

Sample Cooling for Capillary Electrophoresis

A new sample cooling option for the P/ACE capillary electrophoresis (CE) system allows the user to cool samples to 4°C. Although CE offers fast analysis times, automated analysis of numerous samples can take several hours, resulting in sample decomposition when left at ambient temperatures. Sample cooling has proven an effective method in eliminating these problems. The P/ACE solution for sample cooling allows the user to cool only the samples, not the buffers, and the design allows both cooled and uncooled samples to run simultaneously. **Beckman Instruments. Circle 89.**

DNA Quik Strip Kit

The DNA Quik Strip kit determines concentrations of single- or double-stranded DNA, RNA, or oligonucleotides as low as 10 ng/μl in less than 3 min. It can be used for determining nucleic acid concentrations from procedures such as library construction, plasmid and phage DNA preparations, cDNA synthesis, eluted nucleic acids, RNA transcription, polymerase chain reaction product monitoring, and poly A+ mRNA isolation. The assay does not make use of radioactivity or ethidium bromide and provides permanent results without gel electrophoresis or photography. The process simply involves spot-

ting the samples on the Quik Strip, dipping the strip in the DNA Blue Stain for 30 s, and rinsing the strip in water for 1 to 2 min. The concentration of the unknown sample is determined by matching its color intensity to the standards provided in the manual. **IBI. Circle 90.**

Monoclonal Antibodies

Monoclonal antibody (mAb) clone 53FC3 is specific for mannosidase II, a 135-kD Golgi membrane enzyme that acts as a protein marker for the Golgi apparatus. It can be used in immunofluorescence, immunoprecipitation, immunoblotting, immunolabeling, and other immunocytochemical studies. **BABCO. Circle 91.**

A range of anti-mouse and anti-rat adhesion molecule mAb's includes anti-mouse ICAM-1, anti-rat ICAM-1, anti-mouse LFA-1, anti-rat LFA-1α chain, and anti-rat LFA-1β chain. They can be used in histology, adhesion blockade, flow cytometry, and immunoprecipitation. **British Biotechnology Products. Circle 92.**

Anti-FAS mAb is an immunoglobulin M mouse mAb that induces programmed cell death or apoptosis only on human cells that express the Fas antigen. It can be used for immunoblot or flow cytometry studies. **Kamiya Biomedical Co. Circle 93.**

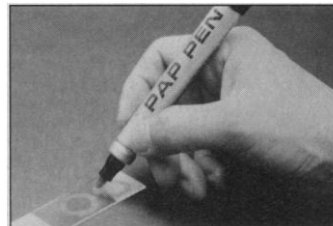
Cell Proliferation Assays

Two new nonradioactive products measure cell proliferation. The Cell Proliferation Kit is an immunocytochemical system for monitoring cell proliferation in tissue specimens derived from tissue culture and whole animal ex-

periments. Proliferation can be detected in 4 hours at sensitivity up to autoradiographic standards. The Cell Proliferation Assay is for the quantification of cell proliferation in cultured cells. **Amer-sham International. Circle 94.**

Pen Creates Barriers on Slides

The PAP Pen is a special marking pen for drawing thin film-like barriers on slides. This barrier creates the proper surface tension to hold antibody solution and other specimens within a target area. The PAP Pen releases fluids in



precise amounts and dries quickly. It is effective for use with immunoperoxidase staining, frozen section, and fluorescent antibody staining methods. Its water-repellent formulation is insoluble in alcohol and acetone. **Research Products International Corp. Circle 95.**

Capillary Electrophoresis System

The HP 3D Capillary Electrophoresis system is a fully automated instrument that incorporates a new high-sensitivity diode-array detector designed for on-capillary detection and HP Extended Light Path Capillaries, which increase sensitivity threefold over straight capillaries without sacrificing resolution. The system is automated from sample introduction to result reporting. The parameters that can be set

and performed at any time during analysis include autosampling, multiple injection, preconditioning, off-line buffer replenishment, polarity switching, fraction collection, and simultaneous programming of voltage and pressure. Capillaries can be exchanged in less than 2 min. A self-aligning mechanism ensures that the capillary is placed precisely in the detector light path. **Hewlett-Packard. Circle 96.**

Literature

DNA/RNA Concentration with Microcon and Centricon Concentrators is a technical note on devices for the ultrafiltration of nucleotides based on the nucleotide content of the fragment rather than the usual molecular weight cut-off. **Amicon Inc. Circle 97.**

Molecular Biology, Immunology, Cellular Biology 1993 is a catalog of isolation kits for total RNA, mRNA, and genomic DNA; kits for simultaneous isolation of RNA and DNA; kits for lambda phage DNA purification; hybridization reagents; electrophoresis buffer concentrates; T cell, B cell, and T cell subpopulation separation kits; mouse embryo isolation kits; and more. **Biotecx Labs. Circle 98.**

Product Selection Guide: 1993 features polycarbonate screen membrane filters; membrane filters of pure silver, silica-free polyvinyl chloride, solvent-resistant polyester, nylon, and mixed cellulose esters; ceramic filters; glass fiber filters; filter holders; and filter devices. **Poretex Corp. Circle 99.**

R&D Innovator is a monthly newsletter to help research directors and managers improve their teams' creativity and productivity by focusing on the human side of the discovery process. It brings insights from industrial and academic researchers and independent inventors. **Winston J. Brill & Assoc. 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 is a weekly, peer-reviewed journal publishing research in every field of science. Submitted manuscripts should be intelligible to readers in a variety of disciplines and should be brief and clearly written. Manuscripts may be sent to either our Cambridge or Washington office; they will be delivered to the office that will be handling them by overnight shipment if necessary. Most submitted manuscripts undergo a two-tier review process. They are first sent to the Board of Reviewing Editors, which judges them on interest and overall suitability. The top 35% of manuscripts are then sent to referees for in-depth review. All manuscripts are acknowledged; those that are not reviewed in depth are returned quickly so the author may seek publication elsewhere. When the review process is complete, the manuscript and reviewers' comments are discussed by the editors at a weekly meeting. Manuscripts are evaluated in terms of their technical merit as well as their merit in relation to other papers under consideration. Upon acceptance, authors agree to transfer copyright of the paper to *Science*, submit sequence and crystallographic data in the appropriate databases, and provide materials or methods needed to verify the paper's conclusions to other investigators under appropriate conditions. Accepted manuscripts are copyedited for clarity, after which authors receive one set of proofs and a reprint order form. Papers are scheduled for publication after *Science* has received corrected proofs.

Categories of Signed Papers

General Articles (3000 to 5000 words) review new developments in one field that will be of interest to readers in other fields; describe a current research problem or a technique of interdisciplinary significance; or discuss some aspect of the history, logic, or administration of science. Many general articles are solicited by the editor, but unsolicited articles are welcome. Both types of article undergo review.

Research Articles (up to 4000 words) contain new data representing a major breakthrough in a field. Articles and Research Articles should include a note giving the authors' names, titles, and addresses; an abstract (50 to 100 words); an introduction, and sections with brief subheadings. A maximum of 40 to 50 references is suggested. *Figures and tables together with their legends should occupy about one printed page for General Articles and Research Articles.*

Reports (up to 2500 words) are expected to contain important research results. Reports should include an abstract (no more than 100 words) and an introductory paragraph. A maximum of 30 references is suggested. Figures and tables together with their legends should occupy no more than one of the pages.

Policy Forums provide a platform for scientists to present in-depth discussions of policy issues relevant to science. When possible, Policy Forums representing opposing sides are presented in the same issue.

Perspectives analyze recent advances in fast-breaking fields and express opinions as to the impact the developments will have on future research. Perspectives should be one or two published pages.

Letters are pertinent to material published in *Science* or to problems of general interest to scientists and may be reviewed by outside consultants. Letters selected for publication are intended to reflect the range of opinions received. The author of the paper in question is usually given an opportunity to reply. Preference is given to short letters (250–500 words).

Technical Comments (up to 500 words) may criticize articles or reports published in *Science* within the previous 6 months or may offer useful additional information.

Book and Software Review selections are made by the editors. Instructions and length specifications accompany items to be reviewed when they are sent to the reviewers, who are chosen by the editors.

Checklist for Submission

✓ Manuscripts should be addressed to the Editor, *Science*, 1333 H Street, NW, Washington, DC 20005 or to Senior Editor, Thomas House, George IV St., Cambridge, UK CB2 1HH. Submit four copies together with a letter giving

- ☐ the names, addresses, and telephone numbers of the authors.
- ☐ the title of the paper and a statement of its main point.
- ☐ the names, addresses, telephone numbers, and fields of interest of four to six persons outside your institution who are qualified to referee the paper. Also include any information needed to ensure a fair review process and to avoid potential conflicts of interest.
- ☐ the names of colleagues who have reviewed the paper.
- ☐ the total number of words (including references and legends).
- ☐ a statement that the material has not been published and is not under consideration for publication elsewhere.

Also include with your manuscript:

- ☐ any paper of yours that is in press or under consideration elsewhere and includes information that would be helpful in evaluating the work submitted to *Science*.
- ☐ written permission from any author whose work is cited as a personal communication, unpublished work, or work in press but is not an author of your manuscript.
- ☐ for manuscripts based on crystallographic data, two copies of the coordinates.
- ☐ any information about the authors' professional and financial affiliations that may be perceived to have biased the presentation.

By submitting a manuscript, an author accepts the responsibility that all those listed as authors of a work have agreed to be so listed, have seen and approved the manuscript, and are responsible for its content.

Manuscript Preparation

Use double-spacing throughout the text, figure legends, and references and notes, and leave margins of at least 2.5 cm. Put your name on each page and number the pages starting with the title page.

Titles and subheadings are descriptive clauses, not complete sentences or questions. Titles should be no more than 76 characters for general articles and 114 characters for research articles and reports.

Abstracts should convey the main point and outline conclusions.

Figures and tables should be provided on separate pages and should be cited in numerical order within the text. For each figure, submit four high-quality prints, laser prints, or original drawings no larger than 22 x 28 cm. On the back of each, write the first author's name and figure number and indicate the correct orientation. Photocopies, transparencies, slides, and negatives are not acceptable. Lettering in Helvetica is preferred. Protein or nucleotide sequences may be

reduced, so make sure the original is clear. A sequence that will occupy the full width of the printed page is 130 characters and spaces; one that will occupy two columns is 84 characters and spaces. Color artwork will be charged at \$600 for the first color figure or figure part and \$300 for each additional figure or part. There is an additional charge for color figures in reprints.

Acknowledgments, including funding information, should be brief and should be at the end of the references and notes.

Science

PERSONNEL PLACEMENT

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- **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.
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- **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.
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- **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.

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POSITIONS OPEN

The Department of Anatomy, College of Medicine, Michigan State University, invites applications for a tenure-track **ASSISTANT PROFESSOR** position. Applicants must have a Ph.D. or equivalent degree. We are seeking candidates with demonstrated research expertise in neurobiology/cell biology who would establish an active research program as well as complement current faculty research programs in these general areas. The successful candidate should be qualified to teach Human Gross Anatomy and be committed to excellence in medical education. Prior teaching experience in a medical school basic science curriculum is preferred. Salary will be commensurate with experience and University/College guidelines. Interested candidates should send curriculum vitae, reprints, statement of current and future research plans and names of three references by July 1, 1993, to: Dr. Joseph Vorro, Chair, Department of Anatomy, Michigan State University, East Lansing, MI 48824. Late submissions will be considered if a suitable candidate pool is not identified by the deadline. Applicants should reference the academic position number **HM545**. The disabled have the right to request and receive reasonable accommodation. Women and minorities are encouraged to apply.

MSU is an Affirmative Action/Equal Opportunity Institution.

FACULTY POSITION APPLIED/ENVIRONMENTAL MICROBIOLOGY/MOLECULAR BIOLOGY

The Department of Biology at Georgia State University invites applications for an anticipated tenure-track position. The appointment will start on or after September 15, 1993. Appointment is expected to be at the **ASSISTANT PROFESSOR** level; however, appointment at a higher level will be considered for candidates with appropriate credentials. Applicants should have a Ph.D. in related fields and at least two years of postdoctoral experience. Preference will be given to those candidates with experience in the application of molecular approaches to environmental biology. Responsibilities will include participation in teaching and research in undergraduate, M.S. and Ph.D. programs. The successful candidate will be expected to interact closely with other faculty in molecular biology, chemistry and geochemistry. Salary will be commensurate with experience. Applications, including curriculum vitae, reprints, statement of research plans and three letters of reference should be sent to: Chair of Search Committee, Department of Biology, Georgia State University, P.O. Box 4010, Atlanta, GA 30302-4010. Deadline for receipt of applications is May 15, 1993. *Georgia State University, a unit of the University System of Georgia, is an Equal Opportunity Educational Institution and an Equal Opportunity/Affirmative Action Employer.*

DEAN, COLLEGE OF PHARMACY, UNIVERSITY OF UTAH. A distinguished educator/scientist is sought to provide educational, scientific and fiscal leadership for the college. The Dean is the chief administrator of the college, reporting directly to the Vice President for Health Sciences. The College of Pharmacy is research-intensive and committed to excellence in professional and graduate education. Applications will be accepted until June 1, 1993, or until a suitable candidate has been identified. Please send curriculum vitae and names, addresses and telephone numbers of three or more referees to: Jean K. Devenport, Pharm.D., Chair of the Search Committee, University of Utah College of Pharmacy, Salt Lake City, UT 84112. *The University of Utah is an Equal Opportunity/Affirmative Action Employer; applications from qualified female/minority candidates are encouraged.*

The Gladstone Institute of Cardiovascular Disease and the University of California at San Francisco General Hospital are recruiting a clinician scientist (M.D. or M.D./Ph.D.) at the level of **ASSISTANT PROFESSOR**. Research experience in the field of molecular medicine (e.g., gene therapy or homologous recombination) is required.

Gladstone and UCSF are Equal Opportunity/Affirmative Action Employers. Women and minorities are encouraged to apply. Applicants should send curriculum vitae and the name of at least three references to:

Gordon J. Strewler, M.D.
Veterans Administration Medical Center
4150 Clement Street, 111-N
San Francisco, CA 94121

POSITIONS OPEN

ASSISTANT PROFESSOR IN ORAL PATHOLOGY

Applications are invited for a full-time, tenure-track position in the Department of Pathology of Northwestern University Dental and Medical Schools at the rank of Assistant Professor. The candidate must hold a D.D.S. or equivalent degree, and be Board-certified or Board-eligible in either Oral Pathology or Anatomic Pathology. The candidate is expected to have a graduate degree with rigorous research training and experience sufficient to maintain a viable research program. He/She will be expected to participate in teaching of pathology, to take part in teaching of graduate students in our established Life Sciences Graduate Program, and to participate in an oral biopsy service. Salary is commensurate with experience. Interested candidates are requested to send curriculum vitae and three references no later than May 31, 1993 to: Janardan K. Reddy, M.D., Professor and Chairman, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611-3008.

Northwestern University is an Affirmative Action/Equal Opportunity Employer. Hiring is contingent upon eligibility to work in the United States.

CELLULAR AND MOLECULAR BIOLOGIST

The Department of Biology invites applications for a tenured **PROFESSORSHIP** (head of the laboratory) in cellular and molecular biology. The laboratory consists of a professor (this position), an associate, and two assistant professors. We wish to recruit an individual with an outstanding record in their interest of research. Teaching advanced and basic courses required. *No discrimination by nationality or religion.* Salary determined by governmental rule and methods depending on research and teaching experience. Japanese or English proficiency required. Expected to hold the position at least three years (renewable every three years). Submit curriculum vitae, reprints, statement of research interests, and three letters of recommendation by July 15, 1993, to: Sadaaki Iwanaga, Department of Biology, Faculty of Science, Kyushu University 33, Fukuoka 812, Japan.

INTER AMERICAN UNIVERSITY OF PUERTO RICO—Position in higher education. Inter American University of Puerto Rico (IAU), a private non-profit institution, invites applications for the following position: Full-time **ASSISTANT PROFESSOR OF OPTOMETRY**. The candidate must be able to lecture in Spanish, possess a Doctoral degree in Optometry with a major in Visual Sciences. Teaching load is 15 credit/hours. Starting salary is \$33,300 per year. **DEADLINE:** May 15, 1993. Send résumé and academic credentials to: Inter American University of Puerto Rico • School of Optometry • Human Resources Office • P.O. Box 191049 • San Juan, PR 00919-1049. *An Equal Opportunity/Affirmative Action Employer (M/F/H/V).*

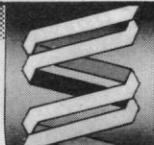
BIOLOGICAL SCIENCES INSTRUCTOR

The Department of Natural Sciences, School of Liberal Arts and Sciences, Stephens College, Columbia, Missouri, seeks **BIOLOGICAL SCIENCES INSTRUCTOR** for a nine-month, tenure-track, teaching and advising appointment. Position begins August 1993. Responsibilities include teaching both lecture and lab sections for anatomy and physiology, genetics, and microbiology (alternate year offerings), and each year, sections in biological concepts and natural sciences for non-majors. Advising and research involving undergraduates is expected. Ph.D. required. Strong commitment to women's education essential. Salary commensurate with qualifications and experience. Submit letter of application stating teaching philosophy and professional goals, curriculum vitae, three letters of recommendation and transcripts of all undergraduate and graduate studies to: Charles Laun, Chair, Biology Search Committee, Campus Box 2072, Department of Natural Sciences, Stephens College, Columbia, MO 65215. Review of applications will begin April 27, 1993, and will continue until position is filled. *Affirmative Action/Equal Opportunity Employer.*

Technology Policy: TENURE-TRACK FACULTY at any level to teach and do research on technical innovation, technology transfer, manufacturing, or similar issues. Research must not treat technology as a black box. Require Ph.D. in science or engineering and demonstrated modern social science research skills. Send résumé to: Professor M. Granger Morgan, Head, Department of Engineering and Public Policy, Carnegie Mellon, Pittsburgh, PA 15213, USA. *CMU is an Affirmative Action/Equal Opportunity Employer.*

DIRECTOR, SCHOOL OF FOREST RESOURCES, PENN STATE. The Pennsylvania State University seeks applications for the position of Director, School of Forest Resources. The director is the school's administrative officer and program leader, and reports to the Dean of the College of Agricultural Sciences. Qualifications include a Ph.D. degree plus a significant period of professional and/or academic experience in a natural resource field; experience or in-depth knowledge of university teaching, research, and extension functions; and administrative and program leadership experience, or strong evidence of the potential for such leadership. The School offers baccalaureate programs in Forest Science, Wildlife and Fisheries Science, and Wood Products at the University Park Campus, and two-year associate degree programs in Forest Technology and Wildlife Technology at the Mont Alto and DuBois campuses, respectively. Graduate programs leading to the M.S., M.F.R., M. Agr., and Ph.D. in Forest Resources and the M.S., M. Agr. and Ph.D. in Wildlife Fisheries Science are also available at University Park. In addition, the School is developing a new undergraduate major in natural resources management. Currently the faculty number 31 at University Park with 7 additional faculty at the DuBois and Mont Alto campuses. Enrollment in the School's programs at the University Park is currently 300 undergraduates plus an estimated 115 undergraduates at Commonwealth Campuses and 75 graduate students. Consideration of applications will begin JULY 15, and will continue until a suitable candidate is selected. Submit a complete resume with documentation of academic training and professional experience along with the names, addresses and telephone numbers of five suggested references to: DR. J.R. STAUFFER, CHAIR, DIRECTOR SEARCH COMMITTEE, 2E FERGUSON BUILDING, SCHOOL OF FOREST RESOURCES, THE PENNSYLVANIA STATE UNIVERSITY, UNIVERSITY PARK, PA 16802. An Affirmative Action/Equal Opportunity Employer. Women and Minorities Encouraged to Apply.

Research Opportunity



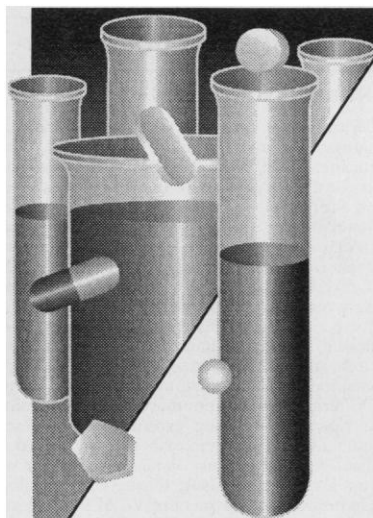
Professional positions are available in two Bioinformatics Projects. One project, funded under the Genome Initiative, is developing mammalian genetic databases. The second project is developing a mammalian gene expression database. These positions entail literature searching, acquiring and analyzing data to be incorporated into the databases, and providing genetic and gene expression information and database support for users. Applicants must be versed in areas of classical and molecular genetics or developmental biology. Other desirable attributes include writing and communication skills and experience using computers. MS degree in life sciences preferred.

The Jackson Laboratory, located on the coast of Maine adjacent to Acadia National Park, is a world-renowned center and resource for mammalian biology and genetics.

Qualified candidates should send resume to: Harold R. Wheeler, Employment Manager, The Jackson Laboratory, 600 Main Street, Bar Harbor, ME 04069, (207) 288-3371.

An Affirmative Action/Equal Opportunity Employer

The Jackson Laboratory



A DYNAMIC MISSION

*At the Glaxo Inc. Research Institute,
Our Priority is Progress.*

In Research Triangle Park, NC, the inspirational Sir Paul Girolami Research Center houses the new Glaxo Inc. Research Institute. Here, professional excellence teams with scientific leadership in a unified mission: to advance the

progress of drug discovery and development. The result is an environment of exceptional challenge...and unsurpassed reward.

The following openings are available within our **DEPARTMENT OF CELLULAR BIOCHEMISTRY**. Interests of this group range from theory and practice of receptor-ligand interactions, to signal transduction mechanisms, to the molecular biology of receptors. The successful candidates will join our highly collaborative research team focused on G-protein coupled receptors and their second messenger systems. These individuals will assist in developing a research program based on the molecular pharmacology of G-protein coupled receptors and their signalling systems.

SENIOR SCIENTIST

Selected individual will be responsible for developing an independent research program on the molecular biology of receptors, and take part in both exploratory projects as well as those relating to compound development.

Background must include a Ph.D. in Molecular Biology, Pharmacology, Biochemistry, or a similar discipline, with a minimum of 2 years postdoctoral experience, preferably in the molecular pharmacology of G-protein coupled receptors. Previous experience in isolation and cloning of receptors, in vitro hybridization, or site-directed mutagenesis would be beneficial.

Please refer to Job # ASC912808 on all resumes.

POSTDOCTORAL SCIENTIST

The selected individual will be responsible for developing a research project on signal transduction mechanisms of G-protein coupled receptors, taking advantage of our state-of-the-art facilities, and open, collaborative environment, while becoming acquainted with research opportunities in the pharmaceutical industry.

Qualified candidate must be a recent Ph.D. graduate with a solid background in Biochemical Pharmacology. Previous experience with second messenger systems would be beneficial.

Please refer to Job # ASC911709 on all resumes.

At Glaxo, pride in our people is reflected in excellent salaries and a flexible benefits package, as well as in such amenities as an on-site fitness center and a work setting in which you will take pride. Research Triangle Park, NC offers an academically enriched quality of life complete with cultural and recreational advantages. For confidential consideration, send your resume to include salary history, **indicating the position title and referring to the appropriate Job # listed above, 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/D/V.

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The Time For Achievement Is Now

POSITIONS OPEN

FACULTY POSITION: The Department of Biology of Monmouth College, Monmouth, Illinois, invites applications for a tenure-track position for the fall of 1993. Candidates should have a strong interest in **ECOLOGY** and be prepared to teach ecology, general zoology and embryology or anatomy. Supervision of senior research projects is expected and provides continuing research opportunities. Experience either as a student or in teaching in a liberal arts institution is highly desirable. Application, including curriculum vitae, three letters of recommendation, and undergraduate/graduate transcripts should be sent by May 10, 1993, to: **Dr. William B. Julian, Vice President of Academic Affairs, Monmouth College, Monmouth, IL 61462.** Applications will be considered until the position is filled. *An Equal Opportunity/Affirmative Action Employer.*

Cell Biology of Aerodigestive Tract—ASSISTANT PROFESSOR: Applications are invited for a position to develop an interdisciplinary research program at Long Island Jewish Medical Center (LIJ) and Albert Einstein College of Medicine on epithelial mesenchymal interactions in normal development and neoplastic processes in the upper aerodigestive tract. Applicants should have a doctoral degree and postdoctoral training in cell biology, extracellular matrix biology and/or molecular biology. Successful candidate will interact closely with investigators at LIJ and the Albert Einstein College of Medicine (**Dr. Karen Auborn, Dr. Robert Bienkowski, Dr. Bettie Steinberg and Dr. Thomas Van De Water**) and must qualify for appointment in the Departments of Otolaryngology and Pediatrics at the Albert Einstein College of Medicine. Salary, technical support and laboratory space will be provided for up to five years. Additionally, you will be expected to develop an externally funded research program. Send curriculum vitae with publication list, and names and addresses of three references to: **Dr. Thomas Van De Water, Department of Otolaryngology, Albert Einstein College of Medicine, 1410 Pelham Parkway South, Kennedy Center 302, Bronx, NY 10461.** LIJ is the Long Island Campus for the Albert Einstein College of Medicine. *An Equal Opportunity Employer.*

DEAN OF FACULTY

The Division of Academic Affairs invites applications for the position of Dean of Faculty. Candidates must have experience in the academic environment with a commitment to the contemporary scientific basis of chiropractic. Candidate should have prior leadership experience and Ph.D. or D.C. with significant experience in administration or teaching. D.C. candidates should possess or be eligible to sit the New York State licensing examination.

Applications will be accepted until the position is filled. Send curriculum vitae and 3 letters of reference to: **David A. Herd, D.C., Chair Search Committee, P.O. Box 800, Seneca Falls, NY 13148.**

New York Chiropractic College is an Affirmative Action/Equal Opportunity Employer.

CHAIR, DIVISION OF PHARMACEUTICS, SCHOOL OF PHARMACY, UNIVERSITY OF NORTH CAROLINA. The School of Pharmacy at the University of North Carolina at Chapel Hill invites applications for the position of Chair of the Division of Pharmaceutics. The Division Chair is responsible for providing administrative leadership to the research and teaching programs of the Division. Candidates must have a Ph.D. in either the pharmaceutical or biomedical sciences, an active research program and an understanding of the dynamics of the profession of pharmacy and its educational goals. The School is part of the Division of Health Affairs of the University of North Carolina, and is in close proximity to the Research Triangle Park, a large research-intensive conglomerate of various industries and institutes. *The University is an Equal Opportunity/Affirmative Action Employer.* Interested individuals should submit curriculum vitae and names of three references to: **Dr. George H. Cocolas, School of Pharmacy, University of North Carolina, Chapel Hill, NC 27599-7360.**

POSITIONS OPEN

TENURE-TRACK PHARMACOLOGIST

The Department of Veterinary and Comparative Anatomy, Pharmacology and Physiology, College of Veterinary Medicine, Washington State University solicits applications for a tenure-track position in pharmacology. Rank and salary will be commensurate with qualifications. Duties include teaching veterinary and graduate pharmacology and establishing a viable research program. Qualifications include a D.V.M./Ph.D., D.V.M. or Ph.D. in pharmacological sciences. The candidate must have a commitment to excellence in teaching, and teaching experience is required. Relevant areas of research include, but are not limited to, alcohol and drug abuse, cardiovascular pharmacology, molecular biology, neuroendocrinology, neuropharmacology and pharmacokinetics. Written applications must include curriculum vitae, description of teaching experience and research interests and a list of three references to be contacted on your behalf. Applications and inquiries should be addressed to: **Dr. Peter Kalivas, Chair, Pharmacology Search Committee, Department of VCAPP, Washington State University, Pullman, WA 99164-6520.** Application deadline is June 1, 1993, or until position is filled. *Washington State University is an Equal Opportunity/Affirmative Action Employer. People of color, women, persons of disability, Vietnam-era disabled veterans and/or persons between the ages of 40 and 70 are encouraged to apply.*

SUPERVISORY CHEMIST

Applications are invited for **CHIEF, CHEMICAL LABORATORY DIVISION (GM-15), U.S. Army Dugway Proving Ground, Utah.** The incumbent will direct chemical defense testing programs for the Department of Defense. The chief will act as laboratory director for all activities performed by civilian, contract and military personnel in a recently constructed laboratory. The incumbent will supervise employees engaged in conducting methodology studies and applied research in all aspects of chemical defense. Incumbent is also responsible for development and performance of compliance programs, e.g., safety, chemical agent surety, and hazardous waste handling. *U.S. citizenship and top secret clearance is required.* Salary \$66,609 to \$86,589. Contact: **Ms. Jackie Wilde, Civilian Personnel Office, Dugway Proving Ground, Dugway, UT 84022-5000, Telephone: (801) 831-2181, Monday to Thursday, 7:00 a.m. to 5:30 p.m. MDT** for information and application packet. *An Equal Opportunity/Affirmative Action Employer.*

Trinity College in Washington, D.C. is seeking a biologist/environmental scientist at the rank of **ASSISTANT PROFESSOR**, effective fall 1993. Teaching responsibilities will include ecology, evolution, genetics, and possibly vertebrate development and anatomy or botany. We are especially interested in someone who will be able to develop our environmental science major. Ph.D. is required. Please send letter of application, curriculum vitae, transcripts, and three letters of recommendation to: **Carole King, Director Human Resources, Trinity College, 125 Michigan Avenue N.E., Washington, D.C. 20017.** Applications should be received by May 15, 1993. *Trinity College is an Equal Opportunity Employer.*

ENVIRONMENTAL BIOLOGIST

Applications are invited for a tenure-track position at the **ASSISTANT PROFESSOR** level beginning fall 1993 in the Biology Department at Elizabethtown College, a small, liberal arts college in southeastern Pennsylvania. The department is seeking someone to supervise a newly instituted Environmental Science Program and teach related courses, such as aquatic ecology and ecotoxicology, and a research methods and a general microbiology course. Some involvement in the general biology program may be necessary. The candidate should have a Ph.D. in Microbial Ecology/Environmental Microbiology or an environmentally related area, have a strong commitment to undergraduate teaching, and have a desire to develop a research program with undergraduates. Grant writing experience is desirable, but not necessary.

Applicants should submit a letter of application, curriculum vitae, description of research interests, copies of transcripts, and names and telephone numbers of three references to: **Martha A. Farver-Apgar, Director of Personnel, Elizabethtown College, One Alpha Drive, Elizabethtown, PA 17022-2298.** Applications will be accepted until position is filled, but no later than June 1, 1993.

Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR EXPERIMENTAL PATHOLOGY

The Department of Comparative and Experimental Pathology has a tenure-track position open for an experimental pathologist at the rank of assistant professor beginning on or after September 1, 1993. Applicants should have a Ph.D. degree or D.V.M./Ph.D. degrees and a record of accomplishment in research. Individuals with molecular research programs focused on virology/viral pathogenesis, cytokine pathobiology, cellular immunology, and leukocyte pathobiology will be given preference. Excellent departmental research resources are available in the Health Science Center and in the Institute of Food and Agricultural Sciences. The successful candidate will be expected to establish a productive research program and to participate with other faculty in the graduate education programs in experimental pathology and infectious diseases. Applicants should submit a letter of intent, curriculum vitae, and the names of three references before July 1, 1993, to: **Dr. William L. Castleman, Chairman, Department of Comparative and Experimental Pathology, College of Veterinary Medicine, P.O. Box 100145, University of Florida, Gainesville, FL 32610-0145.**

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

INVERTEBRATE ZOOLOGIST

DEPARTMENT OF ORGANISMIC AND EVOLUTIONARY BIOLOGY HARVARD UNIVERSITY

The Department seeks a broadly based invertebrate zoologist whose work addresses the organismic and evolutionary biology of living invertebrates (exclusive of insects). The appointment will be to a **TENURED PROFESSORSHIP**. We are especially interested in individuals whose research experience and interests extend across phyla. Applicants should submit, by 1 June 1993, curriculum vitae, a statement of research and teaching interests, and the names and address of three references to:

**Professor Farish A. Jenkins, Jr.,
Chairman, Invertebrate Zoology Search Committee
Department of Organismic and Evolutionary Biology
Harvard University
Cambridge, MA 02138**

Harvard University is an Affirmative Action/Equal Opportunity Employer. We encourage applications from women and minority groups.

ASSOCIATE DIRECTOR—HEMOSTASIS RESEARCH AND DEVELOPMENT: Plan, organize, manage, and control company-wide research and development programs in hemostasis; provide technical education and support to customers and to distribution and sales personnel in the hemostasis market segment; manage Hemostasis Research and Development Group in product support, quality improvement, and new product development of clot-based technology; direct development of enzyme immunoassays, coagulation assay systems, and hemostasis reagents; interface with Manufacturing Managers and Quality Assurance Directors to ensure smooth transition from product development to routine production; serve on major domestic and international advisory councils in order to influence the development and documentation of standards in hematology, blood coagulation, and enzymology.

Applicants should possess Ph.D. degree in Biochemistry, one year of experience in the position, or 4 years of experience as a Research Scientist. Experience in position or related occupation must include the following: isolation and characterization of human blood coagulation/fibrinolysis proteins; development of poly/monoclonal antibodies against coagulation/fibrinolysis proteins and coagulation/fibrinolysis activation markers; development of enzyme immunoassays, coagulation assay systems, and hemostasis reagents.

Forty hours per week; 9:00 a.m. to 5:00 p.m.; \$87,000 per year. *Must have legal authorization to work in the United States.*

Send résumés to: **Job Service of Florida, 701 S.W. 27th Avenue, Room 47, Miami, FL 33135-3014; Attention: Ms. Rosanne Roberts, Alien Employment Certification Specialist. Rc: Job order number FL 0809020. NO CALLS. AN EMPLOYER PAID AD.**

ANNOUNCEMENT: AVAILABILITY OF GRANTS FOR BASIC GLYCOSCIENCE STUDIES

Mizutani Foundation for Glycoscience announces the availability of research grants for basic researches in glycoscience. The suggested proposals for this year are the studies of glycoconjugates; namely, their biochemistry, organic chemistry, biophysics, molecular biology, immunology, and medical significance.

Mizutani Foundation for Glycoscience is a non-profit, private organization devoted for the advancement of glycoscience. The foundation was established on October 1, 1992 with the funds donated by Mr. Masakane Mizutani, Chairman of Seikagaku (Biochemical) Corporation, Tokyo, Japan.

Note 1: For the current year (4/93–3/94) the research "year" is effective only from October 93 through March 94, a 6-month period in total.

Qualification: An applicant must (a) have a Ph.D. or M.D. degree, or their equivalent, in a field related to the proposed study, (b) be a member of a research institute where he or she can carry out the proposed project, and (c) have a documented capability to do independent research in the field of glycoscience.

Grant: As much as 10,000,000 yen (including overhead) may be requested for a research proposal per annum. As a rule, the grant will be approved for one (1) year, but certain proposals, depending on the merit of ongoing research, may be granted a further one year extension, provided application for such extension is made before the end of the ongoing funding period.

Please see Note 1 above for definition of current year.

The total money available for the grant is approximately 100,000,000 yen per annum. However, the cash to be allocated for new research proposals and the number of proposals to be funded may vary each year.

The approved grant will be awarded to the research institution to which the principal investigator is affiliated. No budget will be included in the grant for the stipend of the principal investigator or collaborators. There are certain other regulations as specified in the application form.

Selection: The research proposals will be reviewed and evaluated by the committee of specialists appointed by the foundation for the originality, scientific merit, and feasibility. The potentiality of the principal investigator and the research environment will also be considered.

Application form: The official application form may be obtained by sending a letter or fax (in English, no phone call please) to **the North American office of Mizutani Foundation for Glycoscience:** Department of Biochemistry, Meharry Medical College, 1005 David Todd Jr. Blvd., Nashville, TN 37208, USA (Fax: 615-327-6442).

Deadline: The deadline for application is June 30, 1993 at **the Tokyo office of Mizutani Foundation for Glycoscience:** Sen-i Kaikan, Suite 5F, 3-1-11 Nihonbashi-honcho, Chuo-ku, Tokyo 103, Japan (Fax: 03-3246-1265).

STA FELLOWSHIP PROGRAM

Postdoctoral Fellowships in Japanese National Laboratories

Introduction

The Science and Technology Agency (STA), an administrative organ of the Government of Japan, established the STA Fellowship Program in 1988 in order to offer opportunities for promising young foreign researchers in the fields of science and technology to conduct research at Japan's national laboratories and public research corporations (excluding universities and university-affiliated institutes).

The Program is also a response to calls from the international community of science and technology for greater international cooperation through the exchange of promising researchers.

Since Oct. 1, 1989, the Program has been managed by the Research Development Corporation of Japan (JRDC), a statutory organization under the supervision of STA, in cooperation with the Japan International Science and Technology Exchange Center (JISTEC). JRDC also has the strong support and cooperation of the Responsible Organizations listed in Table 1.

Fellowship Qualifications

The fellowships are open to young PhD holders of under 35 in principle, from universities, research councils, government research laboratories and industry. Any science or engineering discipline will be considered except military R & D.

Applicants should be of sufficient good health to pursue research activities in Japan.

Have sufficient language ability to pursue research activities in Japan, Japanese language ability is preferable, but English is sufficient in most cases. With the agreement of the host research institute, other languages may suffice.

Tenure and Field of Research

The tenure will be from 6 months to 2 years, to be decided upon through negotiation between the candidate and the host institute. The field of research will also be decided upon through negotiation between the candidate and the host institute, the results of research activities produced during the tenure will be subject to the regulations of the host institute.

Research field include: Mathematics; Physics; Geology; Electricity; Electrons; Information Engineering; Mechanics; Engineering Works; Architecture; Erosion Control; Landscaping; Chemistry; Metals; Resources Engineering; Medical Science; Pharmaceuticals; Agricultural Technology; Farming; Forestry; Fisheries; others in the Natural Science.

FELLOWSHIP AWARDS

Fellowships include round-trip air tickets (economy class; not available for dependents) and the following allowances:

- 1) Living allowance: 270,000 a month
- 2) Family allowance: 50,000 a month
- 3) Housing: Apartments will normally be provided to awardees. The apartment floor area is 40m² for awardees unaccompanied by their family and 60m² for awardees to stay with their family in other than metropolitan areas such as Tokyo. If an awardee prefers to use a larger apartment because of the family size or otherwise 100,000 maximum per month may be paid as housing allowance; any shortfall is to be borne by the awardee.
- 4) An initial international settling-in allowance: 200,000
- 5) An annual allowance of up to 115,000 for travel within Japan related to research activities.
- 6) Medical insurance (N.B. not available for dependents)

Assistance for Fellows

If they wish, Fellows may take advantage of the following assistance:

- 1) Free Japanese language courses for Fellows whose host research institutes are in Tsukuba area. Fellows whose institutes are located elsewhere are entitled to reimbursement of reasonable amounts for language tuition at a private school. (N.B. not available for dependents);
- 2) Since most apartments in Japan are unfurnished, basic furniture and electric appliances will be provided free of charge to Fellows;
- 3) Counseling on problems relating to such aspects of daily life as children's schooling, medical care and shopping, is available for Fellows living in Tsukuba area.

APPLICATION PROCEDURE FOR STA FELLOWSHIP (Fig 1)

Applicants possessing the nationality or citizenship or permanent resident status of a country listed in Table 1 should:

- 1) Contact the Responsible Organization in their country to obtain an application form and information about the host research institutes.
- 2) Communicate with host research institutes of interest to ascertain their suitability for the applicant's area of specialization. This should be done using the attached Form 1.
- 3) After agreeing with the prospective host institute on the subject of research, the length of tenure and starting date for the Fellowship, the applicant should obtain from the institute a formal letter of acceptance expressing its willingness to serve as a host.
- 4) Submit the completed application form and the letter of acceptance to the Responsible Organization concerned. The Responsible Organization will then screen applicants, and submit its recommendations for Fellowship candidates to JRDC through JISTEC, accompanied by a complete dossier on the candidates.
- 5) JRDC will then conduct a further screening and notify successful applicants by sending a Letter of Award through JISTEC. The Responsible Organization and the host research institute concerned will also be informed in this respect.

Fig. 1 Procedural Flow from Contact to Receipt of Award

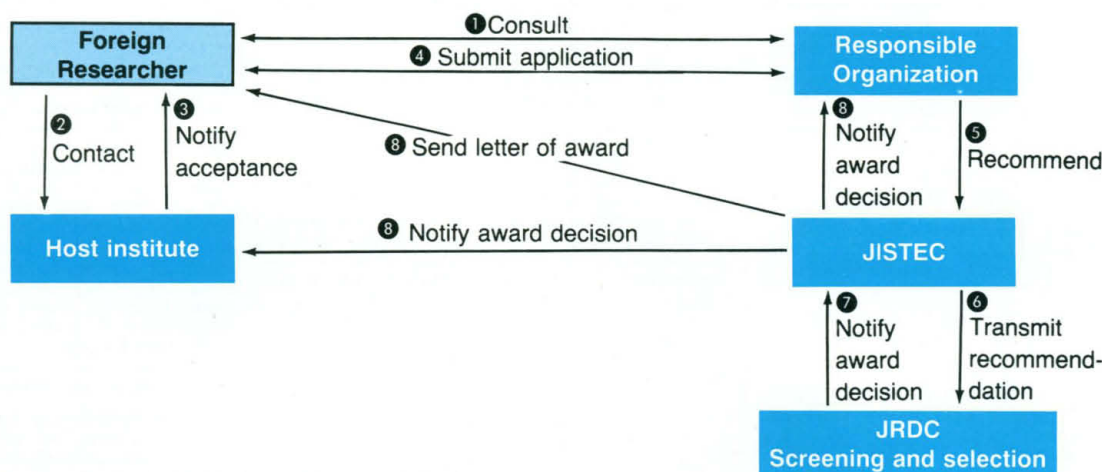


Table 1 **RESPONSIBLE ORGANIZATIONS**

| Country | Contact | | |
|-------------|--|----------------------|--|
| AUSTRALIA | THE AUSTRALIAN ACADEMY OF SCIENCE Ms. Bonnie Bauld International Exchange Officer GPO Box 783, Canberra ACT 2601 Tel: 61-6-247-3966 Fax: 61-6-257-4620 | NEW ZEALAND | MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY Ms. Lisa Goodman International Science Officer P.O. Box 5336, Wellington Tel: 64-4-472-6400 Fax: 64-4-471-1284 |
| AUSTRIA | FEDERAL MINISTRY FOR SCIENCE AND RESEARCH Ms. Susanna Peterka Administrative Officer, International Affairs Minoritenpl atz 5, A 1014 Vienna Tel: 43-222-531-20-6794 Fax: 43-222-531-20-6486 | NORWAY | THE ROYAL NORWEGIAN COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (NTNF) Ms. Else Boon Advisor P.O. Box 70, Tåsen 0801 Oslo 8 Tel: 47-2-237685 Fax: 47-2-181139 or 47-2-184137 |
| CANADA | NATURAL SCIENCE AND ENGINEERING RESEARCH COUNCIL Ms. Eileen P. Garvey Program Officer, Japan Programs 200 Kent Street, Ottawa, K1A 1H5 Tel: 1-613-947-0190 Fax: 1-613-992-5337 | SWEDEN | NUTEK Ms. Leena Holappa Administrative Program Officer Liljeholmsvägen 32, S-117 86, Stockholm Tel: 46-8-775-4000 Fax: 46-8-19-68-26 |
| GERMANY | ALEXANDER VON HUMBOLDT-STIFTUNG Dr. Michal Meier Department Sponsorship Abroad Jean-Paul-Str. 12, D-5300 Bonn 2 Tel: 49-228-833-101 Fax: 49-228-833-199 | SWITZERLAND | SWISS NATIONAL SCIENCE FOUNDATION Dr. Benno G. Frey Head of the Fellowship Section Wildhainweg 20, CH-3012, Bern Tel: 41-31-27-22-22 Fax: 41-31-23-30-09 |
| FINLAND | THE ACADEMY OF FINLAND Ms. Ritva Helle International Affairs P.O. Box 57, SF-00551 Helsinki Tel: 358-0-7758-316 Fax: 358-0-7758-299 | UNITED KINGDOM | THE ROYAL SOCIETY Ms. Vida Cody Head of Japan Exchanges 6 Carlton House Terrace, London SW1Y 5AG Tel: 44-71-839-5561 Fax: 44-71-930-2170 |
| FRANCE | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE Ms. Françoise Aubujeault Chief of Asia Division, Mission of International Relations 15 Quai Anatole-France, 75700 Paris Tel: 33-1-47-53-12-43 Fax: 33-1-47-53-18-70 or 33-1-47-53-00-55 | UNITED STATES | NATIONAL SCIENCE FOUNDATION Ms. Janice M. Cassidy Japan Programs Division of International Programs 1800 G Street, NW, Washington, D.C. 20550 Tel: 1-202-653-5862 Fax: 1-202-653-5929 |
| ITALY | MINISTERO DELLA RICERCA SCIENTIFICA E TECNOLOGICA Ufficio Relazioni Internazionali Dr. Maria Enrica Danubio Head of Bilateral Activities International Relation Office Lungotevere Thaon di Revel 76, 00100 Roma Tel: 39-6-3232642 Fax: 39-6-3221584 | EUROPEAN COMMUNITIES | COMMISSION OF THE EUROPEAN COMMUNITIES Mr. Mario Merla Directorate-General for Science, Research and Development DG XII-G-3 200 Rue de la Loi, 1049 Brussels, Belgium Tel: 32-2-295-39-90 Fax: 32-2-296-33-08 |
| NETHERLANDS | STICHTING VOOR DE TECHNISCHE WETENSCHAPPEN (STW) Dr. C. A. M. Mombers Program Officer Postbus 3021, 3502 GA Utrecht Van Vollenhovenlaan 661, Utrecht Tel: 31-30-923275 Fax: 31-30-961536 | | |

Further information regarding the STA Fellowship and host institute is available from the responsible organizations, or JRDC. (See below)

Research Development Corporation of Japan (JRDC)
Address: 5-2, Nagata-cho 2-chome, Chiyoda-ku, Tokyo 100, Japan

POSITIONS OPEN

Trinity College, Washington D.C. Tenure-track position in physics at the rank of **ASSISTANT PROFESSOR**, beginning fall 1993. Trinity College is a liberal arts Catholic college for women. The successful applicant will teach general physics and other physics courses as needed to support biology, chemistry, and environmental science majors. A Ph.D. is required. Previous teaching experience is preferred. Review of applicants will begin on May 15, 1993. Send letter of application, curriculum vitae, transcripts, and three letters of recommendation to: **Carole King, Director of Human Resources, Trinity College, 125 Michigan Avenue, NE, Washington, DC 20017. Trinity College is an Affirmative Action/Equal Opportunity Employer.**

NEUROSCIENTIST POSITION: THE OHIO STATE UNIVERSITY

Applications are invited for a tenure-track position at the **ASSISTANT or ASSOCIATE PROFESSOR** level. We seek someone for a primary appointment in a clinical department with the potential for a joint appointment in a basic science department. The successful candidate should have evidence of research and teaching excellence in molecular, cellular or systems neuroscience and the M.D. or Ph.D. degree. Our neuroscience program currently includes 80 faculty members with a variety of interests including developmental neuroscience, regeneration and plasticity, biochemical neuropathology, central nervous system transplant technology, gastrointestinal neurophysiology, nervous control over homeostasis, neuropharmacology, psychobiology, psychoneuroimmunology, brain imaging, neuromuscular diseases, movement disorders, neuro-oncology, Alzheimer's disease, and neurobiology of schizophrenia and affective disorders. Applications including curriculum vitae and 3 to 5 references should be mailed to: **Dr. George F. Martin, Department of Cell Biology, Neurobiology & Anatomy, 4066 Graves Hall, 333 West 10th Avenue, The Ohio State University, Columbus, OH 43210** by June 30, 1993, or until the position is filled.

The Ohio State University is an Equal Opportunity/Affirmative Action Employer.



FACULTY POSITION MICROBIAL PATHOGENESIS

The Department of Microbiology and Immunology at Eastern Virginia Medical School is seeking outstanding candidates for a senior-level tenure-track **FACULTY POSITION** in the area of Microbial Pathogenesis beginning July 1994. Individuals using molecular strategies and approaches to studying bacterial pathogenesis are preferred. The successful applicant must have an independent, established and funded research program as well as experience in teaching medical and graduate students. Competitive salary, space, and start-up packages will be provided. The Department of Microbiology and Immunology consists of full-time research faculty in areas of molecular biology, cell biology, bacteriology, virology, cellular immunology and tumor immunology. In addition, the department is associated with a strong clinical research program in infectious disease. Send curriculum vitae, a statement of research interests, relevant reprints and the names of four references by August 15, 1993, to: **Dr. Richard Stenberg, Chairman, Search Committee, Department of Microbiology and Immunology, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately for two to three years to study genotype specific nodulation in *Rhizobium-legume* symbiosis. Experience in plant development or microbiology, and molecular biology preferred. Send curriculum vitae and names of three references to: **Dr. N. Kent Peters, Ohio State Biotechnology Center, 1060 Carmack Road, Columbus, OH 43210-1002. The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Qualified women, minorities, Vietnam-era veterans, disabled veterans and individuals with disabilities are encouraged to apply.**

POSITIONS OPEN

POSTDOCTORAL POSITION

A postdoctoral position to work on the phenotypic alterations of the blood vessel wall after injury is available at Sanofi Recherche, a subsidiary of Elf Aquitaine, in Toulouse, France.

The research project aims at evaluating the variations of thrombogenicity of the vascular endothelium consecutive to anoxia, sepsis or occurring after endothelial regeneration following vascular injury.

The candidate should have a background in pharmacology but also a good knowledge of the basic methods in molecular biology (Northern blotting, PCR . . .). An important component of the experimental work will be aimed at setting up *in situ* hybridization techniques.

Duration of the fellowship is one year and it might be renewable for a second year.

Applications, including curriculum vitae, bibliography and name of two references should be sent to:

**Ms. Mélisende Bart
1899 L Street, N.W., Suite 500
Washington, D.C. 20036**

POSTDOCTORAL POSITION available immediately to study the interaction between bacterial metabolism and signal transduction. Send curriculum vitae, and name and address of three references to: **Dr. Alan Wolfe, Department of Microbiology and Immunology, Loyola University Medical Center, 2160 South First Avenue, Maywood, IL 60153. Equal Opportunity Employer.**

THREE POSTDOCTORAL POSITIONS in Biochemistry and Molecular Biology are available immediately in the Department of Biology at Concordia University. Two positions in plant biochemistry/molecular biology are to work in the area of flavonoid methylation and prenylation; experience in membrane associated enzymes is desirable. A third position in molecular biology will work on calcium and cAMP binding proteins in *Dictyostelium*. Candidates should submit curriculum vitae, related publications, and names, addresses and telephone numbers for three references to: **Dr. R.K. Ibrahim or Dr. A. Tsang, Department of Biology, Concordia University, 1455 de Maisonneuve Boulevard West, Montreal, Quebec, Canada, H3G 1M8. Telephone and FAX: (514) 848-3399.**

NEUROSCIENCE POSTDOCTORAL TRAINING

Immediate opening for person with doctoral degree (M.D., D.O., Ph.D., Pharm.D. or D.V.M.) to carry out microdialysis experiments. Funded for two years at \$30,000 per year by a grant for training underrepresented minorities (Hispanic, Black, American Indian). Contact: **Dr. Harris, Department of Pharmacology, New York College of Osteopathic Medicine, P.O. Box 170, Old Westbury, NY 11568. Telephone: 516/626-6928.**

POSTDOCTORAL POSITION NEUROIMMUNOLOGY

Position available immediately for a Ph.D., D.V.M. or M.D. with background in immunology or neurology, to study the interaction of lymphocytes and central nervous tissue. This program will provide collaborative opportunities with a multidisciplinary team involved in immunology, virology and molecular biology. Please send curriculum vitae and the names of three references to: **Roel C. van der Veen, Ph.D., USC School of Medicine, Department of Neurology, MCH 142, 2025 Zonal Avenue, Los Angeles, CA 90033.**

The University of Southern California is an Equal Opportunity/Affirmative Action Employer and especially seeks women and minority candidates.

UNIVERSITY OF FLORIDA BRAIN INSTITUTE SPINAL CORD INJURY RESEARCH GROUP

POSTDOCTORAL POSITIONS are immediately available as part of an NIH- and state of Florida-funded multidisciplinary program focused on spinal cord injury and repair. Areas of interest include fetal tissue transplantation, neuroimmunology, neuroanatomy, molecular biology, neuropharmacology, electrophysiology, tissue culture, and behavior. Applicants must have a Ph.D. or M.D. degree and preference will be given to individuals with a background in neural plasticity research. Send a statement of research interests, the names of three references and curriculum vitae to: **Paul J. Reier, Ph.D., Department of Neurosurgery, Box 100265, University of Florida, Gainesville, FL 32610.**

POSITIONS OPEN

POSTDOCTORAL POSITION IN BEHAVIORAL GENETICS available in an ongoing selective breeding program to develop and characterize an animal behavioral model of information processing/attentional deficits in schizophrenia. Related efforts will include investigation of the pharmacogenetics/defect state dependency of antipsychotic drugs and use of *in vivo* MR imaging, receptor autoradiography and intracerebral microdialysis to define correlated responses to behavioral selection. Ph.D. in behavioral neurosciences required. Experience in behavioral genetics and psychopharmacology is desired. Send curriculum vitae and letter describing qualifications to: **Dr. Clint Kilts, Department of Psychiatry and Behavioral Science, P.O. Drawer AF, Emory University School of Medicine, Atlanta, GA 30322. Emory University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION

A Postdoctoral Position is available immediately for a Ph.D. with a strong background in Cellular and Molecular Immunology to study the pathogenesis and possible preventions of insulin dependent diabetes in NOD mouse and man. The research will focus on *in vitro* and *in vivo* T cell responses and mechanisms of experimental tolerance to pancreatic islet autoantigens. Send curriculum vitae and names of three references by June 1, 1993, to:

**Noel K. MacLaren, M.D.
Professor and Chairman
Department of Pathology and Laboratory Medicine
University of Florida
College of Medicine
Box 100275 JHMH
Gainesville, FL 32610-0275**

POSTDOCTORAL POSITION available immediately to study dynamics of actin in fibroblast locomotion using correlated video microscopy, microinjection of fluorescent cytoskeletal proteins, immunocytochemistry and electron microscopy.

Send curriculum vitae and 3 letters of reference to: **Dr. Julian P. Heath, Baylor College of Medicine, CNRC, 1100 Bates, Houston, TX 77030. (FAX: 713-798-7130).**

POSTDOCTORAL POSITIONS IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

A position is available immediately to study the interaction and mechanism of action of the chemotherapeutic target enzymes deoxycytidylate deaminase and thymidylate synthase, as well as the regulation of their expression in eukaryotic and prokaryotic systems. Experience in genomic isolation and sequencing will be helpful. The use of high expression systems will be essential to obtain adequate quantities of protein to determine their substrate and allosteric regulatory site regions using both group-specific reagents and site-directed mutagenesis. Familiarity with cloning techniques will be essential. The research will be conducted in a well-equipped core facility. Compensation from Health Research Inc. dependent upon experience. Send résumé and three references to: **Dr. Frank Maley, Wadsworth Center for Laboratories and Research, Empire State Plaza, Box 509, Albany, NY 12201. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION to study signal transduction of Fc receptors and molecular regulation of phagocytosis. Projects include molecular biology of leukocyte tyrosine kinases, isolation and cloning of novel kinase substrates, and transfection of cDNAs into mammalian cells. Experience in protein purification, molecular cloning, and PCR preferred. Send curriculum vitae and at least 2 references to: **Dr. Steven Greenberg, Columbia University, Department of Physiology, 630 West 168th Street, New York, NY 10032. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS. Positions are immediately available for fellows to work on the immunobiology of T-cell/NK cell recognition of bacterial antigens. Send curriculum vitae and references to: **Dr. Gary R. Kimpel, Department of Microbiology, The University of Texas Medical Branch, 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.**

PHARMACOLOGY RESEARCH ASSOCIATE PROGRAM

The National Institute of General Medical Sciences is seeking applications for the Pharmacology Research Associate (PRAT) Program at the National Institutes of Health (NIH). The PRAT program is a 2 year postdoctoral training program, providing research opportunities in such areas as signal transduction, receptor pharmacology, AIDS research, neurobiology/neuropharmacology, chemistry, behavioral pharmacology, metabolism, cell biology, and gene expression and regulation. Those selected for the program may choose from among more than 100 intramural laboratories of the institutes which comprise the NIH.

The program is intended for recently trained, highly qualified scientists who wish to address problems of pharmacological interest. Research proposals are not required for application. Applicants must be U.S. citizens or permanent residents. Deadline for receipt of applications for positions beginning in July of 1994 is June 1, 1993. For more information and application material, please write to:

Program Assistant
Pharmacology Research Associate Program
National Institute of General Medical Sciences
Westwood Building, Room 919
5333 Westbard Avenue
Bethesda, MD 20892



NIH is an Equal Opportunity Employer

NIH Post-Doctoral Position

Anti-V β Reagents In Rhesus Models of Autoimmune and Retroviral Diseases

The Laboratory of Molecular Biology has developed novel immunotoxins directed at components of the rhesus T cell receptor complex which induce profound peripheral T cell depletion *in vivo*. The aim of this project is to investigate rhesus models of autoimmune diseases which exhibit unique V β (or V α) restrictions, identify these restrictions and quantify the effects of depleting the involved subset on the disease process. The role of preferential V β susceptibility in SIVmac infection is also of interest. Junior or Senior positions are available and diverse backgrounds will be considered. Please forward curriculum vitae and the names of three references to:

Dr. David M. Neville Jr.
Section on Biophysical Chemistry
Laboratory of Molecular Biology
National Institute of Mental Health
Bldg. 36 Room 1B08
9000 Rockville Pike
Bethesda, Maryland 20892.



Inquiries by FAX will be accepted at 301-402-0245.

NIH is an equal opportunity employer

BS/MS Protein Scientists

The field of pharmaceuticals and healthcare is more rewarding than ever as new products create a healthier world population. As one of the leaders in this dynamic industry, Pfizer Inc, a Fortune 100 company, is committed to continuing its remarkable growth.

In bringing science to life, our international research-based company uses advanced techniques to generate new products, new areas of revenue and career opportunities that self-directed, talented people will find stimulating and rewarding.

Currently, our Protein Technologies Group in the Department of Molecular Genetics and Protein Chemistry has three positions available for qualified candidates experienced in protein purification. Additional experience in the preparation of proteins for X-ray crystallographic or NMR-based structural studies; protein analytical methods (N-terminal sequencing, amino acid analysis); or biophysical characterization of proteins and peptides would be desirable.

The primary R&D facility for Pfizer Inc is located in a southeastern Connecticut shore community, giving easy access to the well known academic and cultural centers of the Northeast and offers the attractions of a New England lifestyle.

We offer competitive salaries and a full range of benefits including medical and dental insurance, paid holidays and vacations, educational assistance, 401k plan, pension plan, relocation assistance and more.

To learn how you can be part of the future of Pfizer, send your resume to: **Mr. Kym Goddu, Employee Resources Associate, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340.** An equal opportunity employer.



Central Research
Bringing science to life.



POST DOCTORAL FELLOWSHIPS

Immunex Corporation, a Seattle-based biopharmaceutical company focused on the research, development, manufacture and marketing of products to treat cancer and autoimmune disease, is a world leader in cytokine research (see references). Two year Post Doctoral positions will be available in Research and Process Science beginning in January 1994. Successful candidates will be highly motivated Ph.Ds who are able to work in a collaborative environment and have a significant research track record.

PROCESS SCIENCE

We are encouraging applications from scientists with interests in the following areas:

- **Mammalian Cell Culture:** Investigate gene expression at the molecular and cellular level; transcriptional and post-transcriptional regulation of gene expression; protein targeting; continuous cell culture and perfusion technologies.
- **Analytical Biochemistry:** Development of rapid high resolution methods for in-process monitoring of product; peptide mapping and glycosylation analysis.
- **Process Integration/Monitoring:** Integration of fermentation and recovery for continuous production; real-time monitoring; computer control systems for data uptake and analysis; process automation and biosensors.
- **Microbial Fermentation/Expression:** Development/optimization of novel microbial systems for the expression of recombinant proteins; expression using continuous/immobilized cell fermentation technology; computer-based fermentation monitoring and control; novel bioreactor technology; automation.
- **Purification:** Continuous purification; fluidized beds; novel chromatography media; affinity peptides; displacement chromatography; membrane separations.
- **Protein Drug Delivery/Formulation:** Liquid formulation development; sustained release; new stability-indicating methods; targeted delivery.

RESEARCH

Positions are available in the departments and disciplines of **Molecular Biology, Biochemistry, Protein Chemistry, Transgenics/ Gene Targeting, Immunology, Experimental Hematology, Cell Biology and Biophysics.**

■ Research activities will be oriented toward the molecular basis of immune regulation and cytokine action, particularly the cloning of novel cytokines, cytokine receptors and other immunoregulatory molecules, the identification of virally-encoded immune modulators, analysis of the biological activities of these molecules, the signal transduction pathways by which they act and investigations of the structural basis of ligand-receptor interactions. A significant effort will be devoted to the study of in vitro and in vivo models of normal and abnormal immune regulation and hematopoiesis as a means to identify novel immunoregulatory molecules and to characterize their biological activities.

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4. Spriggs, M.K., et al. Vaccinia and cowpox viruses encode a novel secreted interleukin-1 binding protein. *Cell* 71:145, 1992.
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7. Allen, R.C., et al. CD40 ligand gene defects responsible for X-linked hyper-IgM syndrome. *Science* 259:990, 1993.
8. Powers, R., et al. Three-dimensional solution structure of human interleukin-4 by multidimensional heteronuclear magnetic resonance spectroscopy. *Science* 256:1673, 1992.
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11. Grabstein, K.H., et al. Induction of macrophage tumoricidal activity by granulocyte-macrophage colony-stimulating factor. *Science* 232:506, 1986.
12. Namen, A.E., et al. Stimulation of B-cell progenitors by cloned murine interleukin-7. *Nature* 333:571, 1988.
13. Fanslow, W.C., et al. Regulation of alloreactivity in vivo by a soluble form of the interleukin-1 receptor. *Science* 248:739, 1990.
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Immunex Corporation offers a fast-paced, stimulating environment, a competitive salary and an excellent benefits package. We are located in downtown Seattle in full view of Puget Sound and the Olympic Mountains, close to many recreational and cultural activities. For consideration, please send or fax three letters of reference, your curriculum vitae and a brief statement of your research interests (specifying Job #7230230) to:

IMMUNEX CORPORATION, Attn: Human Resources, 51 University Street, Seattle, WA 98101, Fax: (206) 623-4572. For information on opportunities at IMMUNEX, call our Job Line: (206) 389-4060.

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NATIONAL INSTITUTE ON DRUG ABUSE
NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE
DEPARTMENT OF HEALTH AND HUMAN SERVICES

The National Institute on Drug Abuse (NIDA) invites applications for the position of Director, National Institute on Drug Abuse (NIDA). This is a Civil Service position in the Senior Executive Service (SES), with a salary ranging from the ES-1 to ES-6 pay level per annum (currently \$92,000 to \$115,700). Physicians may be eligible for a Physician's Comparability Allowance up to \$20,000 per annum. A one year probationary period must be served by the individual selected if not currently in the career Senior Executive Service.

The National Institute on Drug Abuse provides national leadership and direction in the development of goals, priorities, policies, and program activities designed to increase the knowledge base for developing effective strategies to deal with the health problems and issues associated with drug abuse. The Institute's program includes basic and clinical extramural and intramural drug abuse research and training programs for scientists interested in research careers in the biomedical and behavioral sciences with a special interest in drug abuse. The Director manages a staff of 450 and a budget of \$420 million. The Director is also the chief advisor to the Director, NIH, and the Assistant Secretary for Health on drug abuse research and scientific policy.

Applicants must possess a strong background and accomplishments in the development, management and direction of addiction research programs.

Applicants are required to submit an Application for Federal Employment (SF-171), available at all Federal Job Information Centers and Federal Personnel Offices. Resumes are not acceptable applications. Additionally, applicants may send a curriculum vitae and a bibliography. The vacancy announcement with mandatory/desirable qualifications requirements can be obtained by calling (301) 443-9593. Application material must be sent to the following address:

National Institute on Drug Abuse
Personnel Management Branch
Attn: Ms. Marge Hutton, Parklawn Building, Room 10-21
5600 Fishers Lane, Rockville, Maryland 20857



Faxed material cannot be accepted. Public Health Service Commissioned Officers wishing to enter the SES must follow the above procedures. Officers interested in performing the duties of the position within the PHS Commissioned Corps may submit a resume to the above address.

APPLICATIONS MUST BE RECEIVED NO LATER THAN MAY 17, 1993.

Selection for this position will be based solely on merit, with no discrimination for nonmerit reasons such as race, color, religion, sex, national origin, political affiliation, marital status, handicapping condition, age, or membership or nonmembership in an employee organization.

NIDA is an Equal Opportunity Employer

ENVIRONMENTAL



EPRI'S Mission is...

...to discover, develop, and deliver advances in science and technology for the benefit of our member electric utilities, their customers, and society.

Project Manager Environmental Health Studies

Apply your experience with inhalation toxicology, health risk assessment, and/or environmental health issues/disciplines and be our expert at planning, developing, and managing environmental health research projects. The ability to effectively communicate research results to potential users will be needed.

We want to interview with candidates who possess a solid understanding of environmental health issues, research project management experience, and proven expertise serving as liaison with other research organizations. An Environmental Health Scientist with a doctorate degree in an environmental/occupational health-related discipline would be a valuable addition to our team.

EPRI is a unique non-profit, R&D organization offering competitive salary and excellent benefits. Please submit your resume with salary requirements to **EPRI, Corporate Staffing, Dept. SB314S, 3412 Hillview Avenue, Palo Alto, CA 94303. FAX (415) 855-2954.** We are an Equal Opportunity Employer.

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Division

Miles Inc., Pharmaceutical Division has an exciting study opportunity for an experienced individual in our West Haven facility.

POSTDOCTORAL SCHOLAR

A postdoctoral research position is available immediately for a molecular biologist to study mechanisms of lymphocyte adhesion and activation at the molecular level. Research will involve the molecular cloning and identification of novel adhesion molecules. The candidate will have the opportunity to interact and work with immunologists and cell biologists on this project. A strong background in molecular biology and experience in techniques such as cDNA cloning, library screening, and PCR is required. The successful candidate should have a Ph.D. with 0-3 years of postdoctoral experience.

We offer attractive compensation and generous health, medical and relocation benefits. Resumes, including salary history and objectives, should be forwarded in confidence to:
Miles Inc., Pharmaceutical Division, Dept. POSTDOC MB/AA, 400 Morgan Lane, West Haven, CT 06516.

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POSITIONS OPEN

POSTDOCTORAL FELLOW

Applications are invited for a postdoctoral position to study the regulation of gene expression by steroid hormones in reproductive tissues. Applicants should have training in molecular biology and a strong interest in studying the molecular basis of endocrine regulation. Please send curriculum vitae and the names and addresses of three references to: **Dr. Indrani Bagchi, The Population Council, Center for Biomedical Research, 1230 York Avenue, New York, NY 10021.**

POSTDOCTORAL FELLOWSHIP IN RENAL CELL PHYSIOLOGY

(biochemistry/signaling/biophysics/molecular biology)

In excellent multi-investigator program related to hypertension. Training opportunities exist in the areas of epithelial cell culture, immortalization of primary cells, electrophysiology, epithelial transport, imaging, various aspects of signaling, cell fractionation and receptor analyses. Stipend/salary range \$20,000 to \$35,000, depending on experience. Requirements: evidence of relevant research experience and ability to work independently as documented by publications in high-impact journals. *American citizenship or permanent residency.* Send curriculum vitae to: **Ulrich Hopfer, M.D., Ph.D., Department of Physiology & Biophysics, Case Western Reserve University School of Medicine, Cleveland, OH 44106-4970; FAX: 216-368-5586; Email: uhx@po.CWRU.edu. CWRU is an Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIP HARVARD MEDICAL SCHOOL BRIGHAM AND WOMEN'S HOSPITAL

Position available immediately to investigate the molecular and genetic basis of mesodermal pattern formation in the *Drosophila* embryo. Previous efforts have identified a role for a MyoD-related gene and the neurogenic genes in this developmental process (*Genes and Dev.* 4, 2086-2097, 1990; *Cell* 67, 311-323, 1991). Current projects include studies of homeotic regulation of somatic muscle-specific gene expression as well as screens for novel myogenic genes. A Ph.D. and strong background in *Drosophila* genetics and/or molecular biology are essential requirements of this position.

Please send curriculum vitae, bibliography and three letters of reference to: **Dr. Alan M. Michelson, Department of Medicine, Division of Genetics, Brigham and Women's Hospital, 20 Shattuck Street, Boston, MA 02115.**

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POSTDOCTORAL FELLOWSHIP

Position available to participate in studies of the role of polypeptide growth factors in brain aging, injury, and stroke. Familiarity with molecular biology, histology, and neuronal tissue culture techniques is desirable. Contact: **Dr. Seth Finkbein, CNS Growth Factor Research Laboratory, Massachusetts General Hospital, 149 13th Street, Charlestown, MA 02129. Telephone: (617) 726-5759, FAX: (617) 726-5677.**

POSTDOCTORAL FELLOWSHIP U.C.S.F. BREAST CANCER RESEARCH

A POSTDOCTORAL RESEARCH POSITION is available for a Ph.D. or M.D. with molecular biology experience to study transcription factors involved in human breast cancer. Please submit curriculum vitae, a summary of your research accomplishments and interests, and the names, addresses and telephone numbers of three persons in the United States who will provide references to: **Christopher C. Benz, M.D., Cancer Research Institute, University of California San Francisco, San Francisco, CA 94143-0128. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL FELLOW IN MOLECULAR BIOLOGY/TRANSGENIC RESEARCH:

A postdoctoral position is available in the Laboratory of Molecular Neurobiology, Cornell University Medical College at the Burke Medical Research Institute. The project area is transgenic mouse research for the central nervous system. Send curriculum vitae to: **Ms. Maureen McCrum, Molecular Neurobiology, Burke Medical Research Institute, 785 Mamaroneck Avenue, White Plains, NY 10605.**

POSITIONS OPEN

POSTDOCTORAL POSITION available for studies on DNA repair mediated resistance to anticancer alkylating agents. NIH-supported projects focus on DNA adduct formation and on the function and regulation of human genes for DNA repair. Applicants should have a recent Ph.D. in biochemistry, molecular biology or related areas. Salary \$22,000 to \$26,000. Contact: **Dr. Tom Brent, Department of Molecular Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE:

The Chemistry Department has a position available for a recent Ph.D. trained in synthetic organic chemistry to join the Cyclotron-PET Program at Brookhaven National Laboratory. The successful candidate will participate in the development of rapid organic synthetic methods for incorporating the short-lived positron emitters, carbon-11 and fluorine-18 (half-life: 20.4 and 110 minutes, respectively), into organic molecules. S/he will be a member of a large multidisciplinary team of scientists whose focus is on the development and application of radioactive tracers to the study of biochemical transformations and molecular mechanisms in the living human and animal body using positron emission tomography (PET). A broad knowledge of modern synthetic organic chemistry is important along with experience in high performance purification and analytical methods. New radioactive tracers resulting from this work will be applied to problems in the neurosciences, with specific interest in substance abuse, neuro-degenerative disease, schizophrenia and drug mechanisms.

Candidates can apply by sending curriculum vitae and transcripts, and by arranging to have three references sent to: **Dr. Joanna S. Fowler, Chemistry Department, Building 555, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, NY 11973. Equal Opportunity Employer, M/F/D/V.**

POSTDOCTORAL RESEARCH POSITION in the Laboratory of Reproductive and Developmental Toxicology is available in the Receptor Biology Section to investigate estrogen action and responsiveness in bone/skeletal issues and to participate in ongoing studies of the developmental influence of estrogen exposure on bone and skeleton. The applicant must possess an M.D. or equivalent degree and extensive knowledge in the area of bone cell biology specifically involving regulation of cell responsiveness to estrogen, regulation including effects on estrogen responsive genes in bone cells, alteration/modification and functional activity of the estrogen receptor specifically influenced by protein kinase C pathway in bone cells and investigations of the developmental influences of exposure to estrogenic compounds on bone density and skeletal changes. Applicant must show evidence of certified clinical endocrine training and at least three years of experience, with a strong record of research productivity and proven ability to set up and carry out independent and collaborative research in all of the above areas. Salary range is \$28,000 to \$42,000, commensurate with experience. For additional information, contact: **Dr. Kenneth S. Korach at 919-541-3512.** For prompt consideration, send cover letter, curriculum vitae and three letters of reference by April 30, 1993, to: **Mr. Bruce Wiggins, NIEHS Personnel Office (HV69), P.O. Box 12233, Research Triangle Park, NC 27709. An Equal Opportunity Employer.**

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW to study intracellular packaging and synthesis of complement receptors in human myeloid cells. Experience with immunoassays, monoclonal antibodies, and/or isolation of subcellular fractionation required. Salary/benefits dependent on qualifications. Send curriculum vitae and references to:

**Melvin Berger, M.D., Ph.D.
Division of Immunology
Department of Pediatrics
Case Western Reserve University
2101 Adelbert Road
Cleveland, OH 44106**

Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION in cancer immunology (vaccines) available. Experience in humoral and cellular immunology techniques required. Please send curriculum vitae and three letters of recommendation to: **Dorothee Herlyn, D.V.M., Associate Professor, THE WISTAR INSTITUTE, 3601 Spruce Street, Philadelphia, PA 19104. Equal Opportunity Employer.**

STAFF RESEARCH ASSOCIATE to conduct research on global climate change using a computer model of the atmosphere-ocean system. Design and conduct simulations of climate with the model and perform detailed analysis of the results. Optimize and redesign the computer code so that the computations can be performed on state-of-the-art supercomputers which can be at great distance from each other and connected by networks. Requirements: Ph.D. in Atmospheric Sciences. Research experience in the area of large-scale atmosphere-ocean interaction and climate variability. Experience and demonstrated achievements in designing numerical models of the atmospheric and oceanic circulations, running these models in supercomputers and carrying out analysis of the results with emphasis on the understanding of processes involved. Demonstrated abilities in numerical analysis and computer programming. Job location/interview: Los Angeles. \$34,296 per year. Send this ad and résumé to: **Job #ET3693, P.O. Box 269065, Sacramento, CA 95826-9065, no later than May 8, 1993.**

Here at Chiron, we are on the leading edge of biotechnology research and scientific advancement, producing an array of therapeutic and diagnostic tools to advance potential cures for AIDS, Cancer, Herpes, Hepatitis and Diabetes.

RESEARCH ASSOCIATE/ INSTRUMENTATION SPECIALIST

Take on new challenges as you provide analytical service and assist in research involving the structural characterization of proteins, glycoproteins, peptides, nucleotides and a variety of synthetic organic molecules. HPLC and mass spectrometry (electrospray and laser desorption) techniques will be used on a routine basis. To qualify, you need a B.S./M.S. in Chemistry/Biochemistry and 3 years of experience in an analytical laboratory. Demonstrated ability operating, maintaining, and trouble-shooting lab equipment (e.g., HPLC, protein sequencer, mass spectrometer) is necessary. Experience with mass spectrometry or HPLC of proteins preferred. Excellent verbal/written communication skills and experience with personal computers are essential.

If you have the dedication, spirit and flexibility to rise to our many challenges, send your résumé to: **Chiron Corporation, Human Resources, Box #2-503, 4560 Horton Street, Emeryville, CA 94608-2916. We are an Equal Opportunity Employer.**

TECHNICAL SUPPORT SCIENTIST

Ventana Medical Systems has an immediate opening for an experienced technical support scientist. Candidates should have a minimum of five to ten years of experience in *in vitro* diagnostics and an advanced degree or equivalent. In this position the individual will be responsible for establishing our technical support group which will be responsible for transferring new products from R/D to manufacturing and for maintaining and troubleshooting products on the market. Ventana Medical Systems is an entrepreneurial company leading the development of automated immunohistochemistry and *in situ* hybridization. Interested candidates should send their résumés to:

**Personnel Director
Chemistry Section
Ventana Medical Systems
3865 North Business Center Drive
Tucson, AZ 85705**

SCIENTIST AND REGULATORY AFFAIRS

Opportunity for scientists with demonstrated success in any of the following: transdermal drug delivery, electrotransport, peptide and parenteral delivery, adhesives and polymers, problems of tissue irritation, clinical trials, electrophysiology and regulatory affairs. Salary commensurate with experience and knowledge. Send curriculum vitae, summary of research and published papers to: **President, D.D.S., P.O. Box 276, Stony Brook, NY 11790-3027.**



GLAXO INSTITUTE FOR MOLECULAR BIOLOGY

The Glaxo Institute in Geneva is an international centre of excellence for the discovery of novel molecular mechanisms implicated in serious diseases. In particular, research is focused on the CNS, allergies and inflammatory conditions. We have an outstanding opportunity for a

POST-DOCTORAL SCIENTIST to join a team studying signal transduction pathways in yeast.

The ideal candidate will have a PhD and a proven track record in yeast molecular biology with a thorough knowledge of signal transduction mechanisms in yeast or mammalian cells. Informal enquiries may be made to Dr. Kinsey Maundrell (+41 22 706 96 00).

The Institute provides a dynamic international research environment and actively encourages collaborative projects with academic groups as well as the publication and presentation of results at scientific meetings.

We offer an excellent compensation and benefits package and significant opportunities for career development. Geneva, situated in a very attractive part of Europe, has many advantages as a place to live. The Institute for Molecular Biology is part of the Glaxo group, one of the world's most successful healthcare companies which has an outstanding reputation for the quality of both its research and products.

If you are interested in this position, please send your curriculum vitae with a list of publications and the names of three referees to : Rita Gloor, Personnel Manager, Glaxo Institute for Molecular Biology, 14, chemin des Aulx, 1228 Plan-les-Ouates, Geneva, Switzerland.

NeXagen, Inc., a Boulder-based biotechnology company, is dedicated to drug development through the implementation of proprietary, novel repertoire chemistry. NeXagen scientists are in pursuit of oligonucleotide ligands for use as pharmaceutical agents for the treatment of several major diseases. In addition to their own in-house research programs, NeXagen scientists are involved in an interactive research program with many scientists at the University of Colorado, Boulder campus.

Director of Production

We seek a PhD to direct the production of oligonucleotide-based pharmaceuticals. The successful candidate will have a broad knowledge of synthetic chemistry and nucleoside chemistry, experience in large-scale, GMP preparation of reagents, and creative ideas about interfacing with a strong group of research chemists, molecular biologists, and medical doctors in order to facilitate drug development. Management experience, preferably with a pharmaceutical background, is essential. Resumes should be sent to:

Director of Chemistry
NeXagen, Inc.
2860 Wilderness Place
Suite 200
Boulder, CO 80301

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NATIONAL INSTITUTE OF MENTAL HEALTH NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE

DIRECTOR, DIVISION OF INTRAMURAL RESEARCH PROGRAMS

The National Institute of Mental Health invites nominations and applications for the position of Director, Division of Intramural Research Programs (DIRP), located in Bethesda, Maryland. This program is the largest scientific research center in the world focused on mental health, mental illness, and behavioral and brain research. Its diverse research programs are conducted by approximately 950 employees in 24 different laboratories and clinical branches.

Responsibilities of the Director, DIRP, include the overall management of all scientific, fiscal, and personnel resources. The Director is involved in planning and directing basic and clinical research, supervising the training of scientists, implementing national science policy, and administering and evaluating research programs.

Minimum qualification requirements include a degree of Doctor of Medicine, Doctor of Philosophy, Doctor of Osteopathy, or a bachelor's or higher degree in an academic field related to the health sciences, and progressively responsible experience in developing, administering, and evaluating biomedical research programs. Applicants must further meet established mandatory professional/technical and managerial/executive requirements and additional desirable qualifications.

The person selected for the position will receive a career appointment to the Senior Executive Service (SES) with an annual salary range of \$92,900 to \$107,300 (plus up to \$20,000 per annum for physicians only). SES members are also eligible for performance awards of 5 to 20 percent of base salary. Alternately, this position may be filled through an appointment in the Public Health Service Commissioned Corps.

Further information about the position and qualification requirements may be obtained by contacting Ms. Pat Middleton at (301) 443-9094. An Application for Federal Employment, SF 171, accompanied by a current curriculum vitae and bibliography, should be submitted to Ms. Middleton at the Personnel Management Branch, National Institute of Mental Health, Parklawn Building, Room 15C 12, 5600 Fishers Lane, Rockville, Maryland 20857. Completed applications (including the SF 171) must be postmarked by the closing date of the vacancy announcement, June 1, 1993.

SELECTION FOR THIS POSITION WILL BE BASED SOLELY ON MERIT, WITH NO DISCRIMINATION FOR NON-MERIT REASONS SUCH AS RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN, POLITICS, MARITAL STATUS, PHYSICAL OR MENTAL HANDICAP, AGE, OR MEMBERSHIP OR NON-MEMBERSHIP IN AN EMPLOYEE ORGANIZATION.

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Senior Retrovirologist

The Infectious Diseases Department of the PARKE-DAVIS Pharmaceutical Research Division seeks an experienced PhD Virologist to lead our established HIV program. The PARKE-DAVIS anti-HIV program covers diverse areas such as inhibitors of viral enzymes, inhibition of virus activation from latency, and gene therapy approaches to AIDS. The program involves several major collaborations with academic and government centers of excellence on HIV research.

The successful candidate will have a minimum of 5 years of post-doctoral experience and hands-on familiarity with retroviruses (preferably HIV). A demonstrated ability for evaluating investigational antiviral agents in cell based systems is highly desirable, as is the ability to lead a research group and to interact with existing antiviral research at PARKE-DAVIS. Competence in molecular biology and/or biochemistry of retroviruses is highly desirable, and a record of productivity, indicated by a substantial publication record, is essential.

The successful candidate will develop cell based antiviral testing strategies which complement in vitro screening, and will initiate and participate in external research collaborations. Development of additional antiviral approaches to drug discovery is an essential part of this position.

Interested individuals should send their CV and list of references to **Box JDM-93042, Human Resources Department, PARKE-DAVIS Research Division, Warner-Lambert Company, 2800 Plymouth Road, Ann Arbor, MI 48105.** "Smoke-Free Work Environment"



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Research Scientist in the Developmental Hematology Dept. Molecular/Cell Biologists

Qualified candidate will be studying the regulation of hematopoietic development for an interactive program. Knowledge of DNA techniques and 2 years post doctoral experience are required. An understanding of and previous experience in hematopoiesis is highly desirable.

At Amgen, we invest our employees with the freedom to manage their affairs, regulate the quality of work, and make decisions within company goals. And we back this freedom with meaningful challenges and responsibility, as well as a compensation and benefits package that reflects the level of our commitment. If you're interested in this position, please submit curriculum vitae, for confidential consideration, to: **Amgen Inc., Staffing, Job Code OA-SC-JC-004, Amgen Center, Thousand Oaks, CA 91320-1789.**

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Arctic Research Consortium of the United States, Inc.

The Arctic Research Consortium of the United States (ARCUS) is seeking a highly qualified individual to serve as its President and Chief Executive Officer. ARCUS is a national non-profit corporation, consisting of member institutions involved in arctic research and education. ARCUS provides leadership in and promotion and facilitation of these activities.

The President provides leadership for the Consortium, is responsible to its Board of Directors, manages the affairs of ARCUS, and supervises its staff. The President recommends and implements the programs and policies established by the Board of Directors; develops and administers ARCUS programs and activities; represents the corporation in contract, grant, and financial negotiations with government and private funding and banking entities; and interacts with the arctic research community to assess and advance its needs and priorities. The President represents ARCUS interests and concerns to other groups and organizations to ensure that quality programs and services exist to meet the needs of the arctic research and education community.

Applicants are required to have a Ph.D. or its equivalent. Applicants should also have at least five years of experience in the design and conduct of research in the Arctic and at least five years of experience in the design and management of interdisciplinary research. Demonstrated excellence in the ability to communicate and function effectively with diverse constituencies within the scientific and education community, the policy making community, and the general public is highly desirable. Successful experience in the preparation, negotiation, and management of grants and contracts, as well as in direct responsibility for fiscal management, is a must.

Salary will be negotiated. ARCUS offers a competitive benefits package. ARCUS is currently based in Fairbanks, Alaska.

Send applications, including curriculum vitae and four references, for receipt by 15 May 1993, to:

President Search Committee

Dr. Mark F. Meier, Chair

ARCUS, Inc.

600 University Avenue, Suite B
Fairbanks, AK 99709

ARCUS is an Equal Opportunity, Affirmative Action Employer and invites and encourages applications and nominations from women and under-represented minorities.

SEARCH REOPENED
DIRECTOR, CENTER FOR
LABORATORY ANIMAL CARE
UNIVERSITY OF
CONNECTICUT HEALTH CENTER

The University of Connecticut Health Center invites applications and nominations for the position of Director of its Center for Laboratory Animal Care (CLAC). We seek an individual with experience in laboratory animal care, and in the management/administration of a university (or equivalent) animal care facility. A doctorate in veterinary medicine is a requirement, board certification/eligibility by ACLAM is desirable. This position reports to the Assistant Vice President for Research. CLAC is fully accredited by AAALAC; is organizationally separate from University animal care facilities at Storrs; and is organized as a multistory, 24,000 ft² facility, adjacent to the research laboratories of the Health Center. The Health Center is home to the University's Schools of Medicine and Dental Medicine. The Director also serves as consulting veterinarian for the animal care program at the Department of Veterans Affairs Medical Center, Newington, CT. An in-residence (non-tenure track) faculty appointment in an appropriate department of the University is a possibility.

Interested candidates should send a letter of application, curriculum vitae, and a list of five references to:

Dr. Klaus Nuki, Chairman, Search Committee for Director of CLAC, c/o Office of the Assistant Vice President for Research, The University of Connecticut Health Center, ASB-3 MC5355, Farmington, CT 06030.

The University of Connecticut Health Center is an affirmative action/equal opportunity employer M/W/H.

Research Scientists Meat Science – Australia



\$41 – \$55K Salary + Superannuation

*Division of Food Science & Technology, Meat Research Program,
Cannon Hill and Rockhampton Queensland, Australia*

The Division operates a major program in meat science and technology with its Laboratory at Cannon Hill in Brisbane currently dedicated to research for the Australian meat industry.

We have two positions available for highly motivated meat scientists, one at Cannon Hill and one at Rockhampton. These positions involve research as part of a team of scientists from CSIRO and the CRC for the Cattle and Beef Industry (Meat Quality).

You should have a degree in science or agricultural science and a PhD or equivalent qualification and relevant experience. You must also have a record of achievement in meat science and sound knowledge of the factors affecting meat quality and methods of assessing it. An interest in communication of research results to the meat industry is also essential. Experience in project management using computerised techniques and an understanding of the issues limiting the performance of the Australian meat industry are desirable.

The duty statement and selection criteria can be obtained by phone on (617) 214 2000 or fax (617) 214 2062. More information concerning the position can be obtained from Dr Robin Shorthose. A higher salary may be negotiated for an outstanding candidate.

Please send written applications addressing the selection criteria and including a curriculum vitae and the names of at least two professional referees to **The Personnel Officer, CSIRO Division of Food Science and Technology, PO Box 12, Cannon Hill, Qld 4170, Australia, by 11 June 1993.**



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AVIRON

AVIRON is an exciting, new biopharmaceutical company focused on the prevention of infectious diseases. We are using state-of-the-art proprietary technology to produce live virus vaccines for major respiratory viruses and the herpesvirus family. This is an opportunity to work with a team of talented scientists and a highly committed and distinguished scientific advisory board (including many of the foremost experts on our viral targets).

AVIRON is rapidly expanding and seeks scientists with varied backgrounds and experience, including:

- **Research Scientists** -- Ph.D.s with post-doctoral experience in Molecular Biology, Immunology, and Virology.
- **Research Associates** -- M.S./B.S. in Molecular Biology, Immunology, and Virology. Several years of experience are desirable.

Don't miss the opportunity to put your imprint on this young, dynamic San Francisco Bay Area company. Please send your c.v. and list of references to:

AVIRON
Human Resources Dept. HR-2
1815 Old County Road
Belmont, CA 94002
EOE/AA.

VIROLOGIST

NATIONAL INSTITUTES OF HEALTH. Three post-doctoral positions are available in the Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases involves: (1) the development and characterization of live attenuated influenza A and respiratory syncytial virus (RSV) vaccines; (2) the use of new "rescue" systems for both viruses to examine basic questions of viral genetics, especially for RSV (see PNAS 88, 9663); and (3) the merging of these methods to engineer viruses for evaluation as live virus vaccines and to use in experimental studies of molecular biology, pathogenesis and immunology. These positions offer a unique opportunity to work on investigations that range from basic molecular biology to applied vaccinology. Applications are invited from individuals who have a doctoral degree in Medicine, Microbiology, Virology, Biochemistry, Chemistry, Immunology, or Pathobiology or related disciplines. Salary will be commensurate with experience.

Qualified and interested candidates should send curriculum vitae and names and address of three (3) references to:

**Brian R. Murphy, M.D., NIH, Building 7, Room 106,
9000 Rockville Pike, Bethesda, MD 20892
FAX (301) 496-8312.**

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POSITIONS OPEN

POSTDOCTORAL TRAINING IN NEUROSCIENCE

Postdoctoral fellowships are available for training in neuroscience-oriented approaches to drug abuse research through a training program funded by the National Institute of Drug Abuse. Research emphases include design of novel ligands for opioid receptors, molecular biology of opioid and catecholaminergic receptors, signal transduction of opioid receptors, and peripheral and spinal mechanisms of pain and analgesia. Trainers include: D.R. Brown, R. Elde, G.J. Giesler, K. Hargreaves, A.A. Larson, P.-Y. Law, H. Loh, P. Portoghesi, V.S. Seybold, B. Sharp, S. Thayer, and G. Wilcox. Eligible candidates must have completed a Ph.D. degree or equivalent by the time of appointment and must hold U.S. citizenship or permanent resident status. Address applications (curriculum vitae plus statement of training goals) or inquiries to: Virginia S. Seybold, Ph.D., Department of Cell Biology and Neuroanatomy, University of Minnesota, 4-135 Jackson Hall, 321 Church Street, S.E., Minneapolis, MN 55455. Email: ginger@med.umn.edu. The University of Minnesota is an Equal Opportunity Employer.

POSTDOCTORAL ASSOCIATE

Postdoctoral position available immediately to study the molecular biology of Hepatitis-B virus infections, using an avian model system. Experience in molecular biology and tissue culture desirable. Excellent opportunity exists for interaction with other virology groups at the Center. To apply please send curriculum vitae and references to: Dr. John Pugh, c/o Human Resources Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL ASSOCIATE position (100%) available in an NIH-funded electrophysiology laboratory to study ion channels in mammalian skeletal muscles. Individual will utilize whole cell patch-clamp techniques to study calcium currents, charge-movement and contractile properties of cultured myotubes. Project goal is to understand the alterations in excitation-contraction coupling associated with malignant hyperthermia. Ph.D. in Biological Science required. Previous experience in electrophysiology, muscle physiology and/or computer applications is recommended. Position to start July 1, 1993, or as soon as possible thereafter; application deadline is June 15, 1993. Position is funded for up to 3 years. Send letter of application, curriculum vitae and names of three references to: Esther M. Gallant, Veterinary Pathobiology, College of Veterinary Medicine, 1988 Fitch Avenue, St. Paul, MN 55108. THE UNIVERSITY OF MINNESOTA IS AN EQUAL OPPORTUNITY EDUCATOR AND EMPLOYER.

RESEARCH ASSOCIATE needed by southwest Ohio University doing research to design and perform studies in electrophysiology. Design and test neuropharmacological effects on cells in nucleus of the solitary tract. Conduct single unit recording *in vivo*; slice preparation of extra-, intracellular and patch-clamp recordings; fixation and staining of slices. Responsible for data analysis using pClamp software for written and oral presentation of result in publication and scientific meetings. Research uses intracellular labeling and biocytin tracing. Must have an M.S. degree in Basic Medical Science. Foreign degree acceptable if determined to be equivalent by a recognized authority. Must have 1 year of experience described above or Biologist have 1 year of research in single unit recording from NTS cells, intracellular and patch clamp recording from *in vitro* slices, intracellular labeling and biocytin tracing. Minimum of 1 publication in the field of neuroscience. Must have proof of legal authority to work permanently in the United States. Forty hours per week; 8:00 a.m. to 5:00 p.m.; Monday to Friday; \$22,700 per year. Send résumés in duplicate (no calls) to: L. Ellison, JO# 1230907, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.

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STAFF ASSOCIATE for Molecular Neurogenetics Laboratory, investigating YAC's and cosmid that correspond to known genetic markers. Applicant must have, as minimum, Master's degree in related field with four years of professional work experience. In addition, expertise of BIOMEK robot, pulse field gel electrophoresis and polymerase chain reaction equipment required. Send curriculum vitae and three letters of reference to: Stanley Fahn, M.D., Movement Disorder Division, Department of Neurology, 710 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity/Affirmative Action Employer.

BIOLOGICAL CONTROL OF INSECTS ILLINOIS NATURAL HISTORY SURVEY

The Center for Economic Entomology at the Illinois Natural History Survey invites applications for an **ASSISTANT PROFESSIONAL SCIENTIST** position specializing in the biological control of insects using parasitoids and predators. Candidates must possess a doctoral degree in entomology or another appropriate discipline and are expected to have a broad background in entomology and to be well versed in the theory and practice of biological control. To obtain more detailed information about this position contact: Ms. Jacqueline Sanders, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, IL 61820; Telephone: (217) 244-7790. For full consideration, applications should be received by May 15, 1993. The Illinois Natural History Survey is an Equal Opportunity and an Americans with Disabilities Employer without regard to race, religion, color, national origin, sex, or disabled conditions.

TECHNICAL STAFF MEMBER sought by large molecular biology department to take responsibility for the implementation, interpretation, and educational aspects of governmental regulatory matters as they relate to radioactive, chemical, medical, and biohazardous materials, and to administer an extensive emergency, fire, and safety program. Candidates must have the ability to manage a phosphorous 32 storage-to-decay facility, oversee a chemical hygiene plan, be familiar with the blood-borne pathogens and laboratory safety standards, and be cognizant of the Nuclear Regulatory Commission rules and regulations. Of primary importance will be the ability of the technician to interact with laboratory managers, departmental administration, and to function as a liaison with the university's Office of Health and Safety. A degree in molecular biology, biology, or chemistry, along with demonstrated responsibility for regulatory matters in a research laboratory environment, are a must. Rank of Professional Technical Staff and salary dependent upon qualifications. Send application to: Alice Lustig, Department of Molecular Biology, Lewis Thomas Laboratory, Princeton University, Princeton, NJ 08544.

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CELL AND MOLECULAR BIOLOGISTS Staff Scientist and Postdoctoral Level

Molecular Geriatrics Corporation (MGC) has several positions available at the postdoctoral and staff scientist levels for individuals interested in pursuing research projects related to the cellular and molecular mechanisms involved in neurodegeneration with applications in drug discovery efforts. Expertise is sought in cell and molecular biological methodologies such as immunofluorescence, computer-assisted video microscopy, immunochemistry, subcellular fractionation, PCR, Northern and Southern blot analyses, cDNA sequencing, and site-directed mutagenesis. Preference will be given to candidates with good publication records demonstrating continuous scientific accomplishment. Molecular Geriatrics Corporation is located in Lake Bluff, Illinois, a northern suburb of Chicago on the shores of Lake Michigan. Send curriculum vitae and the names, addresses and telephone numbers of three references to: Lester I. Binder, Ph.D., Director Cellular, Molecular and Structural Biology, Molecular Geriatrics Corporation, 42 Sherwood Terrace, Suites 4 & 5, Lake Bluff, IL 60044. MGC is an Equal Opportunity/Affirmative Action Employer.

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GENETIC EPIDEMIOLOGIST

For cancer genetics research program. Must be able to take a leadership role in supervision of a registry of high risk patients, and to facilitate multi-institutional collaboration. Candidates should have postdoctoral experience in both epidemiology and human genetics. The position carries an appointment at Cornell University Medical College. Working conditions and stipend are attractive. Send résumé to: Dr. D. G. Miller, Strang Cancer Prevention Center, 428 East 72nd Street, New York, NY 10021.

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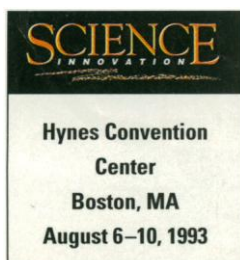
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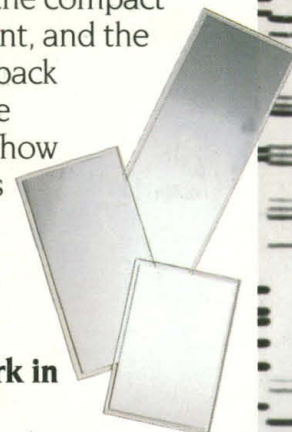


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