

Protein Immunoblotting Detection System

The enhanced chemiluminescence (ECL) protein immunoblotting detection system is a rapid, sensitive, nonradioactive method for the detection of proteins immobilized on membranes. In ECL, the substrate luminol is oxidized by a horseradish peroxidase (HRP) catalyzed reaction, resulting in the emission of light. A chemical enhancer improves the light output 1000-fold over an unenhanced reaction. In the ECL detection system, primary antibodies are used to locate target proteins, which are then detected using species-specific secondary antibodies or proteins, conjugated with HRP. In trials, ECL has proved ten times more sensitive than alkaline phosphatase and ^{125}I -protein A systems, the manufacturer reports. Amersham International. Circle 89.

Recorder Temperature Probe

The T-176R is a low-cost temperature probe that can convert any strip chart or potentiometric recorder into a highly accurate temperature recorder. The probe plugs directly into recorder input terminals to record temperature in such laboratory apparatus as beakers, water baths, incubators, hot plates, and environmental chambers. The probe is thermistor-based and has a range of 0° to 120°C . It is self-calibrating and can run on batteries for field use. It can be used to monitor temperature continuously from a few minutes to several days. A system is also available for converting a personal computer into a multichannel temperature recorder. Lazar Research Laboratories. Circle 90.

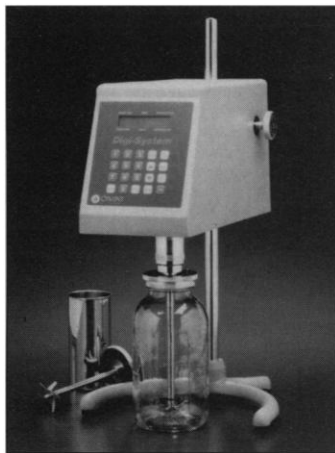
Cellulose Biosynthesis Inhibitor

Phthoxazolin, isolated from cultures of *Streptomyces* sp. OM-5714, is a new inhibitor of cellu-

lose biosynthesis. Phthoxazolin inhibits the incorporation of ^{14}C glucose into the extracellular cellulose fraction of *Acetobacter xylinum*. It also inhibits cellulose biosynthesis in a cell-free system from *A. xylinum* and in a limited genera of fungi. It may represent a new class of nonselective herbicides with low toxicity. Kamiya Biomedical Co. Circle 91.

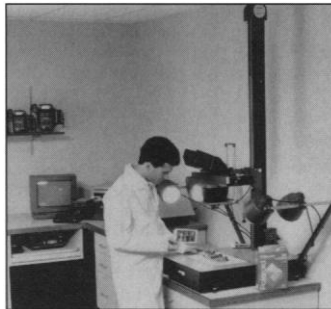
Microprocessor-Controlled Homogenizer

The Omni Digi-System homogenizer can be programmed for repeated testing. The user can select the speed and running time, then run the test again with the push of a button. An optical sensor maintains the programmed speed throughout changes in viscosity, with rotations per minute and time displayed digitally above the key pad. It can also run in a manual mode. Omni International. Circle 92.



Instant Film for Tungsten Lighting

Polacolor 64 Tungsten is the first instant color print film for use with tungsten lighting. It is designed for scientific and medical



imaging applications such as photomicrography and photomacrography. With an ISO rating of 64 and a 90-s development time, the film is optimized for longer duration exposures, eliminating the need for color-correction filtration normally used in converting daylight-balanced films for tungsten lighting. In addition to making the film easier to use, the lack of a need for filtration results in more accurate color rendition. Polaroid. Circle 93.

Ultraviolet Crosslinker

The CL-1000 Ultraviolet (UV) Crosslinker can cross-link DNA to nitrocellulose, nylon, or nylon-reinforced nitrocellulose membranes. Researchers can use the internal photo-feedback system with microprocessor control to manipulate the UV energy level, exposure time, and intensity. The control system automatically adjusts to variations in UV intensity that occur as the UV source ages. UVP. Circle 94.

HPLC Injector Valve Assembly

This assembly consists of a Model 7125 Syringe Loading Sample Injector and a Prime/Purge Valve mounted on a valve organizer bracket. Loading of the sample loop is accomplished with a syringe through a needle

port in the valve rotor. The design allows two injection methods: complete loop filling for reproducibility or partial loop filling for no sample loss, using a special syringe. Bio-Rad Laboratories. Circle 95.

Literature

Tools and Expertise for Catalysis and Materials illustrates a wide range of research products and services involving reaction equipment and reactor systems. Components detailed include stirred autoclaves, pressure vessels, rotary mixers, valves, fittings and tubing, packless centrifugal pumps, modular instrumentation, and complete control packages. Autoclave Engineers. Circle 96.

New UV Detectors for LC is an eight-page brochure describing the UA-6 detector, which combines detector, recorder, and fraction-cutting peak sensor in a convenient package only 28 cm wide. Its remote, dual-beam optical unit can be positioned near the liquid chromatography column outlet to optimize plumbing. Isco. Circle 97.

The *Percoll Reference List* can eliminate time-consuming searches of the literature by providing 890 citations covering hundreds of applications in the separation of cells, organelles, viruses, and other subcellular particles. The list is cross-referenced by author and application, and contains ordering information for Percoll products. Pharmacia LKB Biotechnology. Circle 98.

Application Notes for the Micro-Hand de Fonbrune-type stage-mounted micromanipulator are available for a variety of disciplines. The Micro-Hand is designed for precise manipulation of single cells. It is pneumatically driven for delicate motion with virtually zero drift. Technical Products International. Circle 99.

Personal and Environmental Safety is a catalog covering a broad range of products for safety in the lab. Lab Safety Supply. Circle 100.

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.

Science

PERSONNEL PLACEMENT

LINE CLASSIFIED ADVERTISEMENTS

- **Deadlines:** Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* is published each Friday, except the last Friday of the year. Call for holiday deadlines. Advertisements must be submitted in writing.
- **How to Submit a Classified Ad:** Prepare double-spaced typewritten copy. Do not include any abbreviations. *Science* will edit and typeset ads according to *Science* guidelines. Deadline for applications stated in ad must be at least 2 weeks after date of publication. Include billing information, and desired publication date. Available categories: Positions Open, Meetings, Announcements, Courses and Training.
- **Mail or FAX materials to:**
Science Classified Advertising
1333 H Street, N.W., Room 814
Washington, DC 20005
Telephone: 202-326-6555
FAX: 202-682-0816
- **Rates:** Ads are \$42 per line; \$420 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces. A 3% cash discount is granted to all prepaid ads. If you would like *Science* to give estimated cost, indicate on letter.
- **Ads from Outside the U.S.:** Prepayment made in U.S. dollars by checks drawn on U.S. banks is required.
- **Credit Cards:** *Science* accepts MasterCard and VISA. Discount does not apply to credit cards.
- **Cancellations:** Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

DISPLAY PERSONNEL ADVERTISEMENTS

For rates and information about fractional display ads (all ads 1/8 page and larger) and all Marketplace listings, contact:

Science Classified Advertising
Deborah Cummings
Telephone: 202-326-6541

Janis Crowley, Recruitment
Advertising Manager
Telephone: 212-496-7704
FAX: 202-682-0816

CONDITIONS: Personnel advertising is accepted only with the understanding that the advertisers do not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap or sexual preference. The AAAS encourages employers to actively recruit and employ underrepresented minority groups. *Science* reserves the right, at its discretion, to decline to publish advertisements submitted to it.

POSITIONS OPEN

The Division of Endocrinology and Metabolism at the UNIVERSITY OF CALIFORNIA, IRVINE (UCI), invites applications and nominations for a tenure-track **FACULTY POSITION** at the **ASSISTANT PROFESSOR** level. Candidates should have expertise in molecular and cellular approaches to study aspects related to the endocrine system. Applicants must have an M.D. or M.D./Ph.D. degree and have a strong record of research accomplishments, with the potential to develop an independent research program. The division is committed to excellence in endocrinology while providing a fertile environment for interactive research at UCI and affiliated institutions.

Interested applicants should send their curriculum vitae, a statement of research interest, and names and addresses of at least three references to: **Dr. Murray Korc, Chief, Division of Endocrinology and Metabolism, Department of Medicine, UCI Medical Center, P.O. Box 14091, Orange, CA 92613-1491.** UCI is an Affirmative Action/Equal Opportunity Employer.

GENETICS ASSISTANT PROFESSOR

The University of Tampa invites applications for a tenure-track position beginning in January 1993 to teach genetics, evolutionary biology, introductory biology for majors, and biological science for nonmajors. A **EUKARYOTIC GENETICIST** with broad training in evolutionary biology is preferred. Ph.D. required. Prior teaching and research experience with undergraduates desirable. Send curriculum vitae, a statement of teaching philosophy, a statement of research interests, official transcripts, and three letters of recommendation, by 28 August 1992, addressed to: **Dr. Stanley Rice, Chairman, Department of Biology, c/o Human Resources, University of Tampa, 401 West Kennedy Boulevard, Tampa, FL 33606-1490.** The University of Tampa is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR-CELLULAR NEUROBIOLOGIST. The Neurosciences Group of the Loeb Research Institute at the Ottawa Civic Hospital, a teaching institution affiliated with the University of Ottawa, invites applications for two appointments at the **ASSISTANT PROFESSOR** level. We are seeking candidates with a Ph.D. or M.D. and three or more years of postdoctorate training and demonstrated excellence, originality and productivity in molecular biology applied to neurobiology. Our research program is multidisciplinary and focuses on CNS development, ion channel and receptor function, neural circuitry regulating body fluid and cardiovascular homeostasis, and mechanisms governing neuronal/glia responses to ischemia. At least one appointment will be in the area of signal transduction, but outstanding applicants using molecular approaches in other areas of neuroscience will be considered. *In accordance with Canadian immigration requirements, this advertisement is directed first, but not solely, to Canadian citizens and permanent residents.* Please forward curriculum vitae with names of three references and statement of goals/interests by 1 September 1992 to: **Dr. Leo Renaud, Associate Director, Loeb Research Institute, Ottawa Civic Hospital, 1053 Carling Avenue, Ottawa, Ontario, Canada K1Y 4E9.**

We support an Equal Opportunity Employment and a smoke-free environment.

VISITING FACULTY POSITION

The Faculty of Biological Science at The University of Tulsa has openings for up to three **VISITING ASSISTANT PROFESSORS** to teach introductory courses in the areas of general biology, cellular biology, anatomy and physiology, and genetics for both majors and nonmajors. The salary is competitive and the 1-year appointments begin 31 August 1992. The department has a faculty of 16 and offers B.S., M.S., and Ph.D. degrees.

The University of Tulsa is a private, comprehensive university with a strong commitment to teaching and research. Applicants should have a Ph.D. degree and teaching experience. Send curriculum vitae and three letters of reference to: **Dr. Richard I. Reeder, Faculty of Biological Science, The University of Tulsa, 600 South College Avenue, Tulsa, OK 74104.**

The University of Tulsa, an Equal Opportunity/Affirmative Action Employer, is committed to diversifying its faculty and staff. Members of underrepresented groups (people of color, people with disabilities, women, veterans, etc.) are strongly encouraged to apply.

POSITIONS OPEN

ASSISTANT PROFESSOR OF NUTRITION. A 10-month, tenure-track position is available in the Graduate Program in Nutrition at the University at Buffalo (UB). Ph.D. in nutrition required, preferably followed by postdoctoral research in nutrition science. R.D. desirable. Successful candidates are expected to develop a research program in nutrition that can attract extramural funding, advise students, teach graduate and undergraduate courses and participate on committees. Deadline is 31 July 1992 or until position is filled. Send curriculum vitae, transcripts, three references, and a letter stating research interests and plans to: **Atif B. Awad, Ph.D., Director, 301 Parker Hall, UB, Buffalo, NY 14214.** UB is an Affirmative Action/Equal Opportunity Employer.

Virginia Polytechnic Institute and State University, Department of Fisheries and Wildlife Sciences, is accepting applications for a **VISITING ASSISTANT PROFESSOR** in forest-wildlife stewardship. The successful candidate is expected to develop and implement a land-owner assistance program to enhance wildlife values on private nonindustrial forest lands in Virginia and to conduct other related extension specialist activities. *Women and minorities are encouraged to apply.* Closing date is 1 July 1992. Appointment is for 1 year beginning 1 September 1992, probably renewable for a second year, and possibly convertible to a tenure-track position later. Send letter of interest, résumé, transcripts, examples of publications, and names of three references to: **Dr. Larry A. Nielsen, Professor and Head, Department of Fisheries and Wildlife Sciences, Virginia Tech, Blacksburg, VA 24061-0321.** Virginia Polytechnic Institute and State University is an Equal Opportunity/Affirmative Action Employer and hires only U.S. citizens or others authorized for employment in the United States.

PLANT MOLECULAR BIOLOGIST (PMB)—ASSISTANT PROFESSOR. The Department of Plant Biology, University of New Hampshire (UNH), invites applications for a tenure-track position. The selected candidate will be expected to develop independent as well as collaborative research in molecular biology with potential relevance to the improvement of economically important plants. The research program will be expected to attract external funding. Applicants must have a Ph.D. and postdoctoral research training in plant molecular biology. A strong commitment to undergraduate and graduate teaching and research is expected. Teaching duties will include one undergraduate course and two graduate courses in the areas of expertise. Application review will begin 15 July 1992 and continue until the position is filled. Submit curriculum vitae, graduate school transcripts, list of publications, description of future research and teaching interests, and three letters of reference to: **Professor Subhash C. Minocha, Chair, PMB Search Committee, Department of Plant Biology, University of New Hampshire, Durham, NH 03824-3597.** Telephone: 603-862-3840; FAX: 603-862-4757. Hiring is contingent upon eligibility to work in the United States. *Women and minorities are encouraged to apply.* UNH is an Affirmative Action/Equal Employment Opportunity Employer.

FACULTY POSITIONS AT THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT TYLER

We are presently searching for faculty members to establish independent research programs in the Departments of Biochemistry, Molecular Biology, Physiology and Cell Biology. Generous start-up funds for investigators are available and ample research space is ready for occupancy in newly constructed laboratories. Appointments may be made at any level, but **ASSISTANT** or **ASSOCIATE PROFESSOR** level individuals are preferred. Applicants should have a Ph.D. and at least 2 years of postdoctoral experience. The research institute's emphasis is on research associated with heart and lung diseases and all basic research related to these areas. Salaries are state-supported, and there are no formal teaching requirements. Tyler is an attractive small city with a good and safe school system amid the forests and lakes of east Texas, about 80 miles from Dallas. Potential candidates with strong scientific credentials should send curriculum vitae, a brief statement of research interests and goals and the addresses and telephone numbers of three references to: **Dr. Michael K. Pangburn, Ph.D., Chairman, Search Committee, Department of Biochemistry, University of Texas Health Science Center, Tyler, TX 75710-2003.** The University of Texas is an Affirmative Action/Equal Opportunity Employer M/F/D.

Postdoctoral Opportunities.

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

Cell Differentiation **T.R. Breitman, PhD**

The modification of proteins by retinoids and other ligands is being studied with a special focus on the regulation of cell differentiation and growth by these modifications. Experience in molecular biology, protein purification, and protein chemistry preferred. This position may be filled at the Senior Staff Fellow (assistant professor equivalent) level. Laboratory of Biological Chemistry (OE-14), NCI, Building 37, Room 5D02.

Developmental and Molecular Pharmacology **Douglas E. Brenneman, PhD**

The role of neuropeptides and growth factors mediating neuron-glial interactions during development is studied in cell cultures derived from the central nervous system. The focus of the research is on the mechanism of action and developmental expression of vasoactive intestinal peptide, cytokines and a neuronal survival factor recently discovered by our group. Experience in basic biochemical techniques and molecular biology is desirable. Laboratory of Developmental Neurobiology (OE-14), NICHD, Building 36, Room 2A21.

Molecular Neurobiology **David C. Klein, PhD**

The developmental and neural regulation of gene expression in the pineal gland are being studied. Studies focus on serotonin N-acetyltransferase, hydroxyindole-O-methyltransferase, and other pineal-specific gene products involved in regulating melatonin synthesis. This position has excellent long-term potential for creative and productive investigators. Laboratory of Developmental Neurobiology (OE-14), NICHD, Building 36, Room 4A07.

Molecular Neuropharmacology **David R. Sibley, PhD**

The cellular and molecular biological characteristics of dopamine, serotonin and other neurotransmitter receptors are being investigated. Cell biology projects include studying biochemical mechanisms of receptor-effector coupling, G protein interactions, and receptor regulation in clonal cell lines. Molecular biology projects involve cloning novel receptor subtype cDNAs/genes, analysis and characterization of

receptor/gene structure, and regulation of gene expression in normal and pathophysiological states. Experimental Therapeutics Branch (OE-14), NINDS, Building 10, Room 5C108.

Sexual Development **Dean Hamer, PhD**

The molecular biology and genetics of sexual differentiation of the brain are being studied in organisms as diverse as *Drosophila*, rats and humans. Projects include isolation of sexual behavior mutants and sexually dimorphic mRNAs and linkage analysis of human sexual orientation. Applicants with a background in molecular biology, behavioral science or human genetics are invited to apply. Laboratory of Biochemistry (OE-14), NCI, Building 37, Room 4A13.

Signal Transduction/Gene Expression During Aging **George S. Roth, PhD/James A. Joseph, PhD**

The possible mechanisms for age changes in G protein coupled inositol-1,4,5-triphosphate (IP_3) formation in parotid and brain; age changes in D_2 receptor gene expression in striatum; cell death and resistance to oxygen radical damage; and signal transduction deficits in Alzheimer's disease are being examined. Laboratory of Cellular and Molecular Biology (OE-14), NIA, Francis Scott Key Medical Center, Baltimore, MD 21224.

Additional Postdoctoral Fellowship Opportunities

For an on-line listing of additional postdoctoral openings you may access the NIH EDNET Bulletin Board's POSTDOC conference via modem (1,3014922221 or 1,8003582221). The settings for modem access are "7,Even,1". When connected to NIH, type in ",vt100" at the connect message, "F5E" at initial, and "AJL1" at account.

Those interested in receiving information on other postdoctoral opportunities in NIH research laboratories, as well as information on clinical training opportunities, may contact the Office of Education, Building 10, Room 1C129. Phone: 301-496-2427.

To Apply

If you hold a PhD, MD, or equivalent degree and would like to be considered for one of these positions, please send a cover letter, *curriculum vitae*, bibliography, and statement of research interests to the address listed with each position. In addition, please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.



National Institutes Of Health

Office Of Education

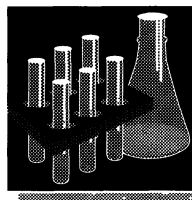
Building 10, Room 1C129, 9000 Rockville Pike, Bethesda, MD 20892 • 301-496-2427 • FAX 301-402-0483

Equal Opportunity Employer

RESEARCH INVESTIGATOR

Join Sterling Winthrop and be a part of a team dedicated to the enhancement of scientific discovery. Sterling Winthrop Pharmaceuticals Research Division is the worldwide pharmaceutical research and development organization of Sterling Winthrop Inc. We currently seek a Protein Chemist to join our interdisciplinary team at our Great Valley, PA facility.

The successful candidate will develop, implement and validate novel and established methods for the characterization of protein conjugates for FDA filings. This position will also interact within a research group to develop novel methodologies in support of discovery and development projects.



The ideal candidate will have a Ph.D. degree and 2 years experience in biomolecule characterization. Demonstrated proficiency and innovation in protein characterization methods (edman degradation, amino acid analysis, mass spectrometry, peptide mapping) is expected. Experience in GMP/GLP procedures, carbohydrate structural analysis or the biophysical characterization of macromolecules is a plus.

At Sterling Winthrop, you'll enjoy a highly competitive salary and benefits package. For confidential consideration, forward your resume and salary requirements to:



**STERLING
WINTHROP**

Pharmaceuticals
Research Division

A Division of Sterling Winthrop Inc.
A Subsidiary of Eastman Kodak Co.

Human Resources
GV-77-92
Sterling Winthrop PRD
9 Great Valley Parkway
Malvern, PA 19355

Equal Opportunity Employer, M/F/D/V

POSITIONS OPEN

FACULTY POSITION

MARINE ECOLOGIST. The University of Oregon (UO) invites applicants for a tenure-track faculty position in the Department of Biology at the level of **ASSISTANT PROFESSOR**. The successful candidate will be based at the university's Oregon Institute of Marine Biology (OIMB) in Charleston and will interact with faculty and students at the main campus in Eugene.

We encourage applicants whose research centers on marine processes at any or several of the following levels: (1) interactions between or among marine organisms, e.g., symbioses, community ecology, or ecosystem dynamics; (2) processes controlling life histories of marine organisms. We are most interested in candidates who combine empirical and experimental approaches with quantitative, theoretical and/or molecular techniques.

Applicants should be able to interact closely with other faculty members at OIMB who have strong research programs in aspects of microbial physiology and ecology, invertebrate biochemistry, physiology and evolution, and larval biology. Applicants will be expected to establish an active research program, advise graduate students, and teach undergraduate and graduate courses. Postdoctoral experience is expected. Preference will be given to candidates with an established record of outstanding research and a commitment to excellence in undergraduate and graduate education.

Please submit curriculum vitae and a statement of research interest and have four letters of recommendation sent to: **Chair, Marine Biology Search Committee, OIMB, University of Oregon, Charleston, OR 97420.** Closing date is 1 August 1992. The UO is an Affirmative Action/Equal Opportunity Institution committed to cultural diversity.

UNIVERSITY OF TORONTO

CENTRE FOR RESEARCH IN NEURODEGENERATIVE DISEASES

Applications are invited for two positions in a recently established neurodegenerative disease research centre with emphasis on Alzheimer's disease. Ph.D.'s or M.D.'s at the **ASSISTANT, ASSOCIATE** or **FULL PROFESSOR** level are sought to join this team of seven P.I.'s. Candidates must have expertise in one of the following areas of neurobiology: transgenic models, biochemically oriented molecular biology, protein structure, or gene regulation. Start-up funds provided; successful candidates must initiate independent and original research programs.

The University of Toronto encourages applications from qualified men and women, members of visible minorities, aboriginal peoples and persons with disabilities. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

Send curriculum vitae, a research statement and three letters of reference prior to 1 August 1992 to: **Dr. D. R. McLachlan, Centre for Research in Neurodegenerative Diseases, Tanz Neuroscience Building, 6 Queen's Park Crescent West, Toronto, Ontario, Canada M5S 1A8.**

FACULTY POSITIONS IN CELL, MOLECULAR AND STRUCTURAL BIOLOGY

Applications are invited for tenure-track positions in the Department of Cell, Molecular and Structural Biology at Northwestern University Medical School. **ASSISTANT to FULL PROFESSOR** applicants must have a Ph.D., M.D., or equivalent degree, with research experience in cell, molecular, or structural biology. Applicants will be screened with respect to their ability to carry on vigorous independent research and to participate in the various teaching programs administered by the department. Candidates whose research interests include developmental biology, biochemistry, and structural biology are encouraged to apply, although outstanding applicants with research interests in other areas of molecular biology will be considered. Send complete curriculum vitae and a brief description of research interests by 15 September 1992 to: **Dr. Rex Chisholm, Chairman, Search Committee, Department of Cell, Molecular and Structural Biology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.**

Northwestern University is an Equal Opportunity/Affirmative Action Educator and Employer and invites applications from all qualified individuals. Applications from women and minorities are especially sought.

Geisinger Clinic

Postdoctoral Position Cardiovascular

Position available in the laboratory of Dr. Janet Robishaw at the Weis Center for Research. This position offers a unique opportunity to combine pharmacological and molecular biological approaches to investigate the function of different α_1 -adrenergic receptor and G protein subtypes in neonatal, rat cardiac myocytes. The successful applicant for this position will have a Ph.D. degree with experience in one or more of the following areas: cell culture, transfection/microinjection of cDNAs into cells, analysis of receptor-G protein coupling and phospholipase C.

The Weis Center for Research is a well-equipped facility located in a semi-rural area. Competitive salary and fringe benefits are available. Send curriculum vitae and names of three references to: **Human Resources (JDR), Geisinger Clinic, 100 N. Academy Avenue, Danville, PA 17822-3024.**

Geisinger.

E.O.E.
M/F/H/V

POSTDOCTORAL FELLOWSHIP

A 2-year postdoctoral position in electrophysiology is currently available in the Pharmacology Department at ICI Pharmaceuticals Group, for independent and collaborative research on the action of drugs and neuromodulators on neuronal calcium channels. Candidate will be involved in ongoing research using the patch-clamp technique in combination with molecular biology to examine calcium channel regulation in acutely isolated and cultured neurons.

Experience in brain slice techniques and knowledge of whole-cell patch-clamp helpful. Familiarity with computer-based data acquisition and analytical techniques desirable.

Interested candidates should submit a curriculum vitae and names/letters of reference to: **Dr. J. M. H. French-Mullen, Dept. of Pharmacology, ICI Pharmaceuticals Group, Concord Pike and New Murphy Road, Wilmington, DE 19897.**



Pharmaceuticals

Equal Opportunity Employer M/F.

POSITIONS OPEN

PHYSIOLOGY, ASSISTANT PROFESSOR (research track) position available for investigations on the molecular and biochemical properties of calmodulin-regulated enzymes including-myosin light chain kinases and nitric oxide synthases. An integrative research program on the biological adaptations of vascular smooth muscle and endothelial cells offers collaborative opportunities dealing with growth responses, dynamic regulation of contractile elements and signal transduction pathways. Experience in molecular biology required. Please send curriculum vitae with three references listed to: **James T. Stull, Ph.D., Department of Physiology, University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9040, telephone: 214-688-6849, FAX: 214-688-2974. An Affirmative Action/Equal Opportunity Employer.**

ASSISTANT/ASSOCIATE PROFESSOR NEUROBIOLOGY COLUMBIA UNIVERSITY

Applications are invited for three tenure-track positions in the Center for Neurobiology and Behavior, at Columbia University, College of Physicians and Surgeons. Applicants must possess a Ph.D. or M.D. degree and have at least 2 years of postdoctoral training. Successful candidates will be expected to develop a vigorous, independent research program in one of three areas: (1) computational neuroscience (theoretical or combined experimental/theoretical approaches); (2) analysis of the molecular mechanisms of transmitter release; (3) analysis of the function and control of transcription factors in the nervous system. Submit curriculum vitae, names and addresses of three references, and summary of research objectives to: **Search Committee, Center for Neurobiology and Behavior, New York State Psychiatric Institute, 722 West 168 Street, New York, NY 10032. An Equal Opportunity/Affirmative Action Employer.**

CELL PHYSIOLOGISTS/ MOLECULAR BIOLOGISTS

The Department of Physiology and Biophysics at the University of Texas Medical Branch (UTMB) at Galveston invites applications for tenure-track positions at the **ASSISTANT, ASSOCIATE AND FULL PROFESSOR LEVELS**. Candidates using state-of-the-art methods to study cellular and subcellular physiology are especially encouraged to apply. Candidates must have Ph.D. and/or M.D. degrees. Salaries and start-up funds are highly competitive. The department offers a stimulating scientific environment with major research strengths in the study of membrane transport systems and is deeply committed to high-quality research and teaching. Send complete curriculum vitae, including publications list, brief statement of future research plans, and names and addresses of three references, to: **Dr. Simon A. Lewis, Head of Search Committee, Department of Physiology and Biophysics, University of Texas Medical Branch, Galveston, TX 77555-0641. UTMB is an Equal Opportunity/Affirmative Action Employer M/F/H/V. UTMB hires only individuals authorized to work in the United States.**

PHARMACOLOGY—UNIVERSITY OF PENNSYLVANIA. The Department of Pharmacology is recruiting four to six additional faculty to the tenure track at the rank of **ASSISTANT, ASSOCIATE or FULL PROFESSOR**. Investigators with interests in the broad areas of **ANALYTICAL/MOLECULAR PHARMACOLOGY** and **CELLULAR/MOLECULAR PHARMACOLOGY** will be appointed. Examples of potential areas of interest include: (1) structure and function of biomolecules using one or more of the following approaches: NMR, EPR, MS, molecular modeling, affinity labeling, and site-directed mutagenesis; (2) enzyme-inhibitor/receptor-ligand design; (3) drug or second-messenger metabolism; (4) growth factor signaling; (5) gene manipulation (e.g., gene transfer, embryonic stem cells and transgenics); and (6) ion channel/brain slice electrophysiology. Applicants should have postdoctoral research experience and the ability to develop a strong extramurally funded research program. Renovated laboratory space and start-up funds are available. *Applications from women and minorities are especially encouraged.* Applicants should submit curriculum vitae, selected reprints or preprints, a statement of research interests, and three letters of recommendation to: **Search Committee, Department of Pharmacology, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6084. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.**

WYETH-AYERST RESEARCH

We're building on our success

Opportunities in Central Nervous System Pharmacology

Wyeth-Ayerst Laboratories is a division of Fortune 100 American Home Products Corporation, a leading manufacturer and marketer of health care products with multi-billion dollar annual sales and an impressive record of growth and profitability.

As a GLOBAL research-based pharmaceutical company, we are committed to helping people lead healthier lives through innovative pharmaceutical and nutritional products. It is from this commitment and position of strength that we move forward with a major expansion of our research and development activities. Current expansion in our Cell Biology and Neurochemistry Laboratories has resulted in the following opportunities.

Ph.D. SCIENTISTS

SIGNAL TRANSDUCTION

This group is responsible for bringing second messenger expertise (G-proteins, DAG/phosphoinositide turnover) to bear on the study of neurotransmitter receptor function and effector coupling in neuronal cell lines. These studies will be an integral part of our increasing research effort in stroke and neurodegeneration. We are seeking a Ph.D. Scientist with 5+ years of experience in cell signal transduction (receptor/effector coupling). This individual will conduct functional pharmacological studies in our mechanism-based CNS programs and will provide Core Group support for programs in other divisions.

STROKE/NEURODEGENERATION LABORATORY

We are seeking a Ph.D. Scientist with 3+ years of postdoctoral experience in assessing potential neuroprotective agents in *in vitro* and *in vivo* models of neurodegeneration. Research experience with noninvasive imaging assessment techniques of cerebral ischemia is preferred to facilitate our stroke/neurodegeneration research program.

INTRACELLULAR PROTEIN PROCESSING

This group studies labile and permanent changes in Central Nervous System proteins in response to pharmaceuticals and in stroke/ischemia/neurodegeneration. The research focus will be phosphorylation/dephosphorylation by kinases/phosphatases and both receptor and non-receptor forms of protein tyrosine kinases. We are seeking a Ph.D. Scientist with 5+ years of experience in intracellular protein processing. Research experience in post-translational processing/membrane insertion of proteins is preferred to facilitate our research in the field of Alzheimer's disease and other neurodegenerative diseases.

B.S./M.S. PHARMACOLOGISTS

We seek Pharmacologists with 0-5 years experience to provide technical support for our Principal Scientists in various groups. Our Signal Transduction group requires experience in cell culture, second messenger biochemical assays, cyclic nucleotide measurements and phosphoinositol hydrolysis. Our Neurochemistry Laboratory requires experience in ligand/receptor pharmacology and general neurochemical techniques (HPLC, radioenzymatic biochemical techniques). Our Intracellular Protein Processing group requires experience in general protein biochemistry, cell culture, enzymatic assays and protein kinase measurement.

The Wyeth-Ayerst Princeton, New Jersey research laboratory is in a location renowned for its excellent quality of life and easy access to the cultural, educational and recreational resources of both New York City and Philadelphia. Please respond by sending your resume to: **Employment Supervisor, Wyeth-Ayerst Research, Dept. CNS, CN 8000, Princeton, NJ 08543-8000. An Equal Opportunity Employer, M/F/D/V.**



Leading The Way for a Healthier World

Alcohol Metabolism Fellowship.

The Unit of Pharmacokinetic Studies, Laboratory of Clinical Studies, invites qualified individuals to apply for a postdoctoral fellowship to study the effects of ethanol withdrawal on drug-metabolizing enzymes. Basic studies of enzyme activity and clinical studies involving altered pharmacokinetics of therapeutic agents are ongoing. A background in biochemistry or pharmacology and experience with *in vitro* enzyme assays and/or HPLC is preferred.

Individuals with less than three years postdoctoral experience may apply by submitting a *curriculum vitae*, three letters of reference and a statement of research interests to Ms. Kathleen Hanratty, Personnel Management Branch.

National Institute On Alcohol Abuse And Alcoholism

Alcohol, Drug Abuse, and Mental Health Administration
Building 31, Room 1B58, 9000 Rockville Pike Bethesda, MD 20892
Equal Opportunity Employer

COMPELLING
SUCCESS

SCIENTIFIC
SAVVY

PATENT
SUPERIORITY

As an established leader in carbohydrate engineering, Alpha-Beta Technology is utilizing its patented technologies to develop an exciting array of proprietary pharmaceutical products. We are seeking an articulate, experienced professional to play a critical role in the product approval process.

Director of Regulatory Affairs

Be a key contributor to our expanding success, reporting directly to Alpha-Beta's President/CEO. Your credentials must include 3-5 years' Regulatory Affairs experience in a biotech or pharmaceutical operation, with demonstrated leadership in regulatory relationship building and attendant documentation procedures. You must have in-depth experience with FDA interaction—CBER relationships highly desirable. A working knowledge of IND, PLA and NDA preparation is essential, as is a strong grasp of GMP and GCP for effective interaction with Research, Quality, Clinical Affairs and Manufacturing groups. A BS in Pharmacy, Molecular Biology or Analytical Chemistry is required; an MS would be helpful.

At Alpha-Beta we reward our talented staff with a competitive salary and benefits package as well as the support, respect and recognition necessary for personal growth. **Please send your resume in confidence to: Robert Sawdon, Alpha-Beta Technology, One Innovation Drive, Worcester, MA 01605. Principals. No phone calls, please. An Equal Opportunity Employer.**

ALPHA-BETA
TECHNOLOGY

SENIOR SCIENTIST

Chiron Corporation is a leading East Bay-based biotechnology company developing products to diagnose, prevent and treat serious human disease. We currently have an opening for a Senior Scientist.

You will optimize the expression of recombinant therapeutic and diagnostic proteins in bacteria. You will also develop host/vector expression systems and genetic screens while collaborating on medium and culture condition optimization with fermentation development.

Requires a PhD and 5+ years' pharmaceutical/biotechnology experience. Strong background in microbial physiology and genetics, and experience with heterologous protein expression, are necessary. Interest in secretory protein processing and a creative, critical scientific approach to microbial expression is desired. Individual must be highly self-motivated and possess management and team leadership skills.

Chiron offers a competitive salary and benefits package. For immediate consideration, please send your resume to Chiron Corporation, Human Resources Department, Box 92-181, 4560 Horton Street, Emeryville, CA 94608. We are an Equal Opportunity Employer.



CHIRON
CORPORATION

THE DEPARTMENT OF OBSTETRICS, GYNECOLOGY, AND REPRODUCTIVE SCIENCES UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE

The Department of Obstetrics, Gynecology and Reproductive Sciences at the University of Pittsburgh has the following full-time faculty positions available:

Assistant Professor of Obstetrics and Gynecology: A position is available for an individual with a basic science background studying the biochemistry and molecular biology of endothelial cell responses. This individual should have extensive laboratory experience, be able to work independently and be competent to train fellows and graduate students. Salary will be commensurate with experience, training, and achievements.

Assistant Professor of Obstetrics and Gynecology: A position is available for a basic scientist with a primary interest in molecular biology. The individual should be experienced in the molecular biology of connective tissue and be interested in participating in studies related to reproductive physiology. Experience and the ability to work independently is required, as is the willingness and ability to teach and train postdoctoral fellows and graduate students. Salary will be commensurate with experience, training, and achievements.

Professor of Obstetrics and Gynecology: Two positions are available for basic scientists experienced in the physiology of pregnancy and parturition. Individuals should have a clear record of experience in working with groups of researchers, have a national reputation, and should be willing and able to train graduate students and postdoctoral fellows.

Send inquiry and curriculum vitae for any of the above positions to:

James M. Roberts, M.D.
Professor and Vice-Chairman, Research
Department of Obstetrics, Gynecology
and Reproductive Sciences
Magee-Womens Hospital
300 Halket Street
Pittsburgh, PA 15213-3180

The University of Pittsburgh is an equal opportunity, affirmative action employer.

NRC-CNRC

NRC – Canada's top R&D organization – helps its industry partners become stronger global competitors. Currently, NRC's Institute for Biological Sciences is looking for those rare people who can help further our record of excellence.

The mission of the Institute for Biological Sciences is to perform frontier research focused primarily on areas of mammalian biosciences that require a multidisciplinary approach, hold good potential for application, and are oriented towards Canadian social, industrial and economic development.

Director General (Ottawa, Ontario)

Reporting to the Vice-President, Biotechnology, the Director General will provide leadership and direction and will be responsible for management of the Institute with respect to its mandated activities and effective operation. The incumbent will manage three research sections and an administrative group consisting of approximately 140 scientists, technical officers and administrative personnel. The Director

General will also be responsible for a budget of \$12 million, including salaries. He/she will be expected to form linkages and encourage collaboration with external organizations, both nationally and internationally. As a senior NRC manager, the Director General will also participate in the strategic planning of NRC.

Candidates must have a Ph.D. in a discipline related to the activities of the Institute, as well as extensive experience as a research scientist in University, Industry or Government and extensive experience in working through individuals and groups, as a manager, to accomplish organizational objectives involving the planning, execution and review functions within an R&D environment. Knowledge of both the English and French languages is required. A security screening will also be required.

SALARY RANGE: From \$81,800 to \$101,400 per annum.

Apply in writing, before July 29, 1992, giving complete details of education and experience to: The Recruitment and Staffing Section, National Research Council of Canada, Ottawa, Ontario, K1A 0R6. In reply, please quote BS-92-01.SCI.



National Research Council Canada
Conseil national de recherches Canada

Canada

NRC-CNRC

NRC - Canada's top R&D organization - helps its industry partners become stronger global competitors. Currently, NRC's Institute for Biological Sciences is looking for those rare people who can help further our record of excellence.

Research Officers (Ottawa, Ontario)

The Institute for Biological Sciences performs frontier research focused on areas of mammalian biosciences that require a multidisciplinary approach, hold good potential for application, and are oriented towards Canadian social, industrial, and economic development. The Institute has advanced equipment and facilities and provides for an integrated multidisciplinary approach in the areas indicated below.

The Structural Immunobiology Section invites candidates with a strong interest in the chemistry or biology of cell surface carbohydrates who are interested in applying the techniques of molecular biology to novel problems in glycobiology.

The Protein Structure and Design Section invites candidates in two specific areas. Trained crystallographers are required with demonstrated abilities for solving protein structures. Also required are candidates with a background in the use of structural data bases, bioinformatics and computer modelling in protein and peptide research.

The Institute invites applications for up to three staff scientific positions, with a term of up to five years. Interested individuals must possess a Ph.D. in a relevant field. Successful applicants will be encouraged to complement existing projects.

Applicants should submit a resume and a brief (five page) research proposal outlining realistic objectives and resources requirements for research in any of the above mentioned areas prior to July 30, 1992 to: The Recruitment and Staffing Section, National Research Council of Canada, Ottawa, Ontario, K1A 0R6. In reply, please quote reference number BS-92-00.SCI



National Research Council Canada
Conseil national de recherches Canada

Canada

**University of London
Wye College**

**Department of Biochemistry
and Biological Sciences
SERC and AFRC Postdoctoral
Research Associateships in
PLANT MEMBRANE TRANSPORT
BIOPHYSICS AND BIOCHEMISTRY**

Applications are invited for two Postdoctoral Associateships in the area of plant and fungal membrane transport. The posts are funded by the British Science and Engineering and the Agriculture and Food Research Councils on the RA1A scale (£12,129 to £19,328 per annum; a further 6% increase pending). Both posts are available starting 1 September 1992, in the first instance for up to 2 years. The successful candidates will join an interdisciplinary group at Wye College and the University of Kent, in nearby Canterbury, engaged in structural and functional studies of ion channels and H⁺-coupled transporters. One project, funded by the SERC, focuses on characterising K⁺ channels using single-channel recording techniques and incorporating channels in planar bilayers. The second project, funded by the AFRC, is directed to the mechanism(s) and control of NO₃⁻ transport and will involve applying intracellular recording techniques—including voltage clamping and ion-selective electrodes—as well as radiotracer flux methods. Some prior experience in these and/or related techniques would be an advantage. For further details, contact Dr. Michael R. Blatt (phone (0233) 812401 extension 371; fax (0233) 813140; overseas prefix 44-233 and the number). There is no closing date; applications—to include a covering letter, curriculum vitae, list of publications and the names of three individuals from whom letters of reference may be sought—should be sent at the earliest possible convenience to Dr. Blatt, Department of Biochemistry and Biological Sciences, University of London, Wye College, Wye, Kent TN25 5AH, England.

Wye College is an equal opportunities employer.

**HERMANN-VON-HELMHOLTZ-
PROGRAMME**

The government minister for research and technology is granting, within the framework of the promotional programme of

NEURO-BIOLOGY

Research grants for a limited time for, in particular, qualified German young scientists in the sector of neurobiology and who, after at least a one year stay abroad, wish to return to Germany. The research grant will be awarded, as a rule, for 2 years. It comprises a position on the basis of BAT II a/b and an inclusive lump sum for appropriate materials. The awarding of the research grant will be carried out on the basis of a selection board procedure according to scientific factors. A return to the same institute where the candidate has been working in Germany before moving abroad is not possible for this grant. A leaflet concerning the research grant and application form can be obtained from the department responsible at:

**Naturwissenschaftliches und Medizinisches Institut an der Universität
Tübingen in Reutlingen, Gustav-
Werner-Straße 3, D-7410 Reutlingen
Telephone: 07121/3198-0, Telefax: -16**

POSITIONS OPEN

The Fogarty International Center (FIC), National Institutes of Health (NIH), Public Health Service, Bethesda, Maryland, is recruiting for the position of **PROGRAM OFFICER FOR BIODIVERSITY**, GS-13/14 (\$46,210 to \$80,087 per year depending upon qualifications). Incumbent serves as staff specialist for all institutional and other award programs related to biodiversity administered or supported by the Fogarty International Center. Applicants should have training and experience in a scientific discipline related to biodiversity. For further information including qualifications requirements, contact: **Ms. Sharon Nieberding, Personnel Officer, FIC**, at: 301-496-4625; FAX: 301-402-1135. Applications must be received by 22 June 1992. *U.S. citizenship required. NIH is an Equal Opportunity Employer.*

CHAIRPERSON

**DEPARTMENT OF PREVENTIVE MEDICINE
AND COMMUNITY HEALTH
THE UNIVERSITY OF TEXAS
MEDICAL BRANCH
GALVESTON, TEXAS**

Applications are invited for the position of Professor and Chair of the Department of Preventive Medicine and Community Health (PM/CH) in the School of Medicine. The University of Texas Medical Branch (UTMB) is a modern health sciences center consisting of Schools of Medicine, Nursing, Allied Health Sciences, and Graduate Biomedical Sciences. Also on campus are The Institute for Medical Humanities, The Marine Biomedical Institute, and the Shriners Burns Institute. UTMB has a significant clinical component consisting of seven hospitals, employs 8400 people, and has 2200 students enrolled. A faculty of 700 is involved in the teaching, research, and service roles of the institution. UTMB is committed to the development of a Department of PM/CH with strength in teaching, scientific inquiry, and services which promote health and well-being. The successful candidate should be supportive of the mission of preventive medicine, should have an interest in developing programs which focus on analysis of problems in health and medical care, and will be expected to interface this department with the other clinical departments and schools on campus and in the surrounding area.

Candidates must have a distinguished record of scholarship and professional achievement and should demonstrate experience, strong leadership qualities, and administrative ability. Curriculum vitae and names of three or more references should be included with a letter of application. Review of applications will begin 30 May 1992. Send applications to: **Dr. Cary W. Cooper, Chair, PM/CH Search Committee, Department of Pharmacology and Toxicology J31, UTMB, Galveston, TX 77550.**

UTMB is an Equal Opportunity/Affirmative Action Employer M/F/V/H. UTMB hires only individuals authorized to work in the United States.

**FACULTY POSITION
PROGRAM IN PROTEIN STRUCTURE
AND DESIGN
UNIVERSITY OF MICHIGAN**

A search is being reopened for a tenured or tenure-track position (rank open) associated with the Program in Protein Structure and Design. The academic appointment will be in the Department of Chemistry, with a joint research appointment in the Biophysics Research Division. We seek an individual who will interact with and complement the existing structure groups in the program (x-ray crystallography; EPR, NMR, and vibrational spectroscopies; electron microscopy; theoretical and computational techniques). Senior candidates must have an internationally recognized program, and junior candidates must provide evidence of ability to develop a strong research program oriented around modern theoretical approaches to analyzing and predicting protein structure and function. Teaching duties will be associated primarily with the Department of Chemistry. Interested candidates should send curriculum vitae documenting qualifications, professional accomplishments, and future research plans and arrange for three letters of reference to be submitted before 1 September 1992 to: **Professor Robert L. Kuczkowski, Chairman, Department of Chemistry, The University of Michigan, Ann Arbor, MI 48109-1055.** *The University of Michigan is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

**DIRECTOR FOR
GLOBAL CHANGE COORDINATION**

Joint Oceanographic Institutions Incorporated (JOI) is seeking a senior-level scientist to head a community-based national office that will facilitate collaborative planning among U.S. and international ocean global change programs.

The office will provide the ocean science community with a central focus for information on research opportunities; analyze long-term science requirements and facilities availability; facilitate interagency planning for global change; produce newsletters and brochures for policy-makers and the public; provide material in response to requests for information from policy-makers, the media and the public; and undertake other coordination tasks at the request of NSF, other agencies, and science planning committees, both national and international.

The office is, at present, funded by the National Science Foundation (NSF) under terms of a cooperative agreement between JOI and the NSF. JOI is a consortium of ten U.S. academic oceanographic institutions established to bring their collective capabilities to bear on large oceanographic research projects. The consortium, a nonprofit corporation, acts as a coordinating body and manager for its member institutions and the academic community.

Qualifications necessary for the director's position include a Ph.D. or equivalent experience in oceanography or related biological or earth science and a working knowledge of the academic community and federal governmental agencies. Familiarity with the international scientific community is also desirable. Good organizational, management, and writing skills are essential.

Please respond in writing to: **Joint Oceanographic Institutions Incorporated, Attention: Personnel Office—GC, 1755 Massachusetts Avenue, N.W., Suite 800, Washington, DC 20036-2102.**

JOI is an Equal Opportunity Employer, M/F/V/H.

DIVISION HEAD, DIVISION OF NEPHROLOGY AND HYPERTENSION. We are seeking a distinguished **PHYSICIAN SCIENTIST** who is Board-certified in internal medicine and nephrology to provide dynamic scientific and clinical leadership to the Division of Nephrology and Hypertension at the State University of New York (SUNY) at Stony Brook. The division comprises 11 physician scientists, two Ph.D.'s, and four fellows who are stationed at Stony Brook and the Northport Veterans Administration (VA) Hospital. The division's faculty is engaged in NIH- and VA-funded research activities as well as active clinical programs. Please send correspondence about this position to: **Dr. Barry Coller, Division of Hematology, SUNY at Stony Brook, Stony Brook, NY 11794-8151.** *SUNY at Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.*



**UNIVERSITY OF
FLORIDA**

**VICE PRESIDENT FOR RESEARCH
AND DEAN OF GRADUATE SCHOOL**

Applications and nominations are invited for the dual position of vice president for research and dean of the graduate school at the University of Florida. Successful candidates will have significant experience and demonstrated success in university-based research environments. The doctoral or equivalent degree in an appropriate area of specialization and relevant experience are necessary.

Applications should include a current résumé and names, addresses and telephone numbers of at least three references. Nominations and applications should be submitted not later than 15 September 1992 to: **Dr. Yngve Ohn, Chair, Vice President Search Committee, Office of the President, 226 Tigert Hall, University of Florida, Gainesville, FL 32611.** *The University of Florida is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.*

POSTDOCTORAL POSITION to study molecular, immunochemical and biochemical properties of neuroendocrine regulation in the inner ear. Candidates should possess a Ph.D. or M.D. degree. Experience in molecular and cell biological techniques desired. Reply to: **Dr. Kyle E. Rarey, University of Florida Health Science Center, Department of Anatomy and Cell Biology, P.O. Box 100235, Gainesville, FL 32610.** Telephone: 904-392-3420, FAX: 904-392-3305.

NRC-CNRC

NRC - Canada's top R&D organization - helps its industry partners become stronger global competitors. Currently, NRC's Institute for Biological Sciences is looking for those rare people who can help further our record of excellence.

Group Leader (Ottawa, Ontario)

The Institute for Biological Sciences requires an experienced scientist to lead a group in protein crystallography and molecular modelling. The appointment is seen as a pivotal position at the interface of structure-function determination and the Institute's other groups involved in protein engineering. The successful candidate will be expected to formulate a research strategy in molecular modelling and structure determination that builds on existing programs in the group and the Institute's other sections. Currently this work

includes protein engineering, cathepsins, PTH B. Thuringiensis toxins, xylanase enzymes, molecular modelling of carbohydrate antigens and antibody engineering of their corresponding binding sites.

Applicants must possess a Ph.D. in Chemistry, Physics, Biochemistry or any other related field as well as extensive post-doctoral experience in the field of protein crystallography and/or molecular modelling of proteins. A strong background in structure and function of proteins, knowledge of the use of modelling methods, and a general knowledge of modern computer systems are also required.

SALARY RANGE : Commensurate with qualifications.

Résumés should be forwarded prior to June 30, 1992, to: The Recruitment and Staffing Section, National Research Council of Canada, Ottawa, Ontario, K1A 0R6. In reply, please quote reference number BS-92-05.GM



National Research
Council Canada

Conseil national
de recherches Canada

Canada

A TIME FOR ACHIEVEMENT

The recent opening of the new Glaxo Inc. Girolami Research Institute, located in Research Triangle Park, NC, represents Glaxo's continued commitment in the pharmaceutical industry to the discovery of drugs for unmet patient needs. Scientists engaged in Glaxo's expanding research and development programs at the Center have a premier facility in which to work.

The expansion of our Nuclear Magnetic Resonance Group, within the Department of Structural and Biophysical Chemistry, has created immediate openings for the following professionals.

SR. SCIENTIST

The selected individual will work closely with biologists and medicinal chemists in the discovery of novel therapeutic entities for the treatment of cancer, inflammation or metabolic diseases. This Ph.D. level position requires previous postdoctoral experience and proven skills in structural determinations of proteins or nucleic acids using multi-dimensional/multi-nuclear NMR methods. A strong physical sciences background with a working knowledge of nuclear spin physics is desired.

Please refer to Job #9141-SS-SC on all resumes.

POSTDOCTORAL FELLOW

The selected individual will be responsible for methods developed and/or structure determination of macromolecules considered to be innovative targets for pharmaceutical intervention. We seek candidates with graduate training and interests in multi-dimensional/multi-resonance NMR methods and other NMR applications for structural studies.

Please refer to Job #9141-PD-SC on all resumes.

Our state-of-the-art Structural and Biophysical Chemistry Department offers a stimulating, collaborative environment among the established NMR, crystallography, computational, protein chemistry and mass spectroscopy groups. Our working environment includes Bruker AMX-600 and AMX-500 NMR spectrometers upgraded for triple-resonance experiments, an extensive computing network with an SGI-380GTX computer server, SGI, and access to the Convex-220 and Cray Y-MP at the nearby North Carolina Supercomputer Center.

Join Glaxo and enjoy an excellent salary, flexible benefits, an on-site recreation and fitness center, a spirit of enthusiasm and teamwork, and outstanding opportunities for career satisfaction. Equally appealing is our world famous scientific, industrial and academic community in Research Triangle Park, NC. Send your resume, INDICATING THE CORRESPONDING JOB # and salary history to: **Human Resources Department, Glaxo Inc., P.O. Box 13398, Research Triangle Park, NC 27709.** (No Phone Calls or Agency Referrals, Please.) An Equal Opportunity Employer M/F/H/V.

Glaxo Inc.



RESEARCH SCIENTIST

Pharmacokinetics and Drug Metabolism

Sphinx Pharmaceuticals Corporation is a rapidly growing company dedicated to the discovery and development of novel therapeutics for human disease based on interactions with key intracellular enzymes involved in signal transduction pathways.

We currently have an opening for a Research Scientist in our Pharmacokinetics and Drug Metabolism group. The successful candidate should have a Ph.D. in pharmacokinetics, biochemistry, or a related field with at least 1-3 years experience conducting preclinical/clinical pharmacokinetic studies. Experience with bioanalytical assay development using HPLC and GC desirable.

Sphinx Pharmaceuticals offers competitive compensation and comprehensive benefits as well as an attractive relocation policy. We are located in the Research Triangle area of North Carolina which offers excellent living conditions and outstanding schools. For confidential consideration, please forward your curriculum vitae, list of publications and names of three references, to: **SPHINX PHARMACEUTICALS CORPORATION, Position # 179, P.O. Box 52330, Durham, NC 27717.** An Equal Opportunity Employer.

SPHINX PHARMACEUTICALS CORPORATION

UNIVERSITY OF CALIFORNIA, IRVINE COLLEGE OF MEDICINE DEPARTMENTS OF PSYCHIATRY AND BIOLOGICAL CHEMISTRY HUMAN MOLECULAR GENETICS: ASSISTANT/ASSOCIATE/ FULL PROFESSOR

The Department of Psychiatry has an immediate opening for a tenured or tenure track faculty position. Research should emphasize the application of molecular genetics/molecular biological approaches to understanding inherited neurodegenerative or neuropsychiatric disorders. However, outstanding applicants in any area of human genetics will be considered. The successful applicant will have a joint appointment in the Departments of Psychiatry and Biological Chemistry which, in conjunction with two other departments, participates in a multidisciplinary Graduate Program in Molecular Biology, Genetics and Biochemistry. This individual will also play an important role in helping to develop a major Human Genome effort at U.C. Irvine. The appointment will be made at the Assistant, Associate or full Professor level, depending upon background and qualifications.

Candidates should have a Ph.D. or M.D., at least two years postdoctoral experience and should have demonstrated excellence and productivity in research. Applications should include a cover letter, curriculum vitae, a statement of research interests and the names and addresses of three people who can be contacted for letters of reference. Applications should be sent to: John J. Was-muth, Chair, Psychiatry/Biological Chemistry Search Committee, Department of Biological Chemistry, College of Medicine, D240 Med Sci I, University of California, Irvine, CA 92717.

UCI is an Affirmative Action, Equal Opportunity Employer. Women and minorities are encouraged to apply.

THE AUCKLAND UNIVERSITY NEW ZEALAND SENIOR LECTURESHIP (NON-MEDICAL) IN ANATOMY Department of Anatomy School of Medicine Vacancy UAC 153

The vacancy is at the Senior Lecturer (Non-Medical) level for a person experienced in cell and tissue biology. The Department of Anatomy is currently acquiring funds for the purchase of a confocal laser scanning microscope and the appointee would have as a prime responsibility the management and direction of the confocal unit and the associated computer graphics facility.

Candidates are expected to have an appropriate postgraduate qualification and teaching experience in cell and tissue biology. They should have a proven record of research in an area of cell and tissue biology, and well developed skills and experience in confocal laser scanning microscopy and computer imaging technology. The successful applicant must be qualified to assume responsibility for the academic direction, supervision and development of confocal microscopy and the associated computer graphics facility in the School of Medicine.

Commencing salary will be established within the range of \$NZ52,000-\$NZ60,944 per annum.

Conditions of Appointment and Method of Application are available from the Assistant Registrar, Academic Appointments, University of Auckland, Private Bag, Auckland, New Zealand, to whom applications should be forwarded by 10 July 1992. Please quote Vacancy Number UAC 153 in all correspondence.

The University of Auckland
An Equal Employment Opportunity Employer
WB NICOLL,
REGISTRAR
University of Auckland
Private Bag
Auckland, New Zealand

POSITIONS OPEN

A **POSTDOCTORAL POSITION** is available from 1 September 1992 (negotiable) to work with Drs. Barry Halliwell and Carroll Cross, studying the mechanisms by which toxic gases (O_3 , NO_2 , cigarette smoke) oxidatively damage the human lung. Work will be based at University of California, Davis (UCD), but some visits to Kings College, London, to learn methods may be arranged. Applicants should have a Ph.D. in biological sciences or chemistry. Experience in HPLC, GC or MS is preferred. Apply to: **Dr. Cross, Pulmonary Medicine, 4301 X Street, UCDMC, Sacramento, CA 95817; FAX: 916-734-7924; telephone: 916-734-3564.** Equal Opportunity Employer/Affirmative Action.

POSTDOCTORAL POSITIONS for recent Ph.D.'s to participate in an action research program on the structure, regulation and expression of human DNA repair genes and enzymes. Current research efforts focus on the molecule defects which underlie cancer-prone human genetic disorders and structural analysis of multifunctional repair enzymes by site-specific mutagenesis. Submit curriculum vitae and the names of three references to: **Dr. Michael A. Sirover, FELS INSTITUTE FOR CANCER RESEARCH AND MOLECULAR BIOLOGY, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140.** Equal Opportunity Employer.

POSTDOCTORAL POSITION IN NEUROETHOLOGY to study the biophysical mechanisms of endogenous burst generation and its modulation in neurons in *Aplysia californica* and the role of these bursting neurons in the control of autonomic function. Experience in intracellular recording techniques is preferred. Send curriculum vitae, names and addresses of three references, and brief statement of research interests to: **Dr. John Koester, Center for Neurobiology and Behavior, Columbia University Medical Center, 722 West 168 Street, New York, NY 10032.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION. Available immediately to study the neuronal cytoskeleton using a wide variety of morphological and biochemical techniques. Principal interests in the laboratory include the mechanisms by which axonal and dendritic microtubules are organized and how they contribute to the fundamental polarity of the neuron. Send curriculum vitae and three letters of reference to: **Dr. Peter W. Baas, Department of Anatomy, University of Wisconsin Medical School, 1300 University Avenue, Madison, WI 53706.**

POSTDOCTORAL POSITION IN MOLECULAR IMMUNOLOGY to study somatic mutation of immunoglobulin genes in B lymphocytes. Research will focus on identifying DNA sequences that target hypermutation to antibody variable genes. Candidate should have a strong background in molecular biology and immunology. Please send curriculum vitae and three letters of recommendation to: **Dr. P. J. Gearhart, Department of Biochemistry, Johns Hopkins University School of Hygiene, 615 North Wolfe Street, Baltimore, MD 21205.** Equal Opportunity Employer.

POSTDOCTORAL position available to study androgen-dependent gene expression and factors that interact with receptor to confer transcriptional specificity. Regulation of the mouse sex-limited protein (*Slp*) gene is studied by transfection, protein-DNA binding, and in transgenics. Knowledge of molecular biological techniques is required; experience in protein biochemistry is preferred. Send curriculum vitae and names of three references to: **Diane M. Robins, Department of Human Genetics, University of Michigan Medical School, Medical Science II 4708, Ann Arbor, MI 48109-0618.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately at the University of California, San Francisco, in the laboratories of Dr. Susan Fisher and Dr. Caroline Damsky to study human placental (trophoblast) development. Previous experience in immunolocalization techniques and in situ hybridization required. Some experience in other molecular techniques desirable. Send curriculum vitae and three letters of recommendation to: **Dr. Susan Fisher or Dr. Caroline Damsky, HSW 604, University of California, San Francisco, CA 94143-0512.** An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION

A position is available in gastrointestinal cell biology to study the effects of gastrointestinal peptides on various gastrointestinal target cells in vitro. Candidate with experience in cell biology, receptor binding assays, signal transduction and cellular biochemistry is desirable. Send letter stating interest, curriculum vitae, bibliography and names of three references to: **Dr. Jerry D. Gardner, Associate Chairman, Department of Internal Medicine, St. Louis University School of Medicine, St. Louis, MO 63104.**

St. Louis University is an Equal Opportunity/Affirmative Action Employer.



TUFTS UNIVERSITY SCHOOL OF MEDICINE

POSTDOCTORAL POSITIONS are available to work on two projects: one to analyze the mechanisms generating somatic mutation of autoantibodies and the other to define the interactions of γ/δ T cells with B cells. Both projects will involve cellular and molecular techniques.

Applications, together with curriculum vitae and the names of three referees, should be addressed to: **Dr. Henry H. Wortis, Department of Pathology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111. FAX: 617-350-8590.**

POSTDOCTORAL POSITION

Physiologically based modeling of metal (Zn, Cd, Hg) accumulation in fish. Initial focus will be on modeling fish size-specific, accumulation kinetics. Training in the use of radiotracers is essential. *Must be a U.S. citizen.* Send curriculum vitae and names of three references to: **Dr. Michael C. Newman, University of Georgia's Savannah River Ecology Laboratory (SREL), P.O. Drawer E, Aiken, SC 29801.** Search will remain open until 10 July 1992. *SREL is an Equal Opportunity Employer. Women and minorities are especially encouraged to apply.*

POSTDOCTORAL POSITION IN MOLECULAR PATHOLOGY. Available to study the pathogenesis and develop new strategies for human genetic disease mutation analysis in a well-established molecular pathology laboratory for 2 years. Candidates must have a Ph.D. or M.D. with experience in molecular genetics. Available summer or fall of 1992. Send curriculum vitae and the names of three references to: **Thomas W. Prior, Ph.D., The Ohio State University, Department of Pathology, North 322 Doan Hall, 410 West 10th Avenue, Columbus, OH 43210.** *The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Qualified women, minorities, Vietnam-era veterans, disabled veterans and the disabled are encouraged to apply.*

SEVERAL POSTDOCTORAL POSITIONS available for recent Ph.D.'s with experience in molecular biology to do work on identification of regulatory proteins involved in gene expression and on projects pertaining to molecular reproduction. Positions are available for up to 3 years at a starting salary ranging from \$25,000 to \$27,000 Cdn. depending on experience and qualifications. Please forward curriculum vitae and the names and addresses of three references by 30 June 1992 to: **Dr. John S. D. Chan, University of Montreal, Maisonneuve-Rosemont Hospital, Research Center, 5415 Boulevard de l'Assomption, Montreal, Quebec, Canada H1T 2M4.**

POSTDOCTORAL POSITIONS CELL CYCLE REGULATION II

Persons interested in eukaryotic cell cycle research are invited to apply for postdoctoral positions in the laboratory of Steve Osmani [see *EMBO J.* 10, 2669 (1991); *Cell* 67, 283 (1991); *EMBO J.* 11, no. 6 (in press) for recent publications and *Nature* 353, 701 (1991) for review].

The Weis Center is a well-equipped modern research facility located in an attractive region of central Pennsylvania. Competitive salary and fringe benefits are available. For consideration, please send curriculum vitae and names of three references to: **Human Resources Department (SO), Geisinger Clinic, 100 North Academy Avenue, Danville, PA 17822-3024.**

*Valuing diversity
...recognizing service*

Co-ordinator Forest Ecology/Impact \$46,000 - \$70,800 (Cdn Funds)

The **Ministry of Natural Resources**, Ontario Forest Research Institute, seeks a knowledgeable research scientist to provide scientific and administrative leadership to the forest-ecology/impact research program. Working at the Centre for Northern Forest Ecosystem Research, you will advance knowledge of forest-ecosystem structure, function and processes necessary to evaluate impacts on the forest environment and improve forest-management practices. **Location: Thunder Bay, Canada.**

Qualifications: Master's degree in forestry or biological science, with specialization to the PhD level, or equivalent experience, in forest ecology and environmental impacts; extensive practical application in forest-ecology research; proven leadership skills; comprehensive knowledge of ecosystem dynamics, silvicultural methods, soil processes, plant growth and development, statistical methods, and use of laboratory and field equipment; superior communication skills.

Please send application or resume, quoting file NR-2028/92, by July 20, 1992 to: Human Resources Section, Ministry of Natural Resources, 70 Foster Drive, Suite 400, Sault Ste. Marie, Ontario, Canada, P6A 6V5.



**Ontario
Public Service**

DEDICATED TO EMPLOYMENT EQUITY

WYETH-AYERST RESEARCH We're building on our success

Research Scientists IMMUNOLOGISTS/VIROLOGISTS

Wyeth-Ayerst Research is a major division of Fortune 100 American Home Products Corporation, a leading manufacturer and marketer of health care products with multi-billion dollar annual sales and an impressive record of growth and profitability.

As a GLOBAL research-based pharmaceutical company, we are committed to helping people lead healthier lives through innovative pharmaceutical and nutritional products. It is from this commitment and position of strength that we move forward with a major expansion of our research and development activities.

We currently have opportunities for Research Scientists within the Biotechnology and Microbiology Division of our Radnor, PA headquarters. You will be part of a team working on anti-viral and vaccine approaches to Human Papillomaviruses. The ideal candidates will have a Ph.D., at least 3 years post-doctoral experience and a record of high productivity in the field of virology. Preference will be given to candidates with a solid background in viral immunology and/or expertise in *in vitro* and *in vivo* papillomavirus models (HPV, CRPV, BPV).

Wyeth-Ayerst offers excellent compensation and benefits programs. For immediate consideration, forward your resume in confidence to: **WYETH-AYERST RESEARCH PERSONNEL, Position #57, P.O. Box 8299, Philadelphia, PA 19101-0082.** Equal Opportunity Employer, M/F/D/V responses encouraged. Principals Only.



**WYETH
AYERST**

Leading The Way for a Healthier World

CHANCELLOR UNIVERSITY OF CALIFORNIA SAN FRANCISCO

The President and The Regents of the University of California invite nominations and applications for the position of Chancellor of the San Francisco campus. The appointment will be effective July 1, 1993.

The University of California, San Francisco, is one of the nine campuses of the University, and the only one devoted solely to the health sciences. It is one of the world's foremost health sciences universities. Its schools of Dentistry, Medicine, Nursing, and Pharmacy and the Graduate Division award advanced professional degrees and doctoral degrees in the basic natural and behavioral sciences relevant to health. The campus is a major clinical and research center for cancer treatment, transplantation, AIDS, pediatric specialties and for research in the basic biomedical sciences. The 1991-92 student enrollment is approximately 3,750; faculty and staff number about 15,000. The campus annual budget is approximately one billion dollars. There are three general acute-care hospitals, an Ambulatory Care Center, and the Langley Porter Psychiatric Institute which is devoted to psychiatric patient care, teaching and research. In addition, the campus has affiliated programs in some 150 institutions throughout California.

The Chancellor is the chief executive officer of the campus and is responsible to the President. Within the scope of University policy the Chancellor exercises very broad delegated powers and is responsible for all aspects of campus administration. Candidates should have demonstrated experience in the administration of substantial organizations, preferably research universities, and should have a strong scholarly record. Applications, accompanied by current resumes, and nominations may be addressed to:

**The President
Attn: Search B
300 Lakeside Drive
University of California
Oakland, California 94612-3550**

And should be received no later than July 8, 1992, to be given full consideration.

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

OPPORTUNITIES IN BIOTECHNOLOGY

Gelman Sciences is forming a **BIOTECHNOLOGY PRODUCT DEVELOPMENT TEAM** to work together within tissue culture and biotechnology filtration markets to assess customer needs and identify new product direction. The team will have responsibility for translating highly technical abstract ideas into specific product prototypes.

This high technology manufacturer of microfiltration products for research laboratories, health care and process industries seeks creative, highly motivated individuals with a minimum of 3 years experience in developing products to meet the needs of the scientific consumable product market.

A combination of the following qualifications along with excellent communication skills is required.

LABORATORY TECHNOLOGY DEVELOPMENT/MARKETING

BS, MS or Ph.D. in cell or molecular biology or immunology, experience in separation sciences with marketing/sales of consumables a big plus.

ENGINEERING TECHNICAL DEVELOPMENT SPECIALIST

BS or MS in Engineering field with experience designing plastic prototypes and familiarity in working directly with customers.

For immediate consideration for these challenging opportunities, please send your resume and salary history to:



GelmanSciences

**Human Resources Department
Biotechnology Product Development
600 S. Wagner Road, Ann Arbor, MI 48106**
Gelman Sciences in an Equal Opportunity Employer

Quality Control Manager

A leading biotechnology company on Long Island, NY has a ground floor opportunity for a hands-on Quality Control Manager responsible for performing and managing all QC activities and establishing SOP's to achieve GMP levels.

Must have B.S./B.A. in Biology or Chemistry plus 3-5 years' experience with GMP level quality control systems within the biotech industry. Knowledge of antibody, immunoassay and DNA probe products desirable. Strong communication and interpersonal skills essential.

Qualified candidates may submit resumes, including salary history to:

**Oncogene Science, Inc.
106 Charles Lindbergh Blvd.
Uniondale, NY 11553
ATTN: FR**

Equal Opportunity Employer

**Oncogene
Science** 

A World of Opportunities At Pall Corporation

Ph.D. SCIENTIST LECTURER

Pall Corporation has achieved global leadership in filtration due to our pursuit of technological excellence.

We seek an individual to provide technical support for our Biomedical Products delivering presentations and seminars to leading hospitals, medical education institutions and professional societies. You will work in conjunction with our Regional Managers throughout the country.

To qualify you will have 3-5 years experience & a Ph.D. in Physiology, Cell Biology, or Life Sciences. An interest or background in health care or medical research along with previous teaching experience is helpful. Extensive travel required.

You will receive a competitive salary & participate in our comprehensive benefits program. Only resumes with salary history will be considered.

Human Resources Dept. (SL-521)



Leadership
in Filtration

PALL CORP.
2200 NORTHERN BLVD.
EAST HILLS, NY 11548
An Equal Opportunity Employer

Chemical Oceanography Faculty Position

University of Rhode Island Graduate School of Oceanography

We invite persons specializing in open-ocean processes to apply for a tenure-track faculty position in Chemical Oceanography. A Ph.D. is required by the time of hire, and the position will be filled at the Assistant or Associate Professor level. The successful applicant must demonstrate the ability to establish an active research program, advise graduate students, and develop and teach one or more courses in marine chemistry and related areas. For the rank of Associate Professor, the applicant must have demonstrated a strong record of independent research and publication.

Preference will be given to persons with experience in studying the use of chemical tracers or biogeochemical cycles, in either case with a focus on the open ocean. In addition, preference will be given to candidates who show promise of complementing other programs at the Graduate School of Oceanography, including physical oceanography, marine and atmospheric chemistry, biological oceanography, and paleo-oceanography. The preferred date of hire is on or before Jan. 1, 1993.

Send curriculum vitae, the names of four references and a summary of research interests to Professor Michael E.Q. Pilson, Search Committee Chair, Marine Chemist (Position No. 091117), University of Rhode Island, P.O. Box G, Kingston, RI 02881. Applications will be reviewed beginning July 1, or until the position is filled. URI is an Affirmative Action/Equal Opportunity Employer.

The United States Department of Energy

1 9 9 2

DISTINGUISHED POSTDOCTORAL RESEARCH PROGRAM

U.S. Department of Energy Distinguished Postdoctoral Research Program

Research Opportunities in Physical Sciences, Computer Sciences, and Engineering

Research in DOE-sponsored programs
Tenable at various national laboratories
Stipend of \$52,800
Doctoral degree received after 1989
U.S. citizens or PRA eligible
Application deadline August 1, 1992

For information and applications:
DOE Distinguished Postdoctoral Research Program
Science/Engineering Education Division
Oak Ridge Institute for Science and Education
P.O. Box 117
Oak Ridge, Tennessee 37831-0117
(615) 576-9934

*Sponsored by the U.S. Department of Energy, Office of
University and Science Education Programs*



The University of Zürich, Switzerland, Institute of Physiology, invites applications for the tenured position (at the Extraordinariat level) of a

Professor of Physiology

Applicants should have an outstanding research record in neurophysiology, e.g. on sensory systems, nerve-muscle interactions or developmental neurophysiology. Preference will be given to candidates working at the *cellular level* with a strong background in advanced electrophysiological and molecular techniques. The candidate should be able to teach in German within two years.

Applications are to be sent before June 30th 1992 to Prof. B. Gähwiler, Physiology Search Committee, Brain Research Institute, August Forel-Strasse 1, CH-8029 Zürich/Switzerland. Applicants are asked to first request instructions for the format of the application from: Medizinisches Dekanat, Universität Zürich, Gloriastr. 23, CH-8091 Zürich, Fax (01) 255 45 65.

Postdoctoral Fellow

DEVELOPMENTAL HEMATOLOGY

Amgen, an industry leader in applied biotechnology, has an opportunity for a Postdoctoral Scientist in the Cell Biology Laboratory of the Developmental Hematology Department. The main area of interest in this group is the study and identification of novel growth factors controlling early development of hematopoietic stem cells and primitive progenitors of the myeloid and lymphoid lineages.

Candidates for this position must have a Ph.D. in Cell Biology, preferably with an emphasis on hematopoietic cell growth and differentiation. Experience with both in vitro and in vivo assays and models is highly desirable.

Amgen offers a stimulating and challenging environment in which individual contributions and achievements are highly valued. There are excellent opportunities for personal and career growth and a strong compensation and benefits package, including equity offerings. Qualified candidates should send a resume, in confidence, to: Amgen Inc., Dept. IM, Mail Stop T-1-A-207, Amgen Center, Thousand Oaks, CA 91320-1789. Amgen is an equal opportunity employer.

AMGEN®

Principals only, please.

MILES

Pharmaceutical
Division

RESEARCH SCIENTISTS

The Miles Research Center (MRC) in West Haven is the U.S. pharmaceutical research arm of Miles Inc., Pittsburgh, located on a campus-like setting near the Long Island Sound. The MRC is being developed into a world-class research complex, including a new research institute for metabolic diseases.

This institute will be developed to uncover the basic mechanisms in the pathophysiology of type II diabetes, its complications, and obesity with a long term goal of developing novel therapeutics for the treatment of these diseases. Applications are now being accepted from Ph.D. or M.D. scientists who want to conduct research on insulin action and signal transduction mechanisms, glucose transport, insulin secretion, obesity and appetite regulation and complications of diabetes.

The applicants should have 2 or more years of postdoctoral experience that demonstrate creativity and productivity in research in these or related areas. Backgrounds in molecular biology, biochemistry, cell biology or physiology are desirable.

Miles Research Center offers highly attractive compensation commensurate with qualifications and a benefits package including 401(k) and relocation assistance. These positions and the research environment in our new West Haven facility allow for a professional working environment conducive to career development. For immediate and confidential consideration, please send your resume including salary history to: Dept. CC-MD, Miles Inc., 400 Morgan Lane, West Haven, CT 06516. An Equal Opportunity Employer M/F/H/V.

Magainin Pharmaceuticals Inc.

Magainin Pharmaceuticals Inc. is a rapidly developing biopharmaceutical company engaged in the research and development of a new class of therapeutic products for the treatment of infections and certain cancers and the promotion of wound healing. With the success of our recent stock offering, we are seeking scientists with commitment, excellent training and communication skills to expand our drug research and development efforts in the following key areas:

Scientist/Senior Scientist Sepsis/Shock

Candidates should have interest and experience in:

- in vivo animal models; monitoring physiological parameters
- testing and evaluating pharmacological agents
- statistical analysis

We are seeking a motivated Pharmacologist/Physiologist for research and programs investigating sepsis and shock and anti-infectives development. Candidates must have a Ph.D. with 5+ years experience. Supervisory experience a plus.

Assistant/Associate Scientist Virology

Candidates should have interest and experience in:

- molecular biology techniques
- manipulation, growth, propagation and culturing human and animal viruses (e.g. vaccinia, polio)

We are seeking an energetic, highly motivated individual with a BS or MS and 3+ years experience to work with a renowned Senior Scientist as part of an antiviral drug discovery team.

For consideration, please submit curriculum vitae (indicate position desired), description of research interests and salary requirements to: **Director of Human Resources, MAGAININ PHARMACEUTICALS INC., 5110 Campus Drive, Plymouth Meeting, PA 19462.**

Magainin Pharmaceuticals 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. An Equal Opportunity Employer. No phone calls, please.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to join an active research group studying the physiology and molecular biology of the human prolactins. Candidates must have either a Ph.D. or M.D. and experience in molecular biology, cell culture, or protein biochemistry. Send curriculum vitae and names of three references to: **Dr. Edith Markoff, Division of Endocrinology, Children's Hospital Medical Center (CHMC), Elland and Bethesda Avenues, Cincinnati, OH 45229.** CHMC is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS. Positions are immediately available for fellows to work on immunobiology of HIV or T cell/NK cell recognition of bacterial antigens. Send curriculum vitae and references to: **Dr. Gary R. Kimpel, Department of Microbiology J-19, University of Texas Medical Branch (UTMB), Galveston, TX 77555-1019.** UTMB is an Equal Opportunity M/F/H/V Affirmative Action Employer. UTMB hires only individuals authorized to work in the United States.

POSTDOCTORAL POSITIONS: (1) Examine the basis for ethanol's effects on calcium channels in peptidergic nerve terminals; (2) examine the basis of action of general anesthetics on ligand-gated receptors and voltage-gated channels expressed in oocytes from mRNA. Training in voltage clamp techniques and/or molecular biology is required. Please send curriculum vitae and the names of three references to: **Dr. Steven N. Treisman, Department of Pharmacology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655.** The University of Massachusetts is an Equal Opportunity Employer.

POSTDOCTORAL POSITION available 1 July 1992 to study erythroid transcription regulation (particularly nuclear matrix/cis-acting factors interrelation). Experience in basic molecular biology techniques and/or cell culture preferred. Send curriculum vitae to: **Dr. Ronald Nagel or Dr. Eric Bouhassira, Department of Medicine/Hematology, Albert Einstein College of Medicine, 1300 Morris Park Avenue, U-921, Bronx, NY 10461.** U.S. citizen or green card required.

POSTDOCTORAL POSITION

The Institute of Wildlife and Environmental Toxicology has an immediate opening for a **POSTDOCTORAL FELLOW** to use a geographic information system in a generalized ecological risk classification for farm ponds. Must have a strong background in the use of ARC/INFO software. Experience with SUN workstations and/or remotely sensed data is desirable. One-year position with possibility of extension. Salary will be \$25,000 to \$30,000. Applicants should send curriculum vitae and three letters of recommendation to: **Dr. Kenneth Dixon, The Institute of Wildlife and Environmental Toxicology, P.O. Box 709, Pendleton, SC 29670.**

MOLECULAR BIOLOGY POSTDOCTORAL/RESEARCH ASSOCIATE: Several positions are available to become part of an interdisciplinary research team using molecular biology to study growth, development and differentiation. The successful candidate(s) will utilize either the lysyl oxidase or protamine gene system. Interested individuals should forward their curriculum vitae, copies of representative publications and three letters of recommendation to: **Dr. Stephen A. Krawetz, Department of Molecular Biology and Genetics, Wayne State University (WSU) School of Medicine, 2228 Scott Hall, 540 East Canfield, Detroit, MI 48201.** WSU is an Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP—HIV RESEARCH. Section on Clinical and Molecular Retrovirology, Laboratory of Immunoregulation, National Institute of Allergy and Infectious Diseases, National Institutes of Health (NIH), Public Health Service, has available a 2- or 3-year intramural research fellowship to study gene transfer and adoptive immunotherapy in AIDS treatment. Candidates wishing to begin research between 1 July and 1 September 1992 are encouraged to apply. An M.D. or Ph.D. degree is required, and a strong background in molecular genetics is preferred. Salary range: \$32,000 to \$38,500 per year. Send curriculum vitae and the names of three references to: **Dr. David I. Cohen, Laboratory of Immunoregulation, NIAID, NIH, Building 10, Room 11B13, 9000 Rockville Pike, Bethesda, MD 20892.** Meets requirements for NIH HIV Loan Repayment Program. NIH is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIPS BRAIN DRUG DELIVERY

UCLA BRAIN RESEARCH INSTITUTE. National Research Service Award Institutional Training Program supports 2- or 3-year postdoctoral research fellowships to study brain drug delivery and blood-brain barrier transport biology. Experience in oligonucleotide or peptide chemistry, receptor biology, and animal physiology and pharmacology desired. Competitive salary plus medical insurance. Positions available now and in 1993. Send curriculum vitae and three letters of reference to:

Dr. William M. Pardridge
Brain Research Institute
University of California Los Angeles
School of Medicine
Los Angeles, CA 90024-1761
or FAX to: 310-206-5163.
An Equal Opportunity Employer.

U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS). **SOIL MICROBIOLOGIST**, Horticultural Crops Research, Corvallis, Oregon. **POSTDOCTORAL RESEARCH ASSOCIATE** will work on aspects of symbiotic bacteria involving VAM-corrhizal fungi and N₂-fixing bacteria under greenhouse and in vitro conditions. Experience with VAM fungi, familiarity with plant physiology and biochemistry required. Two-year, renewable appointment. Starting salary: \$32,000 per year with benefits. Call: **Gabor Bethlenfalvai at 503-750-8785 (research), or Pat Roberts at 301-344-3138 (application procedures).** Inquiries should be received by 2 July 1992. ARS is an Equal Opportunity Employer.

ASSISTANT RESEARCH SCIENTIST

A **POSTDOCTORAL** position is available in the laboratory of Dr. Ross Basch to study the growth and differentiation of human hematopoietic cells in immunodeficient mice. The research involves the isolation and characterization of the human bone marrow cells which serve as hematopoietic progenitors. Experience in tissue culture and molecular biology is desirable.

Salary is competitive and excellent fringe benefits are provided.

Please send your curriculum vitae to: **Dr. R. S. Basch, Department of Pathology, New York University Medical Center, 550 First Avenue, New York, NY 10016.** Equal Opportunity Employer M/F.

CHEMISTRY, RESEARCH ASSOCIATE. Dry line synthesis of metal oxaloxides, complexes of polyoxometalates with O, N donor ligands; characterization using multinuclear NMR, IR, EPR, GC-MS techniques; electrochemistry and x-ray crystallography. Candidate should have Ph.D. degree in inorganic chemistry and demonstrate strong background in synthesis of metal-oxide materials, organic ligand synthesis and spectroscopic characterization techniques, single-crystal x-ray diffraction. \$23,300 per year full time. Send résumé, list of publications, and three professional references by 13 July 1992 to: **Inorganic Research Associate Search Committee, Department of Chemistry, Room 1-014 CST, SYRACUSE UNIVERSITY, Syracuse, NY 13244-4100.** Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSOCIATE for university in central Ohio. Develops and implements computer-user interface systems and equipment for protein sequence searching of biological databases; constructs computer instrument interfacing equipment to study transport of drugs across membranes and interfaces; assists in preparation of grant proposals and publishes articles in peer-reviewed journals; develops and installs software; oversees graduate research assistants. No experience required in above duties but applicants will qualify with Ph.D. in pharmaceutical analysis or analytical chemistry and 2 years of research experience in constructing computer-instrument interfacing equipment to study transport of drugs across membranes, programming in C and Assembly languages and using IBM AIX operating system (experience may be gained concurrent with degree). Forty hours per week, 8:00 a.m. to 5:00 p.m., Monday to Friday; salary: \$25,320 per year. Must have proof of legal authority to work permanently in the United States. Send résumés in duplicate (no calls) to: **G. Maugans, JO #1260385, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

Section Chiefs. Membrane Biophysics.

The Laboratory of Membrane Biochemistry and Biophysics, directed by Dr. Norman Salem, Jr., conducts basic and clinical studies on the functions of polyunsaturated lipids. This newly formed laboratory is seeking applications for two tenure-track positions at the Section Chief level providing an opportunity to form and administer their own research group. These will be in the areas of **NMR** and **Fluorescence Spectroscopy** and are available immediately.

It is expected that each section will

focus upon a series of interrelated problems dealing with the molecular associations, biophysical properties, protein-lipid interactions and membrane functions of polyunsaturated phospholipids. Of particular interest are those species containing **docosahexaenoic acid** (C22:6n3), an essential fatty acid in the nervous and visual systems. Studies will be conducted in collaboration with biochemists and the Section of Mass Spectrometry. The laboratory is well equipped with its own NMR spectroscopy and fluorescence lifetime instru-

mentation and future expansion is planned. The NMR group will also have access to imaging instrumentation within the NIH *In Vivo* NMR Center.

Salary is negotiable and depends upon skills and experience. U.S. citizenship or permanent resident status is required. Minority applicants are encouraged to apply. Interested applicants should apply by submitting a *curriculum vitae*, three letters of reference and a statement of research interests to Ms. Kathleen Hanratty, Personnel Management Branch.

National Institute On Alcohol Abuse And Alcoholism

Alcohol, Drug Abuse, and Mental Health Administration

Building 31, Room 1B58, 9000 Rockville Pike Bethesda, MD 20892

Equal Opportunity Employer

Recruitment Advertisers

SAVE 25%

Running your recruitment advertisement once may not be enough. Place the same ad again within the next four issues and we will give you 25% off your second insertion.

- **Get more attention**
- **Get more value**
- **Get more applicants**

Reach the global scientific community you need to maximize your recruitment efforts. Science does it bigger and better and now Science does it at greater savings for you.

Call, write, or fax:

Science Classified Advertising

1333 H Street, N.W.

Washington, D.C. 20005

Phone: 202-326-6541/6555

Fax: 202-682-0816

The Institute of Molecular Biology, Inc. (IMB) is a rapidly growing biotechnology company committed to bringing quality pharmaceuticals to the health care field. IMB offers the opportunity to work among a group of dedicated, highly respected scientists in a newly constructed facility in the Massachusetts Biotechnology Research Park located approximately 40 miles outside Boston, MA. IMB is seeking to fill new positions in the following areas:

Senior Molecular Biologist

Develop and optimize unique expression systems for recombinant proteins, particularly yeast and *E. coli*; work closely with manufacturing in scale-up of processes. Identify and characterize unique genes using Northern and Southern hybridization; cloning, sub-cloning and sequencing techniques. Expression of novel proteins. Requires Ph.D. in molecular biology. Two to three years' work experience in molecular biology and/or completion of post-doctoral training preferable.

Applied Research Scientist

This position involves designing and conducting *in vivo* efficacy studies in several areas of tissue repair and coordinating the conduct of the supporting analytical and *in vitro* evaluations. The ideal candidate would have expertise in: 1. The physiology of bone/nerve/skin growth or repair; 2. Polypeptide growth or differentiation factors; and 3. The statistical analysis of data and writing of scientific reports. A working knowledge of common protein chemistry and molecular biology techniques helpful. Requires an M.D., Ph.D., D.V.M. or equivalent.

IMB is an equal opportunity employer and offers competitive salary and benefits. For consideration please send your resume to: **Human Resources, Institute of Molecular Biology, Inc., One Innovation Drive, Worcester, MA 01605-4308.**

SCIENCE

Your best media buy to reach the scientific market.

Compare **SCIENCE**'s CPM with the other scientific publications and see for yourself:

Publication	Circulation	Cost/Page (FP BW)	Cost/Thousand (CPM)
SCIENCE	158,286	\$5,360	\$33.86
American Biotechnology Lab.	71,209	\$3,500	\$48.47
BioTechniques	51,557	\$3,800	\$73.70
Nature	50,324	\$4,850	\$96.37
Journal of NIH Research	31,473	\$3,175	\$100.88
Bio/Technology	18,000	\$3,150	\$175.00
Cell	14,041	\$1,700	\$121.07

Dollar for Dollar, SCIENCE gives you more subscribers for your money.

Source: January 1992 Standard Rate and Data
(Includes Paid and Non-Paid Circulation)

Cardiovascular Disease

COR Therapeutics, Inc. is a young, growing biotechnology company located in the San Francisco Bay Area. We specialize in the development of novel therapeutics for the treatment of various aspects of atherosclerosis-induced cardiovascular disease. COR is actively recruiting highly qualified Scientists to join our multidisciplinary research teams in the following areas:

IN VIVO PHARMACOLOGY — We are seeking a Scientist with a pharmacology background to develop thrombosis and vascular cell proliferation animal models and to evaluate anti-restenosis compounds.

CELLULAR ADHESION INHIBITORS — We are accepting applications from individuals to participate in a program to develop inhibitors for cellular adhesions relating to thrombosis, inflammation and reperfusion injury. The successful candidate will have a PhD and postdoctoral experience in cell biology or biochemistry.

ORGANIC/MEDICINAL CHEMISTRY — Medicinal Chemists are sought for our drug discovery efforts in receptor antagonists and protease inhibitors based on synthetic peptide leads.

PROTEIN CHEMISTRY — One position exists for a Scientist with a background in protein chemistry to work on purification and structure/function relationships of coagulation proteins.

COR Therapeutics, Inc. offers competitive salaries, benefits and attractive equity positions to its employees combined with the challenge and opportunity to make significant research contributions. To apply, please send curriculum vitae to: COR Therapeutics, Inc., Human Resources (Ref. #J92), 256 East Grand Avenue, South San Francisco, CA 94080. COR is an equal opportunity employer.

COR COR THERAPEUTICS, INC.

Computing In Science April 3 Reprint

Reprinted from the April 3 issue of **SCIENCE** this special section explores exciting new techniques and innovations taking place with computer technology in science.

Highlights of this special section include:

- Computer Experimentation - from physics to biology
- Massive Parallelism - promises and problems
- Mathematicians and the Computer Revolution
- Overview of New Products

To order your copy send \$3.00 plus postage to: **SCIENCE**

Postage (per copy): US: \$1.50

Int'l Surface: \$2.00

Int'l Air: \$5.00

Attn: Corrine Harris

1333 H Street, N.W.

Washington, D.C. 20005

Visa and MasterCard orders accepted by fax (202) 682-0816
For information on bulk orders call (202) 326-6527

IBI, the leading developer of Macintosh applications for molecular biology research, is seeking two people to join our in-house development team.

SOFTWARE PROJECT MANAGER

Experienced software professional to manage in-house Macintosh development team.

Knowledge of "C", the Mac Toolbox, and experience in a team environment a must. Cross platform experience (Windows, OS/2, OPEN LOOK and other GUI's) would be desirable.

SCIENTIFIC PROGRAMMER

Experienced Macintosh programmer to develop and maintain cutting edge Macintosh applications. Must have experience with "C" on the Macintosh. C++, experience with object-oriented programming techniques, and the Life Sciences desirable.

Competitive compensation package includes paid medical, dental insurance and company bonus.

If you are interested in joining the IBI and Kodak team in developing innovative software tools for the Life Science Research community, send a current resume, including salary history and position desired, to IBI, Software Development Group.



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

An Equal Opportunity Employer

POSITIONS OPEN

RESEARCH ASSOCIATE for northwestern Ohio biomedical research facility. Research project studying the protein P59. The duties of research associate in this program include: (1) grow and maintain the IM9 cell line of human lymphocytes, (2) isolate and purify P59 and other steroid receptor binding proteins and heat shock proteins with conventional chromatography, immunodiffusion chromatography, HPLC, gel filtration, etc., (3) perform various assays to characterize the purified proteins, such as Western blot, gel electrophoresis, ligand binding study, reconstitution, etc., (4) clone the gene mapping chromosome crawling, etc., (5) express the isolated gene in mammalian cells, and (6) perform site-directed mutagenesis to investigate the structure-function relationship. M.S. in pharmacology or molecular biology with the master's project being a laboratory study in protein purification and characterization as well as molecular cloning required. No experience required. Forty hours per week, hours 8:30 a.m. to 5:00 p.m., Monday to Friday; salary: \$24,000 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé in duplicate (no calls) to: **G. Maugans, JO #1333689, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

RESEARCH ASSOCIATE DEPARTMENT OF CHEMISTRY MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)

The Massachusetts Institute of Technology Department of Chemistry has an immediate opening for a Ph.D. in chemistry or physics to participate in high-resolution studies of liquid-crystal phase transitions.

Candidate must have a strong background in calorimetric techniques, electronic design, computer control, and data processing. Experience with liquid crystal theory and glass transitions also required. The work will involve both calorimetric research on thermotropic liquid crystals and significant design, construction, and testing of new high- and low-frequency dynamic specific-heat spectroscopy. Salary range: \$25,000 to \$30,000 per year. Send résumé and names of three references to:

**Professor Carl Garland
Room 6-237**

**Massachusetts Institute of Technology
Cambridge, MA 02139**

*MIT is an Equal Opportunity/Affirmative
Action Employer.*

RESEARCH SCIENTISTS (Two positions). Duties: Carry out laboratory functions related to isolation and characterization of natural products with experience in chromatographic separations and HPLC analysis. Requirement: Ph.D. in a science. Preference: Experience in natural products research. Salary range: \$23,000 to \$27,000 per year.

BOTANIST or PLANT SCIENTIST. Duties: Plant collection of cultivated and wild plants and evaluation of medicinal plants in cultivation. Ability to work with a multidisciplinary team of plant scientists and chemists to develop medicinal plants. Requirements: Master's degree in a plant science. Preferences: Training or experience in plant taxonomy, wild plant collection, or sampling for plant growth or phytochemistry. Salary range: \$20,000 to \$24,000 per year.

RESEARCH ASSOCIATES (Two positions). Duties: Carry out laboratory functions related to isolation and characterization of natural products. Requirements: B.S. and laboratory experience or equivalent. Preference: Master's degree in chemistry or natural products. Salary range: \$20,000 to \$24,000 per year, based upon experience and education.

RESEARCH ASSOCIATE. Duties: Design and conduct greenhouse and field studies on the cultivation of medicinal plants, interest in multidisciplinary research with other plant scientists and phytochemists to enhance the production of active compounds in medicinal plants. Requirements: Master's degree in a plant science. Preference: Master's degree in horticulture, agronomy, forestry or botany. Experience in greenhouse and field trials. Salary range: \$20,000 to \$24,000 per year.

Deadline: All positions open until filled. Send résumé, transcripts, and reprints to: **Business Offices, School of Pharmacy/Research Institute of Pharmaceutical Sciences, 206W Faser Hall, University of Mississippi, University, MS 38677. The University of Mississippi is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

California Institute of Technology (Caltech) is seeking an **ASSOCIATE BIOLOGIST** to participate in an ongoing research program on the evolution and molecular biology of RNA plant and animal viruses. Duties include cDNA cloning and sequencing of viral RNA genomes, development of cloning procedures suitable for high-throughput automated DNA sequencing, and synthesis of oligonucleotide probes.

Candidate must have a Ph.D. in biology and three or more years of postdoctoral experience in the molecular biology of both plant and animal viruses. The candidate must have knowledge of and demonstrated ability in the following techniques, as evidenced by refereed publications: isolation of nondegraded preparations of viral and cellular RNAs, cDNA cloning and sequencing of viral RNA, in vitro mutagenesis, in vitro transcription and translation, RNA transfection in both plant and animal systems, electron microscopy, and immunological procedures such as ELISA and Western blot analysis. In addition, preference will be given to candidate with extensive experience with synthetic oligonucleotide synthesis and automated DNA sequencing.

Salary is \$36,750 per annum. *Caltech is an Equal Opportunity Employer. Women and minorities are encouraged to apply.* Please send curriculum vitae to: **Mike Miranda, Administrator, Division of Biology, 156-29, California Institute of Technology, Pasadena, CA 91125.**

CELL SORTER OPERATOR

The Uniformed Services University of the Health Sciences (USUHS) invites applications for a position in the Biomedical Instrumentation Center (BIC) in the F. Edward Hebert School of Medicine. The BIC provides centralized equipment and service support for biomedical research at the university. The center seeks an individual to set up and operate a cell sorting facility. The individual should have a familiarity with microbiology, cell biology, and cellular immunology. In addition, the candidate should have several years of cell sorting experience. The center currently has a Coulter Epics Elite FACS and a Becton Dickinson FACScan. Full performance level of the position is equivalent to GS-12 (salary range: \$38,861 to \$50,516 per year). Please submit an SF 171 no later than 31 July 1992 to: **Civilian Human Resources Management Directorate (#92-09RA), Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799. USUHS is an Equal Opportunity/Affirmative Action Employer.**

SENIOR GENETICIST TYSON FOODS

Tyson Foods, Inc. is seeking a Senior Geneticist for its Swine Division. Responsibilities include maintaining nucleus herd, sow and boar inventories, evaluating performance, and analyzing genetic and other research data, etc. A Ph.D. in genetics is required, as well as 2 to 4 years of experience. Please send or FAX résumé to:

**Russell Tooley
P.O. Box 2020
Springdale, AR 72765-2020
FAX: 501-756-4217**

Affirmative Action/Equal Opportunity Employment Employer.

MOLECULAR BIOLOGIST

The Miami Vascular Institute (MVI), Miami, Florida, seeks a molecular biologist (Ph.D. or M.D.) to head a research program in postangioplasty restenosis and related areas of vascular biology. Excellent communication skills and experience with all aspects of molecular biology and tissue culture are required. Current funding is desirable. Salary is highly competitive and commensurate with experience. An attractive benefits package is included. A funded position for a research assistant is available. There are opportunities to develop graduate student programs in cooperation with the University of Miami and/or Florida International University. MVI, an internationally recognized center for cardiac and circulatory disorders, is located at Baptist Hospital of Miami on a 70-acre campus boasting Italian Renaissance architecture and lush, subtropical landscaping. Interested individuals should send curriculum vitae and names of three references to: **Gary J. Becker, M.D., F.A.C.C., Miami Vascular Institute, Baptist Hospital of Miami, 8900 North Kendall Drive, Miami, FL 33176.**

POSITIONS OPEN

MOLECULAR AND CELLULAR NEUROBIOLOGISTS MONTREAL NEUROLOGICAL INSTITUTE MCGILL UNIVERSITY

The Montreal Neurological Institute (MNI) is establishing a research group of five molecular and/or cellular neurobiologists to study mechanisms of neuronal survival. Neurotrophins and other survival-promoting molecules will be one, although not the only, research focus. A mid-career or senior scientist with a strong publication record and funding history is being sought as group leader. Other appointments will be made at appropriate ranks with McGill University's Faculty of Medicine. The group will be housed in newly developed laboratory space and provided with ample set-up funds. The academic environment and collaborative potential for neuroscience at the MNI, at McGill and in Montreal are excellent. Montreal is a cosmopolitan, bilingual city known for its high quality of life.

Applications should be sent to: **Dr. Richard A. Murphy, Director, Montreal Neurological Institute, 3801 University Street, Montreal, Quebec, Canada H3A 2B4.** The deadline for receipt of applications is 31 August 1992.

McGill University is committed to Equity in Employment.

RESEARCH SCIENTISTS. Biomedical leader in cryopreservation of transplantable tissue is currently offering excellent career opportunities for two Ph.D.-level research scientists. As part of an innovative research team, each scientist will be expected to manage his/her own primary research project and to collaborate on associated projects. Project management experience is desirable. **HEMOSTASIS RESEARCH.** Requires a Ph.D. in biochemistry/physiology with specific training and research experience in the area of blood coagulation factors, clot formation and wound healing. **DISINFECTION/STERILIZATION RESEARCH.** Requires a Ph.D. in biological sciences with specific training and research experience in the area of inactivation of infectious agents and/or cell and tissue physiology. We offer an excellent salary and comprehensive health package, 401K, cafeteria plan and relocation expense assistance. Please respond in confidence to: **Dr. B. Morse, CryoLife, Inc., 2211 New Market Parkway #142, Marietta, GA 30067. Equal Opportunity Employer.**

PHYSIOLOGIST/MOLECULAR BIOLOGIST. ASSISTANT RESEARCH BIOLOGIST. Department of Obstetrics, Gynecology and Reproductive Sciences. University of California, San Francisco (UCSF). To pursue studies in regulation of growth and differentiation in fetal steroidogenic organs. Must have knowledge and experience in molecular biology, growth factors and steroid biochemistry. Extramural funding. Apply to: **Thomas J. Musci, M.D., Department of Obstetrics, Gynecology and Reproductive Sciences, UCSF, San Francisco, CA 94143-0556, by 26 June 1992. University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

SOFTWARE ENGINEERING GROUP LEADER

The Jackson Laboratory and the Mouse Genome Informatics Project seek a software engineering group leader to oversee design and implementation of a database of genetic and physical mapping information, analytical routines, graphical interfaces, and display tools that support the use of the laboratory mouse as a model for human genetic diseases. This project, which is a fully funded component of the NIH Human Genome Program, will establish a comprehensive, centralized information resource for the genetics research community. The scientist will be the senior computing scientist in a group including software engineers, geneticists, and molecular biologists. Applicants with a Ph.D. degree in computer science are strongly preferred. Broad technical experience in data management, relational and object-oriented databases, graphical user interfaces, and data visualization is required. Preference will be given to those who have managed software teams in a scientific environment. Application deadline: open until filled. Apply to: **Dr. Joseph H. Nadeau, Project Leader, Mouse Genome Informatics Project, Jackson Laboratory, 600 Main Street, Bar Harbor, ME 04609.**

The Jackson Laboratory is an Equal Opportunity/Affirmative Action Employer.

PROGRAM OF EXCELLENCE IN MOLECULAR BIOLOGY OF THE HEART AND LUNG

Special Postdoctoral Positions

The University of Cincinnati Program of Excellence in Molecular Biology of the Heart and Lung, funded by the National Heart, Lung and Blood Institute of NIH, has as a goal the application of molecular genetic approaches to study heart and lung function. Postdoctorals work closely with the sponsor in initial years but are encouraged to develop a research program separate from that of the sponsor and apply for independent funding during the final year.

The Program is open to Ph.D.s or M.D.s with training in molecular genetics who wish to apply their skills to significant problems of heart or lung or to individuals with strong backgrounds in heart and lung who wish to develop molecular genetic tools for continued study of these problems. We are particularly interested in recruiting minorities to the Program. Stipends begin at \$26,000 per year with benefits. Openings are available in several of the laboratories listed below.

Na,K-ATPase gene regulation and structure-function studies including identification of the cardiac glycoside binding site using site specific mutagenesis. Jerry B. Lingrel, Ph.D.

Characterization of lung surfactant proteins and genes. Jeffrey Whitsett, M.D.

Collagen gene expression in the lung. Winston Kao, Ph.D.

Structure-function relationships and genetic regulation of Ca-transporting ATPases of intracellular and plasma membranes. Gary Shull, Ph.D.

Study of cardiac contractile proteins and growth and developmental control of muscle and pulmonary proteins. Jeffrey Robbins, Ph.D.

Transcriptional analysis of lung surfactant protein gene promoters. Donal Luse, Ph.D.

Manipulating genes important in heart and lung development by insertional mutagenesis and targeted modification in ES cells. Steven Potter, Ph.D.

Structure and function of Ca⁺⁺ channel proteins (heart, brain, vascular smooth muscle) and gene regulation; isolation of receptors for calcium antagonists. Arnold Schwartz, Ph.D.

Role of apolipoproteins in heart and lung development and in resistance to disease. Judith Harmony, Ph.D.

Gene targeting in ES cells using homologous recombination. Focus is on vasculogenesis, angiogenesis and cardiogenesis. Thomas Doetschman, Ph.D.

The genetics of human cardiovascular disease. Anil Menon, Ph.D.

Applicants should submit a C.V. and the names of three references to Jerry B. Lingrel, Ph.D., Director, Program of Excellence in Molecular Biology, Department of Molecular Genetics, Biochemistry and Microbiology, University of Cincinnati College of Medicine, Cincinnati, Ohio 45267-0524.

Affirmative Action/Equal Opportunity Employer

Director Earth Sciences Division

Lawrence Berkeley Laboratory, a multi-disciplinary research and development center, funded by the U.S. Department of Energy is currently inviting applications for the position of Director, Earth Sciences Division.

The Director will coordinate a broad program of integrated research in geology, geophysics, geochemistry and hydrogeology, and will be responsible for developing interdisciplinary projects in such areas as the earth science aspects of environmental studies, petroleum reservoir engineering, nuclear waste disposal, and geothermal energy. The Earth Sciences Division has a staff of approximately 200, including 40 principal investigators and faculty scientists with an annual budget of over \$13M. The Division Director also participates in formulating the research policy and long-term direction of the Laboratory as a whole. The Director is expected to maintain a strong personal involvement in research.

This position requires a Ph.D. or equivalent in Earth Sciences or a related field, combined with a distinguished record of scientific achievement and program management. The candidate must have demonstrated capabilities in scientific leadership and must have strong management and administrative skills, creativity in decision making and problem solving and experience in human resource management.

The closing date for the submission of applications is July 30, 1992. Applicants must submit two copies of resume, salary history, and the names and addresses of three references to: **ESD Search Committee, Job H/7347, c/o Employment Office, Bldg. 90/1042, Lawrence Berkeley Laboratory, One Cyclotron Road, Berkeley, CA 94720.** An equal opportunity employer.



LAWRENCE BERKELEY LABORATORY
UNIVERSITY OF CALIFORNIA
U.S. Department of Energy

UNIVERSITY OF VIRGINIA

Director Molecular Biology Institute and Markey Center

Nominations and applications are invited for the Directorship, which can start during the 1992-93 academic year, later if necessary. The Institute and the Center, managed conjointly at present, command significant resources. The Institute is supported primarily with university funds. The Markey Center for Research on the Molecular Biology of Cellular Signaling Processes is funded by a five-year grant from the Markey Charitable Trust. Core space of some 12,000 square feet and core facilities for the Center are located in the School of Medicine. The more than fifty molecular biologists comprising the parent Institute are members, however, of departments of the College of Arts and Sciences as well as of the School of Medicine. All members hold regular faculty appointments, as will the new Director.

Candidates should have a strong research program in one of the molecular subdisciplines of signaling, e.g., membranes and receptors, signal transduction, genome-level processes, molecular structure. Candidates should be eligible for the rank of Professor. Scientific management experience would be helpful but is not a prerequisite for appointment. Administrative arrangements, salary, and departmental affiliation are flexible and will depend upon experience.

Applicants should provide a curriculum vitae, a full bibliography, and the names of three referees. Nominations may be offered by letter. Please address:

Markey Search Committee
Box 56, MR-4 Building
University of Virginia
Charlottesville, VA 22908

Applications should be complete by July 31, 1992; but the search will continue, and additional applications will be accepted as necessary, until the position is filled.

*The University of Virginia is an Equal Opportunity, Affirmative Action Employer.
Women and minorities are encouraged to apply.*

Science at Synergen

Synergen is a young and rapidly growing research based biopharmaceutical company, using the latest advances in recombinant DNA technology, molecular biology and manufacturing technology. Our focus is on the discovery, development, and production of protein-based human pharmaceuticals for the treatment of serious human diseases. We currently have need for the following professional:

PHARMACOLOGY SCIENTIST

We are seeking a generalist with a broad-based research background to test molecularly derived proteins in a variety of animal models of human disease. The qualified candidate must have extensive knowledge of and experience in animal model testing, and inflammation, neuroscience, growth factors or cytokines; a Ph.D. in Physiology or Pharmacology is required.

Synergen offers a competitive compensation package, generous benefits, an open, non-traditional work-place and corporate financial stability. Located at the base of the Rocky Mountains, Boulder, Colorado is renowned for its beauty, culture and natural attractions. Please send your resume to: Employment Manager, Box PS, Synergen, Inc., 1885 33rd Street, Boulder, CO 80301. We are an Equal Opportunity Employer.



SYNERGEN

POSITIONS OPEN

NATURAL PRODUCTS CHEMIST. Campbell Research and Development, a division of the Campbell Soup Company, in Davis, California, is seeking a natural products chemist. The successful candidate must be able to independently develop methods for the isolation, identification and further analysis of plant metabolites using GC, HPLC and other appropriate methods. Knowledge of plant metabolites ("phytochemicals") as related to human nutrition is desirable. Must have excellent communication skills. Requires Ph.D. or M.S. in nutrition, biochemistry, chemistry or other areas relating to human health and plant metabolites. Starting date: 1 August 1992. Facility located 6 miles from the University of California, Davis, campus. Submit résumé, transcripts and names of references to: Ms. Dawn Adams, Campbell Research and Development, 28605 County Road 104, Davis, CA 95616. Telephone: 916-753-2116.

QUANTITATIVE ECOLOGIST—FISHERIES (Re-advertised). A position is available immediately for a quantitative fisheries ecologist with expertise in applying statistical and population models to conduct assessments and population analyses of regional fisheries. The position (Assistant Marine Scientist—Contract) at the Marine Resources Research Institute [South Carolina Wildlife and Marine Resources Department (SCW-MRD)] is on a federally funded contract. Applicant should hold the Ph.D. degree and be experienced in statistics and population modeling of fisheries data. The successful candidate is expected to participate in field work and to develop and apply innovative analyses to long-term fishery-independent sampling data on south-eastern reef fishes. Prior to 15 July 1992, please send curriculum vitae, statement of research interests and goals (fewer than three pages), and three letters of reference to: Dr. George R. Sedberry, Fisheries Ecologist Search, Marine Resources Research Institute, P.O. Box 12559, Charleston, SC 29422-2559. The SCW-MRD prohibits discrimination on the basis of race, sex, color, national origin, handicap or age.

STAFF SCIENTIST/SCIENTIST CENTER FOR BIOMEDICAL RESEARCH THE POPULATION COUNCIL

The Population Council is seeking a scientist for its Contraceptive Development Program. Advanced degree (Ph.D., M.D., D.V.M., or equivalent) in immunology, endocrinology, or reproductive physiology—preferably relating to reproductive physiology or contraception. Minimum of 2 years of relevant postdoctoral training, including experience in antibody production, characterization, and small animal surgery. Salary will depend upon qualifications and experience. Excellent benefits. Send résumé to: Dr. Rosemarie Thau, The Population Council, Center for Biomedical Research, Tower Building, 1230 York Avenue, New York, NY 10021. An Equal Opportunity Employment Employer M/F.

SCIENTIST/MOLECULAR BIOLOGIST

Research scientist sought for research center at public university in southern Ohio to carry out independent research project focused on the definition of the molecular basis of growth hormone's physiological effects (and potential pharmacological impacts) using in vivo (transgenic mice) and in vitro (tissue culture) models. He/she will: (1) conduct experiments using gene cloning, DNA site-specific mutagenesis, gene sequencing, immunoprecipitation, protein structure/function analysis, radioimmune and radioreceptor assays, and tissue culture, using state-of-the-art techniques; (2) perform transgenic animal screening and animal surgery; and (3) operate standard molecular biological equipment and instrumentation. This (nonfaculty) scientist will also (co-) write grant applications and contract proposals; train graduate students and postdoctoral fellows; make proprietary and confidential presentations to corporate sponsors; supervise and manage the operation of his/her laboratory; perform at the level of an already well-trained, technically competent molecular biologist. Education: Ph.D. or M.D. in molecular biology or physiology. Experience: 2 years (in the job described). Experience could be gained during or after the attainment of the Ph.D. (or M.D.). Hours: Forty hours per week, 8:00 a.m. to 5:00 p.m., Monday to Friday. Salary: \$33,000 to \$46,758 per year. Must have proof of legal authority to work permanently in the United States. Send résumé in duplicate (no calls) to: J. Davies, JO #1227533, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.

POSITIONS OPEN

STAFF ANALYTICAL CHEMIST, for manufacturer in the Cincinnati area. Development of analytical research methods for the characterization of taste/flavor in beverage products. Contribute to projects which will research the effects of chemical taste/flavors in existing beverage products and the development of new products. Identify and characterize products' raw materials, packaging, and finished products by a variety of chromatographic and spectroscopic methods and innovative technologies. Manage routine, day-to-day analysis of submitted samples, use multivariate analysis techniques to reduce data and model product performance and chemical/flavor correlations. Interact closely with chemical engineers as a team member on developing projects. Ph.D. or completion of all requirements for Ph.D. in chemistry (with research emphasis in analytical chemistry) required plus 1 year of experience in job offered or 1 year of experience as pre- or postdoctoral researcher in analytical chemistry and development and application of spectroscopic methods for chromatography. One year of experience must involve research in developing chromatographic detectors and techniques; applied work in capillary LC, HPLC and capillary electrophoresis; and spectroscopic analysis using FTIR, MS, UV-Vis. One year of experience also must involve optics, lasers and mathematical methods for optimization of instrument performance; and interfacing chromatographs and spectrometers to computers.

Forty hours per week, 8:00 a.m. to 4:30 p.m. Salary: \$48,300 per year. Must have proof of legal authority to work permanently in the United States. Send résumé in duplicate (no calls) to: C. Bussard, JO #1230842, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.

ANNOUNCEMENTS

AQUATIC BIOLOGY and PLANT ECOLOGY applications for nomination for NSERC Women's Faculty Awards are invited. Must be female Canadian citizens or landed immigrants with a Ph.D. Preferred areas of research are aquatic biology, molecular biology, mycology, plant ecology, and plant morphology. Send curriculum vitae, statement of research interests, and reprints to: R. J. F. Smith, Biology Department, University of Saskatchewan, Saskatoon, Sask., S7N 0W0 Canada, by 20 July 1992. Telephone: 306-966-4400, FAX: 306-966-4461, BITNET: SMITHR@SASK.USASK.CA.

MEETINGS

MAJOR INTERNATIONAL CONFERENCE ON WATER DISINFECTION

The First International Conference on the Safety of Water Disinfection: Balancing Chemical and Microbial Risks will be held in Washington, D.C., 31 August to 3 September 1992. A distinguished group of international experts will review the current science on the potential health risks of exposure to chemical byproducts of water disinfection processes compared with those from microbial contamination of drinking water. The conference is sponsored by the International Life Sciences Institute (ILSI), U.S. Environmental Protection Agency, U.S. Food and Drug Administration, Pan American Health Organization, World Health Organization, and American Water Works Association. For further information contact: Diane Dalisera, ILSI, 1126 Sixteenth Street, N.W., Washington, DC 20036, telephone: 202-659-0074.

MARKETPLACE

Custom DNA
Purified and Delivered in 48 hours.

\$7.50 per base • Purified
Guaranteed minimum 100 µg DNA

Research Genetics
1-800-533-4363

Circle No. 3 on Readers' Service Card

From Success to Perfection

PolyATtract™ System 1000

*"the perfect mRNA
purification system"*

■ **Paramagnetic mRNA purification -
from tissue to mRNA - complete
in 30 minutes**

PolyATtract System 1000 uses Promega's MagneSphere® Streptavidin Paramagnetic particles to carry out a complete mRNA purification - from tissue to mRNA - in 30 minutes or less. mRNA purity and integrity are maintained while cutting process time to a minimum.

■ **Higher yields than oligo(dT)**

Use of efficient solution annealing reactions and elimination of standard organic extraction and precipitation steps contribute to much higher yields of mRNA. PolyATtract System 1000 can deliver up to twice the amount of mRNA as obtained from conventional oligo(dT) batch column methods.

■ **Large or small amounts of tissue**

PolyATtract System 1000 provides reagents for isolation of mRNA from up to 2g of tissue. The amount of tissue in each isolation can vary from as much as 1g to as little as 15mg. mRNA recovery is proportional to tissue mass. Up to 20 50mg isolations may be performed with one PolyATtract System 1000.



Promega

Promega Corporation

2800 Woods Hollow Road
Madison, WI 53711-5399 USA
Telephone 608-274-4330
FAX 608-273-6967
Telex 62057092

800-356-9526
Fax 800-356-1970

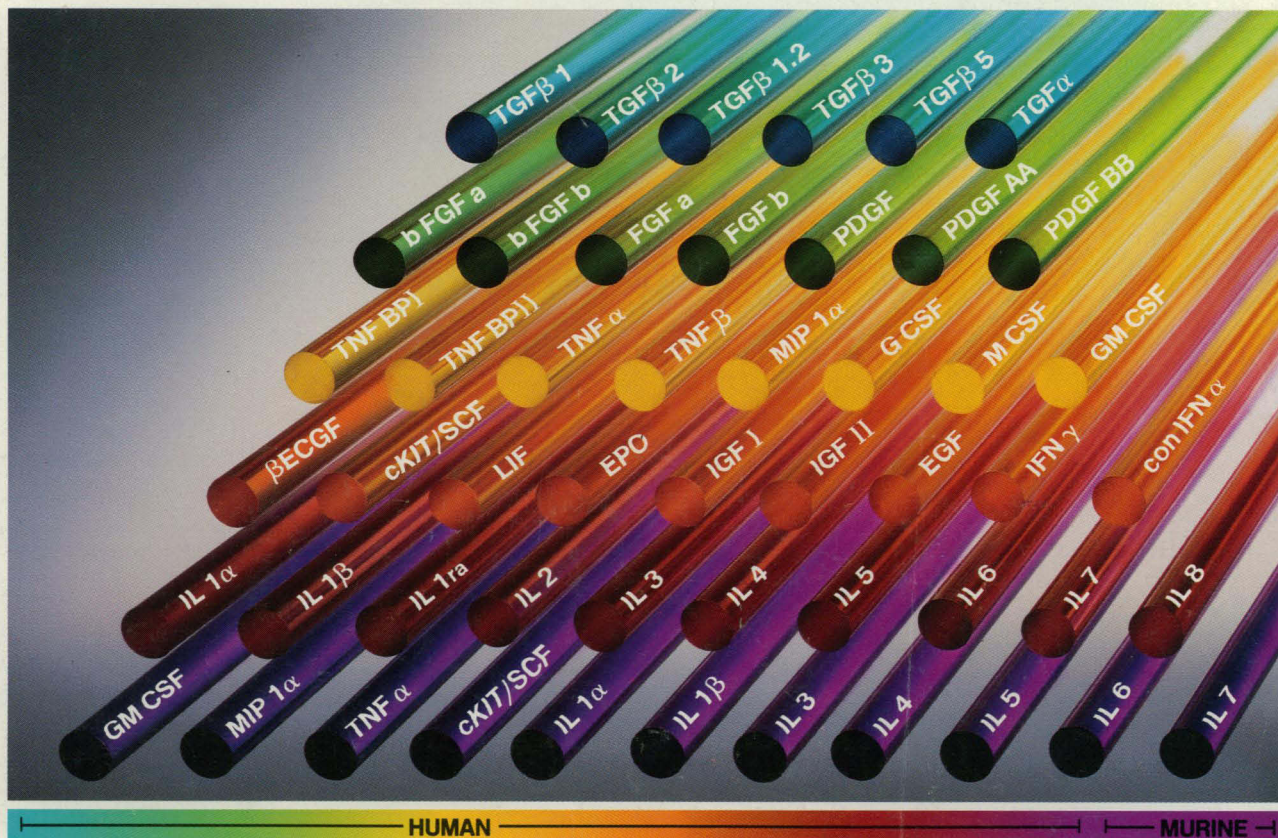
©1992, Copyright Promega Corporation
All rights reserved.

For more
information about
Promega's new
PolyATtract System
1000, please
request information
packet LF063.



Circle No. 18 on Readers' Service Card

For CYTOKINE Research



The Broadest Spectrum of Premium Quality Cytokines

The cytokine laboratories of R&D Systems provide the most extensive line of both natural and recombinant cytokines. Each protein carries the following assurances:

Superior Quality

Each cytokine is produced and extensively tested in the laboratories of R&D Systems, ensuring extremely high and consistent quality.

Full Biological Activity

The biological activity of each cytokine is determined by bioassay. A description of the appropriate bioassay and the typical ED₅₀ range is included in each package insert.

Highest Purity

All are greater than 97% pure, as determined by N-terminus analysis as well as SDS-PAGE visualized by silver stain.

Additional Reagents

R&D Systems produces over 250 cytokine related reagents (e.g. neutralizing and detection antibodies, genes, probes, and cytokine ELISA assay kits) to provide investigators with a solid foundation on which to do cytokine research.

To obtain a catalog, detailed product information or to place an order call 1-800-343-7475.

In Europe contact:

British Biotechnology, Ltd.
4-10 The Quadrant, Barton Lane
Abingdon, Oxon OX14 3YS
Telephone: +44 (0865) 781045
Fax: +44 (0235) 533420

In Japan contact:

Funakoshi Co., Ltd.
9-7, Hongo 2-Chome
Bunkyo-ku, Tokyo 113
Telephone: +81 (03) 56841622
Fax: +81 (03) 56841633

R&D Systems
614 McKinley Place N.E.
Minneapolis, MN 55413
Telephone: 800-343-7475
Fax: (612) 379-6580

1-800-343-7475

Circle No. 4 on Readers' Service Card

R&D SYSTEMS