize.
- Sponsors for the Award are the Westinghouse Foundation and American Association for the Advancement of Science.

1989 Award Winner: Robert D. Ballard
Center for Marine Exploration
Woods Hole Oceanographic
Institution

For additional information, contact: **Patricia S. Curlin, AAAS Committee on Public Understanding of Science and Technology**, 1333 H Street, NW, Washington, DC 20005 or call 202/326-6600.

Deadline for nominations is 1 August 1990.

**DIRECTORY OF AFRICAN
UNIVERSITIES**

The Association of African Universities (AAU) announces the publication of the 5th Edition of the *Directory of African Universities*. Published biannually, the *Directory* provides 500 pages of useful information on principal officers, faculties, departments, and institutions; degrees, diplomas, and certificates awarded; admission requirements; library services; and other details about 92 African universities, including postal addresses.

It is an indispensable reference tool for national and international organizations and institutions, including libraries and universities, as well as individuals concerned with higher education in Africa.

PRICE: US \$35 including airmail postage (Customers will receive invoices from AAU)

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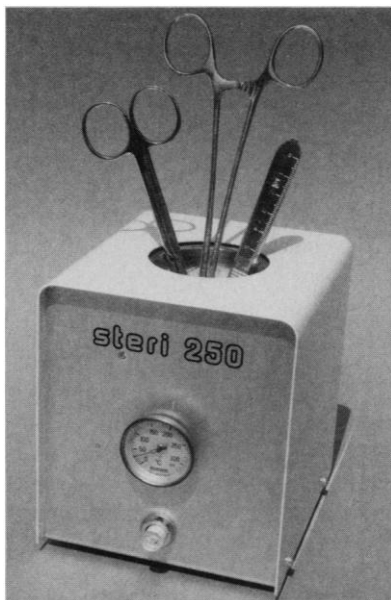
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Products & Materials

Instant Dry Sterilizer

Steri-250 and Steri-350 sterilize laboratory instruments for tissue culture and animal surgery. The dry bead sterilizers work in 5 to 10 s without flames, gases, or disinfectant fluids. A central well filled with thermoresistant glass beads quickly reaches and



maintains 250°C, sterilizing all pathogens and microbial contaminants on contact. The sterilized instruments cool to working temperature in 30 to 60 s. The outside surface of the sterilizer remains at room temperature. Inotech Biosystems International. Circle 449.

Spectrometer

The NR-1100 Spectrometer sharply resolves close peaks for identifying liquids, gases, and solids. The instrument features a dual detector system for high- and low-level scatter detection where extreme sensitivity and a high signal-to-noise ratio are needed. Scanning range is 330 to 910 nm. Scattered

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

light is processed through a 1-m double monochromator and then to the detector system. A large sample chamber allows an operator to include fixtures and holders as part of the sample setup. Heating, cooling, and even large crystals are all practical within the space available. Optional equipment includes compatible sample holders, beam-splitter, polarized light filters, and multi-channel detector with a 1-inch light capture surface. Jasco. Circle 467.

Reversed-Phase Column for Peptide Mapping

The nonmetallic Delta-Pak C₁₈ 3.9 mm by 150 mm column is packed with 300 Å, 5-μm reversed-phase material. The Delta-Pak column is compatible with Waters' nonmetallic 625 LC System and allows the selection of novel mobile-phase modifiers such as hydrogen chloride for reversed-phase, high-performance liquid chromatography mapping. Use of hydrogen chloride-modified mobile phases is made possible by incorporating polymeric materials in the advanced Delta-Pak and 625 LC System designs. The 625 LC System is the only instrument to combine a nonmetallic design with low dispersion fluidics optimized for the stringent requirements of peptide mapping. Waters, Division of Millipore. Circle 454.

Acid Mixture Protects Skin

"BARRIER" is an acid mixture that provides a barrier to skin attack while retaining acidic properties. Made of a mixture of acids and water, the solution has a pH of 0.49. Alone, it acts as a germicide against infec-



tion caused by fungi, yeasts, viruses, and bacteria. Diluted, it becomes a surgical scrub. If mixed one-to-one with another strong acid, such as hydrogen chloride, the mixture permits a person to place a hand safely into the solution, yet retains the properties of HCl. Barr-Chem Development. Circle 458.

Soluble Copolymer for Gel Electrophoresis

Instacryl H Copolymer is the first soluble copolymer for gel electrophoresis. It can reduce experiment time by 65% and increase resolution. The copolymer allows separation of double-stranded DNA in the 10- to 3500-base pair range and eliminates the need for acrylamide when separating in the 10- to 500-base pair range. Instacryl H gels can be formed in less than 10 min, simply by mixing the solution with water and buffer before adding the cross-linker dithiothreitol. International Biotechnologies Inc. Circle 451.

Literature

STAR Biochemicals Catalog lists biologically active peptides, synthetic enzyme substrates, BOC-amino acids, FMOC-amino acids, and resins for solid-phase peptide synthesis. STAR specializes in custom synthesis of peptides. STAR Biochemicals. Circle 471.

A Practical Selection Guide to HPLC Systems and Components is published by one of the world's three largest manufacturers of analytical instruments. The brochure covers analytical, semipreparative, and preparative systems; isocratic and gradient, single-pump, and multipump systems; and a wide selection of detectors, flow cells, pumps, automation accessories, and data-handling processors. Shimadzu Scientific Instruments. Circle 472.

Growth Factor Product Guide provides comprehensive technical information on a line of growth factors, growth factor antibodies, and extracellular matrix products. Promega. Circle 473.

Protein Sequencer PI 2090E is a brochure that describes a new protein and peptide sequencer. Topics covered include background on the manufacturer, femtomole amino acid detection, and details on the unit's sample support disks and data-handling hardware and software. Porton Instruments. Circle 474.

Chemglass is a 292-page catalog featuring a complete line of laboratory glassware and chemistry products. Chemglass. Circle 483.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year, and is mailed on issue date. Personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference. **SCIENCE** reserves the right, in its discretion, to decline to publish advertisements submitted to it.

LINE CLASSIFIED ADVERTISEMENTS

DEADLINE: Thursday, 10 a.m., 2 weeks prior to issue date. Advertising is accepted only in writing.

POLICIES: All classified ads will be edited and typeset according to **SCIENCE** style guidelines. NO ABBREVIATIONS. Any deadline for applications stated in ad must be at least 2 weeks after date of issue in which ad appears.

CLASSIFICATION: **SCIENCE** publishes line classified ads under the following headings: **Positions Open, Employment Agencies, Fellowships, Situations Wanted, Courses and Training, Meetings, Announcements, and Marketplace.** Advertisers should specify classification desired; however, **SCIENCE** reserves the right to decline classification requests which it believes may be misleading to readers.

RATE: \$41 per line, \$410 minimum, per week. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces per line. No charge for use of blind box number. No agency commission for ads less than 40 lines. To ESTIMATE ad cost, structure ad copy on a 52-character line; include any desired heading on 32-character lines. Each line of heading, one line of white space between heading and body of ad, and all partial lines (including centered reply information, if desired) are counted as full lines. Multiply total number of lines x \$41 = approximate cost of ad, per week. (This is an approximate cost ONLY. Allow for variation between estimated lines and actual typeset lines and resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment. **SCIENCE** cannot provide proofs of typeset ads.)

PREPAYMENT DISCOUNT: A 3% cash discount is granted to all prepaid line ads. Prepayment in U.S. dollars by checks drawn on U.S. banks is required for all foreign ads.

BOXES AND LOGOS: Any 1-column line classified ad can be boxed and/or published with logo. No extra production charge for use of box or logo. For boxed ads, one line equals 48 characters and spaces; two additional lines will be added to cost of ad to allow for top and bottom box rules. Logos are billed according to number of lines needed to accommodate logo.

SITUATIONS WANTED ADS: As a service to AAAS members in good standing, **SCIENCE** offers free placement of Situations Wanted ads for individuals seeking full-time or part-time employment. A blind box may be used. Ads must be submitted in writing with text of 20 words or less, not including address or box number, and are limited to two insertions per member in each calendar year. Please enclose **SCIENCE** mailing label including AAAS membership number when submitting ad.

CANCELLATIONS: Deadline for cancellations is 10 a.m. Tuesday, 10 days prior to issue date.

Address ad copy or requests for information to:

SCIENCE Classified Advertising
1333 H Street, NW, Room 940
Washington, DC 20005
Telephone: 202-326-6555
FAX: 202-682-0816

MARKETPLACE AND DISPLAY PERSONNEL ADVERTISEMENTS

For rates, deadlines, and information about fractional display ads (1/6 page and larger) and all Marketplace listings of available products and services, contact:

Scherago Associates, Inc.
1515 Broadway
New York, NY 10036
Telephone: 212-730-1050
FAX: 212-382-3725

RESPONSES TO EMPLOYMENT ADS

Applicants should read Positions Open ads carefully in order to submit all required material when responding, and should especially check for any stated deadline for receipt of applications. **SCIENCE** encourages applicants for positions to investigate employment laws, nondiscrimination policies, visa requirements, and cultural differences in the country advertising for employees.

To reply to a blind box ad, address correspondence to:

Box (give number)
SCIENCE Classified Advertising
1333 H Street, NW, Room 940
Washington, DC 20005

POSITIONS OPEN

ASSISTANT PROFESSOR, MICROBIOLOGY/BIOTECHNOLOGY. Nine-month, tenure-track position, Weber State College, September 1990. Primary emphasis: excellence in undergraduate teaching; research and professional service encouraged. Preference given to candidates with background in industrial/environmental microbiology. Ph.D. in microbiology required; additional biotechnology experience desirable. Send résumé, paragraph each on your teaching philosophy and research interests by 4 June 1990 to: **Human Resources Department, Weber State College, Ogden, UT 84408-1016.** *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR. Applications are invited for a tenure-track position. Applicant must have an earned doctorate in cell biology, biochemistry, molecular biology, poultry science, animal science, or closely related area. The successful candidate will have a joint teaching (30%) and research (70%) responsibility and will be required to develop an innovative and productive research program that utilizes state-of-the-art molecular biology techniques with emphasis on the protein and amino acid regulation of growth and development in poultry. Teaching responsibilities will include participation in a graduate course in protein and amino acid metabolism. Applicants should submit a letter of interest, college transcripts, a detailed résumé, and three letters of recommendation to: **Dr. K. R. Robbins, Professor and Head, Department of Animal Science, The University of Tennessee, Knoxville, TN 37901-1071.** Telephone: 615-974-7286. Applications accepted until 28 September 1990 or until position is filled. Salary commensurate with training and experience. *The University of Tennessee is an Equal Opportunity Employer.*

The University of California San Francisco seeks a Board-certified/-eligible pediatrician at the **ASSISTANT PROFESSOR IN RESIDENCE** level, with a major commitment to research, for the Division of Infectious Diseases; clinical and teaching duties will require 20% to 30% time. The individual must have experience in cellular biology, and specific expertise in phospholipid binding proteins and polymorphonuclear leukocyte degranulation. Extramural research support is essential for this position. Contact in writing: **Dr. Steve Kohl, San Francisco General Hospital, 6E9, 1001 Potrero Avenue, San Francisco, CA 94110.** *Affirmative Action Employer. Women and minorities are encouraged to apply.*

ASSISTANT OR ASSOCIATE PROFESSOR PLANT VIROLOGY

The University of Arizona invites applicants for a tenure-track assistant or associate professor position with research (75%) and teaching (25%) responsibilities. The appointee will be expected to develop a creative research program in plant virology. The specific area is unrestricted. Appropriate areas of research include genome structure and function, host-virus and virus-vector relationships. The position will be one of several focusing research on the molecular and ecological mechanisms which will eventually be applied to reducing losses to plant virus diseases. Deadline is 31 May 1990 or until a suitable candidate is found. Submit a letter of application stating career goals, reprints, and résumé, and have four letters of recommendation sent to: **M. R. Nelson (Telephone: 602-621-1828), Department of Plant Pathology, Forbes 104, University of Arizona, Tucson, AZ 85721.** *An Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE PROFESSOR OR PROFESSOR. Tenure-track, 12-month position, requiring approximately 50% research, 10% teaching, and 40% administration. The successful candidate will assist the associate director in administering a broad-based research and teaching program and develop a research program in one of the following areas: composites, wood quality enhancement, or wood chemistry and biotechnology. Qualifications: earned doctorate in wood science and technology, chemistry, engineering, or related field; demonstrated leadership, management ability, and communication skills are desired. Application deadline: 30 June 1990 or until position is filled. Salary: competitive, commensurate with experience. Application procedures: candidates should submit a letter of application, résumé, transcripts, and names of three references to: **Ms. Deborah C. Reginelli, Mississippi Forest Products Laboratory, PC # 00247, P.O. Drawer FP, Mississippi State, MS 39762.** *Mississippi State University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR DEPARTMENT OF SURGERY

The Department of Surgery at the University of Pittsburgh School of Medicine is seeking a candidate at the assistant/associate professor level to join a newly constituted Section of Surgical Oncology and Tumor Immunology. Applicants should have a Ph.D. in immunology along with vast knowledge and experience in lymphocyte biology and experimental immunotherapy of cancer. We are particularly interested in individuals with demonstrable experience in lymphokine and T cell receptor molecular biology. There is a possibility of a co-appointment in a basic science field, depending upon experience. We offer a competitive salary. Nominations, including curriculum vitae and bibliography, should be sent to: **Richard L. Simmons, M.D., Chair, Department of Surgery, University of Pittsburgh, 497 Scaife Hall, Pittsburgh, PA 15261.**

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

ASSISTANT/ASSOCIATE PROFESSOR

The newly established Division of Neuroscience in Psychiatry at the University of Minnesota seeks applicants for two positions at the assistant professor (tenure track) or associate professor (tenure) level. The objectives of the division are to pursue research questions in basic neural mechanisms. Neuroscientists with expertise in electrophysiology, molecular neurobiology, or receptor mechanisms are particularly encouraged to apply. A Ph.D. in a neuroscience-related field or M.D. degree is required. Candidates at the assistant professor level should have postdoctoral or residency training and have demonstrated potential for developing an independent research career and involvement in quality research accepted or published in peer-reviewed journals. Associate professor applicants should have professional distinction in research and writing and demonstrated effectiveness in teaching and advising. Associate professor candidates are also expected to have an extramurally funded research program. The successful applicants will join the rapidly expanding multidisciplinary neuroscience community at the university. Opportunities are numerous for collaborations, intramural funding, and joint appointments in other basic and clinical departments. Applicants should provide curriculum vitae, the names and addresses of three references, and a statement of present and future research goals by 1 June 1990 to: **Dr. Boyd K. Hartman, Director of Neuroscience Research in Psychiatry, Box 392 UMHC, Department of Psychiatry, University of Minnesota Medical School, Minneapolis, MN 55455.** Telephone: 612-626-4034.

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

BIOCHEMISTRY/DEVELOPMENTAL BIOLOGY

The Department of Biology, Hamilton College, invites applications for a 1-year replacement position at the **ASSISTANT PROFESSOR** level, effective 1 August 1990. Applicants must have a Ph.D. degree; teaching experience is desirable. The successful applicant will team-teach a fall term introductory course in genetics and development (development part), a spring term introductory course in cell chemistry and structure (cell chemistry part), and teach an upper level course in biochemistry. Participation in the interdepartmental molecular biology/biochemistry program is expected. Interested individuals should send curriculum vitae, statements of teaching and research interests, and three letters of reference to: **David A. Gapp, Chair, Biology Department, Hamilton College, Clinton, NY 13323.** Applications must be received by 8 June 1990. *Women and members of minority groups are encouraged to apply. Hamilton College is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGIST, ASSISTANT PROFESSOR. Tenure-track position available to study molecular biology of Alzheimer's disease, heat shock proteins, and ubiquitin in nervous tissue. A strong background in molecular biology is required. Send curriculum vitae, reprints of recent publications, and names of three references to: **Pierluigi Gambetti, M.D., Division of Neuro-pathology, Institute of Pathology, Case Western Reserve University, 2085 Adelbert Road, Cleveland, OH 44106.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

APPLIED SCIENTISTS sought, B.S., M.S., Ph.D., for environmental analysis and permitting. Prefer training and/or experience in southeastern United States. Expertise sought in botany, wildlife, wetlands, CAD, GIS, water quality, statistics. Send résumé to: **Personnel Department, Breedlove, Dennis and Associates, Inc., P.O. Box 720037, Orlando, FL 32872-0037. An Equal Opportunity Employer.**

ASSISTANT TO THE EDITOR-IN-CHIEF OF THE JOURNAL OF IMMUNOLOGY

A full- or part-time position in the editorial offices of *The Journal of Immunology* in Bethesda, Maryland, will be available 1 July 1990. The incumbent serves as assistant to the editor-in-chief. Principal duties include the preliminary review of manuscripts submitted for publication, their assignment to referees, and participation in the decision-making process concerning publication of manuscripts. Doctorate in immunology or extensive experience in immunology research required. Salary negotiable. Send curriculum vitae to: **Dr. Ethan M. Shevach, The American Association of Immunologists, The Journal of Immunology, 9650 Rockville Pike, Bethesda, MD 20814, or telephone: 301-530-7178.**

BIOCHEMICAL SPECIALIST/ FLUORESCENCE INSTRUMENTATION. SPEX Industries, the leading manufacturer of high-performance fluorescence instrumentation, seeks candidates for the position of fluorescence support specialist. Primary duties are customer support, training, demonstrations, and applications development. A strong background in molecular fluorescence and/or circular dichroism instrumentation is required. Send résumé with salary requirements to: **Personnel, RKS, SPEX Industries, Inc., 3880 Park Avenue, Edison, NJ 08820. Equal Opportunity Employer.**

BIOCHEMIST. Responsible for conducting and supervising research concerning relationship between Alzheimer's disease and Down's syndrome to develop diagnostic test for early detection and cure for Alzheimer's disease. Supervise one laboratory technician and one postdoctoral fellow and conduct research in cloning of DNA probes from Down DNA region on human chromosome 21 to determine biochemical and genetic basis of Alzheimer's disease, using Compaq 286 computer and Densitometer machine. Also responsible for radiation protection and chemical and bacterial safety in laboratory. Ph.D. in biology and 2 years of experience in job offered or 2 years of experience as research associate/molecular biology required. Forty hours per week at \$30,000 per year. Send two copies of résumé to: **J.O. #00451, Commonwealth of Massachusetts, Department of Employment and Training, Special Programs, 1st Floor, 19 Staniford Street, Boston, MA 02114.**

BIOLOGY. Stanley H. Kaplan Educational Center is seeking an M.S. biologist to research, write, and edit technical educational material in our midtown Manhattan office. Candidate will have some management responsibilities. Full benefits package; salary commensurate with experience. Send résumé and cover letter to: **Research Department GG, 810 7th Avenue, 22nd Floor, New York, NY 10019.**

GC/MS CHEMIST (gas chromatography/mass spectrometry). Perform physical and chemical testing on preship samples, industrial solvents, circulating solvents, environmental samples, water testing, and requested sample testing. Supervise and/or train technicians; troubleshoot instrumentation, methodology, and chemical-related process problems; operate RTE computer, operate and maintain such equipment as gas chromatograph, gas chromatography/mass spectrometer (model 5970), and liquid chromatograph; and provide R&D support as well as technical presentation. Requires master's in chemistry. Experience not required but education must have included 2 years of graduate level research using high-performance liquid chromatograph, gas chromatograph, and gas chromatography/mass spectrometer (model 5970). Graduate education must have included one course in chemistry and computers and one course in structural determination in chemistry. Salary: \$13.75 per hour; 40 hours per week, no overtime, 8 a.m. to 5 p.m., Monday through Friday. Send résumé to: **Illinois Department of Employment Security, 401 South State Street-3 South, Chicago, IL 60605, Attention: Joan Sykstus, Reference V-IL 1194-S. An employer-paid ad.**

POSITIONS OPEN

The Marine Biology Research Division of the Scripps Institution of Oceanography seeks to appoint a **BIOL-OGIST** in the Research Series, with a demonstrated commitment to independent research on marine organisms. Candidates with interdisciplinary interests complementing the broad spectrum of interests represented here are encouraged to apply. Fields sought include, but are not restricted to, midwater biology, marine botany, molecular biology, and pharmacology. Candidates must have a Ph.D. or equivalent and be assured of extramural support for salary and research for at least 2 years. Level of appointment and salary depend on research achievements. Send curriculum vitae and names of three references by 30 June 1990 to: **Chair, MBRD, A-002, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, CA 92093. An Equal Opportunity/Affirmative Action Employer.**

CHEMICAL LIMNOLOGIST, GEOCHEMIST. The Research Center at the State University of New York (SUNY) at Oswego invites applications for a permanent-track, full-time research position at the **RESEARCH ASSOCIATE** level (Ph.D. required). Preference will be given to candidates with strong research potential who can establish an independent, externally funded research program and complement existing environmental programs on solid and hazardous wastes, water quality, and Great Lakes ecosystems. Broad experience in chemical and numerical analyses and field sampling desirable. Send curriculum vitae, description of research interests, and three letters of reference to: **Research Associate Search, Research Center, King Hall, SUNY at Oswego, Oswego, NY 13126.** Review of applications will begin on 30 May 1990 and will be accepted until position is filled.

An Affirmative Action/Equal Opportunity Employer.

CHAIRMAN, DEPARTMENT OF PHARMACOLOGY AND THERAPEUTICS UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE GAINESVILLE, FLORIDA

Nominations and applications are requested for the position of professor and chairman of the Department of Pharmacology and Therapeutics of the University of Florida College of Medicine. The college seeks an individual who possesses and has demonstrated strong leadership abilities. The candidate should have an established and continuing record of major research productivity. The candidate should have a commitment to the further development and strengthening of the research and teaching programs of the department. Applications and nominations are invited at this time. Outstanding candidates with M.D. and/or Ph.D. degree will be considered. Applications including curriculum vitae, bibliography, and the names and addresses of at least three references should be sent by 1 September 1990 to:

**James E. McGuigan, M.D., Chairman
Search Committee for
Pharmacology and Therapeutics
Chairman, Department of Medicine
University of Florida College of Medicine, J-277
Gainesville, FL 32610**

An Equal Opportunity/Affirmative Action Employer.

VICE PRESIDENT FOR BOTANICAL SCIENCE THE NEW YORK BOTANICAL GARDEN

Prestigious cultural institution seeks vice president who will be responsible for planning, budgeting, and supervision of the botanical science program of about 60, including 22 Ph.D. scientists. Will serve as public spokesman for the botanical scientific program to the scientific community, the general public, and national and international agencies. Will also seek funds to support the botanical science program from the public and private sector.

Position requires a Ph.D. in plant sciences with strong preference for a candidate with administrative experience. Candidate must be a recognized leader in botanical science with an active research program. Must have knowledge of systematic, tropical, and economic botany. Excellent salary and benefits.

Please submit résumé and letter of interest by 15 August 1990 to:

**Ms. Sally Gavin, Director of Personnel
The New York Botanical Garden
Bronx, NY 10458-5126**

Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

EXECUTIVE DIRECTOR MONTEREY BAY AQUARIUM RESEARCH INSTITUTE (MBARI)

An opening exists for an outstanding scientist with excellent administrative skills; one who can interact with an interdisciplinary group including biological, chemical, and physical oceanographers, as well as engineers, computer experts, and administrators. The executive director is the chief executive officer (CEO) of MBARI and is expected to maintain strong interactions with the local and national marine science communities. The director should be capable of attracting strong scientists and engineers, and of directing and motivating them to solve challenging problems. Current MBARI resources include marine laboratories situated in Pacific Grove and Moss Landing, an 110-foot research vessel, an ROV, and a scientific, engineering, and operations staff of about 50 persons. The 1990 operations budget is \$7.5 million. Significant growth in facilities, staff, and budget is planned for the future.

If interested in becoming a candidate, send a letter stating your qualifications and a résumé to:

**Dennis A. Powers
MBARI Search Committee
Hopkins Marine Station
Cabrillo Point
Pacific Grove, CA 93950**

DIRECTOR MOLECULAR SYSTEMATICS AND EVOLUTION LABORATORY

In conjunction with the development of an interdepartmental program in systematic biology, the University of Arizona Division of Biotechnology invites applications for the position of director of its Molecular Biology Support Facility. Candidates should have the Ph.D. degree and professional experience in the application of molecular techniques to problems in systematics and evolutionary biology (including phylogeny reconstruction, population, and conservation biology). The director will organize and coordinate all laboratory activities, provide technical training and advice to associated faculty, staff, and students. The director will be appointed as a research scientist and will be encouraged to seek external funding for independent research. Salary will be commensurate with experience.

Application materials, including curriculum vitae, selected reprints, a statement of research interests, and names of three references, should be submitted by 15 July 1990 to: **Dr. John Law, Director, Division of Biotechnology, Biological Sciences West 364, University of Arizona, Tucson, AZ 85721.**

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

GROSS ANATOMIST

The Department of Cell Biology and Anatomy at the University of Alabama at Birmingham invites applications for two, a tenure-earning and a nontenure-earning, faculty positions in anatomy. Applicants should have training for and experience in teaching gross anatomy to medical or other health professional students. Position requires a terminal degree in biologic sciences with special emphasis on human morphology. Applicants should send curriculum vitae and three letters of recommendation to: **Dr. B. R. Brinkley, Professor and Chairman, Department of Cell Biology and Anatomy, University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294.** (Responses must be received within 1 month of the publication date.) *We are an Equal Opportunity/Affirmative Action Employer.*



Wayne State University

The Department of Pathology in the Wayne State University School of Medicine is seeking an M.D. and/or Ph.D. to establish a research program and supervise a diagnostic laboratory in **MOLECULAR BIOLOGY**. Postdoctorate fellows and pathologists in training are encouraged to apply. Interested individuals should send curriculum vitae and the names of three references to: **John D. Crissman, M.D., Chairman, Department of Pathology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201. An Equal Opportunity/Affirmative Action Employer.**

BS/MS Scientists

Pulmonary Research/ Cellular Immunology



The continued expansion of our Central Research facilities at Groton, CT has created a need for additional research assistants. You will join a multidisciplinary project team engaged in research targeted at discovery of novel therapeutics for a variety of pulmonary and autoimmune diseases. The positions require a BS or MS degree or the equivalent, plus relevant experience.

Pulmonary Research

Physiologist—You will participate in a project designed to evaluate the efficacy of novel compounds on pulmonary diseases, using *in vivo* techniques. Relevant experience or interest in *in vitro* functional pharmacology, evaluation of pulmonary function and/or applied biomedical engineering desired.

Inflammation Cell Biologist—You will be involved with a team investigating the mechanisms of recruitment and activation of inflammatory cells in pulmonary diseases. Relevant experience with *in vivo* models, tissue culture and/or immunologic methods is desired.

Cellular Immunology

Cellular Immunologist—You will perform *in vitro* T lymphocyte activation and signal transduction studies, investigate the role of T cell ion channels in autoimmune diseases, and determine intracellular mechanisms of immunosuppressive agents. Experience in one or more of the following laboratory techniques is desired: cellular and biochemical functional assays, cell purification, tissue culture, ELISA, radioisotopic assays, receptor binding and protein biochemistry.

Pfizer offers a stimulating scientific research environment with opportunities to interact with scientists from many disciplines. In addition, Pfizer has a competitive compensation/benefit package along with relocation assistance to this southeastern Connecticut shoreline community. Please send a resume indicating position of interest, a description of your research experience, and names of three references to: Mr. Kym Goddu, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.

Associate Director Agricultural R & D - International

Merck Sharp & Dohme Research Laboratories has an immediate opening for an Associate Director, International Pesticide Development in its Agricultural Research Department located in Three Bridges, New Jersey. This successful candidate will have responsibility for the planning and management of development programs in Japan and Europe for a class of novel natural product insecticides. Regular interactions with regulatory, marketing and operations professionals provide high visibility within the Company. The successful candidate should have a Ph.D. in entomology, agronomy, or plant pathology, 5 or more years experience in agricultural pesticide development, and a working knowledge of pesticide regulatory requirements. Excellent oral and written communication skills will be required.

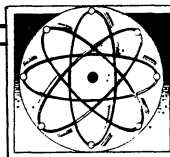
Merck & Co., Inc., is a Fortune 500 Company. Its agricultural research facility is located in Hunterdon County in West Central New Jersey approximately 60 miles from New York City. Our salaries, benefits, and growth potential are excellent. Interested candidates should submit their resume with the names of three references to **Mr. Michael Stephens, Merck & Co., Inc., P.O. Box 2000, WBD-362, Rahway, NJ 07065.** An Equal Opportunity Employer.



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This dynamic field is one of the fastest growing, creative and meaningful areas of business expansion today. Throughout the 1990s, an exciting new era of research is progressing that depends on our products. To provide the quality and service this essential work demands, we offer challenging careers in:

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- Tissue Culture
- Molecular Biology
- Protein Chemistry

To explore the opportunity in our state-of-the-art environment, send your confidential resume to: **Personnel Manager, SIGMA CHEMICAL COMPANY, Position #37, P.O. Box 14508, St. Louis, MO 63178.** An Equal Opportunity Employer.

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CHEMICAL COMPANY



Protein/Peptide Research Scientist NMR Spectroscopist

CIBA-GEIGY Pharmaceuticals Division is respected worldwide for its life-extending and health-enhancing products. Our commitment to research is evidenced by our investment in the most advanced analytical tools and in the accomplished professionals who utilize them.

This PhD-level Scientist will apply thorough knowledge and experience of NMR spectroscopic techniques and principles to determine the solution structure of proteins and peptides. Fully integrating a new Bruker AMX-500 and Silicon Graphics workstation into our multidisciplinary research environment will be among this scientist's major responsibilities.

Credentials must include a PhD in Chemistry, Biochemistry, or a closely related discipline. Extensive practical experience preparing protein/peptide samples for NMR evaluation and knowledge of data processing software is essential. Familiarity with molecular mechanics and/or dynamics is desirable to enable close collaboration with the molecular modeling group.

CIBA-GEIGY offers competitive salaries, excellent benefits and a stimulating research environment at its 100-acre headquarters complex. Please send resume with salary history and requirements to: **Al Aronson, Staffing Center, CIBA-GEIGY Corporation, Pharmaceuticals Division, Dept. LB, 556 Morris Avenue, Summit, New Jersey 07901.** We Are An Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

CIBA-GEIGY

Director, Tobacco-Related Disease Research Program

Office of the Vice President -Health Affairs

The University of California, Office of the President, seeks a uniquely qualified individual to manage a new Tobacco-Related Disease Research Program (TRDRP). Funded by the State of California's Cigarette and Tobacco Products Surtax Fund, the TRDRP will administer \$30,000,000 annually to qualified California non-profit organizations and agencies for research into the prevention, causes and treatment of tobacco-related diseases in the areas of Cancer, Heart and Lung, and Sociobehavioral/Epidemiological/Public Health.

The Director has overall responsibility for planning, managing, coordinating and monitoring all grant and contract proposals and awards made under the TRDRP. Other involvement includes providing support and guidance to the Scientific Advisory Committee, maintaining an updated master consultant file of scientists for committees, and ongoing liaison with academic institutions, governmental bodies, professional organizations, voluntary health organizations and the public at large. This position also develops annual reports to the Legislature, and generally provides conceptual leadership with respect to the role, scope, emphasis and direction of the TRDRP.

REQUIREMENTS: Minimum qualifications include a Ph.D., M.D., or equivalent degree with demonstrable knowledge of the scientific, clinical, societal, fiscal and political issues pertaining to tobacco-related disease research. Also, substantive research experience in a relevant basic or clinical biomedical or sociobehavioral area as evidenced by publication in peer-reviewed scientific literature and in-depth familiarity with NIH peer review/grants management process. Five or more years of successful high level leadership of a major research program including at least one year of responsibility in grant solicitation, peer review and funding, and demonstrated success interacting with a broad range of individuals and concerns germane to a highly visible and complex publicly-funded program are also requisite. Excellent oral and written communication skills and proven ability to organize/supervise staff.

SALARY RANGE: \$74,500-\$119,000 commensurate with qualifications and experience.

APPLICATIONS: Please send nominations or a letter of application, resume, and salary history by June 1, 1990 to: Director of Personnel, Screening Committee T, University Of California, Office of the President, 300 Lakeside Drive, 9th Floor, Oakland, CA 94612-3550. EOE/AA



UNIVERSITY OF CALIFORNIA
Office of the President

POSITIONS OPEN

FACULTY POSITIONS

The Yale University School of Forestry and Environmental Studies is considering making appointments at the **ASSISTANT PROFESSOR** rank in the following areas:

- meteorology/climatology,
- environmental chemistry, and
- geographic information systems.

The positions are available beginning 1 January 1991, and all are for an initial term of 3 years.

To apply, send a letter that includes teaching and research goals; curriculum vitae and transcripts; the names, addresses, and telephone numbers of three references; and examples of recent work to: **Professor William H. Smith, Search Chair, c/o Dean's Office, Yale University, School of Forestry and Environmental Studies, 205 Prospect Street, New Haven, CT 06511.** A complete application packet should arrive no later than 1 October 1990.

Yale University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION RETINAL MOLECULAR BIOLOGY AND BIOCHEMISTRY THE UNIVERSITY OF MICHIGAN

The Department of Ophthalmology, W. K. Kellogg Eye Center, is seeking an **ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** for an immediate opening in retinal molecular biology. This position will complement a group having basic and clinical expertise in the inherited retinal dystrophies. Research experience should include retinal biochemistry and molecular biology with particular expertise in assaying and isolating plasma membrane conductance channels. A joint appointment in a related graduate department at the University of Michigan is possible. Curriculum vitae and a letter of interest with a statement of research should be forwarded to:

Paul A. Sieving, M.D., Ph.D.
Department of Ophthalmology
W. K. Kellogg Eye Center
University of Michigan
1000 Wall Street
Ann Arbor, MI 48105

The University of Michigan is an Affirmative Action Employer.

FACULTY MEDICAL TECHNOLOGY RESEARCHER AND STAFF POSITIONS

Two positions are available in the Department of Biological Sciences at Wright State University (WSU).

Position one is a tenure-track position for a certified medical technologist (MTASCP). We prefer to hire a Ph.D.-level candidate, but encourage M.S.-prepared candidates to apply. The successful candidate would develop a strong research program in his/her discipline, participate in upper-level courses for the medical technology program, and direct an accredited program leading to a B.S. in medical technology. Rank and salary commensurate with experience.

Position two is a staff position requiring medical technology certification (MTASCP) and preferably a master's degree. The successful candidate would assist the program director, coordinate students in their clinical experience, and act as a liaison to the six to seven area hospitals affiliated with the program.

The Medical Technology program at WSU is a 3+1 year program in the Department of Biological Sciences. The program has approximately 60 undergraduates and graduates about 12 to 20 students per year. The Department of Biological Sciences offers a master's degree and cooperates with the School of Medicine in the biomedical sciences Ph.D. program. Departments of Biochemistry, Microbiology-Immunology, Anatomy, and Physiology-Biophysics interact within the College of Science and Mathematics.

WSU is a major metropolitan university serving over 17,000 students and is an *Equal Opportunity/Affirmative Action Employer*. Interested persons should send a letter of interest, curriculum vitae, and names, addresses, and telephone numbers of three references to: **Medical Technology Search Committee, Department of Biological Sciences, Wright State University, Dayton, OH 45435.** Review of applications will begin 15 July 1990 and applications will be accepted until the positions are filled.

POSITIONS OPEN

FACULTY POSITION DEPARTMENT OF PHARMACEUTICS COLLEGE OF PHARMACY UNIVERSITY OF FLORIDA

The Department of Pharmaceutics is seeking to fill a tenure-track faculty position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. The department teaches undergraduate classes in the college professional degree programs and runs an active graduate and post-doctoral training program.

Candidates should hold a Ph.D. in pharmaceutics or in an appropriate related discipline and, preferably, have postdoctoral experience.

The successful candidate will be expected to take part in teaching and research activities in one or more of the following areas: physical pharmacy, drug delivery, pharmaceutical analysis, pharmacokinetics, and pharmaceutical molecular biology. He/she will be expected to develop a strong research program and external support.

Applicants should send curriculum vitae and three letters of reference by 15 July 1990 to: **Dr. R. J. Pranker, Chairman, Search Committee, College of Pharmacy, University of Florida, Box J-494, JHMHC, Gainesville, FL 32610.** For further information, telephone: 904-392-5880.

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

The Animal Science Department, Iowa State University, seeks to fill the following tenure-track faculty positions. All positions emphasize research, teaching, and graduate education.

SENIOR FACULTY POSITION: Swine nutrition and growth. Research and graduate education in monogastric nutrition, growth and related sciences are major responsibilities. Leadership of a major research program and supervision of extensive research facilities are required.

ASSISTANT PROFESSOR: Animal behavior and environmental biology. Emphasis is on research and teaching at graduate and undergraduate levels. Research efforts will concentrate on environmental and other management considerations influencing performance of swine.

ASSISTANT PROFESSOR: Dairy nutrition and management. Teaching at the undergraduate level will include nutrition, dairy enterprise management, and related technologies. Research and graduate education will be essential.

ASSISTANT PROFESSOR: Dairy cattle genetics and systems modeling. Extension programs in dairy enterprise management and off-campus teaching will be major responsibilities. Research and graduate education will be in the area of dairy herd improvement and enterprise management systems.

ASSISTANT PROFESSOR: Molecular biology, gene mapping/function. Research program in gene identification, mapping, and expression at the molecular level. Emphasis will be on relationships with growth, immune systems, and reproduction as these may influence productivity of domestic animals. Teaching will relate to the above areas.

Applicants for the above positions must have a Ph.D. in the area specified or in a closely related field. Outstanding research ability and effectiveness in communicating with colleagues, students, and clientele are essential. Candidates may request information and/or apply by contacting: **Dr. S. A. Ewing, Head, Department of Animal Science, 101 Kildee Hall, Iowa State University, Ames, IA 50011.** Telephone: 515-294-7620. *Equal Opportunity/Affirmative Action Employer.*

FRED HUTCHINSON CANCER RESEARCH CENTER ASSISTANT MEMBER POSITION TRANSPLANTATION BIOLOGY PROGRAM

Seeking an investigator with interest and experience in bone marrow transplantation for preclinical research program in hematopoietic growth factors and marrow culture studies (with and without gene transfer) in a canine marrow transplant model. Approximately 25% patient care responsibilities (M.D. or M.D./Ph.D. required) and ability to generate grant support within 3 to 4 years is expected. Salary depending on experience. Excellent benefits and smoke-free environment. Send curriculum vitae and application to: **Dr. Keith Sullivan, Search Committee, 1124 Columbia Street, Seattle, WA 98104.**

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



The University of Sydney

AUSTRALIA

School of Biological Sciences

LECTURER IN BIOLOGY

(Eukaryotic Molecular Genetics)

Reference No. 14/02

Applications are invited for a tenurable lectureship in the area of eukaryotic molecular genetics. Preference may be given to applicants in the areas of mammalian and human molecular genetics. The appointee will be expected to teach genetics at all undergraduate levels, to establish a research programme in the area of eukaryotic molecular genetics and to supervise honours and postgraduate students. Further information from Associate Professor C.B. Gillies, Dr K.D. Brown FAX +612 692 4203.

LECTURER IN BIOLOGY

(Marine Animal Biology)

Reference No. 14/03

Applications are invited for a tenurable lectureship in the general area of marine animal biology. The appointee will undertake teaching in appropriate aspects of animal biology at all undergraduate levels. The appointee will also be expected to teach at the postgraduate level and develop research in some area of marine biology, an established area of strength in the School of Biological Sciences. Further information from Professor D.T. Anderson or Dr A.J. Underwood FAX +612 692 4119.

LECTURER IN BIOLOGY

(Plant Molecular Genetics)

Reference No. 14/04

Applications are invited for a tenurable lectureship in the area of plant molecular genetics. The appointee will be expected to teach genetics, particularly as applied to plants at all undergraduate levels, to contribute appropriately to teaching of plant science, to establish a research programme in the area of plant molecular genetics and to supervise honours and postgraduate students. Preference may be given to applicants in the areas of plant genome analysis and/or gene transfer. Further information from Professor N.A. Walker or Associate Professor C.B. Gillies FAX +612 692 4203.

Salary: Lecturer A\$32,197-A\$41,841 per annum.

Appointments to lectureships have the potential to lead to tenure and are usually probationary for three years.

Assistance with relocation expenses in Sydney will be provided.

Method of application: Applications, quoting reference no., including curriculum vitae, list of publications and the names, addresses and FAX numbers of three referees, to the Registrar, Staff Office, University of Sydney, NSW 2006, Australia. FAX +612 692 4316.

The University reserves the right not to proceed with any appointment for financial or other reasons.

Closing: 31 May 1990.

Equal employment opportunity is University policy

5665M

Schering

Section Leader Allergy

***If managing
drug research efforts
is what you have in mind,
come to Schering-Plough
Research.***

As a \$3-billion healthcare leader, we create pharmaceuticals that enhance, improve and prolong life. Our dedication to discovery has led to innovations that have won Schering-Plough top recognition around the world. We seek the talents of an experienced scientific professional with proven managerial abilities to play a leadership role at our research facility in Bloomfield, NJ.

This high profile position provides supervision for a senior level group whose collective goal is to develop models of pulmonary inflammation and formulate directions in new drug discovery. Requires a PhD in Pharmacology or related scientific discipline and a background of at least 5 years in the area of pulmonary inflammation mechanisms. Experience in all biological and inflammatory processes, as well as cytokines is desired.

We reward your achievements with an excellent salary and an outstanding benefits program. For immediate consideration, please forward your resume with salary requirements, in confidence to: Mr. R. Blackburn, Schering-Plough Research, P.O. Box DD90-27, 60 Orange Street, Bloomfield, NJ 07003. We are an equal opportunity employer.

What you have in mind, we put in action.

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Director
Center for
Molecular Biology

Wayne State University

Applications are invited for the position of Director of the Center for Molecular Biology, an interdisciplinary program composed of primary and participating faculty located in various departments throughout the University. The Director reports to the Vice President for Research and Dean of the Graduate School and will be responsible for the continued growth and development of the Center, which has a \$2,000,000+ annual operating budget. The Center for Molecular Biology is a relatively young enterprise and currently has eight full-time and three half-time faculty members; additional faculty positions are available. The Director should be an independent investigator with a superlative record of scholarly accomplishment in an area of Molecular Biology, possess extramural support and have the capacity for leadership and administration. Experience with promoting economic development through effective technology transfer is highly desirable. Salary is commensurate with qualifications and experience. Applicants should forward a copy of their curriculum vitae to:

Dr. Raymond F. Novak
Chairman, Search Committee
Wayne State University
2727 Second Avenue, Room 4000
Detroit, MI 48201

Wayne State University is an equal opportunity/affirmative action employer.

Director, Math/Science Center

Battle Creek, Michigan is serious about changing math and science education. Local business, professional, civic and education leaders are committed to the early opening of a Math/Science Center to serve K-12 students in Calhoun County, Michigan.

Candidate will be employed by Battle Creek Public Schools. Position and program are new. Start-up of Math/Science Center will be immediate challenge. Ability to work with multiple school systems and foster continued support of business and foundations will be key responsibilities.

Qualifications: Masters Degree, undergraduate studies in math/science, eligible for Michigan Administrative Certificate, management experience. Salary \$55,000 minimum. Comprehensive Benefits.

Apply to: Mr. Robert Harberts, Asst. Supt.
Personnel and Administration
Battle Creek Public Schools
3 West VanBuren Street
Battle Creek, Michigan 49017-3079

Equal Opportunity Employer

Battle Creek, Michigan, Home of:

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IMMUNOLOGIST

DNAX Research Institute is seeking a scientist to join the staff of our Immunology Department.

Candidates should hold either a Ph.D. or M.D./Ph.D. degree, and be interested in an aspect of immunology that would allow them to take full advantage of the established research strengths and unique resources of DNAX. We are particularly interested in individuals working in one of the following areas: Antigen presentation, inflammatory monokines, adhesion molecules, or in vivo models of cytokine function.

The successful candidate will be expected to establish an independent research program in their area of interest, and will have the opportunity to conduct basic research in the absence of teaching and grant-writing responsibilities. They will be free to work with postdoctoral fellows and to communicate their scientific findings in a manner identical to academic institutions.

DNAX Research Institute, located next to Stanford University, is committed to basic research and provides a unique opportunity for productive collaborative efforts between immunologists and molecular biologists in an academic type of environment.

Interested applicants should send a curriculum vitae and the names of three references to the Human Resources Department, DNAX Research Institute of Molecular and Cellular Biology, 901 California Avenue, Palo Alto, California 94304-1104. DNAX is an equal opportunity employer, m/f/h/v.

DNAX Research Institute

The Process Of Achievement.

Magainin Sciences Inc. is dedicated to leadership in the research, development and commercialization of novel pharmaceuticals based upon magainin compounds and related host defense peptides. Apply your talent and expertise here, and be part of the exciting, cutting-edge achievement process within our rapidly developing company

Tumor/Cell Biology: *Conduct in vitro and in vivo studies to develop host defense peptides as anticancer agents. Experience with tissue culture and tumor cells essential; knowledge of in vitro and in vivo models for testing anticancer drugs desirable.*

Molecular Biology: *Develop rDNA expression system for host defense peptides. Experience with microbial rDNA expression systems essential; knowledge of and experience in production of peptides/proteins by rDNA desirable.*

Opportunities are at the Ph.D. (0-5 years' postdoctoral experience) and M.S., B.S. (2-10 years' experience) levels

For consideration, please submit curriculum vitae, description of research interests and salary requirements to

Director of Human Resources, Magainin Sciences Inc., 5110 Campus Drive, Plymouth Meeting, PA 19462.

Magainin Sciences Inc. is located in new state-of-the-art facilities in suburban Philadelphia. We offer excellent salaries, benefits, outstanding scientific interactions and the opportunity to change the future of therapeutics

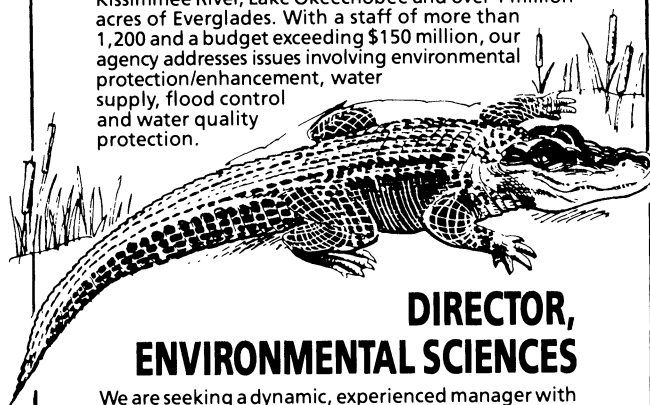
Magainin Sciences Inc.

An Equal Opportunity Employer

SHAPING THE MASTER PLAN

Florida's Future Is Being Decided Today

The South Florida Water Management District is a 16-county regional agency responsible for the management of water resources in the most urbanized area of Florida. The agency has direct responsibility for environmental research and management for the Kissimmee River, Lake Okeechobee and over 1 million acres of Everglades. With a staff of more than 1,200 and a budget exceeding \$150 million, our agency addresses issues involving environmental protection/enhancement, water supply, flood control and water quality protection.



DIRECTOR, ENVIRONMENTAL SCIENCES

We are seeking a dynamic, experienced manager with solid scientific credentials to fill the position of Director of Environmental Sciences. We are looking for a highly motivated individual with proven management, communication and interpersonal skills, and a common sense approach to environmental issues.

Our ideal candidate will hold a Ph.D. in an environmental biology field such as wetlands ecology, biological limnology, estuarine biology or systems ecology. Master's degrees in these fields will be considered. This is a management position dealing with South Florida aquatic ecology; field experience in Florida wetlands or the Everglades is a plus.

This person will oversee the District's ecological research, monitoring and biological data collection programs. The selected candidate will be responsible for the daily supervision of a current staff of 18, the development and administration of an annual budget, and representation of the District's Environmental Sciences program to state and local officials as well as the environmental community.

The selected candidate will have a proven track record of increasingly responsible supervisory/management experience; a minimum of five to ten years including budget preparation and administration, program planning and project management. Solid communication and interpersonal skills are a must.

In exchange for your expertise we offer a competitive salary based on experience and an excellent benefits program. For consideration, please submit your resume to: **Linda Starr, Senior Employment Representative, South Florida Water Management District, P.O. Box 24680, West Palm Beach, FL 33416-4680 or call (407) 687-6362.**



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

An Equal Opportunity Employer M/F/H/V

POSITIONS OPEN

FACULTY POSITIONS IN NMR SPECTROSCOPY THE UNIVERSITY OF MICHIGAN

FACULTY POSITION for an NMR spectroscopist with experience in the use of multidimensional spectroscopy applied to the determination of protein structure. The position will be a joint appointment in the Department of Biological Chemistry and the Biophysics Research Division, in association with the Program in Protein Structure and Design. The level of the appointment will be negotiated based on the qualifications and experience of the candidate. The successful candidate will have a strong record of addressing significant biological problems and of developing innovative methods for the design and interpretation of NMR experiments. He or she will have teaching responsibilities in graduate courses in physical biochemistry and biophysics, and will be expected to maintain an active externally funded research program involving graduate students. Two 500-MHz instruments are already available within the units sponsoring this position. Applicants should submit curriculum vitae and a statement of research goals and should provide names of three references.

ASSISTANT OR ASSOCIATE PROFESSOR level position for an NMR spectroscopist with experience in determination of receptor/ligand or drug/target interactions. The position will be joint between the Biophysics Research Division and the College of Pharmacy, in association with the Program in Protein Structure and Design. Responsibilities will include teaching undergraduate or graduate students in the College of Pharmacy. The successful candidate will be expected to develop an active externally funded research program involving graduate students. Applicants should submit curriculum vitae and a statement of research goals and should provide names of three references.

Submit applications for the above two positions to: **Chair, NMR Search Committee, Biophysics Research Division, The University of Michigan, 2200 Bonisteel Boulevard, Ann Arbor, MI 48109-2099.**

The University of Michigan is an Affirmative Action/Equal Opportunity Employer. Applications from qualified women and minorities are particularly invited.

CLINICAL INSTRUCTOR. Board-certified or -eligible, University of California, San Francisco (UCSF), dermatology. Duties: clinical director of the photopheresis program. Apply to: **Bruce U. Wintroub, M.D., UCSF Dermatology, 515 Spruce Street, San Francisco, CA 94143-1214.** UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply. Open until filled.

MARINE MOLECULAR BIOLOGIST. Energetic, brilliant molecular biologist, with several years of postdoctoral experience, is sought to lead a new program involving application of molecular biology to marine research problems. The Bermuda Biological Station for Research, Inc. (BBSR), is a U.S. not-for-profit research and educational corporation which is eligible for funding from various federal funding agencies such as NSF, NIH, NOAA, and DOE, as well as corporations and private foundations. Colleagues would include two Ph.D. chemical oceanographers, two Ph.D. biological oceanographers, one Ph.D. biochemist, one Ph.D. ecologist, and one Ph.D. coral physiologist, all in residence year round. Please send letter of application, including curriculum vitae, to: **Dr. A. H. Knap, Director, Bermuda Biological Station for Research, Inc., Ferry Reach, GE-01, St. Georges, Bermuda.** The BBSR is an Affirmative Action/Equal Opportunity Employer.

NUCLEAR ENGINEER, probabilistic risk analysis specialist. Perform probabilistic risk analysis (PRA) and system design for nuclear, hazardous waste, and petroleum processes and facilities. Fire risk assessment, radiation shielding/criticality analysis, structural reliability analysis, and developing expert systems for operation control. Ph.D. in nuclear engineering and expertise in fault/event tree and Bayesian approach, probabilistic risk assessment, neutron transport theory and multigroup criticality equations, stress analysis and fracture mechanics, artificial intelligence (AI)/data analysis. Knowledge of KEE and SAS languages, Fortran, DOS, Symbolics, SAP, LISP, intelligence compilers, nuclear and structural mechanics. Salary: \$4000 per month; 40 hours per week. Place of employment/interviews: Pasadena, California. Send résumé to: **Job # MLU 14688, P.O. Box 9560, Sacramento, CA 95823-0560** not later than 26 May 1990.

POSITIONS OPEN



The Department of Pathology at the Wayne State University School of Medicine and Detroit Medical Center is seeking an academically oriented **NEUROPATHOLOGIST** to develop a comprehensive program in research, teaching, and service aspects of neuropathology. Applicants must be Board-certified or -eligible and licensable in the state of Michigan. Academic rank and salary will be dependent upon experience. Interested individuals should send curriculum vitae and the names of three references to: **John D. Crissman, M.D., Chairman, Department of Pathology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201.** An Equal Opportunity/Affirmative Action Employer.

FLORIDA INSTITUTE OF TECHNOLOGY

NEARSHORE PHYSICAL OCEANOGRAPHER. A senior full-time faculty member with research and teaching interests in nearshore physical science including remote sensing, coastal and continental shelf meteorology, and hydrodynamics; will also chair marine and environmental science group of department. Position open immediately. Send curriculum vitae and names of three references to: **Dr. J. C. Sainsbury, Oceanography and Ocean Engineering, Florida Institute of Technology (FIT), Melbourne, FL 32901.** Telephone: 407-768-8000, ext. 8096.

MARINE BENTHIC ECOLOGIST. Assistant professor; temporary, academic year appointment; start September 1990. Requires Ph.D.; teaching biological oceanography and marine benthic ecology; teaching of statistical analysis desirable. Send curriculum vitae and names of three references to: **Dr. W. G. Nelson** at above address. FIT is an Equal Opportunity/Affirmative Action Employer.

PHARMACOLOGIST/PHYSIOLOGIST. Monsanto Company is expanding exploratory pharmaceutical research and we are seeking a pharmacologist/physiologist. This position requires a Ph.D. in pharmacology or physiology with experience in isolated smooth muscle, cellular, and whole-animal assay techniques. A working understanding of biochemistry and cell and molecular biology will facilitate collaborative research. This is an excellent opportunity to apply your skills to new discoveries and challenges. Please send your curriculum vitae and names of three references to: **Philip Needleman, Ph.D., Vice President, Research and Development, Monsanto Company, AA4-PN, 700 Chesterfield Village Parkway, St. Louis, MO 63198.** Equal Opportunity Employer, M/F/H/V.

POSTDOCTORAL ASSOCIATE. Fully funded opportunity in ongoing research utilizing site-directed mutants to study the catalytic mechanism and cellular function of the carbonic anhydrases. Recent Ph.D. with experience in recombinant DNA techniques or enzyme structure and kinetics preferred. Please send curriculum vitae and the names of three references to: **Dr. David Silverman, J-267 Health Science Center, University of Florida, Gainesville, FL 32610-0267.**

POSTDOCTORAL ASSOCIATE

Postdoctoral position available to study fertilization-associated signal transduction pathways in mammalian sperm, including isolation of receptors and receptor-regulated ion transport proteins. Experience in protein purification or membrane biochemistry is preferred. Please send curriculum vitae and names of three references to: **Dr. Harvey M. Florman, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

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

POSTDOCTORAL POSITION. In molecular neurobiology for molecular genetic and immunochemical studies of nicotinic acetylcholine receptors and related proteins. Experience in molecular biology required. Research will be at the Institute of Neurological Sciences, University of Pennsylvania, Philadelphia. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. Jon Lindstrom, The Salk Institute, P.O. Box 85800, San Diego, CA 92138.**

POSITIONS OPEN

POSTDOCTORAL POSITION. Molecular and cellular factors affecting reovirus growth and transport in Kupffer cells/hepatocytes will be explored. Available immediately. *Candidate must be U.S. citizen.* Applications to: **Don Rubin, M.D., Research Medicine (151F), Veterans Administration Medical Center, University and Woodland Avenues, Philadelphia, PA 19104.** Telephone: 215-823-6352.

POSTDOCTORAL POSITION. In molecular biology to analyze structure-function relationships and receptor specificity of a polypeptide toxin which interacts with voltage-sensitive Na channels in excitable tissues. Experience in standard molecular biology techniques including bacterial expression. Send curriculum vitae and addresses of references to: **Dr. Kenneth Blumenthal, Department of Biochemistry, University of Cincinnati College of Medicine, Cincinnati, OH 45267-0524.**

POSTDOCTORAL POSITION. For 2 years in substance abuse research, available July 1990. Biochemist, molecular biologist, or pharmacologist wanted for PCR, cDNA hybridization probing of dopamine receptor or transporter involvement in cocaine and alcohol addicted patients; and expression cloning of cocaine receptor. *Must be U.S. citizen.* Salary: \$30,000. Send curriculum vitae to: **Dr. Floyd Sallee, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.** Telephone: 803-792-3750.

POSTDOCTORAL POSITION. Available in the area of biochemical/molecular biological studies on the structure and purification of adenosine receptors. Recent Ph.D. in biochemistry or molecular biology required. Experience in molecular biological techniques required. Send curriculum vitae and names of three references to: **Dr. Gary L. Stiles, Departments of Medicine and Biochemistry, P.O. Box 3444, Duke University Medical Center, Durham, NC 27710.**

A POSTDOCTORAL POSITION is immediately available in the Atherosclerosis Research Unit which conducts basic research employing tissue culture models. The projects involve regulation of gene expression in endothelial cells. The candidate must have experience in basic molecular biology. Salary commensurate with experience. Send curriculum vitae and three references with telephone numbers to: **Dr. Michael B. Stemerman, New York Medical College, Department of Medicine, Vossburg 302, Valhalla, NY 10595.**

POSTDOCTORAL POSITION. Available immediately to study protein kinase C, oxygen radicals, cell adhesion, pharmacological aspects of cancer metastasis [ref. *PNAS* 86, 6758 (1989); 85, 612 (1988)]. Some experience in protein purification and enzyme characterization is desirable. Send curriculum vitae and names of three references to: **Dr. Rayudu Gopalakrishna, Department of Pharmacology and Nutrition, MMR-512, University of Southern California (USC) School of Medicine, Los Angeles, CA 90033.** USC is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

Applications are invited for a postdoctoral position for 2 to 3 years and open from 1 September 1990 to work on molecular pathogenesis of bacteria with particular reference to vaccine development. Candidates should have a Ph.D. degree and a good background in recombinant DNA technology. Applications, comprising full curriculum vitae and the names of three referees, should be sent to: **Professor Alf A. Lindberg, Department of Clinical Bacteriology, F82, Huddinge Hospital, S-141 86 Huddinge, Sweden.** FAX: 46-8-7794647.

POSTDOCTORAL POSITIONS. Available to study the molecular basis of tumor resistance to ionizing radiation. The research program includes the following: characterization of differential gene expression, effects of oncogene expression on resistance, DNA damage and repair, and genetic modulation of resistance through antisense technology. Experience in molecular biology, biochemistry, or radiation biology required. Interested individuals should send curriculum vitae and names of three references to: **Dr. Anatoly Dritschilo, Professor and Chairman, Department of Radiation Medicine, Georgetown University Medical Center, 3800 Reservoir Road, N.W., Washington, DC 20007.** Georgetown University is an Equal Opportunity/Affirmative Action Employer.

Opportunities for Life Scientist Ph.D.'s – Japan

The Positions

Procter & Gamble has entry level openings for life scientists with Ph.D. or postdoctoral training in the following disciplines:

<i>Biochemistry</i>	<i>Toxicology</i>
<i>Pharmacology</i>	<i>Physiology</i>
<i>Pharmacy</i>	<i>Microbiology</i>
<i>Molecular Biology</i>	<i>Cell Biology</i>

We are building a new technical center in Rokko Island, Kobe, which is expected to be completed in early 1993. These positions will be located in either our present location at Osaka or in Cincinnati, Ohio, until the new center is completed.

The Candidates

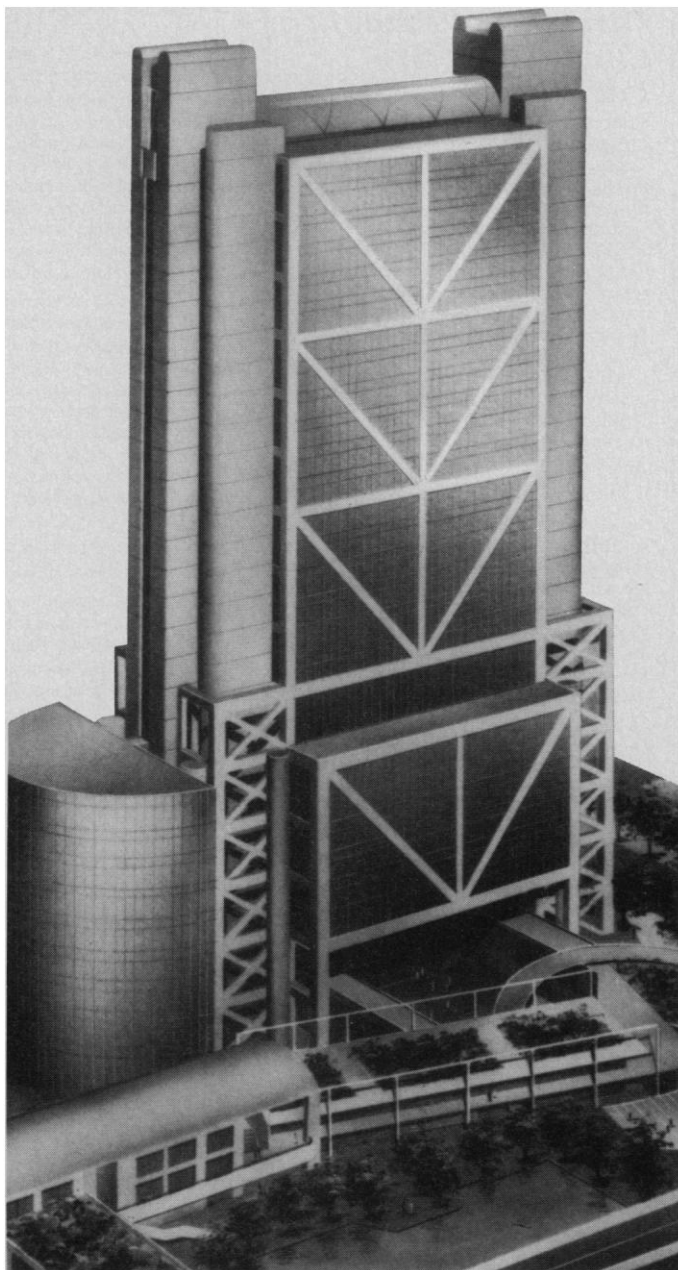
Candidates must be bilingual (Japanese and English) with excellent academic/research records and good communication skills. For non-Japanese citizens, employment is contingent upon obtaining a work visa from the Japanese government.

The Company

Procter & Gamble is a multinational, technically based corporation with \$21.4 billion in worldwide sales in a wide range of household consumer products and an R&D budget of \$628 million. It is the 14th largest U.S.-based corporation and was recently voted 4th most admired corporation in the U.S. by *Fortune* magazine.

In Japan, Procter & Gamble is engaged and rapidly growing in the research and development, manufacture, and sales of household consumer products in health and beauty care, paper, laundry and cleaning product categories. The decision to establish a technical center in Kobe recognizes Japan as a major source of product and packaging technology across the categories of interest to P&G.

Besides offering a stimulating international environment for personal and professional growth, we offer a highly competitive salary and benefits package.



Application

Applicants should send their resume and publication list to:

Dr. T. J. Logan, Manager
Japan Life Science Positions
The Procter & Gamble Company
Miami Valley Laboratories
P.O. Box 398707
Cincinnati, Ohio 45239-8707
Allow 6-8 weeks for response.

PROCTER & GAMBLE

Procter & Gamble is an equal opportunity employer.



**University of
Massachusetts
Medical Center
Director of Protein
Chemistry Core
Facility**

Applications are invited to fill the position of Director of Protein Chemistry. Applicants should hold a Ph. D. or equivalent experience in protein chemistry and have at least 3 years of experience in peptide sequencing and synthesis. The successful applicant is expected to supervise, maintain and administrate the University of Massachusetts Medical Center Protein Chemistry Core Facility. This facility was established to serve UMMC faculty who require custom peptide syntheses and peptide sequence analyses as part of their research programs.

Title and salary will be commensurate with experience.

Send curriculum vitae, outline of scientific background and the names of three references to:

Dr. H.M. Goodman
Office for Scientific Affairs
University of Massachusetts
Medical Center
55 Lake Avenue North
Worcester, MA 01655

An Affirmative Action/Equal Opportunity Employer

**HEAD
DIVISION OF EPIDEMIOLOGY**

The University of Minnesota invites applications and nominations for a tenured position of Head of the Division of Epidemiology in the School of Public Health. The division has a distinguished record of research and teaching and, as the largest unit with 30 faculty and 120 graduate students, plays a major role in the School. Divisional research, with over 30 funded projects, is a healthy blend of observational and intervention studies aimed at improving public health and requiring a blend of epidemiology, biology and behavioral science. The educational program includes majors in both epidemiology and community health education. The division offers programs leading to the MPH, MS and PHD degrees, and has active post-doctoral training and Preventive Medicine residency programs.

An earned academic or professional doctorate with a minimum of 5 years leadership experience (10 years total experience preferred) in epidemiology, public health, preventive medicine or related fields. Candidates should have administrative experience, a distinguished research and teaching record, and a commitment to working creatively to develop and implement the division's and the school's activities. Faculty rank and salary will be commensurate with qualifications and background. Closing date for applications is June 30, 1990.

Applications with curriculum vitae and the names of three references should be sent to:

Professor Thomas A. Louis
The University of Minnesota
School of Public Health
420 Delaware St., SE, Box 197
Minneapolis, MN 55455

The University of Minnesota is an equal opportunity educator and employer and specifically invites and encourages applications from women and minorities.



**Cell Biologist/
Microbiologist**

Monsanto Company's Corporate Research group has an immediate opening for an experienced Cell Biologist/Microbiologist to join a world-class, multidisciplinary research team working in the science of polymer membranes, bio-separations, cell culture and controlled delivery.

The candidate should possess a Ph.D. in Cell Biology, Biophysics, Biochemistry or Microbiology or equivalent. Experience in a variety of cell culture methods is required. Experience in biocompatibility, immunology and therapeutic cell culture is desirable.

For consideration, please send your resume and letters of reference to: Dr. J.M.S. Henis, Sr. Fellow; Mail Zone - U2E; MONSANTO COMPANY; 800 North Lindbergh Blvd.; St. Louis, MO 63167. Monsanto Company is an Equal Opportunity Employer M/F/H/V.

Monsanto

**THE JACKSON
LABORATORY**
Bar Harbor, ME USA 04609

THE JACKSON LABORATORY is an independent research institution having a major emphasis on mammalian genetics, developmental biology, immunology, and cancer. Most investigators utilize murine model systems. The Laboratory is undertaking an expansion of its research staff at all levels. Excellent candidates in all areas of research appropriate for The Jackson Laboratory are sought, including those candidates whose programs focus on the study of the whole organism as an integrated system, and in the areas of mammalian genetics, developmental biology, immunogenetics, endocrinology, reproductive biology, hematology, neurobiology, or cancer. Applicants should send curriculum vitae, description of research interests, and the names of three professional references to:



**The Jackson
Laboratory**

Dr. John Eppig
Chair, Search Committee
600 Main Street
Bar Harbor, ME USA 04609

The Jackson Laboratory is an Affirmative Action/
Equal Opportunity Employer

**UNIVERSITY OF ARKANSAS FOR
MEDICAL SCIENCES**

Under the auspices of the NSF EPSCoR II Program and the State of Arkansas, the University of Arkansas for Medical Sciences is expanding in the area of Neuroscience with the ultimate goal of forming a Neurobiology Research Center. Applications are requested for four tenure track positions at the Assistant Professor level. The successful candidates will be expected to develop strong independent research programs, to participate in multi-investigator collaborative efforts and to teach medical/graduate students. Qualifications include a Ph.D. degree and at least two years of post-doctoral experience. Appointments will be made in either the Department of Anatomy or the Department of Physiology and Biophysics. The starting date for two of the positions will be no earlier than August, 1990, and for the other two positions no earlier than August, 1991. Salaries and recruiting packages are competitive. Ongoing extramurally-funded research includes work on brainstem and spinal control of locomotion, glial response to injury, neuron/glia tissue culture, spinal cord grafting techniques, effects of survival factors in development, sexual dimorphism in the spinal cord, regulation of the febrile response, control of neurohypophysial hormones, and receptor regulation, especially adrenoceptors. The four individuals to be appointed must have experience in one or more of the following areas: Spinal Cord Physiologist - intracellular recordings *in vivo* and *in vitro*, respiratory/vesico-motor/locomotor control. Molecular Neurobiologist - regulation of gene expression, *in vitro* mutagenesis. Cellular Neurobiologist - *in situ* hybridization, mRNA expression, cytoimmunology. Developmental Neurobiologist - cell surface interactions, neuronal connectivity, ultrastructure, autoradiography, immunocytochemistry.

Candidates should send a curriculum vitae, a statement of their research interests and plans, and the names of three references to:

Prof. E. Garcia-Rill
Project Director and
Chairman, Search Committee
Slot 510, University of Arkansas for Medical Sciences
4301 W. Markham Street
Little Rock, AR 72205

Deadline for receipt of applications for full consideration is June 15, 1990.

UAMS is an equal opportunity/affirmative action employer.

**Faculty Positions in Biochemistry or Tumor Cell Biology
St Jude Children's Research Hospital**

St Jude Children's Research Hospital, a private research institute, is engaged in a major expansion of its facilities and scientific activities. A new research building to be completed in early 1991 will provide 240,000 square feet of new laboratory space which will house the institute's basic science programs. As part of this expansion, new faculty positions are now available in the Departments of Biochemistry and Tumor Cell Biology. Although preference will be given to applicants who have recently completed postdoctoral training and are seeking positions at the level of Assistant Member, more senior investigators with appropriate research interests and qualifications will be considered for positions of higher faculty rank. Candidates with programs focusing on the regulation of cell growth, differentiation and transformation, the biochemistry and molecular biology of signal transduction, and mechanisms of gene regulation are particularly encouraged to apply. Opportunities exist for collaborative interactions with ongoing basic research programs in Virology and Molecular Biology, Immunology, and Pharmacology, as well as with clinical investigators in Hematology/Oncology and Infectious Disease. In addition to new facilities and excellent start-up funds, salaries are nationally competitive and include a generous benefits package. A strong institutional commitment to its faculty ensures stability in program development and continuity of research activities. Applicants should submit a curriculum vitae, a letter summarizing their research accomplishments and goals, and the names of three references to either:

James N. Ihle, Ph.D.

**Chairman, Department of Biochemistry
or**

Charles J. Sherr, M.D., Ph.D.

**Howard Hughes Medical Institute
Chairman, Department of Tumor Cell Biology
St Jude Children's Research Hospital
332 North Lauderdale
Memphis, TN 38105**

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

MERCK

We are a large corporation in the chemical-pharmaceutical industry, and are active in many countries all over the world. Our wide range of products is the result of our own research activities using state-of-the-art facilities.

For new developments in our pharmaceutical research in Darmstadt, Germany, we are looking for a qualified

Biomolecular Computing Scientist

This position is available for a research scientist to use techniques of molecular modelling, molecular graphics and molecular dynamics in pharmaceutical research. The work will be directed primarily to immunological problems.

The position is an opportunity for an innovative scientist with the right combination of practical ability and interpersonal skills to join our multidisciplinary research.

The successful candidate should possess a Ph.D. in biochemistry or biophysics or a related field.

Qualified candidates for this position must have a unique background covering a variety of disciplines including a general knowledge of protein crystallography, protein design and protein data bases. Experience in biophysical chemistry is essential, experience in molecular modelling techniques related to macromolecules is desirable.

Please send your application to:

**E. Merck
Personalabteilung AT
Postfach 4119
D - 6100 Darmstadt 1**

National Institutes of Health ENDOCRINOLOGIST

The Biochemistry and Molecular Pathophysiology Section, Diabetes 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 receptors. Applicant should have research interest and preferably experience in applying methods of biochemistry, cell biology, and molecular biology to investigate the mechanism whereby the insulin receptor mediates the action of insulin upon cells. Applicants should be familiar as well with the methods of *molecular genetics* as applied to elucidating the causes of genetic disease, and should have a substantial record of publication of original work. Starting salary \$42,000 or may be negotiable commensurate with qualifications and experience. Interested candidates should submit curriculum vitae, several reprints, summary of research interests, and names of three references to:

**Simeon I. Taylor, M.D., Ph.D.
National Institutes of Health
Building 10, Room 8S-243
9000 Rockville Pike
Bethesda, Maryland 20892**

NIH is an Equal Opportunity Employer

EXPERIMENTAL PATHOLOGY

SCIENTIST, CELLULAR PATHOLOGY

SmithKline Beecham Pharmaceuticals, a worldwide leader in pharmaceutical research, has a challenging opportunity for an established scientist to join the Cellular Pathology Unit in the Department of Experimental Pathology.

We are seeking a Senior Scientist to conduct research in the pathogenesis of drug-induced toxicities and animal models of disease and to supervise GLP toxicity studies to support our drug development activities.

The successful candidate will have:

- An advanced degree in Experimental Pathology or a related field.
- 5 or more years broad experience in biomedical research.
- Experience in toxicology, experimental pathology or veterinary medicine.
- Experience in the cell biology and molecular genetics of animal models of cardiovascular disease would be an asset.
- Excellent oral and written communication skills.
- Experience in leading a laboratory.

Located in suburban Philadelphia, SmithKline Beecham Pharmaceuticals offers a collegial work environment with considerable opportunity for personal and professional growth. For confidential consideration, please forward your curriculum vitae to: Liz McKendry, E135, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406. We are an Equal Opportunity Employer, M/F/H/V.

SB
SmithKline Beecham
Pharmaceuticals

BIOTECHNOLOGY

POSTDOCTORAL RESEARCH POSITIONS

Cetus Corporation, a leader in biotechnology, currently has two Postdoctoral Research positions available.

One position is available in the Department of Protein Chemistry. Responsibilities include purification and characterization of native and recombinant proteins, as well as structure/function studies in collaboration with a multi-disciplinary team. Requirements include a PhD with significant experience in protein fractionation and detection at the micro level. Facility with HPLC or FPLC and western analysis is expected. Knowledge of immunology and cellular or molecular biology is desirable. Box 90067/KK.

A second position is available in the laboratory of Dr. L.L. Houston. This position is funded by a grant from the National Cooperative Drug Discovery Group (NCI) to investigate and characterize novel immunotoxins made with single chain Fv (SFv) antibodies made in *E. coli*. Biosynthetic antibody binding sites will be linked chemically and genetically to recombinant ricin A chain and other toxins. A PhD and experience in protein chemistry and immunology are required. Box 90082/LH.

Interested candidates should send their CV and the names of three references, noting appropriate Box, to: Cetus Corporation, Human Resources, 1400 53rd Street, Emeryville, CA 94608. We are an Equal Opportunity Employer.



Bio-Organic Chemist Team Leader

Enzymatics, Inc. has pioneered the application of biochemical Analog to Digital technology. The results are highly accurate, disposable, independent tests that are essentially chemical computers.

We are looking for a senior Ph. D. to lead and staff a technology expansion team. The team leader will work in collaboration with leading academic scientists in an unusually broad effort involving organic chemistry, DNA cloning, and receptor substrate interactions.

We are also recruiting Industrial Postdocs to join this team. Research publication will be encouraged.

Please send your resume with salary history to:

Enzymatics, Inc.

355 Business Center Drive
Horsham, PA 19044

An Equal Opportunity Employer

Ref. Job:#R36

WE'RE CHANGING MILLIONS OF LIVES. NOW IT'S YOUR TURN.

At Praxis Biologics, a wholly owned subsidiary of American Cyanamid Company, we're pioneering the design, manufacture and marketing of vaccines so sophisticated, they're changing people's lives—right now.

At Praxis, you'll help improve the quality of a lot of lives. Including your own. Our Rochester, NY research facility is located within easy reach of some of New York State's most attractive cultural, educational and recreational resources.

RESEARCH SCIENTIST — Virology Group

We are seeking a Ph.D. with a minimum of 2 years' post doctoral experience who is skilled in the fields of virology, biochemistry, immunology and pathogenesis. You will define mechanisms and develop potential vaccines targeted for control of upper respiratory diseases. Supervision of support staff will also be required.

RESEARCH SCIENTIST — Protein Chemistry

You will develop and perform analytical methods for the identification, characterization and quantification of a variety of protein and glycoconjugate vaccines. To qualify, you must have a Ph.D. or M.S. in Biochemistry or an equivalent field and 2 or more years' experience in the purification, characterization and sequencing of proteins and in instrument automation. Supervision of support staff will also be required.

At Praxis, you'll enjoy a professional atmosphere and the kind of salary and benefits package you'd expect from an industry leader. Please send your resume to: Human Resources Department, 300 East River Rd., Rochester, NY 14623. An Equal Opportunity Employer M/F.

P R A X I S
B I O L O G I C S



Progenics

Pharmaceuticals, Inc.

INVESTIGATOR AND POSTDOCTORAL POSITIONS

The Departments of Molecular Immunology and Virology are recruiting scientists for Investigator and Postdoctoral positions. Applications are invited from scientists of the highest caliber with Ph.D., M.D., or M.D./Ph.D. degrees. Progenics provides a strong interactive environment for collaborative research among basic science and clinical investigators. Current research interests of the staff include:

Paul J. Maddon, M.D., Ph.D.
Gary A. Beaudry, Ph.D.

Molecular biology and biochemistry of HIV and CD4 (the HIV receptor); molecular mechanisms of virus-receptor interaction and viral infection; development of viral inhibitors; molecular mechanisms of T cell function. (Cell **42**, 93-104; **47**, 333-348; **54**, 865-874; **57**, 469-481; Nature **331**, 82-84; PNAS **84**, 9155-9159)

Candidates should send a curriculum vitae, a description of their research experience, and the names and addresses of three references to:

Director, Human Resources
Progenics Pharmaceuticals, Inc.
Old Saw Mill River Road
Tarrytown, NY 10591

POSTDOCTORAL POSITIONS

**National Institute of Diabetes
and Digestive and Kidney Diseases
Phoenix, Arizona**

Full-time research position is now available for an M.D. or Ph.D. at the Clinical Diabetes and Nutrition Section to participate in studies of energy metabolism in humans. Expertise in human physiology and energy metabolism is required. Two-year postdoctoral experience in this field is preferred.

The position involves supervising technicians and less experienced fellows in ongoing studies of energy expenditure (indirect calorimetry and isotope ratio mass spectrometry) and participating in the establishment of new lines of research.

Send curriculum vitae, three references, and a summary of current research activity to:

**Eric Ravussin
Clinical Diabetes and
Nutrition Section
National Institutes of Health
4212 North 16th Street
Room 541
Phoenix, Arizona 85016.**

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R&D –
Clinical Chemistry/Biochemistry (PhD, MS levels);
Statistics (MS):

**Our R&D people,
like our reagents,
represent
an
excellent
“mix.”**



Ciba Corning is a worldwide diagnostics company – a leader in meeting the specific needs of STAT and routine laboratory testing, with a reputation for product innovation.

When you join Ciba Corning, you'll be joining an international company with over 2100 employees and interesting, challenging projects. Yet when you join our R&D group in Oberlin, a beautiful college town just west of Cleveland, you'll be part of a unit that recognizes individual talent and achievement... encouraged by supportive management. Growth creates opportunities:

- **Sr. Immunologist**
- **Sr. Scientist – Reagent Chemistry**
- **Sr. Scientist – Experimental**
- **Sr. Scientist – Immunochemistry**

Minimal requirements: PhD or MS with extensive experience in some of the following: immunoassays, immunology, clinical chemistry assays/instrumentation, turbidimetric reagents development/applications.

• **Statistician**

Minimal requirements: MS in Statistics, with experience in clinical science and engineering reliability.

If this sounds like your environment for success, send your resume and recent salary history to:

Human Resources Department (19971)

CIBA-CORNING

132 Artino Street • Oberlin, OH 44074

An EEO/Affirmative Action Employer M/F/H/V
No phone calls or third party inquiries, please

Boehringer Ingelheim Pharmaceuticals, Inc. is engaged in the discovery, development, manufacture and marketing of novel drug compounds. The following position is currently available in the Department of Toxicology and Safety at our Research and Development Center, located in **DANBURY, CT.**

SENIOR TOXICOLOGIST

Responsibilities include: being Study Director for in-house pre-clinical toxicology studies, writing protocols and reports, monitoring toxicology studies performed at contract laboratories, participating in the evaluation of new pharmaceutical candidates and supervising a technical staff.

Requirements include a Ph.D. in Toxicology, Pharmacology or related discipline with two or more years post-doctoral experience as a Study Director for toxicology studies in support of new chemical/pharmaceutical agents.

Boehringer Ingelheim offers a competitive salary and benefits package including relocation assistance, modern facilities and the opportunity to have your contributions recognized.

If interested, please send your curriculum vitae to: Dept JC-1S-027, Boehringer Ingelheim Pharmaceuticals, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. We are an equal opportunity employer m/f/h/v.



**Boehringer
Ingelheim**



The Biophysical Chemistry Department of MSDRL is seeking outstanding Peptide Chemists to join our expanding research program. The department is an interdisciplinary team devoted to basic research in protein structure and the related design of enzyme inhibitors and receptor agonists or antagonists. The ultimate goal of our team of synthetic chemists, molecular biologists, structural chemists (x-ray crystallography and macromolecular NMR), and computational chemists (molecular modelling) is the application of three dimensional structural information to the earliest phases of drug discovery. These positions offer immediate interaction with Merck scientists in the therapeutic areas of Autoimmunity and Immunology/Inflammation.

Ph.D. Peptide Chemist

Qualifications include a Ph.D. in Organic/Bioorganic Chemistry with 1-3 years of relevant postdoctoral or industrial experience. A strong background and practice experience in peptide synthesis, chromatographic purification, and modern spectroscopic and analytical methods of peptide characterization is required. This person will conduct independent research in structure-based design and synthesis of biologically active peptides, and work collaboratively with our interdisciplinary team to support ongoing projects.

BS or MS Peptide Chemist

This position requires a BS or MS on Chemistry/Bioorganic Chemistry with a minimum of one year of laboratory experience in peptide synthesis, purification, and characterization. Responsibilities include solid phase peptide synthesis, preparation of protected intermediates, and HPLC-based peptide purification and characterization.

Merck Sharp & Dohme Research Laboratories is located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Interested individuals should send their resume and the names of three references to **Ms. Susan F. Glinka, P.O. Box 2000, Merck & Co., Rahway, NJ 07065.**

EQUAL OPPORTUNITY EMPLOYER



Merck & Co., Inc.

POSITIONS OPEN

POSTDOCTORAL POSITION. Available immediately to study developmental regulation of mammalian intestinal lipoprotein metabolism. Strong background in molecular biology/genetics desirable. Research involves work with a neonatal swine model, including intestinal explant cultures. Send curriculum vitae and names of three references to: **Dennis D. Black, M.D., Department of Pediatrics, University of Chicago, 5825 South Maryland Avenue, Box 107, Chicago, IL 60637.** An Equal Opportunity Employer.

POSTDOCTORAL POSITION. Bioorganic chemistry: one to two available immediately for recent Ph.D. to study (i) (bio)chemical mechanisms of lipid peroxidation initiation by O₂-derived oxidants and (ii) unique small molecule and protein-based catalysts (computer-aided design, synthesis, site-directed mutagenesis). Send résumé, research interests, and the names of three references to: **Dr. Thomas A. Dix, Department of Chemistry, University of California, Irvine, CA 92717.** Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION IN NEUROENDOCRINOLOGY. Department of Psychiatry, University of Pennsylvania. To study molecular mechanisms by which alcohol exposure produces immune suppression. Studies include neuroendocrine regulation of immune function using wide variety of biochemical, anatomical, and molecular techniques. Experience in immunology, molecular biology, or neuroendocrinology is desirable but not essential. Available immediately. Send curriculum vitae and names of three references to: **Dr. E. Redei, Department of Psychiatry, or Dr. M. Prystowsky, Department of Pathology and Laboratory Medicine, University of Pennsylvania, Clinical Research Building, 422 Currie Boulevard, Philadelphia, PA 19104-6141.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS IN MOLECULAR GENETICS

One immediately available to study regulation of transcription of phosphate acquisition genes of yeast. This will be in collaboration with the laboratory of Dr. Keith Bostian. Another is to study regulation of transcription of galactose pathway genes of yeast. This will be available by late 1990 or early 1991. A background in chemistry, biochemistry, molecular biology, or genetics is required. Send curriculum vitae and three references to: **Dr. Jim Hopper, Biological Chemistry, Milton S. Hershey Medical Center, Pennsylvania State University, Hershey, PA 17033.**

An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITIONS

Postdoctoral openings are available in the Department of Molecular Biology and Biochemistry at the University of California, Irvine. These positions are for 1 or 2 years under the sponsorship of the following faculty members: D. Aswad: biochemistry of neural functions. B. K. Burgess: biochemistry and genetics of nitrogen fixation. M. G. Cumsy: mitochondrial biogenesis, mitochondrial protein import and gene expression in yeast. R. Davis: biochemical genetics of *Neurospora*. H. Y. Fan: animal virology nucleic acid studies in murine leukemia viruses. C. Glabe: developmental biology; cell-cell interactions. G. A. Granger: cell and molecular mechanisms operative in cellular immunity. B. A. Hamkalo: eukaryotic chromosome structure and function. A. Henschen: structure-function relationships in proteins. A. A. James: molecular biology of insect vectors of infectious diseases. J. E. Manning: gene sequence organization in eukaryote DNA, electron microscopy. R. Miledi: neurotransmitter receptors and synaptic functions. M. B. O'Connor: molecular genetics of development. D. F. Senear: regulatory energetics and protein-DNA assemblies. W. M. Stanley, Jr.: protein biosynthesis in eukaryotic cells. K. K. Tewari: nucleic acids of chloroplasts and other organelles. S. Tewari: neuro-molecular biology and CNS acting drugs. L. P. Villarreal: molecular biology of small DNA viruses. E. K. Wagner: nucleic acids and molecular biology of herpesvirus replication. C. A. Woolfolk: general microbiology, enzymology. For further information, contact or write to: **The Department of Molecular Biology and Biochemistry, University of California, Irvine, CA 92717.** The University of California is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION. Available immediately for 2 to 3 years to study hormonal and growth factor effects on cytosolic free Ca²⁺ by microfluorometry of single cells. Experience in electrophysiology for patch clamp studies desirable. Project also involves generation and use of antibodies to signal transduction proteins for studies on molecular regulation by tyrosine and serine protein kinases and phosphatases. Contact: **Dr. John R. Williamson, Department of Biochemistry/Biophysics, University of Pennsylvania, Philadelphia, PA 19104.** An Equal Opportunity Employer.

TWO POSTDOCTORAL POSITIONS are available 1 August 1990 to study long-term synaptic potentiation, the pharmacology and biophysics of NMDA receptors, and their influence on the input-output relation of hippocampal neurons. The projects involve electrophysiological recordings using single-electrode voltage clamp and patch clamp techniques. Training and experience in electrophysiology is required. Candidates should submit curriculum vitae and three letters of references to: **Dr. G. Barrionuevo, or Dr. J. W. Johnson, Department of Behavioral Neuroscience, 446 Crawford Hall, University of Pittsburgh, Pittsburgh, PA 15260.**

POSTDOCTORAL POSITION. Available to study cell cycle control and cellular aging in budding yeast [*Mol. Microbiol.* 4, 337 (1990); *J. Gerontol.* 45, B68 (1990)]. Research includes cloning and characterization of genes whose expression is age-related and the isolation of mutants with an altered life-span. This position is for someone who wishes to broaden his/her expertise in molecular biology in an excellent research atmosphere. Send a biographical sketch, including a bibliography, a brief summary of past research, and the names, addresses, and telephone numbers of three references to: **Dr. S. M. Jazwinski, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center (LSUMC), 1901 Perdido Street, New Orleans, LA 70112.** LSUMC is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS IN VIRUS STRUCTURE. Two or more postdoctoral positions open for individuals interested in applying x-ray crystallographic methods to investigate the relationship between virus structure and function. One position, open immediately, specifically involves crystallographic studies and computational modeling of complexes of poliovirus with antiviral drugs. The other position(s) involve crystallographic studies of intermediates and mutants relevant to virus assembly and cell entry, or crystallographic studies of antigenic chimeras of poliovirus. Individuals with a background in x-ray crystallographic or other relevant structural methods, and individuals with a background in virology interested in learning crystallographic techniques, are encouraged to apply. Interested candidates should send curriculum vitae and names of three references to: **Dr. James Hogle, Department of Molecular Biology, Scripps Clinic and Research Foundation, 10666 North Torrey Pines Road, La Jolla, CA 92037.**

POSTDOCTORAL POSITION

The Section of Analytical Chemistry, Laboratory of Clinical Studies, National Institute on Alcohol Abuse and Alcoholism (NIAAA), invites qualified individuals to apply for a postdoctoral fellowship for the study of protein-lipid interactions in biological membranes. The section specializes in the study of polyunsaturated phospholipids in relation to their membrane function and metabolism. A unique opportunity exists for the successful applicant to participate in basic studies involving general elements of biomembrane structure and clinical studies involving the biological basis of alcohol action in conjunction with our interdisciplinary group. A background in either protein or lipid biochemistry is appropriate for this position. Applicants should be less than 5 years past the granting of a professional degree and be U.S. citizens or permanent residents. The salary range is from \$28,000 to \$34,000 depending upon experience, and a relocation reimbursement and travel allowance is also available. Interested candidates should send their curriculum vitae, a one-page description of relevant research interests, and three letters of reference to: **Dr. Norman Salem, Jr., NIH/NIAAA, Building 10, Room 3C-102, 9000 Rockville Pike, Bethesda, MD 20892.** NIH is an Equal Opportunity Employer.



PLANT NUTRITION

CIAT is seeking a senior staff scientist to work within the Bean Program at headquarters in Cali, Colombia, starting December 1, 1990. The appointee will conduct research leading to improved productivity of the common bean (*Phaseolus vulgaris*) in tropical soils. Potential research areas include mechanisms of bean adaptation to edaphic constraints, development of efficient screening methodologies, development of novel and efficient fertilizer technologies, and nutrient cycling in bean cropping systems. Research is conducted in an interdisciplinary environment including close collaboration with a Plant Physiologist, Plant Breeder, Soil Microbiologist, and Agronomists. In addition to research duties the appointee will provide technical support to outposted CIAT staff and interact with colleagues in national agricultural research programs in Latin America and Africa. CIAT has excellent facilities for Plant Nutrition research including a new Plant Nutrition research laboratory, greenhouses with solution culture and advanced sand culture systems, and field research farms on diverse soil taxa. Central research facilities include a radionuclide laboratory, an analytical laboratory offering comprehensive soil and plant analysis, a fully equipped biotechnology and tissue culture facility, scanning and transmission electron microscopes, mass spectrometry, and mainframe computing facilities.

Qualifications: Ph.D. in Plant Physiology, Soil Science, Agronomy, Horticulture, Ecology, or related field with demonstrated expertise in Plant Nutrition and Soil Fertility. Fluency in English or Spanish required.

Salary: Compensation is dependent on qualifications and experience and is comparable to other international centers, including an excellent benefits package and generous annual home leave. Living conditions in Cali are excellent.

Applications: Applicants should submit a letter of application including a statement of current and future research direction, resume, academic transcripts, selected reprints, and the names, addresses with FAX or telex number, and telephone numbers of four referees to: Dr. D.R. Laing, Deputy Director General, CIATE, AA 6713, Cali, COLOMBIA. FAX (572) 364-7243. Applications should arrive in CIAT by August 1, 1990.

RESEARCH SCIENTIST MOLECULAR BIOLOGY

Amgen, an innovative leader in the discovery, development, and marketing of human therapeutics through applied biotechnology, has an immediate opportunity for a Research Scientist in our Molecular Biology Group.

Responsibilities for this position will include the development of research programs leading to the identification and cloning of novel cellular growth factors involved in stem cell regeneration and recruitment.

Qualified applicants must have a Ph.D. in Molecular or Cellular Biology and a minimum of 2 years' postdoctoral experience in the characterization of cellular growth factors, cDNA cloning, and the expression of recombinant proteins.

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

AMGEN, INC.
Recruitment, Dept. #527
Amgen Center
Thousand Oaks
CA 91320-1789

Equal
Opportunity
Employer

AMGEN

RESEARCH SCIENTISTS Biotechnology Research and Development

5 Prime→3 Prime, Inc., a privately held biotechnology company that develops and markets products for life science research, is seeking experienced scientists to participate in the development of novel research techniques. The positions offer a challenging opportunity with a rapidly growing company.

Ph.D., M.S., and B.S. Level Positions in Technology Development

Positions are available for energetic, creative scientists with in-depth training in Molecular Biology and hands-on laboratory experience in recombinant DNA techniques. A minimum of two years experience in molecular biology and biochemistry are required. Industrial experience is preferred. Experience in basic gene cloning and mammalian tissue culture is essential. Familiarity with a variety of cDNA cloning and gene expression in prokaryotic and/or eukaryotic systems is highly desirable.

5 Prime→3 Prime, Inc. offers a dynamic research environment, the opportunity for high visibility and career growth. If you are creative, innovative and would like to see the results of your research move from the development laboratory to researchers world-wide, send your C.V. and three references to:

Director of Professional Recruitment
5 Prime→3 Prime, Inc.
117 Brandywine Parkway
West Chester, PA 19380



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MRC CAMBRIDGE CENTRE FOR PROTEIN ENGINEERING



CAMBRIDGE INTERDISCIPLINARY RESEARCH FOR PROTEIN ENGINEERING

Positions in: NMR, X-ray Crystallography, Computer Graphics and Modelling. Structure Prediction, Molecular Genetics, Protein Chemistry, Enzymology and Chemistry for Scientists, Research Support Staff, and Research Students.

The Cambridge Interdisciplinary Research Centre in Protein Engineering has been set up by the Medical Research Council in laboratories at the MRC Centre (Addenbrooke's Site) and Cambridge University Chemical Laboratory. The remit of the Centre covers all areas of Protein Engineering including macromolecular interactions. The Centre will act as a focus of collaboration between the University, the MRC Laboratories and Industry, under the Directorship of Professor Alan Fersht and Dr. Greg Winter.

There are some special positions available for Postdoctoral workers who wish to pursue independent research in the general area of Protein Engineering and Design. They will receive full support from the Centre, plus possibilities of additional funding, via the LINK initiative to form small research groups.

Salaries for Scientists in the range of £10,458-£20,469 pa. Salaries for Research Support Staff in the range of £6,668-£12,223 pa, possibility of performance pay up to £14,335 pa. Optional MRC Pension Scheme.

Please send full cv's, names of three referees and, in case of applicants for the independent scientific positions, a resume of a research proposal, to: Professor A R Fersht, FRS, Director, Cambridge Centre for Protein Engineering, University Chemical Laboratory, University of Cambridge, Lensfield Road, Cambridge CB2 1EW.

The Medical Research Council is an Equal Opportunity Employer.

HUMAN GENE THERAPY

Somatix is creating cell-based protein delivery systems which may be implanted into patients to produce and deliver therapeutic proteins. The expertise of Somatix is both in generic augmentation of somatic cells and in advanced drug delivery; gene transfer into human cells using recombinant retroviral vectors is a technology that was pioneered by the founding scientist of our company, Dr. Richard Mulligan of the Whitehead Institute at MIT.

Research Scientist/Cell Transplantation

We are currently seeking a PhD-level Scientist with a minimum of 2 years' postdoctoral experience in cell biology to develop cell-based protein delivery systems for in vivo and ex vivo use. The successful candidate should have research experience in angiogenesis and/or endothelial cell biology; a preference will be given to candidates familiar with biomaterials, microencapsulation or artificial cells.

Research Associate/Cell Transplantation

Somatix also needs a BS- and/or MS-level Scientist to be involved in development of delivery systems for genetically augmented somatic cells. We require at least 3 years' academic or industrial experience in cell biology, cell transplantation and/or histology; preference will be given to individuals skilled in tissue culture, animal handling, enzymatic assays and/or biomaterials.

Somatix provides excellent career potential in a rapidly growing company, as well as a competitive compensation and benefits package. If you are a self-motivated professional interested in being an important and valued member of a multidisciplinary team, then please forward your resume to: LH 90/19, Somatix Corporation, One Kendall Square, Bldg. 650, Cambridge, MA 02139. We are an Affirmative Action/Equal Opportunity Employer.

Somatix

ADVANCEMENT IN SCIENCE BEGINS AT BIO-RAD

Research Scientist Clinical Diagnostic Controls

The satisfaction of working at Bio-Rad Laboratories comes from seeing your research quickly become a useful product. It's a feeling of success that we invite you to share as a Research Scientist in our Diagnostic Controls Division.

Independent in your scope, you will develop new products and support existing products, conducting studies with limited supervision, planning and executing your own experiments, directing chemists and technicians in your efforts. Your ideas and product proposals will be encouraged.

Integral to our success, you will team-up with Production, QC, Marketing and Technical Service, providing your scientific expertise and using your written and oral communication skills daily. Your knowledge of GMP, GLP and regulatory issues will be valued as practical assets.

If this kind of opportunity appeals to you, please send your resume to Bio-Rad Laboratories, ECS Div., 3726 E. Miraloma Ave., Anaheim, CA 92806, Attn: Human Resources Department #45. EOE.

BIO-RAD

Bio-Rad Laboratories

Postdoctoral Opportunity Bioremediation Project

Lawrence Livermore National Laboratory, one of the nation's premier research and development organizations, has a challenging postdoctoral opportunity with our Geochemistry group in the Earth Sciences Department.

The successful applicant will participate in a newly initiated multidisciplinary research effort to develop innovative strategies for *in situ* microbial subsurface hazardous waste remediation. This project will initially be directed toward experimental and theoretical studies of microbial degradation of chlorinated organic solvents, chemical and physical interactions between the biological and inorganic portions of the system, and modeling of the fluid-flow and chemical transport. You will participate in an effort to describe quantitatively the chemical changes in the aqueous phase and rock matrix concomitant with the growth of a microbial community in a groundwater/rock medium. Close collaboration with LLNL scientists engaged in related experimental and theoretical work will be required.

Requirements include a PhD in Organic Chemistry, Biochemical Engineering, Organic Geochemistry, or equivalent. A background in biochemistry and biochemical engineering is desirable; familiarity with the thermodynamics of aqueous solutions and the computational aspects of heterogeneous chemical equilibria would be very helpful. Experience with microbial water treatment processes a plus, but not required.

LLNL offers an excellent salary and compensation package, as well as the opportunity to work in a state-of-the-art facility. For immediate consideration, please forward your resume to: Phil Harding, Professional Staffing, Lawrence Livermore National Laboratory, P.O. Box 5510, L-725, Dept. A90262, Livermore, CA 94550. U.S. citizenship required. Equal Opportunity Employer.

University of California

 **Lawrence Livermore
National Laboratory**

PHYSICAL SCIENTIST GS-1301-14

The National Institutes of Health (NIH), National Center for Research Resources, Biomedical Engineering and Instrumentation Program, has a career civil service position for a Physical Scientist at GS-14 ranging from \$50,342 - \$65,444/annum, depending upon qualifications.

The position is Manager of the NIH *In Vivo* Nuclear Magnetic Resonance Research Center, administered by the Biomedical Engineering and Instrumentation Program.

The *In Vivo* NMR Research Center is a centralized resource unique at NIH, providing facilities and technical support for NIH scientists seeking to advance *in vivo* NMR technology, its application to animal and human physiology, and ultimately its clinical application.

The incumbent will: develop and coordinate research programs to advance *in vivo* NMR technology; provide consultations to researchers in localized spectroscopy, functional imaging, flow imaging, diffusion imaging, sodium imaging; allocate resources; insure smooth functioning of equipment and facilities, etc.

Qualifications:

Candidates must hold a doctoral degree plus have one (1) year of specialized experience that is equivalent in difficulty to the next lower grade level in the Federal Service. Specialized experience is in applying *in vivo* NMR instrumentation and techniques to imaging and spectroscopy. Experience in providing direction for or managing an *in vivo* NMR imaging and spectroscopy research facility.

An application for consideration must be received on or before May 25, 1990.

Candidates should submit an Application for Federal Employment (SF-171), curriculum vitae, bibliography, and at least three (3) references to:

Ms. Rosemary Carter
National Institutes of Health
Public Health Service
Building 12A, Room 4057
9000 Rockville Pike
Bethesda, Maryland 20892



U.S. Citizenship Required
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FACULTY POSITION IN NUCLEAR CHEMICAL ENGINEERING

The Department of Nuclear Engineering at MIT is seeking qualified applicants for a tenure track position at the level of assistant professor in the area of Nuclear Chemical Engineering. Candidates should hold a Ph.D. or Sc.D. degree in an engineering or physical sciences discipline.

The applicant should be strongly committed to research in nuclear energy conversion and have broad interests in nuclear chemical engineering, materials science and engineering, and environmental degradation of materials in nuclear applications. Candidates who combine strengths in basic science and engineering applications will receive preference. Candidates should have experience in one or more of the following areas: chemical processing of radioactive materials and materials used in fission reactor fuel cycles, nuclear waste management systems, irradiation effects on nuclear materials, and corrosion and water chemistry in LWRs. The ability to carry on a successful experimental research program is highly desirable.

The position requires the capability to develop a substantial research program, either individually or through interaction and collaboration with other departmental faculty as well as with scientists and engineers at the MIT Nuclear Reactor Laboratory (NRL). The NRL is an on-campus, interdepartmental, interdisciplinary laboratory which operates a 5MW research reactor and associated facilities. The NRL serves as a focal point for several large projects in nuclear materials and nuclear chemical engineering, in which the applicant is encouraged to join and eventually assume a leadership role.

The candidate should be capable of teaching a variety of courses in the academic areas of nuclear chemical engineering, nuclear waste management, nuclear materials, and corrosion engineering, as well as assisting in the development of new fission engineering courses. The successful candidate will have the responsibility for the supervision of student research at the undergraduate, master's and doctoral levels.

Interested candidates should send their resumes to:

Dr. Neil E. Todreas,
Search Committee Chairman
Nuclear Engineering Department, 24-219
Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, MA 02139.

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MIT

POSTDOCTORAL POSITIONS

We have discovery down to a science

Hoffmann-La Roche is one of the world's foremost companies involved in pharmaceutical and medical research. We have a variety of research opportunities in our Exploratory Research organization, located at our Nutley, New Jersey headquarters.

MOLECULAR IMMUNOLOGIST

You will join an interdisciplinary team investigating the molecular basis of rheumatoid arthritis, and assume responsibility for cloning and characterizing T cells, and developing new *in vitro* models of arthritis. A PhD in Molecular Biology, Immunology or a related field with experience in molecular and cell biology techniques required. **Please refer to Position PK on c.v.**

MOLECULAR BIOLOGIST

You will use expression cloning techniques to identify genes encoding novel cell surface molecules involved in leukocyte endothelial adhesion. A PhD in a Biological Science with experience in cell culture techniques and/or mammalian expression cloning systems desirable. **Please refer to Position DP on c.v.**

MOLECULAR MODELING

Develop and implement new methods for the design of molecules as potential drug candidates. A PhD in Chemistry is required; a background in molecular modeling techniques and computer programming experience desirable. **Please refer to Position CC on c.v.**

MOLECULAR BIOLOGIST

Develop a novel genetic system for the cloning and characterization of proteins that interact with c-myc and other nuclear protooncogenes. A PhD in Molecular Biology, Genetics or Biochemistry with experience in rDNA required; a background with yeast genetics is desirable. **Please refer to Position GJ on c.v.**

ORGANIC BIOCHEMIST

You will participate with a multidisciplinary team whose research is directed towards the design and synthesis of modified peptides and small molecules to increase their transport across cell membranes. You must be a PhD Chemist with skills in synthesis and analytical techniques of gel filtration, ion exchange chromatography and reverse phase HPLC. **Please refer to Position PR on c.v.**

MOLECULAR BIOLOGIST

You will study virus gene products at the molecular level with a view towards defining targets for antiviral agents and designing hybrid viruses that may be used in animal models of viral disease. A PhD in Molecular Biology with a background in virology required. **Please refer to Position IS on c.v.**

Hoffmann-La Roche offers the benefits of a multidisciplinary environment that stimulates personal and professional growth, and encourages publications. In addition, we are conveniently located in an attractive suburban community just west of New York City and its cultural and intellectual energy. Our salaries and benefits package are competitive.

For consideration, please send your curriculum vitae and the names of three references, indicating the code for your position of interest, to: **Mr. R.H. Stevenson, Assistant Director, Exploratory Research, Hoffmann-La Roche Inc., Nutley New Jersey 07110.** We are an equal opportunity employer.



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POSITIONS OPEN

POSTDOCTORAL POSITION. Immediately available for 2 to 3 years, starting no later than 1 July 1990. Research will involve cloning and expression of tumor-associated antigens. Ph.D. with experience in recombinant DNA technology and eukaryotic expression systems strongly preferred. Interested candidates should send a letter describing research interests, curriculum vitae, and names of three references to: **Dr. Donald L. Morton/Dr. Robert Chiu, Division of Surgical Oncology, University of California, Los Angeles (UCLA), School of Medicine, 9-267 Factor Building, Los Angeles, CA 90024-1782.** UCLA is an Equal Opportunity/Affirmative Action Employer.

A **POSTDOCTORAL POSITION** is available 1 July 1990 to study the effects of cytokines and bacterial-derived protein toxins on vascular endothelial cells *in vitro*. A focus is placed on transcriptional/translational regulation of endothelial hemostatic factors. Prior experience in vascular biology is desirable. Please send curriculum vitae, a statement of research interests, and names of three references to: **Dr. Tom G. O'Brig, University of Rochester Medical Center, Department of Microbiology and Immunology, Box 672, 601 Elmwood Avenue, Rochester, NY 14642.** The University of Rochester is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION. To study DNA repair in chromatin of mammalian and yeast cells. Specific areas include: repair in yeast minichromosomes (*Cell*, 18 May 1990 issue), UV photofootprinting in chromatin [*J. Mol. Biol.* **204**, 949 (1988)], repair in inducible genes, and isolation and EM visualization of biotin-tagged repair complexes. Send statement of interests, résumé, and names of three references to: **Dr. Michael J. Smerdon, Biochemistry/Biophysics Program, Washington State University (WSU), Pullman, WA 99164-4660. FAX: 509-335-9688.** WSU is an Equal Opportunity/Affirmative Action Employer. Protected group members are encouraged to apply.

POSTDOCTORAL POSITIONS. Available in Departments of Biochemistry, Molecular and Cellular Biology, Microbiology and Immunology, Pharmacology, and Physiology. Applicants must have a Ph.D. or M.D. degree. Positions available during 1990 and 1991. Closing date: 31 December 1990 or until positions are filled. *Women and minorities are urged to apply.* Send applications to appropriate department head: **The University of Arizona, Arizona Health Sciences Center, Tucson, AZ 85724.**

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POSTDOCTORAL FELLOW

To measure whole cell and single channel K^+ and Ca^{2+} currents in isolated arterial muscle cells, to measure intracellular Ca^{2+} and pH with fluorescent probes, and to examine the cellular and ionic mechanisms of vasoactive fatty acids. The successful candidate will be part of an interactive program studying chemical and mechanical transduction mechanisms controlling vascular tone, and be an active participant in a hypertension program project grant. The position is available 1 July 1990. Send curriculum vitae and three references to: **Dr. David R. Harder, Department of Physiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226.** Equal Opportunity/Affirmative Action Employer, M/F/H.

POSTDOCTORAL FELLOWSHIPS IN COGNITIVE NEUROSCIENCE

The McDonnell-Pew Center for Cognitive Neuroscience announces the availability of fellowships to support interdisciplinary postdoctoral trainees. For 1990-91, these fellowships will be concentrated on bridging computational neuroscience and cognition, in combining event-related potentials and magnetoencephalography, and in the neural bases of language and memory, within ongoing research programs at the University of California, San Diego; The Salk Institute; and the Research Institute of Scripps Clinic. Send a statement of research interests, curriculum vitae, and letters of recommendation from three academic references to: **Dr. Terrence Sejnowski, The Salk Institute, 10010 North Torrey Pines Road, La Jolla, CA 92037.** Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOW. Two- to four-year position available 1 July 1990 to study plasminogen/plasminogen activator regulation by endothelial cells. M.D. and/or Ph.D. required with experience in molecular biological techniques. Send curriculum vitae and letters of reference to: **Dr. Katherine A. Hajjar, Departments of Medicine/Pediatrics, Cornell University Medical College, 1300 York Avenue, New York, NY 10021** Cornell University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP. Immediate opening to participate in studies of cytochrome P450 gene regulation and protein function. Areas of interest include, (i) molecular mechanisms of cytochrome P450 gene induction by chemical carcinogens, (ii) the tissue-specific control of P450 genes, and (iii) the function of P450s in cells following transfection of recombinant cDNA and gene clones. Requirements include a Ph.D. with a solid background in molecular or cell biology. Send curriculum vitae and names and telephone numbers of references to: **Dr. Robert Tukey, University of California, San Diego, Cancer Center, T-012, La Jolla, CA 92093.**

POSTDOCTORAL RESEARCH ASSOCIATE

Position available for minimum of 1 year to study mammalian mitochondrial biogenesis and the role of DNA topoisomerases in this process. Project involves enzymologic and molecular biologic approaches so experience in recombinant DNA and/or protein biochemistry techniques is desirable. Send curriculum vitae and names of three references to:

**Dr. Frank J. Castora
Department of Biochemistry
Eastern Virginia Medical School
700 Olney Road
Norfolk, VA 23501**

Affirmative Action/Equal Opportunity Employer.

PROTEIN BIOCHEMIST. Proficient in purification and characterization of connective tissue proteins using ion exchange, gel exclusion and affinity chromatography, isoelectric focusing, hydroxyapatite chromatography, HPLC, electrophoresis, blot transfer, tissue culture. Knowledge of producing and characterizing monoclonal and polyclonal antibodies.

Requirements include a doctorate in biochemistry or biology and at least 2 years of practical experience. Forty hours per week; salary negotiable. Position located at University of California, Los Angeles.

Send résumé only to: **Nancy Jordan-Smith, 1000 Veteran Avenue, Room A3-34, Los Angeles, CA 90024.**

PROTEIN STRUCTURE ANALYSIS CHEMIST

Houston Biotechnology Incorporated is a privately held company founded in 1984 specializing in the research and development of biopharmaceutical products, specifically those for the prevention and/or treatment of eye and brain disorders. We are currently expanding our division of product development and seek a physical protein chemist with experience in the area of characterization and analysis of proteins. The ideal research would have a familiarity with circular dichroism, mass spectroscopy, NMR, HPLC, capillary electrophoresis, glycoprotein chemistry, heterobifunctional chemistry, in addition to standard chromatographic, electrophoretic, and immunological methods of protein analysis. Experience with monoclonal antibody characterization and bioanalytical regulatory requirements is desirable. This position will be part of a bioanalytical team which solves complex bioanalytical problems. Candidates should possess a Ph.D. or equivalent with 2 to 3 years of relevant experience, and excellent written and oral communication skills.

Houston Biotechnology Incorporated is located next to the Baylor College of Medicine's Center for Biotechnology in the Research Forest of The Woodlands, a planned residential-commercial community 35 miles north of Houston with very affordable housing and beautiful parks within minutes of us. Qualified applicants should forward a résumé and description of relevant experience in protein structure analysis to: **Cindy Owens, Director of Human Resources, Houston Biotechnology Incorporated, 3608 Research Forest Drive, The Woodlands, TX 77381.**

Schering

Assistant and Associate Scientists

*If advancing new discoveries
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Schering-Plough, a \$3-billion, research-driven healthcare corporation, has exciting challenges at the forefront of cardiovascular pharmaceuticals. The following positions are currently available at our Bloomfield, New Jersey facility:

Associate Scientist (Pharmacology)

Requires an MS or BS in Biology and experience in small animal handling and surgical techniques. Knowledge of cardiovascular physiology or pharmacology, or a background in antihypertensive drug discovery would be ideal.

Assistant Scientist (Molecular Biology)

Requires a BS/MS in Biochemistry or Biological Sciences with 1-3 years' laboratory experience in Molecular Biology. Experience with cDNA library construction and screening, sequencing, DNA/RNA isolation and analysis, blotting techniques, tissue culture, PCR, and radioisotope labeling is preferred.

Assistant Scientist (Biochemical Pharmacology)

To execute research in cardiovascular pharmacology leading to the discovery of novel therapeutic agents. Requires a BS in Biochemistry with 0-3 years' laboratory background, or an MS in Biochemical Pharmacology. Prefer experience in concepts and methods of receptor theory and radio-labeled ligand binding assays, regulation of enzyme function, and/or purification and characterization of proteins (SDS gel electrophoresis and column chromatography).

As members of a team investigating drug discovery in the cardiovascular field, you must be self-motivated and goal-oriented with the ability to work independently and interact effectively with all staff.

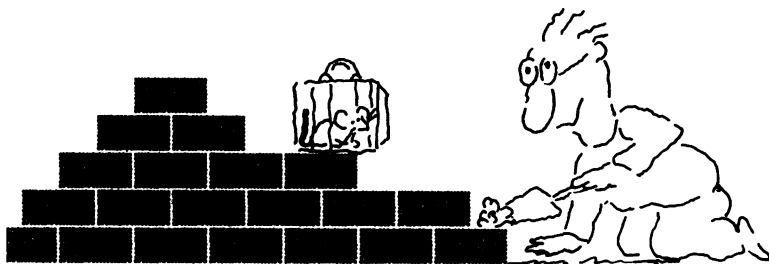
We offer a very competitive salary and benefits package. For prompt consideration, please send resume, indicating position of interest, to: Ms. P. Valendo, Schering-Plough Research, 60 Orange Street, Bloomfield, NJ 07003. An equal opportunity employer.

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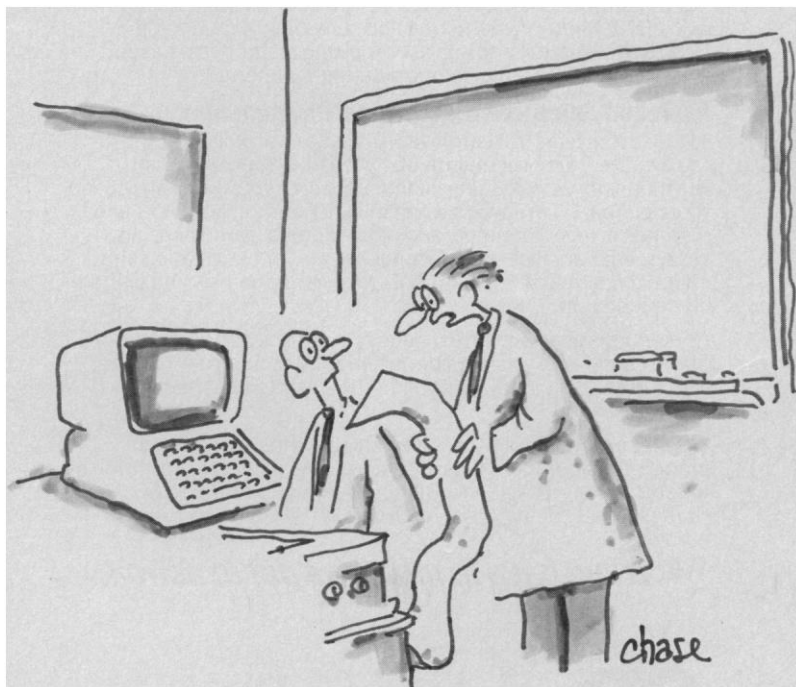


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Postdoctoral Research Associates

The Agricultural Research Service as the principal scientific research agency of USDA, conducts research to solve technical food and agricultural problems of broad scope and high national priority. The agency's work is carried out under six specific research objectives—conservation of national resources, crop production and protection, animal production and protection, human nutrition, postharvest research, and integration of management systems. Overall aim of ARS research is to ensure the continuation of an adequate supply of food and fiber of high quality to meet the needs of American people and for export.

ARS is currently recruiting for 100 postdoctoral positions throughout the country. Opportunities exist in many research areas, including:

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Successful candidates will be hired initially for up to 2 years in duration. Salary for these GS-11/12 positions (\$29,891 to \$35,825) will be based on qualifications and experience.

For written descriptions of positions and application procedures, write to:

N. L. Bakes
Personnel Division (S)
USDA/ARS
6305 Ivy Lane, Room I37
Greenbelt, MD 20770

or call:

Ms. Kim Conley
(301) 344-2796

ARS is an Equal Opportunity Employer. Women and minorities are encouraged to apply.



Cardiovascular Research

Postdoctoral Scientist

CIBA-GEIGY Pharmaceuticals Division, headquartered on 100 acres in Summit, New Jersey, is respected worldwide for cardiovascular research and the development of products to treat cardiovascular disorders.

We are seeking a Postdoctoral Scientist to join our multi-disciplinary team studying the molecular and cellular pathology of myocardial ischemic-reperfusion injury. Candidates must possess a PhD in Biochemistry, Cell Biology, Pharmacology or Molecular Biology. Extensive experience with the analysis of receptor-effector systems and intermediary metabolism, mammalian tissue culture, tissue fractionation and enzymology, as well as various chromatographic and electrophoresis techniques, is highly desirable. As a Postdoctoral Scientist, participation in scientific forums and publication of research findings is expected.

We offer competitive salaries and comprehensive benefits in an environment conducive to personal and professional growth. Please send your resume with salary requirements to: **Staffing Center, CIBA-GEIGY Corporation, Pharmaceuticals Division, Dept DJ, 556 Morris Avenue, Summit, New Jersey 07901.** We Are An Equal Opportunity Employer M/F/H/V.

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POSTDOCTORAL POSITION

Position available to study the biochemistry of eukaryotic transcription, focusing on the structure and function of mammalian factors essential for promoter-specific initiation by RNA polymerase II. [Proc. Natl. Acad. Sci. USA 86, 7356-7360 (1989); J. Biol. Chem. 264, 2357-2362 (1989)]

Those with prior experience in nucleic acid enzymology are particularly urged to apply.

Please send letter and curriculum vitae, or call (405) 271-7610.

Joan W. Conaway, Ph.D.
Ronald C. Conaway, Ph.D.
Program in Molecular and
Cell Biology
Oklahoma Medical Research
Foundation
825 N.E. 13th Street
Oklahoma City, OK 73104



EOE/Affirmative Action Employer. OMRF encourages women and minorities to apply.

SIGMA XI, WORKSHOP



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Nominate yourself or others by brief, substantive letter. Review of nominations will begin 25 May 1990. Travel, lodging and meals provided through a Johnson Foundation grant and pending NSF support.

Dr. Anna J. Harrison
Chair, Sigma Xi Committee on Science,
Mathematics and Engineering Education
14 Ashfield Lane
South Hadley, MA 01075

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Our Pharmaceutical Products Division is leading in the development and manufacture of anti-infective, cardiovascular and anti-convulsant/neurological products. At nearly twice the industry standard, we have invested more than \$500 million in R&D in 1989. We currently have opportunities for the following individuals:

CARDIOVASCULAR DRUG DISCOVERY GROUP

Assistant/Associate Scientists

The selected individuals will have a minimum of a Bachelor's degree in a biological science, and at least 3 years of related experience. Experience in small animal surgery, handling plasma and urine samples, quantitative chemistry, radioisotopes and general laboratory instrumentation is desired. Preference will be given to candidates with relevant experience in cardiovascular/renal physiology or pharmacology. **Job #TO-7550.**

NEUROSCIENCE RESEARCH GROUP

Research Associates/Behavior

The qualified individual will have 2 or more years experience in Behavioral Pharmacology or a related area. Experience in small animal surgery, drug administration and computer-based behavioral test procedures are preferred. A B.S. or M.S. in a related discipline is required. **Job #KA-7613.**

Abbott offers an excellent salary and benefits package including profit sharing and a stock retirement plan. We are located in an attractive suburban area 30 miles north of Chicago. For consideration, please send your resume with salary history, indicating Job Number interested in, to: **Patricia Handy, Corporate Placement, Abbott Laboratories, One Abbott Park Rd., Abbott Park, IL 60064.** Abbott is an Affirmative Action Employer.

ABBOTT LABORATORIES



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Research Scientists

Triton Biosciences Inc., an emerging pharmaceutical and diagnostics company, is focused on product development opportunities in the areas of cancer, AIDS and other serious diseases. We currently have the following positions available in our San Francisco Bay Area facility.

cDNA Cloning

Help establish a state-of-the-art cDNA cloning group for identifying and isolating human genes that may have diagnostic or therapeutic value in cancer treatment. You must have a PhD and 2+ years of post-doctoral research. Experience in successfully cloning novel cDNAs is essential. Industrial experience is desirable. Refer to job #90-021.

Mammalian Expression Systems

Help establish a state-of-the-art mammalian expression group for identifying and producing novel biologics that may have diagnostic or therapeutic value in cancer treatment. The successful candidate will have a PhD and 2+ years of expression work experience in mammalian tissue culture systems. Industrial experience is desirable. Refer to job #90-032.

Cell Biology

Develop novel cancer therapies involving oncogenes, growth factors, cytokines and monoclonal antibodies. Requires a PhD in Biology, Immunology or Pharmacology. Five or more years of experience in in-vitro and in-vivo tumor cell models is preferred. Refer to job #90-007.

Cancer Markers

Evaluate new cancer markers for diagnostic use, specifically for immunohistochemical applications. A PhD and a minimum of 3 years' experience in routine immunohistochemical techniques are required. Refer to job #89-063.

Triton offers competitive salaries and benefits, including a special incentive of \$15,000-\$30,000, and relocation assistance. For consideration, send your resume, along with a cover letter highlighting your skills and experience, to Triton Biosciences Inc., 1501 Harbor Bay Parkway, Alameda, CA 94501. EOE/AA employer.



Triton Biosciences Inc.

REQUEST FOR APPLICATIONS The Molecular Basis of Cystic Fibrosis

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) and the Cystic Fibrosis Foundation (CFF) invite investigator-initiated research applications to define and characterize the etiology and pathogenesis of cystic fibrosis (CF).

The purpose of this request is to elucidate the underlying biochemical defect(s) relative to the CF gene and the cystic fibrosis transmembrane regulator (CFTR) protein. Research areas include but are not limited to:

- Processes associated with the expression of CF gene products;
- Mechanisms involved in the abnormal ion transport in CF and the relationship to the structure and function of CFTR and other membrane proteins;
- Model systems to study the regulation of defective cellular processes;
- Potential therapeutic agents or strategies to reverse or modulate the underlying CF defect(s).

Research approaches must be directly relevant to CF. Applications must be submitted to the NIDDK. **Proposals which are judged meritorious but are not funded by the NIH will be considered for support by the CFF.**

NIH support will be provided as grants-in-aid determined by project scope. CFF support is available for up to three years.

The deadline for letters of intent is June 15 and for applications is **August 1, 1990**. Interested investigators are urged to contact Dr. Nancy Lamontagne, Director, Cystic Fibrosis Program (NIDDK) or Dr. Robert J. Beall, CFF Executive Vice President for Medical Affairs.



5333 West Bard Avenue
Westwood Bldg., Rm. 607
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RESEARCH SCIENTISTS & ASSOCIATES

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BIOMEDICAL ENGINEER

An opening exists in the Metabolic Diseases Branch, National Institutes of Health (NIH), for a person with M.S. or Ph.D., programming experience in UNIX, and experience in several of the following areas: computer image analysis, C-language, electrical engineering, light, fluorescence, and video microscopy. The incumbent will develop, maintain, and participate in cell biology research with a sophisticated video light microscopy system. The type of appointment will depend upon background. Send CV, summary of research interests, and names of at least 3 references to:

**Dr. Stephen Marx
National Institutes of Health
Bldg. 10, Room 9C-101
9000 Rockville Pike
Bethesda, MD 20892**

U.S. Citizenship is not required.
NIH is an Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL POSITIONS. In neurobehavioral and neurocardiovascular pharmacology. Two positions (\$20,000 per year) are available to begin before 31 October 1990. One is offered in conjunction with the Alzheimer's Disease Research Center and involves studies of pharmacological approaches to enhance learning and memory performance in nonhuman primate and rodent models. Of interest is the role of central nicotinic receptors. The second position involves studies of central cholinergic and adrenergic systems in cardiovascular regulation and in models of hypertension. Send curriculum vitae and two letters of reference or contact: **Dr. Jerry J. Buccafusco, Department of Pharmacology and Toxicology, Medical College of Georgia, Augusta, GA 30912.** *Equal Opportunity/Affirmative Action Employer.*

IMMEDIATE POSTDOCTORAL POSITIONS

IMMUNOLOGIST/CELL BIOLOGIST: Experience in monoclonal antibody technology and animals model. **RADIATION BIOLOGIST:** Experience in cell culture, animals models, and molecular biology. **ORGANIC CHEMIST:** Experience in radiolabeling of various molecules. Candidates to work within multidisciplinary group examining the diagnostic and therapeutic potential of radionuclides. Salary based on experience. *Must be U.S. citizens or permanent residents.* Send curriculum vitae to: **A. I. Kassis, Ph.D., Harvard Medical School, 50 Binney Street, Boston, MA 02115.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW IN MOLECULAR BIOLOGY. Position available to study the biochemistry and cell biology of the Alzheimer's amyloid precursor protein. Projects include: (i) purification of the amyloid precursor and its characterization with emphasis on posttranslational modifications, (ii) isolation of proteolytic enzymes involved in the secretion of the precursor from neuronal cells, and (iii) investigation of the biological properties of the purified precursor in cell cultures. Candidates should have a strong background in biochemistry and experience in protein purification and cell culture techniques. Salary is highly competitive and is commensurate with experience. Please send curriculum vitae and references to: **Dr. Nikos K. Robakis, Ph.D., The Mount Sinai Medical Center, Department of Psychiatry, and Fishberg Neurobiology Center, Box 1229, One Gustave L. Levy Place, New York, NY 10029-6574.** *An Equal Opportunity Employer.*

RESEARCH CHEMIST. To design and conduct basic research in gene isolation by developing new chemical methods for detecting and analyzing nucleic acids, specifically as it relates to plant DNA; develop new methodologies for isolation, purification, and detection of nucleic acids and synthesis of oligonucleotides; supervise small staff to develop and improve analytical techniques such as UV, IR, NMR (¹H NMR, ¹³C NMR, 2D NMR), LCC, MPLC, HPLC, GC, and GCMS. Ph.D. or equivalent in chemistry, plus 3 years of experience as postdoctoral researcher in biotechnology. Requires hands-on laboratory experience with nucleic acids and above-described analytical techniques. Forty hours per week; \$42,000 per year. *Must have proof of legal authority to work in the United States.* Apply or send résumé to: **Job Service of Iowa, 150 Des Moines Street, Des Moines, IA 50309.** *Job Order IA 0224373. Advertisement paid by employer.*

RESEARCH SCIENTIST

Ph.D. experienced in cell biology, molecular biology, and/or protein chemistry wanted for the Division of Pulmonary and Critical Care Medicine in the Department of Internal Medicine at Yale-New Haven Hospital. Must be willing to participate in sectional programs and have the desire and ability to establish an independent line of investigation. Interest in inflammation, cytokines, and/or matrix is highly desirable. Tenure-track appointment with protected time and resources available for qualified individual. Please send curriculum vitae and three references to: **Elizabeth Malinowski, Assistant Administrator, Yale University, Pulmonary and Critical Care Section, Department of Internal Medicine, 105 LCI Building, P.O. Box 3333, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE. Needed to join active laboratory investigating molecular biology of insulin and insulin receptors in prokaryotes, yeast, and fungi. Please send curriculum vitae and names of references to: **Dr. John Lenard, Department of Physiology and Biophysics, University of Medicine and Dentistry of New Jersey (UMDNJ), Robert Wood Johnson Medical School, 675 Hoes Lane, Piscataway, NJ 08854-5635.** *The UMDNJ is an Affirmative Action/Equal Opportunity Employer, M/F/H/V, and a member of the University Health System of New Jersey.*

POSTDOCTORAL RESEARCH ASSOCIATE. For ACS-funded project on in vivo NMR metabolic studies of glucocorticoid-induced cell lysis in human leukemic cell lines; 3-year appointment. Salary: \$20,000 to \$24,000, depending on experience, plus fringe benefits. Submit résumé plus two recommendation letters before 1 August 1990 to: **Dr. J. F. M. Post, Department of Human Biological Chemistry and Genetics, University of Texas Medical Branch (UTMB), Galveston, TX 77550.** *UTMB is an Equal Opportunity M/F/H/V Affirmative Action Employer. UTMB hires only individuals authorized to work in the United States.*

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE

POSTDOCTORAL RESEARCH ASSOCIATE. Livestock and Poultry Sciences Institute, Beltsville, Maryland, seeks molecular biologist to isolate and characterize receptors on bovine leukocytes, in an effort to prevent bacterial infection of the udder. Candidates should be able to apply molecular biology principles and techniques to this objective. Immunology experience desirable but not essential. Salary: \$29,891 per annum; appointment is for 2 years. For information on the research assignment, contact: **Dr. R. H. Miller, 301-344-2330.** For information on application procedures/forms, contact: **Sandra Thomas, 301-344-3953.** Applications for this position must be marked OE005.

USDA/ARS is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

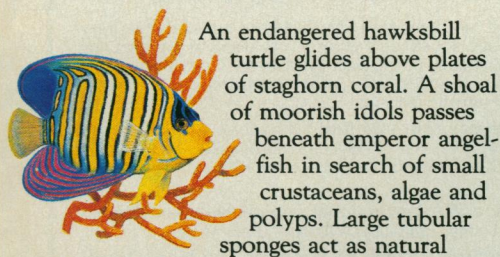
RESEARCH ASSOCIATE. Needed to (i) investigate the synthesis and characterization of conjugated fluoropolymers prepared via elimination reactions carried out on soluble precursors, (ii) carry out polymerization of gaseous monomers using high-pressure suspension polymerization techniques, and (iii) characterize polymer by the use of high-resolution FT-NMR (Fourier Transform-Nuclear Magnetic Resonance), FT-IR (Fourier Transform-Infrared), EPR (Electron Paramagnetic Resonance), UV-VIS (Ultra Violet-Visible) spectrometers, thermal analysis, and other polymer characterization instruments. Forty hours per week, 8:00 a.m. to 5:00 p.m., \$22,320 per year, no overtime. Six years of grade school, 5 years of high school, 5 years of college, master's degree with major field of study in chemistry, and 3 years of experience in related occupation as polymer researcher required. Apply at the **Texas Employment Commission, Arlington, Texas**, or send résumé to: **The Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. #542447.** *Ad paid by an Equal Employment Opportunity Employer.*

CORNELL UNIVERSITY COLLEGE OF VETERINARY MEDICINE DEPARTMENT OF PATHOLOGY RESEARCH ASSOCIATE CELL BIOLOGY/ELECTRON MICROSCOPY

A postdoctoral position for a research associate is available in the Neuromuscular Diseases Laboratory, Department of Pathology, New York State College of Veterinary Medicine, to study the cellular pathogenesis of muscular dystrophy. Experience in electron microscopy, particularly freeze fracture and etching techniques, is required. Experience in the study of the cytoskeleton is desirable. Salary is commensurate with experience. Applications, including curriculum vitae and names of two referees, should be submitted by 1 June 1990 to: **Dr. Barry Cooper, Department of Pathology, College of Veterinary Medicine, Cornell University, Ithaca, NY 14853-6401.** For further information concerning the project, please contact: **Dr. Cooper, telephone: 607-253-3350; FAX: 607-253-3708.**

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Together, we have the strength and mass to meet the challenges of today's competitive research environment. And by meeting these formidable challenges, we will establish PRI as one of the world's leading pharmaceutical R&D companies. To do this, we're continually seeking entry through senior level candidates to join us at one of our several sites in the following fields: pharmacy, biology, biochemistry, toxicology, immunology, chemistry, microbiology, biochemical engineering, pharmacology, pathology, statistics, nursing and medicine. Send your resume to: Selection Dept. SC-511, R.W. Johnson Pharmaceutical Research Institute, P.O. Box 300, Raritan, NJ 08869-0602. An Equal Opportunity Employer M/F



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Post-Doctoral Scientist

Cangene Corporation has developed a unique and powerful nucleic-acid amplification technology. We are seeking an exceptional individual to join our team of scientists in the application of this technology to in vitro diagnostic assays.

The successful candidate will have:

- A Ph.D. in molecular biology, nucleic acid biochemistry, or closely related discipline;
- Sound training in basic molecular biology, with laboratory experience in nucleic acids, especially the enzymology of replication and transcription;
- Proven analytical and communication skills, and be an energetic self starter.

Cangene Corporation is located near Toronto, a major academic, corporate and cultural centre in Canada. The Company offers an excellent remuneration package and the opportunity to work in a challenging, creative, and goal oriented environment.

Candidates are invited to submit, in strictest confidence, a curriculum vitae, a list of publications, and the names of two referees, quoting file #0119.A to: **Dr. Robin R. Gutell, Cangene Corporation, 3403 American Drive, Mississauga, Ontario, Canada L4V 1T4.**



The Canadian Genetic Engineering Company

GRADUATE PROGRAM IN MOLECULAR BIOLOGY AND GENETICS

Director: Carlo M. Croce, M.D.

Chairman, Graduate Studies: James H. Keen, Ph.D.

As part of intensive development in the fields of molecular biology, molecular genetics and structural biology, a new doctoral program has been established by faculty of the Fels Institute for Cancer Research and Molecular Biology and several other departments of Temple University. Areas of training include:

Molecular genetics of growth control, oncogene activation and cancer suppression (Drs. Renato Baserga, Bruno Calabretta, Carlo Croce, Danuta Kozbor, Edward Mercer, Veena Rao, Shyam Reddy, Tapan Som).

Genomic Structure and transcriptional and developmental regulation (Drs. Martyn Darby, Tadaatsu Goto, Kay Huebner).

Molecular and structural biology of receptors and signal transducers (Drs. Jeffrey Benovic, Thomas Frielle, Bradford Jameson, James Keen, Gerald Litwack, Woon Ki Paik, Dianne Soprano).

Mechanisms of DNA repair and chemical carcinogenesis (Drs. Kim deReil, Nahum Duker, Earl Henderson, Prabhakar Lotlikar, Peter Magee, Arthur Schwartz, Michael Sirover).

The program has numerous specialized facilities available including peptide and oligonucleotide synthesis, and sequencing facilities, cell sorting by flow cytometry, computer facilities equipped for molecular modeling and 3-D structure prediction, magnetic resonance, low angle laser light scattering, electron microscopy, and is developing laboratories in X-ray crystal structure analysis.

Students accepted into the program will be provided with predoctoral support including waiver of tuition and a stipend of \$12,000 per year. For interested and qualified students, a M.D./Ph.D program is available.

For further information regarding September 1990 entrance, contact: **Dr. James H. Keen, Molecular Biology and Genetics Program, Fels Institute for Cancer Research & Molecular Biology, Temple University School of Medicine, 3420 N. Broad Street, Philadelphia, PA 19140. (215) 221-4354.** Temple University is an Equal Opportunity Employer/Affirmative Action.



MOLECULAR BIOLOGY Post-Doctoral Program

The Upjohn Company, a research-based pharmaceutical firm located in Kalamazoo, Michigan, is inviting applications for its Post-Doctoral program. Openings are available in the following research areas:

CANCER RESEARCH: Study of intracellular genomic localization exhibited by DNA reactive anticancer compounds with the goal of identifying biologically important alkylation loci. Studies will involve the use of cell biology, molecular biology and fluorescence based histochemistry.

TRANSGENIC PROGRAM: Isolation and characterization of embryonic stem (ES) cells defective in cholesterol transport. Studies involve construction of vectors for homologous recombination, isolation of ES cells with one inactive copy of the gene, transmission of ES cells into mouse germ line and analysis of the transgenic mice.

E. COLI GENE EXPRESSION & PROTEIN SECRETION: Use of E. coli to identify genes and to express and study proteins of pharmaceutical interest. Examination of the interactions between a secreted protein and host-factors required for its export.

Individuals with a recent Ph.D. degree, preferably with a background in molecular biology, biochemistry, microbiology, cell biology or genetic toxicology are encouraged to forward their resume and a statement of research interests and experience in strict confidence to: Fax (616/329-5525) or mail to The Upjohn Company, Position # 5679-BA, Corporate Employment, Kalamazoo, MI 49001. We are an Equal Opportunity Employer M/F.

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Upjohn

JOURNEY POSTDOCTORAL FELLOWSHIP in Basic Biomedical Research

St. Jude Children's Research Hospital

The Journey Fellowship in Basic Biomedical Research is offered annually by St. Jude Children's Research Hospital, a premier, nonsectarian, center for biomedical research and catastrophic diseases of children. The Journey Fellowship is open to a junior Ph.D. or M.D. investigator who seeks training in one of the areas of basic biomedical research available at this center. These include biochemistry, immunology, tumor cell biology, pharmacology, pharmacodynamics, pediatric hematology-oncology, infectious diseases, and virology and molecular biology.

Journey Fellowship awards are made for up to three years and are based on merit recommendations and the promise of a productive career in biomedical research.

Application deadline	1 September 1990
Decision	15 October 1990
Beginning date	1 July 1991
Stipend	Highly Competitive

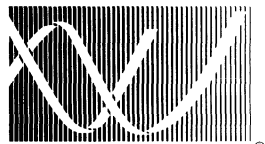
The Journey Fellowship honors the memory of Dr. Leon Journey, a distinguished cell biologist and electron microscopist who served on the faculty of St. Jude Hospital.

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

For more information and application contact:



Allan Granoff, Ph.D., Deputy Director
St. Jude Children's Research Hospital
P.O. Box 318
Memphis, TN 38101-0318
Phone (901) 522-0301
FAX (901) 527-2270



C A B M

CENTER FOR ADVANCED BIOTECHNOLOGY AND MEDICINE

**POSTDOCTORAL POSITION:
ANTIVIRAL DESIGN USING 3-D
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AS VACCINE VECTORS AGAINST
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MOLECULAR BIOLOGY/VIROLOGY/
X-RAY CRYSTALLOGRAPHY/
MOLECULAR MODELING**

Current projects in our laboratory include engineering of human rhinoviruses to display immunogens from other pathogens, crystallographic and biochemical studies of retroviral reverse transcriptases, and crystallographic studies of human rhinoviruses complexed with antiviral agents. State-of-the-art facilities are available for molecular biology and virology, protein chemistry, crystallography, and molecular modeling. Successful applicants will be supported by federally funded research grants, but encouraged to apply for independent fellowship support. Send CV and arrange to have three letters of reference sent to:

EDWARD ARNOLD
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679 Hoes Lane, Piscataway, NJ 08854-5638
Phone: (201) 932-5182
E-mail (internet): arnold@biovax.rutgers.edu

**PROGRAM IN EXCELLENCE IN MOLECULAR BIOLOGY
OF THE CARDIOVASCULAR SYSTEM**

**NEW INVESTIGATOR POSITIONS
Molecular Biology of Ion Channels**

The NHLBI of the NIH has awarded the University of Cincinnati Medical Center a new program providing unique opportunities for training and research in the Molecular Biology of the Heart and Lung.

Postdoctoral assistant or junior faculty positions are now available in the Component on the Structure and Function of Ion Channel Proteins.

Candidates with molecular genetic skills possessing a Ph.D. and/or M.D. degree, who wish to address problems associated with ion channels of heart, smooth muscle, and brain, are encouraged to apply.

Beginning stipends for recent graduates are at a minimum of \$25,000 including benefits, and progresses to \$37,000 or higher in final years.

Applicants should submit a C.V. and the names of three references to Dr. Arnold Schwartz, Department of Pharmacology and Cell Biophysics, University of Cincinnati, College of Medicine, 231 Bethesda Ave., Cincinnati, OH 45267-0575. If you wish further information, telephone 513-558-2400. FAX number 513-558-1778.

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Postdoctoral Research Staff Member

Lawrence Livermore National Laboratory, one of the nation's premier research and development organizations, is seeking an environmental scientist for a 2-year postdoctoral appointment.

Requirements include a recent PhD with formal training and experience in microbial ecology and biochemistry that is relevant to investigating the effects of environmental factors on organic contaminant degradation. The successful applicant will interact with a multidisciplinary research team that is investigating the interaction of microbial processes, fluid flow and chemical transport in subsurface environments.

Lawrence Livermore National Laboratory offers a highly competitive benefits package including three weeks vacation during your first year of employment. Interested applicants should send their curriculum vitae to: **Earl G. Morrell, Professional Employment Division, Lawrence Livermore National Laboratory, P.O. Box 808, L-725, Dept. A90258, Livermore, CA 94550.** An equal opportunity employer.

University of California



Lawrence Livermore
National Laboratory

POSITIONS OPEN

RESEARCH ASSOCIATE. Postdoctoral position available immediately to study human AIDS grain tissue and simian brain tissue infected with SIV. Expertise needed with in situ hybridization, electron microscopy, immunoelectron microscopy, and immunocytochemistry in HIV and/or SIV material. Ph.D. or M.D. required. Salary commensurate with experience. Send application to: **The University of Medicine and Dentistry of New Jersey (UMDNJ), Human Resources, 9QN334, 30 Bergen Street, Newark, NJ 07107-3007, Attention: Mr. Lew Castiglia.** The UMDNJ is an Affirmative Action/Equal Employment Opportunity Employer, M/F/H/V, and a member of the University Health System of New Jersey.

IMMUNOBIOLOGY RESEARCH ASSOCIATE

Immediate opening for Ph.D. immunologist to share supervising, administration, and technical responsibilities with research director in growing, NIH-funded laboratory. Studies involve the inflammatory lymphocyte T-cell indications that occur in vivo, and other immunologic phenomena associated with transplantation immunology. Position requires organized, energetic, and personable scientist. Send curriculum vitae, statement of career goals, and references to: **Charles Orosz, Ph.D., Director, Therapeutic Immunology Laboratories, Division of Transplantation, Department of Surgery, The Ohio State University Hospitals, 259 Means Hall, 1654 Upham Drive, Columbus, OH 43210.**

IMMUNOLOGIST/ ASSOCIATE RESEARCH SCIENTIST

The Surgical Immunology Research Laboratory at the West Haven Veterans Administration (VA) Medical Center is looking for a Ph.D. **DIRECTOR** to oversee one to three surgical resident trainees and participate in studies of lymphocyte signal transduction, neuroenteric mediators of immune function, and the effect of immunosuppressives on second messengers and activation events. A permanent salary line from Bridgeport Hospital funds this geographic full-time position at West Haven, 5 minutes by shuttle bus to the Yale main campus. *Bridgeport Hospital, Yale University, and the West Haven VA Medical Center are all Equal Opportunity Employers and applications from women and minorities are encouraged.* Send curriculum vitae to: **Marvin A. McMillen, M.D., Director, Surgical Intensive Care Unit, West Haven VA Medical Center, West Spring Street, West Haven, CT 06516.**

RESEARCH ASSISTANT, BIOLOGY. Working independently, will carry out experiments analyzing DNA and RNA from mammalian cells using electrophoretic and hybridization techniques, order and monitor laboratory supplies, and perform related duties. Requires B.A./B.S. in biology, biochemistry, chemistry, or related field and 2 to 3 years of laboratory experience working with nucleic acids using standard recombinant DNA techniques. Experience working with animals (especially rodents) preferred. Master's degree desirable. Send résumé and salary requirement to: **Ms. Nilima Bhatia, Human Resources, Tufts University, Medford, MA 02155.** Affirmative Action/Equal Opportunity Employer.

CORTECH, INC.

RESEARCH ASSISTANT, MOLECULAR BIOLOGY. Cortech is a Denver-based pharmaceutical research and development company specializing in the areas of immunology, protease biochemistry, and receptor pharmacology. We are seeking a research assistant in the area of molecular biology. The successful candidate will have a B.S. or M.S. and several years of experience in the field as well as be familiar with several of the following techniques: cDNA library construction and screening, DNA sequencing, expression of foreign proteins in bacteria, protein purification, protein characterization (HPLC, gel electrophoresis, immunochemical, etc.), and peptide mapping. Cortech offers a stimulating environment where a multidisciplinary approach is employed in order to develop new technologies for the treatment of human disease. *Cortech is an Equal Opportunity Employer and offers an excellent compensation and benefits package including stock options.*

Please direct inquiries to:

**Barbara Klipfel, Laboratory Manager
Cortech, Inc.
6840 North Broadway, Suite F
Denver, CO 80221**

POSITIONS OPEN

RESEARCH ASSOCIATE

Stanford University Pathology Department is seeking Ph.D. experienced in purification of mammalian or bacterial proteins. Familiarity with immunoassays and/or monoclonal antibody production is desirable, but not necessary. Full time. Both permanent and temporary positions are available. Send curriculum vitae to: **Dr. W. Ruchl, Department of Pathology, L235, School of Medicine, Stanford, CA 94305.**

UNIVERSITY OF ILLINOIS AT CHICAGO TECHNOLOGY MANAGEMENT POSITION

The University of Illinois at Chicago (UIC) has an immediate opening for a **MARKETING SPECIALIST** who will be responsible for the identification, disclosure, and licensing of university intellectual properties. Experience in technology evaluation and marketing and negotiation of research, development, and licensing agreements is required. Minimum qualifications include an undergraduate degree in a scientific or engineering discipline, an applicable professional or advanced degree, and experience marketing biotechnology or software inventions. Senior level requires at least 5 years of combined experience in related fields of work. Outstanding verbal and written communication skills are essential. Salary is competitive and commensurate with experience. Applications should be received by 7 June 1990 to ensure full consideration. Please send letter of application, complete résumé, salary history, and names of three references to: **Ms. Amy Levant, Search Coordinator, Office of the Vice Chancellor for Research (M/C 672), University of Illinois at Chicago, Box 6998, Chicago, IL 60680.**

UIC is an Affirmative Action/Equal Opportunity Employer.

VIROLOGIST. Monsanto's Corporate Research Glycosciences function has an opening for a virologist to participate in a program on viral glycoproteins. This position requires a Ph.D. in virology or a closely related discipline and postdoctoral experience. Additional experience in an area of glycobiology, such as oligosaccharide characterization, is preferred. Interested candidates should send their résumé and three letters of recommendation to: **Monsanto Company, BB5B-GJ, 700 Chesterfield Village Parkway, St. Louis, MO 63198.** Equal Opportunity Employer, M/F/H/V.

COURSES AND TRAINING

Merck Sharp and Dohme Research Laboratories Fellowship in Laboratory Animal Medicine at University of Pennsylvania. The Office of Laboratory Animal Resources of the University of Pennsylvania invites applications for **POSTGRADUATE TRAINING** in laboratory animal medicine under the auspices of a fellowship from Merck Sharp and Dohme Research Laboratories. The training will include both a clinical residency in laboratory animal medicine and a master's degree program. Training will encompass 3 years of intensive study divided between (i) academic course work; (ii) clinical, diagnostic, teaching, and administrative experience; and (iii) independent research. This formal training program can be used toward eligibility for certification by the American College of Laboratory Animal Medicine. A stipend of \$20,000 to \$36,000 will be provided based on the individual's experience. *Applicants should be U.S. citizens or permanent residents of the United States and graduates of AVMA-accredited schools of veterinary medicine.* For further information, contact: **Dr. Harry Rozniarek, Director, University Laboratory Animal Resources, 100 Blockley Hall, University of Pennsylvania, Philadelphia, PA 19104-60211.**

The University of Pennsylvania provides Equal Opportunities in Education and Employment.

SITUATIONS WANTED

FIELD BIOLOGIST. Ph.D. Diverse experience as grantee and manager. Interdisciplinary, terrestrial and marine, pole to pole. Seeks station management. **Box 39, SCIENCE.**

MOLECULAR MICROBIOLOGIST. Five years of postdoctoral training. Seeking faculty position in intermediate-size university/college with facilities for rDNA research. **Box 40, SCIENCE.**

SITUATIONS WANTED

PHYSIOLOGIST, Ph.D. Experience: reproduction; cryopreservation, assay of gametes and tissues; tissue culture; electron microscopy; science writing; and many laboratory procedures. **Box 38, SCIENCE.**

RETIRED Ph.D. Temporary. Teach genetics, evolution, human biology, etc. Fall of 1990. **Jack Bennett, P.O. Box 364, DeKalb, IL 60115. Telephone: 815-756-7712.**

VETERINARY IMMUNOLOGIST, Ph.D. (1989); domestic, salmonid. Seeking academic/industrial position, aquatic immunology. Monoclonals, flow cytometry, cytotoxicity, transfection, electron microscopy, ELISAs. **Anne Raub Greenlee, Department of Animal Sciences, Washington State University, Pullman, WA 99164-6332. Telephone: 509-335-1002.**

MARKETPLACE

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Growth Factors and Their Receptors in Cancer: Basic Mechanisms and Therapy

Forty-third Annual Symposium on Fundamental Cancer Research

December 4 - 7, 1990

The Westin Galleria Hotel • Houston, Texas

Ernst W. Bertner Award and Memorial Lecture - Donald Metcalf, Royal Melbourne Hospital
Keynote Address - George Todaro, Oncogen

The goals of this Symposium are to review the most exciting research on the basic mechanisms of growth factors and their receptors in cancer and to explore their potential therapeutic applications. Progress related to the biology and normal physiological function and mechanisms of action of growth factors and their receptors in a variety of tissues will be described, as well as the pathophysiology associated with the regulation and expression of these factors in cancer. Individual sessions will focus on specific target tissues. In addition, new models in which to study the role of autocrine, paracrine, and endocrine factors, as well as transcriptional factors, will be presented. The topic of antigrowth factors and their role in cancer expression and progression will also be discussed.

Additional invited speakers include:

David Beach, Cold Spring Harbor Laboratory
Samuel Benchimol, The Ontario Cancer Institute
Michael Cleary, Stanford University
Cynthia Dunbar, National Heart, Lung and Blood Institute
Myrtle Gordon, Chester Beatty Laboratories, England
Warner Greene, Duke University
Alan Hall, Chester Beatty Laboratories, England
Douglas Hanahan, University of California - San Francisco
Edward Harlow, Cold Spring Harbor Laboratory
Meenhard Herlyn, The Wistar Institute
David Housman, Massachusetts Institute of Technology
Tony Hunter, The Salk Institute
Tadamitsu Kishimoto, Osaka University
Michael Klagsbrun, Harvard Medical School
Joan Massague, Memorial Sloan-Kettering Cancer Center
John Minna, National Cancer Institute
Donald Mosier, Medical Biology Institute
Joseph Schlessinger, New York University Medical Center
Charles Sherr, St. Jude Children's Research Hospital
Kendall Smith, Dartmouth Medical School
Charles Stiles, Harvard Medical School
Bill Sugden, University of Wisconsin School of Medicine
Max Wicha, University of Michigan
Lewis Williams, University of California - San Francisco
Owen Witte, University of California - Los Angeles

Chairmen

Albert Deisseroth • Jordan Gutterman
Garth Nicolson

Call for Posters

Abstracts, not exceeding one page, should be typed double-spaced on plain 8.5 x 11 inch paper and must be received no later than October 8, 1990. Participants will be notified of their posters' acceptance by mail.

Wilson S. Stone Memorial Award

Nominations are solicited for the Wilson S. Stone Memorial Award. The award acknowledges outstanding research accomplished by a junior investigator (postdoctoral fellow, or assistant professor for not more than three years). The research should be consistent with the theme of the Symposium. The award consists of a plaque, a \$1,000 honorarium, and travel and per diem expenses to attend the Symposium. Deadline for receipt of applications is July 31, 1990.

Abstract submissions and nomination forms for the Stone Award may be requested by phone, 713/792-3391, by FAX 713/790-9492, or by writing:

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1. Nielson, K. and Mathur, E.J. (1990) Strategies 3:17-19.

2. Nielson, K. and Mathur, E.J. Manuscript in preparation.

3. Nielson, K. and Mathur E.J. (1989) U.S. patents filed.

4. Mullis, K.B., and Faloona, F.A. (1987) Meth. Enzymol. 155:335-350.

Figure 1 shows two examples of *in vitro* amplification reactions that are significantly enhanced by the addition of Perfect Match polymerase enhancer to the polymerase preparation. Note that in lanes 1 and 2, the desired PCR product cannot be detected unless Perfect Match polymerase enhancer is added to the amplification reaction.

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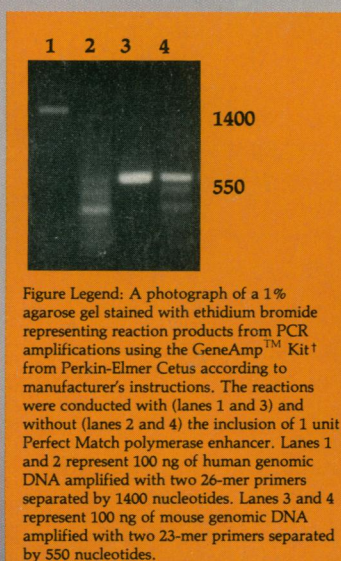
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