

SCIENCE

Information for Contributors

Please follow these guidelines in preparing your manuscript to ensure speedy handling by our editorial offices.

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 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-in-Chief, *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.

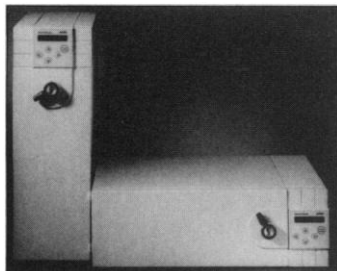
For the complete Information for Contributors, see the 1 January 1993 issue.

Four-in-One Centrifuge

The J2-HC centrifuge offers high-speed, high-capacity microcentrifuge or microplate centrifugation. The centrifuge generates up to 18,000 rpm and 48,000g and has a 3-liter capacity in both swinging bucket and fixed angle rotor for large volume and multiple sample processing. The J2-HC accommodates the complete Beckman line of high-speed rotors. With the JA-12 rotor, the centrifuge runs 12 50-ml conical tubes without adaptors. It performs high-speed applications such as pelleting bacteria, subcellular fractionation, and separating bacteria. The JS-4.3 swinging bucket rotor runs a range of labware from 1.5-ml tubes to 750-ml bottles. Applications include phase separations, receptor binding studies, and concentration of cells or bacteria. The centrifuge processes plasmid mini-preps and performs microplate applications ranging from cytotoxicity studies to cloning. **Beckman Instruments. Circle 139.**

Column Thermostat

The Mistral column thermostat permits exact and reproducible high-performance liquid chromatography (HPLC) analyses at ambient and subambient temperatures. The thermostat features a temperature range of ambient +5° to 90°C with 0.1°C accuracy, stability, and reproducibility. Temperatures as low as 5°C can be achieved with the Peltier cooling option. The Mistral is particularly useful for HPLC users who wish to improve resolution without changing columns or experimenting with dif-



ferent solvents. According to the manufacturer, the stable, low-temperature environment it provides can improve the resolution of some analyses by as much as 20%. **Euramark. Circle 140.**

Chemical Information Software

UNITY Chemical Information Software directly addresses the question: "Which structures in a chemical database are flexible enough to achieve a particular geometry?" UNITY's flexible algorithmic search of three-dimensional conformers is realized through an algorithm that makes use of analytical derivatives to minimize energy in torsional space. By letting the query direct the algorithm, fast searches of the relevant conformational space can be achieved at speeds up to 100 structures per second. **Triplos Associates. Circle 141.**

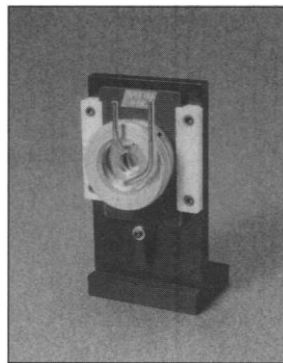
Protein Analysis Kit

The ProSort SDS-Protein Analysis Kit makes molecular weight determination of proteins faster and easier on Applied Biosystems' capillary electrophoresis systems. ProSort is a polymer solution sieving matrix that provides accuracy and resolution comparable to standard SDS-polyacrylamide gel electrophoresis (SDS-PAGE). ProSort offers the advantages of capillary electrophoresis—fast separation, low sample requirements, and built-in quantitation—and eliminates gel preparation, staining, and other labor-intensive requirements of SDS-PAGE. Sample preparation for ProSort is identical to conventional SDS-PAGE, but more precise quantitation is possible using the ultraviolet detector built in

to the capillary electrophoresis system. Proteins ranging from 14 through 205 kD can be separated in one run. ProSort also allows easy separation of glycoproteins. **Applied Biosystems. Circle 142.**

Sealed Cell for Liquid Analysis

The EZ-Fill Sealed Cell is an innovation in liquid transmission cells for infrared analysis. Prior sealed cells have been difficult to fill and are subject to broken seals



when too much pressure backs up. The EZ-Fill cell features a new design that reduces the back pressure, making it easy to fill and clean. It can be used for viscous samples because of its unique fluid dynamics. **Spectra-Tech. Circle 143.**

T Cell Isolation

Dynabeads M-450 Pan T (CD2) can be used for fast positive selection of extremely pure (>99%) and viable (>95%) CD2⁺ T cells within 20 min from a suspension of cells such as whole blood, buffy coat, or gradient-isolated mononuclear cells. The viable cells can be used in a variety of assays. Dynabeads M-450 Pan T (CD2) can also be used for depletion of cells whenever a suspension depleted of CD2⁺ cells is desired. Dynabeads M-450 Pan T (CD2) are uniform superparamagnetic

polystyrene beads coated with a primary monoclonal antibody specific for the CD2 membrane antigen that is predominantly expressed on human T lymphocytes. **Dynal. Circle 144.**

Literature

Shodex DEGAS: HPLC Eluent Degassing Device describes this high-performance liquid chromatography product. **JM Science. Circle 145.**

Catalog/Handbook of Fine Chemicals for Research and Industry: 1993-1994 is a 1,728-page compendium with more than 12,000 listings of organic and inorganic compounds, biochemicals, deuterated compounds, catalysts, stains and dyes, polymers, solvents, ion-exchange resins, and much more. **Janssen Chimica. Circle 146.**

Laser Diode Drivers and Accessories is a specification sheet for a line of these products. **LiCONiX. Circle 147.**

Guide to Radioiodination Techniques provides a comprehensive review, outlining strategies for the preparation, purification, and assessment of radioiodinated tracers for use in assays. It also describes methods for preparing radioiodinated proteins and haptens. **Amersham International. Circle 148.**

Application Notes for Confocal Microscopy is a series of six publications covering uses in the food industry, nonisotopic in situ hybridization, intracellular calcium imaging, visualization and localization of DNA replication sites, use of krypton/argon mixed gas lasers, and ultrasensitive imaging using fast photon counting. **BioRad Laboratories. Circle 149.**

Precision Syringe Drive Module (PSD/2) includes features, technical specifications, and detailed mechanical drawings of the module. **Hamilton. Circle 150.**

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

SCIENCE

PERSONNEL PLACEMENT

LINE CLASSIFIED ADVERTISEMENTS

- **Deadlines:** Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* is published each Friday, except the last Friday of the year. Call for holiday deadlines. Advertisements must be submitted in writing.
- **How to Submit a Classified Ad:** Prepare double-spaced typewritten copy. Do not include any abbreviations. *Science* will edit and typeset ads according to *Science* guidelines. Include billing information, and desired publication date. Available categories: Positions Open, Meetings, Announcements, Courses and Training.
- **Mail or FAX materials to:**
Science Classified Advertising
 1333 H Street, N.W., Room 814
 Washington, DC 20005
 Telephone: 202-326-6555
 FAX: 202-682-0816
- **Rates:** Ads are \$42 per line; \$420 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces. A 3% cash discount is granted to all prepaid ads.
- **Ads from Outside the U.S.:** A discount of \$30 will be offered to advertisers making payment in U.S. dollars by checks drawn on U.S. banks. Contact Annemarie Vis at +44 223 302067 (telephone) or +44 223 302068 (FAX).
- **Credit Cards:** *Science* accepts MasterCard and VISA. Discount does not apply to credit cards.
- **Cancellations:** Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

DISPLAY PERSONNEL ADVERTISEMENTS

For rates and info. about fractional display ads (all ads 1/2 page and larger), contact:

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

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR. The Department of Pathology of the Harvard Medical School invites applications for a faculty position in veterinary pathology to direct the activities of the Division of Comparative Pathology at the New England Regional Primate Research Center. Responsibilities include the conduct of an independent research program with emphasis on the pathogenesis of lentiviral infections of nonhuman primates; directing the diagnostic pathology services for the animal colonies; training postdoctoral fellows in an NIH training program; and collaborative diagnostic and research support to other members of the Primate Center faculty. Experience in research and diagnostic pathology is required. The selected candidate will be expected to successfully compete for research support. Certification by American College of Veterinary Pathologists is desirable. Appointment at the Assistant or Associate Professor level in the Department of Pathology, Harvard Medical School, depending upon experience. Qualified applicants should submit a letter of interest, along with curriculum vitae and names of at least three references to:

Dr. Ronald D. Hunt, Director
New England Regional Primate Research Center
One Pine Hill Drive
P.O. Box 9102
Southborough, MA 01772-9102

Harvard University is an Equal Opportunity/Affirmative Action Employer and encourages the applications of qualified women and minorities.

PHYSIOLOGY, FACULTY. A tenure-track position for an investigator in cellular physiology, biophysics, or neuroscience. Researchers in cellular/molecular physiology, membrane transport, or neurobiology are especially invited to apply. Applications including curriculum vitae, a brief statement of research interests and three letters of reference should be mailed to: **Dr. Robert B. Gunn, Chairman, Department of Physiology, Emory University School of Medicine, Atlanta, GA 30322.** New applications will be considered until September 15, 1993, or until the position is filled. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

PHYSIOLOGIST

A position of **ASSISTANT or ASSOCIATE PROFESSOR** is immediately available in the Department of Physiology, College of Osteopathic Medicine. Applicants must have a doctorate or equivalent degree and postdoctoral experience in a relevant field; a commitment to teaching excellence and implementation of progressive instructional techniques; and established research interests. Primary duties include medical student education with secondary emphasis on research or other academic activities. The school's mission is to be number one in the country in the training of primary care physicians. Submit curriculum vitae and the names of 3 references to: **Gary O. Ballam, Ph.D., Chairman, Department of Physiology, The University of Health Sciences, 2105 Independence Boulevard, Kansas City, MO 64124-2395.** *Equal Opportunity Employer.*

NEUROBIOLOGY FACULTY POSITION

The Neurobiology Research Center at the University of Alabama at Birmingham (UAB) School of Medicine invites applications for a faculty position at the **ASSISTANT PROFESSOR** level. Applicants should have at least two years of postdoctoral experience. The Center is seeking an outstanding individual with a strong record of achievement using modern approaches to neurobiology whose interests complement those of current members. Interests of the faculty include membrane biophysics, synaptic plasticity and modulation, cellular and molecular basis of neurodevelopment, signal transduction and intracellular signaling. The Center has excellent research facilities and has recently been provided with new space in the Civitan International Research Complex on the UAB campus. The development of the Center is supported by funds from the state and the Lucille P. Markey Charitable Trust.

Send curriculum vitae and statement of research plans and have three letters of recommendation sent to: **Michael J. Friedlander, Ph.D., Neurobiology Research Center, 1719 6th Avenue South, CIRC 516, University of Alabama at Birmingham, Birmingham, AL 35294-0021** by September 15, 1993. *UAB is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

The Department of Biological Chemistry is seeking applications at the **ASSISTANT or ASSOCIATE PROFESSOR** level for a 12-month, tenure-track faculty position(s). Outstanding individuals with research experience or interests which augment current departmental programs in the areas of gene regulation, signal transduction mechanisms, developmental biology or structural biochemistry are sought. Individuals working with yeast or higher eukaryotic systems are encouraged to apply. The successful candidate will be expected to establish an active, externally funded research program. Other responsibilities will include teaching biochemistry to undergraduate, graduate, medical, or dental students, and participating in the department graduate program. Applicants should send curriculum vitae and bibliography, a brief description of current and future research directions, and request three letters of reference to be sent to: **Dr. Jack E. Dixon, Chair, Department of Biological Chemistry, University of Michigan Medical School, 5416 Medical Science I, Ann Arbor, MI 48109-0606.** Deadline for applications is November 1, 1993.

The University of Michigan is an Affirmative Action/Equal Opportunity Employer. Applications from qualified women, minorities, and/or disabled individuals are encouraged.

TENURE-TRACK, ASSISTANT PROFESSOR Department of Microbiology and Immunology Virginia Commonwealth University

Tenure-track assistant professorship in the Department of Microbiology and Immunology at Virginia Commonwealth University. An individual with expertise in one or more areas of contemporary immunobiology, including cellular or molecular immunology, immunogenetics or immunochemistry is being sought. Applicants must hold a Ph.D. or equivalent degree and have at least 2 years of productive postdoctoral experience. Successful applicants expected to develop and maintain strong, grant-supported independent research program including training of graduate students and postdoctorals. Participation in graduate and professional-level teaching and service activities is required. Candidates should submit a statement of research interests, curriculum vitae, and the names and addresses of three references by October 1, 1993. Submit materials to: **Dr. F. L. Macrina, Box 678 MCV, Richmond, VA 23298-0678.** *Virginia Commonwealth University is a culturally diverse, Equal Opportunity/Affirmative Action Employer. Women, minorities, and persons with disabilities are encouraged to apply.*

ASSISTANT/ASSOCIATE PROFESSOR OF SURGERY AND PHYSIOLOGY

Assistant/Associate Professor of Physiology. Tenure-track position. Joint appointment in Surgery-ENT/Physiology. Develop/direct new research in secretory function of dark cells in inner ear. Interest in auditory and vestibular ontogeny beneficial. Postdoctoral required. Salary negotiable. Send letter and curriculum vitae to: **William Davis, M.D., Division of ENT, One Hospital Drive, MA 314, Columbia, MO 65212.** *The University of Missouri is an Equal Opportunity and Affirmative Action Employer. Women and minorities encouraged to apply. The University complies with the guidelines of the Americans with Disabilities Act of 1990. If you have special needs as addressed by the ADA and need assistance, notify us at the above address. Reasonable efforts will be made to accommodate your special needs.*

NEUROPATHOLOGIST RHODE ISLAND HOSPITAL

Requirements: M.D., Board certification (or qualification) in Neuropathology. Commitment to service neuropathology, teaching students, residents and fellows, and to conduct research in a field related to neuropathology, e.g., muscle/nerve disorders, neurogenetics, neoplasia, pediatric, or fetal neuropathology. Academic record sufficient to qualify for a faculty appointment at the level of **INSTRUCTOR or ASSISTANT PROFESSOR** in the Brown University School of Medicine. *Applications from women and minority groups are encouraged.* Screening will continue until a candidate is selected or the search is closed. *Affirmative Action/Equal Employment Opportunity Employer.* Send curriculum vitae to: **Edward G. Stopa, M.D., Chair, Neuropathology Search Committee, Department of Pathology, Rhode Island Hospital, 593 Eddy Street, Providence, RI 02903.**

POSITIONS OPEN

DANA-FARBER CANCER INSTITUTE/ HARVARD MEDICAL SCHOOL PROFESSOR OF PATHOLOGY

Harvard Medical School and the Dana-Farber Cancer Institute are searching for a Professor of Pathology. The candidate should be a leader in the field of molecular analysis of leukocytes cell adhesion including, but not limited to, integrins. The candidate should have experience in and would continue to supervise the research of graduate students and postdoctoral fellows. The candidate is expected to participate in the teaching of medical and graduate students.

Applicants are invited to submit curriculum vitae to: **Lan Bo Chen, Ph.D., Professor of Pathology, Chairperson, Search Committee, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115.** *Harvard Medical School and the Dana-Farber Cancer Institute are Affirmative Action/Equal Opportunity Employers. Women and minorities are encouraged to apply.*

University of North Texas Health Science Center at Fort Worth (UNTHSC-FW) seeks PROFESSOR AND CHAIR OF PHYSIOLOGY. The Department of Physiology invites applications and nominations for a chairperson. Candidates must have a Ph.D., M.D., or D.O. or equivalent degree, and an active, funded research program with an outstanding record of research achievement in the area of cardiovascular physiology. The Chairperson will be responsible for providing academic and administrative leadership to promote research and teaching excellence of an active faculty.

The University of North Texas Health Science Center is a state-supported institution with new well-equipped facilities, consisting of a College of Osteopathic Medicine and a Graduate School of Biomedical Sciences. The Health Science Center is affiliated with the University of North Texas. Send curriculum vitae, statement of teaching and administrative experience, a summary of research interests and goals, a list of grant funding and the names of three references by December 31, 1993, to: **Dr. Thomas Yorio, Search Committee Chairman, Office of Graduate Studies, University of North Texas Health Science Center at Fort Worth, 3500 Camp Bowie Boulevard, Fort Worth, TX 76107-2699.**

UNTHSC-FW is an Equal Opportunity/Affirmative Action Employer and Educator.

JUNIOR FACULTY POSITIONS

The Department of Chemistry at Indiana University plans to make three tenure-track appointments at the **ASSISTANT** or **ASSOCIATE PROFESSOR** levels in biochemistry, inorganic, and organic (organometallic) chemistry, effective fall 1994. These positions will require the ability to organize and present courses at both the graduate and undergraduate levels. Potential candidates are expected to have a solid record of accomplishment in research and show promise of developing vigorous, independent programs of scholarly investigation. To apply, submit a biographical sketch, publication list, and a description of ideas for the development of vigorous teaching and research programs. The applicant should also arrange to have three letters of recommendation transmitted. The deadline for applications is October 15, 1993. All application materials should be sent to: **Professor Paul A. Grieco, Chairman, Department of Chemistry, Indiana University, Bloomington, IN 47405.** *Indiana University is an Affirmative Action/Equal Opportunity Employer.*

CHAIR

**Department of Genetics and Developmental Biology
University of Connecticut School of Medicine**

Applications are requested for the Chair of a newly created basic science department. The ideal candidate will be actively engaged in a research program in genetics or developmental genetics, and have the academic background required to ensure vigorous departmental growth. It is intended that the department should have a significant focus in mammalian, including human, genetics, but also substantial research on other organisms. Applications should include complete curriculum vitae and should be submitted by October 1, 1993, to: **Chair, Genetics and Developmental Search Committee, Medical Dean's Office, University of Connecticut School of Medicine, 263 Farmington Avenue, Farmington, CT 06030.**

AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER, M/F/D/V.

POSITIONS OPEN

University of Vermont Molecular/Cellular Physiologist

The Department of Molecular Physiology and Biophysics seeks two tenure-track faculty members at a level commensurate with experience. The Department has strengths in the following aspects of muscle physiology: 1) Contraction and motility; 2) Ion channels; 3) Cellular growth and remodeling; 4) Intra- and intercellular signaling. We are seeking individuals whose research directly complements existing strengths. Strong preference will be given to individuals applying forefront cellular and/or molecular biological techniques to the study of physiological function. Candidates for **ASSISTANT PROFESSOR** must have an earned doctorate, plus 2 or more years of postdoctoral experience at time of application. They must demonstrate the potential to develop an active independent research program and to contribute effectively to department teaching at both graduate and undergraduate levels. Applicants at the **ASSOCIATE/FULL PROFESSOR** level must have demonstrated excellence in teaching and their ability to direct and sustain vigorous and productive research programs. *The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and individuals from diverse racial, ethnic, and cultural backgrounds are encouraged to apply.* Consideration will be given until the positions are filled. Formal review will begin on October 15, 1993, and the expectation is to fill the positions within 9 months. Applicants should send curriculum vitae along with a description of career goals, research objectives, and names of three references to:

**Chair, Faculty Search Committee
Department of Molecular Physiology & Biophysics
University of Vermont College of Medicine
Burlington, VT 05405-0068**

ASSISTANT PROFESSORSHIP IN PHYSIOLOGY/PHARMACOLOGY

An assistant professor-level faculty position in physiology/pharmacology is available in the Department of Veterinary Physiology and Pharmacology, College of Veterinary Medicine, Texas A & M University. The 12-month, tenure-track appointment requires expertise in teaching and research and will be open to individuals holding a D.V.M. and/or a Ph.D. degree. Teaching responsibilities may include instruction of undergraduate, professional, and graduate students in physiology. The successful candidate will be dedicated to high quality teaching and will be expected to participate in ongoing research programs or to establish viable collaborative or independent projects. Interested candidates should submit curriculum vitae, statement of research interests, statement of teaching philosophy and a list of references to: **Dr. Deborah T. Kochevar, Department of Veterinary Physiology and Pharmacology, Texas A & M University, College Station, TX 77843-4466.** Applications will be accepted until November 1, 1993. *Texas A & M University is an Equal Opportunity/Affirmative Action Employer/Educator.*

DIRECTOR, CANCER CENTER University of California, San Francisco

UCSF seeks an outstanding individual to coordinate and develop a Comprehensive Cancer Center, with the goal of advancing knowledge, education, and treatment of cancer. Based at UCSF/Mt. Zion Hospital and including all cancer-related programs at UCSF, the cancer center will include major efforts in clinical diagnosis and treatment of cancer, basic research, and programs in epidemiology, prevention and control. The director will be **ASSOCIATE DEAN** for cancer programs and report directly to the dean of the School of Medicine. The cancer center represents a major institutional commitment, including a budget in the UCSF School of Medicine and a substantial complement of space for research and patient care. The individual chosen will have outstanding administrative and organizational skills and a national reputation in clinical oncology and/or basic research related to cancer. Applicants must be qualified for appointment as a professor in a School of Medicine academic department. Applicants should send curriculum vitae to: **Dr. Warner C. Greene, c/o Joyce McKinney, Office of the Dean/School of Medicine, 513 Parnassus, Room S-224, San Francisco, CA 94143-0410.**

POSITIONS OPEN

DIRECTOR, LABORATORY ANIMAL MEDICINE University of North Carolina at Chapel Hill

Position provides professional direction for the use of animals in research and educational programs within the University, administering the University program for laboratory animal care and housing, and participation in educational and research programs. Candidates must have a D.V.M. degree from an AVMA accredited school or college and be certified by board of ACLAM or equivalent boards. Applications should include current curriculum vitae, names and addresses of 3 professional references and should be submitted by October 15, 1993, to: **Dr. William D. Huffines, Chair, Search Committee, CB # 7520, Berryhill Hall, Chapel Hill, NC 27599-7520.** *Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

EXECUTIVE STAFF POSITION

This position reports directly to the Chief Executive Officer of a privately owned European Specialty Pharmaceutical Company with world wide sales. The senior person selected will head a five person group responsible for coordination of clinical and registration of new pharmaceutical products in markets around the world. Project timetables and budgets will be coordinated with the individual country managements. Your experience in clinical and/or pharmaceutical development and European regulations as well as project management will be needed to offer guidance to the various departments doing the work in countries.

You will need a M.D./Ph.D. degree with experience in project management and ten years in the pharmaceutical industry. Experience in peptides and their unique delivery systems is helpful. Interpersonal skills in dealing with both internal and external collaborators essential. Speaking knowledge of French is useful. The position is based in Paris France.

Please send curriculum vitae and salary history with names of three references to: **SCIENCE Classified Advertising Box 39, 1333 H Street, NW, Washington, DC 20005.**

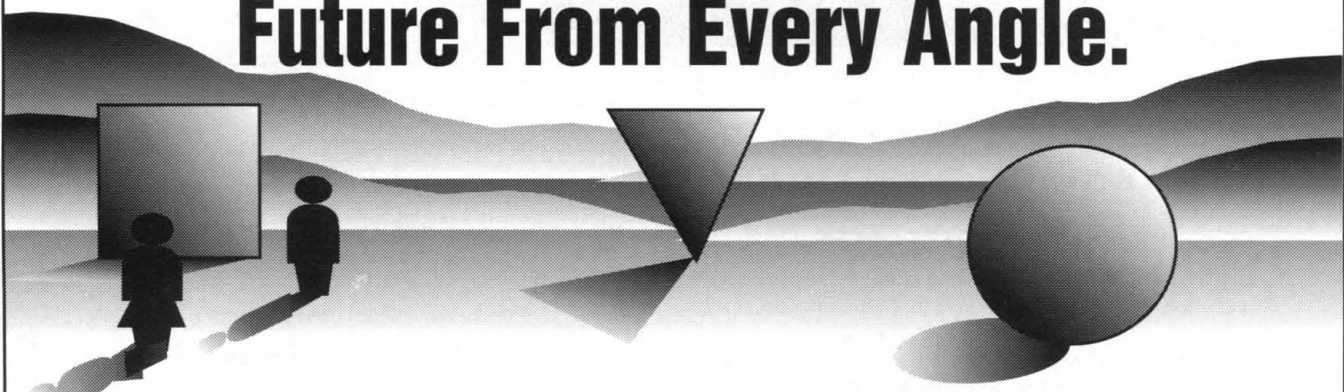
DIRECTOR OF JOINT TECHNOLOGY TRANSFER PROGRAM University of Washington and Washington Research Foundation

The University of Washington and the Washington Research Foundation Board of Directors are jointly seeking a proven leader to serve in a new dual position as Director of the University's Office of Technology Transfer (OTT) and as President of the Washington Research Foundation (WRF) to help define and implement a long-range effort to build a vital and comprehensive intellectual property management program. Candidates should have both general and technology transfer-specific management experience, and demonstrated skills as an effective negotiator and consensus-builder. An M.B.A. and/or an advanced degree in a scientific discipline is desirable, as is relevant experience at a research university and/or in industry. Applications will be accepted until September 15, 1993. Send résumé and letter of application to: **Search Committee for Director of Technology Transfer, University of Washington, Office of Research AC-20, Seattle, WA 98195.**

Salary will be commensurate with qualifications. *The University of Washington and Washington Research Foundation are Affirmative Action Employers.*

The University of South Carolina, Columbia, invites applications and nominations for the position of DEAN of the College of Science and Mathematics. The Dean of the College of Science and Mathematics is responsible for administering the College's budget of approximately \$17.5 million in state funding and \$21 million in outside support. The College consists of seven departments and several institutes. Applicants should send a letter of application and a complete résumé to: **Dr. Ralph E. White, Chairman of the Science and Mathematics Dean Search Committee, Department of Chemical Engineering, Swearingen Engineering Center 2C13, University of South Carolina, Columbia, SC 29208. Telephone: (803) 777-6060; FAX: (803) 777-8265.** *The University of South Carolina is an Equal Opportunity Employer and specifically invites and encourages applications from women and minorities.*

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PROTEIN CHEMISTS (Washington, DC) - Code 2310

BS/MS level candidates in Protein Chemistry or Biochemistry are being sought to support our Washington, DC-based operations. A minimum of two years experience in Edman sequencing, amino acid analysis, protein chemistry and peptide purification is required.

SENIOR MOLECULAR BIOLOGIST/MICROBIOLOGIST (Washington, DC) - Code 2311

A Senior Scientist is sought to support ongoing research efforts in the general area of molecular biology/microbiology. Candidates should possess a Ph.D. in a biotechnology-related discipline. Candidates should have demonstrated creativity and productivity, scientific leadership/technical management experience, breadth of scientific endeavor, excellent interpersonal skills, and the ability to obtain competitive funding. Current interests of our molecular biology/biotechnology program include environmental microbiology and bioremediation, nucleic acid technology, protein engineering and immobilization, biosensors, molecular self-assemble, bioelastometers and biomaterials.

TECHNICAL SUPPORT STAFF (Washington, DC) - Code 2312

BS/MS level candidates (with a minimum of two years experience) are being sought for Technical Support positions in our Washington, DC-based operations. Candidates will conduct laboratory research in vaccine development and environmental contamination hazard assessment. Personnel required include: Biologists, Molecular Biologists, Molecular Immunologists and Biochemists (with fermentation/protein purification experience).

SENIOR BIOCHEMIST/IMMUNOCHEMIST (Washington, DC) - Code 2289

A Senior Scientist with a Ph.D. in Biochemistry, Immunochimistry, Organic Chemistry, or related field is being sought to assume a leading role in the development of novel biosensor technologies. Candidates should possess a broad scientific background, with a minimum of five years of demonstrated laboratory experience in fluorescence and optics for sensor applications. Project and personnel management experience, with consummate written and oral communication skills are required. Previous experience in successfully securing sources of research funding is preferred.

ANALYTICAL CHEMISTS (Denver, CO) - Code 2299

BS/MS level candidates in Analytical Chemistry are being sought to support our research efforts. A minimum of two years experience in GC and GC/MS, volatile and semi-volatile analysis is required. Candidates must possess an intimate familiarity with EPA protocols and methodologies.

HEALTH HAZARD TOXICOLOGIST (Dayton, OH) - Code 49

A Senior Scientist with a Ph.D. in Toxicology is sought to conduct research efforts focusing upon toxicology and exposure standard setting. Candidates must be familiar with industrial

hygiene/occupational medicine, with a minimum of five years of practical experience. The selected candidate will evaluate laboratory toxicology test results, and use scientific literature and test results to recommend exposure standards. Candidates will also apply mathematical exposure models to hazard evaluation.

AEROSOL SCIENTIST/INHALATION TOXICOLOGIST (Dayton, OH) - Code 50

A Senior Scientist is sought to conduct research efforts involving the generation of selected aerosols, and delivery to custom inhalation exposure chambers. Qualified candidates will possess a Ph.D. in Toxicology, with extensive knowledge of aerosol physics, measurement methods, and instrumentation. Candidates will be responsible for the characterization of exposure chamber atmospheres, and the development of combustion toxicology exposure systems that permit the measurement of performance decrements in small animal models. Candidates will also develop methods for combustion toxicology assessment as required.

PROTEIN CHEMISTS (Boston, MA) - Code PRC

Bachelors, Masters and Ph.D. level candidates (with a minimum of two years post-degree experience) are sought to conduct research in the purification of proteins using chromatography, electrophoresis, and related techniques. Responsibilities will also include the isolation of proteins from biological systems; characterization of purified proteins in terms of composition and sequence; identification of modified amino acids; peptide synthesis; chemical modification of proteins; and structural characterization to include X-ray, NMR, DC and related techniques.

PHYSICAL CHEMISTS (Boston, MA) - Code PHC

Bachelors, Masters and Ph.D. level candidates (with a minimum of two years post-degree experience) are sought to conduct research in the following areas: the characterization of crystalline morphologies through organic template reactions; Langmuir techniques; optical characterization of organic-inorganic assemblies; analytical characterization of materials including FTIR, MS, X-ray, SEM, TEM, AFT/STM and related techniques.

If you're stimulated by provocative science, and applications-oriented research and development, you're ready for all that we have to offer. **GEO-CENTERS, INC.** offers a competitive salary, a generous benefits package and relocation assistance. **U.S. CITIZENSHIP OR GREEN CARD IS REQUIRED.** Candidates will be evaluated on educational credentials, demonstrated practical experience, and publication records in their research specialties. Qualified applicants are encouraged to send their resume and salary history to the appropriate location listed for each position. Responses for Codes 2310, 2311, 2312, 2289 & 2299 should be sent to: **GEO-CENTERS, INC.**, 10903 Indian Head Highway, Fort Washington, MD 20744, Attn: Deborah Hall-Greene/Code _____. Responses for Codes 49 & 50 should be sent to: **GEO-CENTERS, INC.**, P.O. Box 59839, Centerville, OH 45459-0839, Attn: Dr. T.K. Narayanan/Code _____. Responses for Codes PRC & PHC should be sent to: **GEO-CENTERS, INC.**, 7 Wells Avenue, Newton Centre, MA 02159, Attn: Human Resources/Code _____. **GEO-CENTERS, INC.** is an Equal Opportunity/Affirmative Action Employer. (Principals Only).



GEO-CENTERS INC.

Tomorrow's Technologies, Today's Applications.

Collaboration

CAMBRIDGE POSITIONS

DISCOVERY RESEARCH

Cellular Immunology. We currently seek two individuals with 2-5 years' experience in T-cell function studies (including T-cell activation, proliferation, lymphokine production and cytolytic activity) to work in a novel cytokine discovery program. One position requires a PhD with 3-4 years' postdoctoral training. The second position requires a BS in the Life Sciences. Experience with molecular biology and FACS would be a definite plus for either position. (Job Code MMS1)

Embryonic Growth & Regulatory Proteins.

The EGRP Group's research is focused on the biology and molecular basis of organ formation during embryogenesis and organ hemostasis and renewal in the adult animal. The goal of the group is to understand how parenchymal organs, such as the pancreas, are formed and maintained in the adult animal.

The EGRP Group has an opening for a Staff Scientist, with a PhD, or equivalent, 3-5 years of postdoctoral experience with publications in any of the following: cellular, biochemical or molecular aspects of vertebrate or invertebrate development, cell biology or endocrinology. Experience with mammalian systems would be preferred. Candidates with research experience in topics such as cell fate, epithelial-mesenchyme interactions in systems such as *Drosophila*, *C. elegans*, *Xenopus* and zebra-fish are encouraged to apply. The ideal candidate must have the ability to work in a team-oriented environment with hands-on, bench-level and supervisory responsibilities. In addition, candidates should have excellent verbal and written communication skills. (Job Code MMS2)

PRE-CLINICAL BIOLOGY

Bone Biology. Our Pre-clinical Bone Biology Group is looking to expand with the addition of a PhD/DVM/MD level scientist. The selected individual will participate in a research program examining the efficacy of our novel polypeptide growth factors in animal models of bone and connective tissue repair. Duties will include: deriving experimental protocols, conducting *in vivo* studies, collecting/analyzing data, coordinating in-house research with experiments performed by collaborators, and deriving new *in vivo* experimental systems. An extensive background in bone biology and some experience with related animal model research are required. (Job Code MMS3)

For these Cambridge-based positions, located just outside Boston, please forward resume, specifying position of interest and corresponding job code, to: Human Resources Department, Genetics Institute, Inc., 87 CambridgePark Drive, Cambridge, MA 02140.

■ *Innovation is a collaborative process. Witness the teamwork required for Genetics Institute's discovery and characteri-*

zation of novel human regulatory proteins and their development into biopharmaceuticals. Together, our impressive team is harnessing the body's natural responses and creating a broad-based portfolio of licensed and proprietary pharmaceuticals for the treatment of hemophilia, bone damage and disease, cancer, anemia, infectious disease, heart disease, inflammatory conditions and immune system disorders.

Our impressive team of professionals bring their individual talents and expertise to work in concert. It's a team with energy, influence and respect. With the right background and drive, you could be a part of it, contributing to the next level of breakthroughs. The race to discovery is a bold one. Take your place at the forefront with Genetics Institute. ■

ANDOVER POSITIONS

PROCESS BIOCHEMISTRY

The Formulation Group is responsible for the development of manufacturable, stable, and marketable dosage forms of recombinant protein products. Properly developed stability-indicating methods are required for the rational development of formulations. The comprehensive characterization of drug substances/products and degradation products is also an integral component of the Group's work.

Formulation. As a Staff Scientist you will develop HPLC and electrophoresis methods and methodologies for stability indicating assays and formulation studies. In addition, you will be responsible for the characterization of degradation products and mechanisms.

Qualified individuals will have an MS with 3 years' experience, or a PhD with at least one year of experience, degree in biochemistry, pharmaceuticals, or analytical biochemistry. Successful candidates must understand the requirements for stability-indicating assays. (Job Code DMS1)

For this Andover-based position, located 30 minutes outside of Boston, please forward your resume, specifying job code, to: Human Resources Department, Genetics Institute, Inc., One Burt Road, Andover, MA 01810.

Genetics Institute offers competitive salaries and benefits, including comprehensive healthcare, three weeks' paid vacation, 401(k), stock purchase plan and equity participation programs, on-site exercise facility and child care resource and referral.

Genetics Institute is dedicated to building strength through diversity. We are an equal opportunity employer.

Discovery

■ *Genetics Institute, a pioneer in biopharmaceutical research and development, is at the forefront of the discovery and characterization of novel human regulatory proteins. Backed by our exceptional human and scientific resources, fellows in our Postdoctoral Program participate in all aspects of scientific interchange, including individual research, publication, presentation and attendance at meetings and seminars. As our efforts continue, we seek individuals who will make significant contributions.* ■

POSTDOCTORAL FELLOWSHIPS

Small Molecule Drug Discovery

We are currently seeking a PhD for postdoctoral studies in protein structure and receptor/ligand interactions by multi-dimensional NMR spectroscopy, within our Structural Biology Group. Research efforts are supported by a 600 MHz NMR spectrometer with accessory PF as well as SGI workstations and compute services. Applicants should be motivated to pursue problems on the leading edge of structural biology and have demonstrated expertise in macromolecular structure determination. (Job Code DC)

Pre-Clinical Biology R&D (3 positions)

Our studies encompass the development of infectious disease models for the evaluation of novel cytokines as potential therapeutic agents. Responsibilities encompass performing *in vitro* and *in vivo* experiments, (transgenic and knockout systems) involving cell assay systems, interactions with microorganisms and protocol development. A PhD or PhD/MD in immunology, microbiology or a related discipline is required. Experience in cell culture, *in vivo* models and cellular immunology or molecular biology is desirable. (Job Code JS)

Our active pre-clinical hematopoiesis group uses cellular and molecular approaches to study the biology of novel cytokines. We seek an individual to study cytokine gene expression and regulation in normal and transgenic models. Experience using general molecular biology research techniques is required. Knowledge of *in situ* hybridization is desirable. (Job Code SG)

Study the effect of alternative drug strategies for novel cytokines and growth factors. The ideal candidate will have a PhD in pharmaceuticals/ pharmacokinetics and experience developing *in vitro/in vivo* models for evaluating the delivery of therapeutic candidates. Experience with peptides is desirable. (Job Code BF)

Process Biochemistry

Engaged in developing scalable processes for purifying proteins of therapeutic importance, research ranges from investigating new and emerging technologies for purifying proteins to using proteins that pose challenging separations problems as models. In addition, we are working to better understand the mechanism of action for existing separations, and investigating the effects of purification on the structure of proteins. (Job Code GA)

Microbial Fermentation

This research effort involves the development of fermentation processes that maximize the cellular and volumetric productivity of bacteria capable of producing proteins of pharmaceutical interest. An opportunity exists for a microbial physiologist who utilize knowledge of regulation of energy yielding pathways, protein chemistry and molecular genetics to enhance the production of recombinant proteins in *Escherichia coli*. Demonstrated proficiency in modern molecular biology techniques is essential. (Job Code NS)

As a growing force in the biopharmaceutical industry, we are constantly looking for superior post doctoral candidates. Genetics Institute offers competitive salaries and benefits, including comprehensive healthcare, three weeks' paid vacation, 401(k), stock purchase plan, on-site exercise facility, and child care resource and referral. If you have an interest in our post doctoral program, please forward your curriculum vitae and letter of interest specifying job code to: Human Resources Department, Genetics Institute, Inc., 87 CambridgePark Drive, Cambridge, MA 02140, Attn: Postdoc Fellows.

Genetics Institute is dedicated to building strength through diversity. We are an Affirmative Action Employer.



Harnessing The Body's Power To Heal™

BIOLOGICAL MECHANISMS AND QUANTITATIVE RISK ASSESSMENT

The Health Effects Research Laboratory of the U.S. Environmental Protection Agency is pleased to announce that its first annual Symposium will be held November 1-4, 1993, at the Sheraton Imperial Hotel & Convention Center in Research Triangle Park, North Carolina. The Symposium will focus on the role of biological mechanism research in future risk assessment strategies. The role of mathematical models of biological systems in integrating research activities and reducing uncertainties in the risk assessment process will be discussed. An opportunity will be provided for presenting posters on topics related to the theme of the Symposium. For more information on the Symposium or for submission of abstracts, please contact:

HERL Symposium Coordinator
Research and Evaluation Associates, Inc.
100 Europa Drive, Suite 590
Chapel Hill, North Carolina 27514
(919) 968-4961
(919) 967-4098, (FAX)



Max-Planck-Institute for Chemistry (Otto-Hahn-Institut), Mainz/Germany

Research Unit to be headed by a Junior Scientist

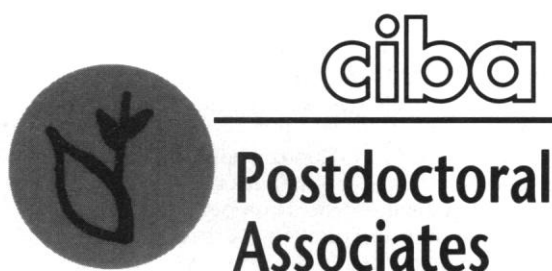
The Max-Planck-Institute for Chemistry - Division of Atmospheric Chemistry - seeks an outstanding candidate to lead a research group devoted to theoretical and/or experimental studies of the physical/chemical interactions between the solid/liquid/gas phases in the atmosphere (troposphere and/or stratosphere).

The successful candidate will have had several years of postdoctoral experience and an outstanding record of achievement in one of these research areas. The available position represents a five years appointment at a level equivalent to associate professor (C3). Appropriate laboratory space, funds for laboratory set-up and operation, and additional salaries for one Ph.D. level scientist and one technician will be guaranteed; fellowships for post-doctoral fellows and graduate students are subject to negotiation.

Candidates should submit their curriculum vitae, a list of publications, a short description of their future research objectives, and the names of three scientists familiar with the candidate's research accomplishments and scientific potential to:

Professor Dr. Paul J. Crutzen
Max-Planck-Institut für Chemie
Saarstr. 23
55122 Mainz

Application deadline: October 31, 1993



Ciba's Agricultural Biotechnology Research Unit in Research Triangle Park, NC is world renowned for innovative research and development which promotes more bountiful and resilient crops.

We are seeking recent PhD Scientists with specialties in Molecular Biology or Biological Science to join us this Fall. Selected candidates will be part of a collaborative, interdisciplinary effort researching the molecular basis of acquired disease resistance in plants. Experience in biochemistry, genetics or molecular biology is required. Understanding of plant biology or plant pathology is helpful, but not mandatory.

We offer competitive salaries and a generous benefits package. Please send resume, transcripts and three letters of professional reference to: **Manager, Human Resources, Dept. 9310, Ciba-Geigy Corporation, P.O. Box 12257, Research Triangle Park, NC 27709-2257.** We Are An Equal Opportunity Employer M/F/D/V.



W. ALTON JONES CELL SCIENCE CENTER
INCORPORATED

RESEARCH OPPORTUNITIES AT THE W. ALTON JONES CELL SCIENCE CENTER

THE W. ALTON JONES CELL SCIENCE CENTER is located in the heart of the Adirondack State Park, Lake Placid, N.Y. The Center is equipped with state-of-the-art equipment (amino acid analyzer, amino acid and DNA sequencers, peptide and DNA synthesizers and various other analytical instruments) for studies in cell and developmental biology. Salaries and benefits are competitive. Send curriculum vitae, names and telephone numbers of three references and summary of research interests to:

Ms. Andrea Terwillegar, W.A.J.C.S.C., 10 Old Barn Rd., Lake Placid, NY 12946. The Cell Science Center is an Equal Opportunity/Affirmative Action Employer.

GRADUATE, POSTDOCTORAL AND VISITING SCIENTISTS PROGRAMS.

The Center participates in a graduate program with Clarkson University, Potsdam, NY and the University of Vermont, Burlington, VT. Course work is taken at the University and research work is conducted at the Center. This program is open to excellent candidates who have completed their undergraduate degree. **STUDENTS, POSTDOCS AND VISITING SCIENTISTS** participate in projects within laboratories of senior scientists including:

JAMES L. STEVENS, Director: Cellular and biochemical toxicology and carcinogenesis.

JOHN W. CRABB: Protein structure-function, molecular biology of visual cycle proteins.

JUN HAYASHI: Developmental immunobiology of thymocytes and thymic epithelial cells.

SUSAN JAKEN: Regulation and activation of protein kinase C isozymes.

WALLACE MCKEEHAN: Growth factors/receptors in blood vessels, liver and prostate.

J. DENRY SATO: Cellular endocrinology physiology.

GINETTE SERRERO: Biology and hormonal control of mesenchymal cell differentiation.

DANIEL J. SUSSMAN: Regulation of gene expression in mammary tumorigenesis and mouse development.

ASSOCIATE DIRECTOR

Frederick Cancer Research & Development Center (FCRDC)
National Cancer Institute, National Institutes of Health (NIH)
Public Health Service (PHS)

The NCI is accepting applications for the position of Associate Director, FCRDC, located in Frederick, Maryland. We are seeking scientists experienced in biology, microbiology, pharmacology, chemistry, or medicine, who have demonstrated the ability to manage large, multi-disciplinary public health research programs involving the causes of biology of cancer and AIDS and who have skill in basic or biomedical research and science program administration. The FCRDC is operated under a system of five contracts at approximately \$150 million per year. These contracts support basic research; operational support; animal production; and, computer and library services. The Associate Director is responsible for the direction of the FCRDC and coordination of research and management matters with the Director, NCI and other organizations. The incumbent formulates major policies on the operation of the FCRDC in conjunction with the Director, NCI. He/She cooperates and maintains contact with local community representatives and local and national news media as well as Congressional offices.

Salary: Ranges from \$66,609 to \$91,029 per annum. Physicians may be eligible for an added allowance up to \$20,000 per annum.

Benefits: Generous package includes health and life insurance options, retirement, paid holidays, vacation and sick leave.

Exceptional recruiting difficulty may result in payment of a recruitment bonus. Payment of travel and transportation expenses will be considered on an individual basis.

For Qualification Requirements, Application Procedures, and Other Additional Information, please contact:

**Ms. Marge Johnson, Personnel Management Specialist, NCI,
NCI-Frederick Cancer Research and Development Center,
Building 427, Room 14, Frederick, Maryland 21702-1201;
Tel: (301) 846-5023; FAX: (301) 846-1494**

Applications must be postmarked no later than the announcement closing date of September 13, 1993. To be considered, applicants must be U.S. citizens.

NIH is an Equal Opportunity Employer

SCIENTIFIC DIRECTOR OF GENE THERAPY LABORATORY

St. Luke's Medical Center in Milwaukee, Wisconsin, has an excellent opportunity for an experienced scientist interested in providing scientific leadership and direction to our Gene Therapy program. The ideal candidate would be a molecular biologist with several years experience beyond the doctoral level. Experience in gene transfer techniques including transfection or transduction of genes into human cells is strongly preferred.

The selected candidate will be given latitude to provide an independent research program functioning as the scientific director of our Gene Therapy laboratory. The quality of work expected is similar to other national programs and laboratories engaged in such activities. St. Luke's Medical Center has committed significant resources to effect this goal and to develop this program including: ample research space, well equipped laboratories, and sufficient support personnel. The selected individual has latitude to bring a complete support-team along and to develop a training program involving postdoctoral fellows. An attractive salary and benefit package is included for the director and all other individuals. The program is endowed and only partially dependent on grant funding for growth. There will be cooperative interaction with the National Cancer Institute and academic institutions and clinical physicians on clinical patient trials. A further resource available on site is an already functioning TIL and LAK laboratory with a scientific staff.

St. Luke's Medical Center is a six hundred bed, not-for-profit hospital with a comprehensive cancer care program. This institution is committed to becoming a leader in cancer treatment. Milwaukee is noted for its culture, academic, social and sports events found typically in any large city, but in an atmosphere of small town friendliness.

Please forward your curriculum vitae to:

**John P. Hanson, Jr., M.D.
2901 W. Kinnickinnic River Pkwy.
Suite 516**

**Milwaukee, WI 53215-3690
Telephone: (414) 385-3086 or
Kimberly Wink**

**St. Luke's Medical Center
2900 W. Oklahoma Avenue
Milwaukee, WI 53215
Telephone: (414) 649-7951**

Wyeth-Ayerst Research Women's Health Institute

Wyeth-Ayerst Research, a major division of Fortune 100 American Home Products Corporation, is an international leader in the Research and Development of a broad range of highly advanced Pharmaceuticals, Biologicals and Nutritional Products.

The Women's Health Institute is being established to focus and expand basic and clinical research efforts in the field of women's health in recognition of the increased need for specialized attention to the health needs of women throughout their lives. The Women's Health Institute plans to build strong research programs in the areas of endocrinology, cell biology, molecular biology and OB/GYN and to apply the most modern technological approaches to the discovery and development of new therapeutic strategies that address major health concerns of women.

DISCOVERY

This organizational unit will be responsible for establishing and maintaining a steady flow of new pharmaceuticals into the pipeline, for identifying and investigating new agents to undergo clinical development and for defining innovative approaches to scientific discovery of compounds for the treatment of disorders affecting women's health and fertility.

Directors - Cell Biology, Molecular Biology, Morphology, Endocrinology

Each Director will be expected to have a strong background and demonstrated success in their relevant discipline, expertise in the development and implementation of scientific techniques relevant to their specialty and strong leadership abilities to ensure an integrated team effort. Successful candidates must have a Ph.D. in the relevant discipline with a minimum of 8 years related experience. Pharmaceutical industry experience and experience in the field of women's health desirable.

CLINICAL DEVELOPMENT

This organizational unit will oversee the design, monitoring and evaluation of clinical studies designed to bring the Women's Health Institute compounds from the earliest stages of testing through to regulatory approval.

Assistant Vice President

Overall management of clinical development efforts including collaboration with basic researchers, as well as with the Clinical R&D OB/GYN group to implement and execute general clinical trial strategies on a global basis. The selected individual will interact with Clinical Pharmacology to arrange pharmacokinetic and pharmacodynamic studies and will work with academic or contract organizations for clinical studies.

The successful candidate will have a strong background and expertise in management and clinical operations, a minimum of 10 years relevant experience, and will be a M.D., fully trained in a relevant discipline with full board certification/eligibility in a specialty/subspecialty (OB/GYN, Reproductive Endocrinology, Infertility, Bone and Mineral Metabolism).

Additional recruiting efforts will take place over the next several months for Research Scientists and technical support personnel in Molecular and Cell Biology, Morphology, Endocrinology and Chemistry.

Wyeth-Ayerst offers an excellent compensation and benefits package in a highly professional environment. Please respond by sending your resume with salary requirements to: **Wyeth-Ayerst Research Personnel, Position WHI, P.O. Box 8299, Philadelphia, PA 19101.** An equal opportunity employer, M/F/D/V responses encouraged.

**WYETH
AYERST**

Leading The Way for a Healthier World

POSITIONS OPEN

University of Alabama at Birmingham Schools of Medicine and Dentistry

CHAIRMAN DEPARTMENT OF CELL BIOLOGY

The University of Alabama Schools of Medicine and Dentistry, UAB, are seeking applications and nominations for the position of Professor and Chairman of the Department of Cell Biology. The person filling this position will assume the leadership of a strong, mature faculty and will have an opportunity to expand the department in new directions. The department's research and office space is partially housed in a recently completed basic health science building. The department includes 18 tenure-track faculty members participating in both graduate and professional teaching.

The applicant must have a Ph.D., M.D., or equivalent degree, be internationally recognized for research in cell biology, have a commitment to graduate and medical education, and have a record of demonstrated leadership in administrative activities. The successful candidate is expected to be an established scientist with a strong ongoing, independent and well-funded research program.

The Search Committee, headed by **William J. Koopman, M.D.**, Director of Immunology/Rheumatology, will review the application. Interested applicants should submit curriculum vitae including the names of three references to:

**Amy Thompson, Director
Administrative Services-School of Medicine
University of Alabama at Birmingham
MEB 310E, University Station
Birmingham, AL 35294-3293**

An Equal Opportunity/Affirmative Action Employer.

McGill University Department of Anatomy and Cell Biology FACULTY POSITION

Applications are invited for a tenure-track position at **ASSISTANT PROFESSOR** rank, starting 1 September 1994. Applicants must have a Ph.D. and/or M.D. degree and postdoctoral research experience. The successful candidate will be expected to establish an active independent research programme in a topical area of developmental, cellular or tissue biology, including supervision of research by graduate students to M.Sc. and Ph.D. levels. The Department has strong research groups working in problems of cell and molecular biology, extracellular matrix, immunobiology, reproductive systems, calcified tissues, neurobiology, developmental biology and aging. The Department offers extensive research facilities in electron microscopy, high-resolution radioautography, confocal microscopy and tissue culture, used by members in conjunction with modern methods of cell and molecular biology and immunobiology. The successful candidate will also be expected to become an enthusiastic participant in departmental teaching. Applications, including curriculum vitae with representative reprints, names, addresses and telephone numbers of 3 referees, should be sent by 1 December 1993 to: **Dr. D. G. Osmond, Chair, Department of Anatomy and Cell Biology, McGill University, 3640 University Street, Montreal, Quebec, Canada H3A 2B2.** In accordance with Canadian immigration requirements this advertisement is directed to citizens and permanent residents of Canada. Non-Canadians and non-residents are encouraged to apply. McGill University is committed to equity in employment.

INFECTIOUS DISEASES: The Department of Pediatrics at the Medical College of Wisconsin has two openings for full-time **FACULTY**. Rank Open. These positions represent an expansion of the current Infectious Diseases Section to enhance a core group investigating common pediatric lower respiratory viruses. Interested applicants may hold either Ph.D., M.D., or M.D./Ph.D. degrees. Those holding the M.D. degree should be board certified in Pediatrics and have completed a pediatric infectious diseases fellowship program. Preference will be given to applicants with training and experience in the technical, biological, and molecular approaches to understanding the epidemiology, pathogenesis, and prevention of common lower respiratory viruses in children. Please direct inquiries with curriculum vitae and the names of two references to: **Michael J. Chusid, M.D., Department of Pediatrics, MACC Fund Research Center, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226.** *Equal Opportunity/Affirmative Action Employer, M/F/D.*

POSITIONS OPEN

FISH AND WILDLIFE DEPARTMENT HEAD

Position is at the University of Idaho. Required qualifications include a Ph.D. and experience appropriate for full professor. The successful candidate must demonstrate commitment to academic excellence, outstanding research record, and excellent interpersonal, communication and executive leadership skills. Send curriculum vitae, statements of administrative, research, and teaching philosophies, and 3 letters of reference by **15 September 1993** to: **E. O. Garton, Chair, Fish and Wildlife Department Head Search Committee, University of Idaho, Moscow, ID 83844-1136.** *An Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION IN THE PHARMACEUTICAL SCIENCES. The Department of Pharmaceutical Sciences at the Idaho State University (ISU) College of Pharmacy has a vacancy for a 9-month, tenure-track position. This appointment is intended to be at the junior level, but more senior applicants will be considered. Applicants are sought with expertise in biopharmaceutics, drug delivery systems, physical pharmacy, or a closely related area. Candidate should have either a Ph.D. degree with postdoctoral research training or a Pharm.D. degree with sufficient research experience. He/she must have a strong commitment to teaching and the ability to communicate effectively. In addition to instructing Pharm.D. and Ph.D. students, the successful candidate will be expected to develop an active and extramurally funded research program, and participate in College, University, and professional activities. The position is available immediately, and the search will remain open until the position is filled. Interested candidates are invited to send curriculum vitae, three letters of reference, and statements of their research interests to: **Dana L. Diedrich, Ph.D., Professor and Chair, Department of Pharmaceutical Sciences, Idaho State University College of Pharmacy, Pocatello, ID 83209-8334.**

ISU is an Affirmative Action/Equal Opportunity Employer and encourages applications from women, minorities, and members of underrepresented groups.

FACULTY POSITION— ANALYTICAL CHEMISTRY

Indiana University, Bloomington—**ANALYTICAL CHEMISTRY.** The Department of Chemistry at Indiana University, Bloomington, invites applications for a tenure-track faculty position in analytical chemistry at all levels beginning in the fall of 1994. Junior-level applicants must show exceptional promise of establishing a vigorous, independent research program in an academic setting. To apply, please submit curriculum vitae, a publication list, and a short résumé of ideas for the development of research programs, and arrange to have three letters of recommendation forwarded. Established investigators should send a letter of application and appropriate supporting materials. Deadline for applications is October 15, 1993. Please apply to: **Professor Paul A. Grieco, Chairman, Department of Chemistry, Indiana University, Bloomington, IN 47405.** *Indiana University is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS available immediately in the molecular genetics of skeletal disorders and of skeletal development. Studies include normal and abnormal molecular regulation of osteoblast proliferation and differentiation by extracellular matrix components. Strong background and experience in (1) eukaryotic gene transfer, (2) bone cell biology and/or, (3) integrins and signal transduction. Send curriculum vitae and the names of three references to: **Dr. Richard J. Wenstrup, Division of Human Genetics, Children's Hospital Research Foundation, Pavilion Building Room 2-52, 3333 Burnet Avenue, Cincinnati, OH 45229-3039.** *An Affirmative Action/Equal Opportunity Employer.*

A POSTDOCTORAL POSITION in plant virology is available to study the molecular basis of geminivirus pathogenesis and strain diversity. Candidate should have a recent Ph.D. in Plant Pathology, Plant Molecular Biology, or related field. Send curriculum vitae, transcripts, and the names, addresses, and telephone numbers of three references to: **Dr. Drake C. Stenger, Department of Biological Sciences, Northern Illinois University, DeKalb, IL 60115.** *Northern Illinois University is an Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITIONS IMMUNOLOGY DEPARTMENT

THE DEPARTMENT OF IMMUNOLOGY at the University of Texas, M. D. Anderson Cancer Center is seeking applicants for tenure-track faculty positions. Applications from both highly qualified junior investigators with a strong background in molecular/cellular immunology and established investigators with a record of outstanding productivity will be considered. Although primarily a research position, the selected candidates will be expected to participate in training and teaching programs in immunology. Applicants should send curriculum vitae, three letters of recommendation and a brief statement of research interests to: **Dr. Ronald Palacios, Chairman Search Committee, The University of Texas, M. D. Anderson Cancer Center, Department of Immunology-178, 1515 Holcombe Boulevard, Houston, TX 77030.** *An Equal Opportunity/Affirmative Action Institution. Smoke-free environment.*

POSTDOCTORAL POSITIONS, MOLECULAR VIROLOGY

Two positions available immediately to study i) antisense RNA and HIV. ii) DNA binding proteins, EBV and DNA replication. A strong background in Molecular Biology and gene cloning is required. Recent Ph.D.'s with less than 2 years of postdoctoral research experience are encouraged to apply. Send curriculum vitae and names of three references to: **Dr. Patrick K. Lai, Tampa Bay Research Institute, 10900 Roosevelt Boulevard, St. Petersburg, FL 33716.**

POSTDOCTORAL POSITION available to study the structure, modification, and regulation of noncollagenous bone proteins and their function in bone formation and metabolism. Proteins to be studied include the vitamin K-dependent matrix Gla protein and bone Gla protein. Send résumé and 3 references to: **Dr. Paul Price, Department of Biology, University of California, San Diego, La Jolla, CA 92093-0322.** FAX: (619) 534-1492.

POSTDOCTORAL POSITION available immediately to study effects of **ABUSED DRUGS** on CNS gene expression. Opportunity to learn quantitative *in situ* **HYBRIDIZATION** and **MICRODIALYSIS**. Familiarity with biochemical neuroanatomy/pharmacology of limbic/basal ganglia systems, molecular techniques, immunocytochemistry, and small animal neurosurgery desired. Salary commensurate with experience and NIH guidelines. Send curriculum vitae and names of 3 references by September 15, 1993, to: **Jacqueline F. McGinty, Ph.D., Department of Anatomy & Cell Biology, East Carolina University, School of Medicine, Greenville, NC 27858-4354.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Position available October 1, 1993, for molecular/marine biologist to study the relationship between ultraviolet damage in DNA and recA expression in marine bacteria. Project utilizes radioimmunoassays to quantify photoproducts. Some field work. Send application, curriculum vitae, and names of 2 to 3 references to: **David L. Mitchell, Ph.D., The University of Texas System Cancer Center, Science Park/Research Division, Smithville, TX 78957.** *An Equal Opportunity/Affirmative Action Employer. A smoke-free environment.*

POSTDOCTORAL POSITION available August 1993 to participate in studies investigating PDGF signal transduction mechanisms in vascular smooth muscle cells. Digitized video and confocal microscopy, in combination with caged-compound release, will examine the role of intracellular Ca^{2+} and second messengers in alterations of gene expression and biological activity. Recent Ph.D. in cell biology, biochemistry or related field with a strong research background in fluorescence microscopy, molecular biology, and/or protein biochemistry preferred. Send or FAX curriculum vitae and names of three references to: **Dr. Pamela Diliberto, Department of Cell Biology & Anatomy, University of North Carolina—Chapel Hill, CB# 7090, 202 Taylor Hall, Chapel Hill, NC 27599.** FAX: (919) 966-1856. *Equal Opportunity/Affirmative Action Employer.*

PARALLEL PROCESS, UNPARALLELED PROGRESS.

Vertex Pharmaceuticals, Inc. is a leader in the use of structure-based rational drug design, a scientific approach to drug discovery which uses atomic level information to design synthetic compounds that interact with protein targets involved in disease processes. Vertex is using advanced techniques of biology, chemistry and biophysics to create novel, small molecule compounds that the Company plans to develop as orally deliverable drugs to treat major human disease. Vertex is concentrating on the development of drugs in the areas of immunology, inflammation and antiviral therapy.

Molecular Biologists-PhD

Currently we are seeking two PhD research scientists to join our Molecular Biology group. The successful candidates will play key roles in our drug discovery programs in inflammation, virology, and gene regulation.

Qualified candidates will have three years of postdoctoral experience and a PhD in Biochemistry, Molecular Biology, or related discipline. Some experience in the pharmaceutical or biotechnology industries preferred. Candidates should have a successful record of research achievement. Preference will be given to candidates with a demonstrated experience in designing novel approaches to understand disease pathogenesis, and an enthusiasm for participating in a multidisciplinary approach to drug discovery and development.

Pharmacologist-PhD

We are seeking a highly motivated scientist possessing a PhD in Pharmacology with 5+ years of experience (preferably in industry) to play a key role in the development of a research group dedicated to pharmacological studies for all our drug discovery programs. This individual will build a group at Vertex that will have over-

all responsibility for studies in pharmacokinetics, bioavailability, absorption, distribution, metabolism and excretion of small molecule drug candidates.

Expertise in pharmacokinetic modeling, analytical chemistry methodologies and small animal microsurgical techniques is a must. Experience in rodent models of inflammation and immune regulation is desirable. A track record of independent productivity reflected in a body of critically reviewed publications is also necessary. Candidate should enjoy hands-on activities and is expected to be involved in laboratory work. This position reports to the VP of Research.

Immunologist/Cell Biologist-PhD

We are seeking a PhD Immunologist/Cell Biologist to participate in the characterization of novel immunosuppressive and anti-inflammatory drugs at the cellular and biochemical level. A PhD in biological sciences and 2+ years postdoctoral experience are required for an individual to design and execute experiments to define the function of novel drug receptors in cell activation and cytokine processing events. The successful candidate will have expertise in immunopharmacology, biochemistry and receptor-linked cell signaling mechanisms. Familiarity with eukaryotic cell culture and animal models of inflammation are desired.

With our resourceful approach to structure-based rational drug design and a strong financial base, we invite you to take advantage of our excellent salaries, benefits and professional development potential. Please forward a detailed resume to: Vertex Pharmaceuticals Incorporated, c/o Recruiting Coordinator, SCV813, 40 Allston Street, Cambridge, MA 02139-4211. We are an Equal Opportunity Employer.



VERTEX
PHARMACEUTICALS
INCORPORATED

We're Not Leaving Success To Chance.

Research Opportunities in Entomology

The Department of Research Specialists at Pioneer Hi-Bred International, Inc. is seeking applicants for our ongoing program of crop improvement. Pioneer offers competitive salaries, excellent facilities and a highly cooperative research environment.

Entomology Manager to conduct a research program in plant resistance to insects in support of the efforts of the Plant Breeding Division of Pioneer Hi-Bred International, Inc. The position will involve development and adaption of laboratory bioassay, greenhouse, and field techniques.

A Ph.D. in Entomology, plus a minimum of two years research experience with plant resistance to insects in row crops. Expertise in laboratory bioassays would be preferred.

Pioneer Hi-Bred International, Inc. is an Equal Opportunity Affirmative Action Employer. Send a resume with a copy of your transcripts and a list of five references that can be contacted.



PIONEER

Pioneer Hi-Bred International, Inc.
Plant Breeding Division
Dept. of Research Specialists
ATTN: Michelle Shriver
7301 NW 62nd Avenue,
P.O. Box 85
Johnston, IA 50131-0085

APPLICATION DEADLINE: October 1, 1993

MILES

Pharmaceutical
Division

Miles Inc., Pharmaceutical Division, has two exciting career opportunities for motivated professionals in our Institute for Metabolic Disorders.

ASSOC. RESEARCH SCIENTISTS

Research assistants are needed to perform experiments designed to determine the machinery involved in the sorting and redistribution of insulin regulated glucose transporters.

Cell Biologist: responsible for subcellular fractionation procedures on cultured cells and animal tissues involving radio-iodination, homogenization, sonication, ultracentrifugation, gradient centrifugation, immunoprecipitation, and chromatography followed by analysis by SDS-PAGE and immunoblotting. Subcellular localization will also be determined by immunofluorescence microscopy; experience with multiple labeling procedures is essential. Experience in techniques involved in antibody production, evaluation, and purification is also helpful.

Molecular Biologist: responsible for assembling DNA constructs of altered proteins and creating stable cell lines expressing these proteins. Experience in the following molecular biology techniques is required: pcr, site-directed mutagenesis, DNA construct preparation, and DNA sequencing. The applicant must have experience in cell culture techniques including transfection, antibiotic selection, subcloning, and amplification. Familiarity with general biochemical techniques helpful.

A BS with 2+ years' relevant experience; a Master's with some experience; non-degreed with 7+ years' proven experience and accomplishment is required for these positions.

We offer attractive compensation and generous benefits. Resumes, including salary history and position of interest, should be forwarded in confidence to: **Miles Inc., Pharmaceutical Division, Dept. ELKC, 400 Morgan Lane, West Haven, CT 06516.**

An Equal Opportunity Employer M/F/D/V

A World of Opportunities At Pall Corporation

STAFF SCIENTISTS

Pall Corporation, a Fortune 500 company, is the world leader in filtration technology. We have achieved global leadership in our field due to our pursuit of technological excellence. Join Pall as we continue our growth. We currently have 2 positions available in our Scientific and Laboratory Services Department.

STAFF SCIENTIST ENGINEER

Your primary responsibilities will be the technical support of our ultra-filtration and crossflow filtration products working in our Scientific and Laboratory Service Division.

To qualify you will have a Ph.D. in Chemical Engineering or BioPhysics with a biology background and 3-5 years experience in bioprocessing including ultrafiltration and crossflow filtration.

DEPT. SC/SLS-930200003D

Ph.D. STAFF SCIENTIST

In this position you will take on a key role in supporting the demanding technical needs of our customers in the medical industry.

The individual we seek will have 1-5 years experience working with blood, blood products and related areas of Hematology or Clinical Immunology. A Ph.D. in Physiology, Biochemistry, Biomedical Engineering, or Microbiology combined with an undergraduate degree in Engineering or Life Science are required. DEPT. SC/SLS-9303010A

We offer competitive salaries and comprehensive benefits program. Only resumes with salary history and department code will be considered. Reply to:



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Filtration

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2200 NORTHERN BOULEVARD
EAST HILLS, NEW YORK 11548

An Equal Opportunity Employer No Phone Calls Please

CELL BIOLOGISTS

The Department of Medical Cell Biology of the Nemours Research Programs is expanding with the hiring of two experienced cell biologists at Assistant or Associate Professor level. Candidates must have at least two years postdoctoral experience and must be able to demonstrate a capacity and an enthusiasm for independent research. One of the posts will be to develop a program of work in some aspect of intestinal cell biology, preferably using cultured cells. Also to collaborate in and support the existing research programs directed by three gastroenterology physician investigators. The second appointee will have interests in endocytosis and/or lysosomes function and will pursue independent and collaborative research in this field.

The Department of Medical Cell Biology is one of three research departments located at the Alfred I. duPont Institute, a rapidly growing multidisciplinary children's hospital that has close academic and clinical links with Jefferson Medical College, Philadelphia. The Department currently has a staff of 45 and is engaged in a range of research projects in which the techniques of molecular and cell biology are used to investigate problems related to child health and disease. Existing work relevant to these new posts is concerned with pinocytosis and lysosome function in embryonic nutrition, genetic defects and targeted drug delivery; and with gastrointestinal energy metabolism, transport, motility and inflammation.

Send a letter of interest, curriculum vitae, and salary history (required) to: Dr. J.B. Lloyd, Professor and Director, Department of Medical Cell Biology, Nemours Research Programs, P.O. Box 269, Wilmington, DE 19899. Applications will be accepted until the positions are filled.



**Government of Canada
Gouvernement du Canada**

Canada International Fellowships and NATO Science Fellowships 1994-1995

In 1994, the Natural Sciences and Engineering Research Council of Canada (NSERC) will offer 70 Canada International Fellowships to recent PhD graduates from abroad. On behalf of the North Atlantic Treaty Organization (NATO), NSERC will also offer approximately 9 NATO Science Fellowships to postdoctoral fellows from Central and Eastern European countries. These fellowships are tenable in Canadian universities.

Eligibility: Applicants must have obtained a doctoral degree from a recognized foreign university within the last four years (or expect to have such a degree by the time the award is taken up). Candidates must not be Canadian citizens or permanent residents of Canada.

Fields of research: Natural Sciences or Engineering.

Duration of award: One year. Renewals for a second year are possible.

Stipend: \$29,000 (Canadian) per annum plus a travel allowance.

Application procedure: Applications must be submitted directly to the university department in which it is proposed to hold the award, not to NSERC. Candidates must not apply to more than one university.

Date of submission: November 15, 1993, for receipt of applications by the proposed host university.

For further information, contact the:

International Fellowships Office
Natural Sciences and Engineering Research
Council of Canada
Ottawa, Ontario, Canada K1A 1H5
Telephone: (613) 992-9169

Canada

ATTENTION Science RECRUITMENT ADVERTISERS...

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Place your classified ad in any July or August 1993 issue of *Science* and get double exposure. We'll display the same position announcement at the Employment Exchange during Science Innovation '93: The Conference on New Research Techniques--for only \$50 more.

When you place your classified ad in *Science*, simply let us know that you want to take advantage of the \$50 SPECIAL and we'll do the rest.

The Employment Exchange will take place at Science Innovation '93 at the Hynes Convention Center in Boston, August 6-10. Thousands of scientists have been invited to participate. Act fast and you can reach this unique pool of candidates.

You can also take advantage of the special if you have recently advertised in *Science*.

To obtain more information or to find out how you may interview candidates during the Employment Exchange at Science Innovation '93, contact: Jacquelyn Roberts at 202-326-6737.

SKIRBALL INSTITUTE OF BIOMOLECULAR MEDICINE

The Skirball Institute of Biomolecular Medicine at New York University Medical Center School of Medicine will open in September 1993. This institute will focus on molecular neurobiology, developmental genetics and molecular pathogenesis. Each program will comprise 1-2 groups at the professorial level and 8-9 junior groups at the assistant professor level. In addition, several groups will be recruited in structural biology encompassing x-ray crystallography, NMR, electron microscopy as well as protein and DNA chemistry. The structural biology groups will be integrated within the 3 major research programs. A total of 40 research groups will be recruited during the next year. All group leaders will receive tenured or tenure track appointments in the existing basic science or clinical departments of New York University School of Medicine to achieve optimal interaction between existing departments and the Skirball Institute.

If you would like to join us in this unique opportunity to build an exceptional research environment, send your curriculum vitae, bibliography, a short research proposal and a list of reference to: Dr. Lennart Philipson, NYU Medical Center, 550 First Ave., New York, NY 10016 or to FAX # (212) 263-8951. If you need additional information, please call (212) 263-8950. EOE, M/F.



PROFESSORSHIPS

The Toyota Technological Institute (TTI), established in 1981 by a donation from the Toyota Motor Corporation, offers undergraduate and master's programs. To further strengthen education and research at the graduate level, TTI is adding a doctoral program which will focus on the following disciplines:

Information Aided Technology including Advanced Information Theory; Information Processing; Information/Motion Transformation Theory; Thermofluid Dynamics; Intelligent Design; and Information Integrated Realization Technology.

Future Industry-oriented Basic Science and Materials including Ultimate Structure & Properties; Molecular Design, Characterization & Properties; Noble Crystals & Semiconductors; Structure Controlled Materials; Singular Layers in Materials; and Beam Processing.

To commence this project, TTI is currently seeking 5-8 senior faculty members at the full professor level to join this community by April 1, 1995. Selected individuals will organize a unit laboratory, which will consist of 1 professor, 1 associate professor, 2-3 post doctoral research associates and students.

Support for research start-up expenses and an annual research budget will be provided, in addition to a salary and fringe benefit package. Details will be provided upon inquiry.

Qualified applicants are invited to mail their curriculum vitae, a statement of research interest and a list of publications, by October 30, 1993 to: Dr. M. Nagasawa (Vice-President).



TOYOTA TECHNOLOGICAL INSTITUTE
2-12 Hisakata, Tenpaku-ku, Nagoya, Japan 468

Fax inquiries
(Japan 81-52-802-6069)

TTI is An Equal Opportunity Employer

University of Heidelberg

At the **Faculty for Theoretical Medicine**, there is a vacancy in the field of general immunology as from March 1, 1994, for a

Professor (C4)

The position is associated with the chairmanship of the department for general immunology, serological and haematological diagnostics, and blood bank of the Institute for Immunology (Clinic of the Heidelberg University).

The applicant should be able to represent the subject with respect to research and teaching. The following characteristics are prerequisite:

- "Habilitation" or equivalent scientific qualification
- acknowledged research achievements and the willingness to work together with other teams within and outside the University of Heidelberg
- experience in managing a department, an institute or a similar team
- experience with indirect medical care service (Immunological-serological diagnostics) would be of favor
- good tutorial abilities and academic teaching experience

applications with the usual documents can be submitted until Sept. 30th, 1993 addressed to: **The Dean of the Faculty for Theoretical Medicine, University of Heidelberg, Im Neuenheimer Feld 346, D-69120 Heidelberg, Germany.**

President

The Presidential Search Committee of the State University of New York Health Science Center at Brooklyn invites nominations and applications for the position of President of the Health Science Center.

The SUNY Health Science Center at Brooklyn is a comprehensive health sciences campus of the State University of New York, composed of the Colleges of Medicine, Health Related Professions, Graduate Studies, and Nursing, as well as a 372-bed University Hospital. It is the primary health care education institution for Brooklyn and its surrounding area and its 700 faculty are responsible for the education of approximately 1,500 students and 700 houses-taff.

The Search Committee seeks an outstanding individual with the following qualifications:

- A record of significant accomplishment in the health field;
- Substantial experience in positions reflecting administrative responsibility and leadership;
- The ability to work effectively with the full range of constituencies, including faculty, administrative officers, staff, students, alumni, community groups, health care affiliates, public sector leaders and entities at the local, state and federal levels;
- The ability to communicate the Health Science Center's mission, needs and strengths to SUNY system officers, community leaders and groups, elected officials and agencies at all levels of government, health care service constituencies, and potential donors;
- A commitment to the principles of diversity and equal opportunity.

The Presidential Search Committee will begin the review of candidates immediately and continue until the position is filled. The new President will assume office on January 1, 1994 or as soon as possible thereafter. Candidate nominations or expressions of interest (with letter of interest, resume and the names of three references) should be sent to:

**Dr. Ross Clinchy, Staff Coordinator
Presidential Search Committee
Box #1233, SUNY Health Science Center at Brooklyn
450 Clarkson Avenue, Brooklyn, NY 11203**

All inquiries, nominations and applications will be held in confidence. SUNY Health Science Center at Brooklyn is an affirmative action equal opportunity employer with a strong commitment to racial, cultural and ethnic diversity.



**State University of New York
Health Science Center at Brooklyn**

EO/AA Employer

DMC#A0225



Scientist

**Groundbreaking challenges
in protein biochemistry.**

Impact on exciting new areas of research as part of a high-profile scientific team. Regeneron Pharmaceuticals, Inc., a major biotechnology company known for its leading-edge research in the development of therapeutic agents for degenerative and traumatic nerve diseases, has an immediate opportunity for a Scientist committed to exploring new areas of protein biochemistry.

You will be experienced utilizing methods in protein microanalytical chemistry, with expertise in HPLC, peptide mapping, sequencing, amino acid analysis, circular dichroism, and spectroscopy. Ph.D. degree required.

Regeneron is situated on an expansive wooded campus near Tarrytown, in Westchester County, 25 miles north of New York City. Our rapid growth affords you a competitive salary and benefits package including stock options and the opportunity to work with a world-class scientific team. To apply, please send detailed resume with salary history to: Human Resources, Dept. Bin-JL#2, Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, N.Y. 10591-6707. Equal Opportunity Employer.

REGENERON
Pharmaceuticals, Inc.

DIRECTOR UTAH SUPERCOMPUTING INSTITUTE AND SPECIAL ASSISTANT TO THE PRESIDENT FOR INFORMATION SCIENCES

Applications and nominations are invited for the dual position of Director of the Utah Supercomputing Institute and Special Assistant to the President for Information Sciences at the University of Utah. A candidate is sought with the highest credentials in high performance computing, who will direct the Institute, collaborate with faculty in obtaining extramural support, and develop industrial partnerships and applications in high performance computing. The successful candidate will supervise a staff dedicated to forging collaborative interaction with and providing support to faculty and students with high performance computing and communications needs. The Director will report to the Vice President for Research. In the capacity of Special Assistant to the President, the successful candidate will advise the President on coordination of campus computing activities. This charge is interpreted broadly to include the operation of networks, the increasingly close relationship between computing and telecommunications, instructional computing, administrative data processing, etc., in order to ensure maximum attention to the computing and communications needs of the faculty, staff, and students, at reasonable costs. It is anticipated that the successful candidate will qualify for a concurrent faculty appointment in one or more academic departments. A Ph.D. degree or equivalency in a science or engineering discipline is required, with expertise in computational science. Applicants should have at least 5 years experience in organized research, in addition to a demonstrated record of leadership and administrative experience. Familiarity with national supercomputer centers and funding agencies is highly desirable.

Past and present employers will be contacted unless otherwise requested in writing.

The University is an AA/EEO employer and encourages applications from women and minorities, and provides reasonable accommodation to the known disabilities of applicants and employees.

A letter of application, a current curriculum vitae, and three to five letters of recommendation should be submitted to:

USI Director and Special Assistant to the President
for Information Sciences Search Committee
c/o Office of the Vice President for Research (PB-2693)
210 Park Building
University of Utah
Salt Lake City, UT 84112

Applications will be accepted until the position is filled

POSTDOCTORAL/ TECHNICIAN POSITION

A postdoctoral or technician position is immediately available in the mass spectrometry group of Children's Hospital Oakland Research Institute. This group has four mass spectrometers capable of FAB, electrospray MS and GC/MS and carries out mass spectrometry principally of proteins and small molecules (steroids, taxoids, drug metabolites).

This position involves the quantification of clinically important steroids and other small molecules in serum and urine by GC/MS and HPLC/MS. The successful candidate will have experience in several of the following: extraction or compounds from body fluids, steroid metabolism, gas chromatography, HPLC, mass spectrometry and simple organic synthesis (e.g. of stable isotope labelled standards).

We offer a salary range of \$24,825 to \$34,688 annually. Please send resume to: Children's Hospital Oakland, Human Resources, 747 52nd Street., Oakland, CA 94609. EOE.

Children's Hospital Oakland
.....
*The pediatric medical center
for Northern California*

SENIOR SCIENTIST MOLECULAR BIOLOGY Boulder, Colorado

5 Prime → 3 Prime, Inc., a rapidly growing biotechnology products manufacturer, has an immediate research and development position available. The position requires a Ph.D. in molecular biology with demonstrated scientific independence and a strong record of product development accomplishment.

We invite candidates with a minimum of 5 years industrial experience, who possess a strong interest in bringing in new technology, strong communication skills and a team orientation. This is a management track position.

5 Prime → 3 Prime offers a competitive compensation and benefits package and generous relocation arrangements, plus the opportunity to pursue personal and professional growth in culturally dynamic Boulder, Colorado. Qualified candidates should send resume and 3 references to:



Human Resources
5 Prime → 3 Prime, Inc.
5603 Arapahoe Road
Boulder, Colorado 80303

University of Heidelberg

Candidates are invited to apply for the post of:

PROFESSOR (C3) in Surgical Oncology

at the Clinic for Surgery (Department: General surgery, Casualty surgery with Outpatient-Department, Director: Professor Dr. Ch. Herfarth).

Applicants should have experience in clinical oncology and an excellent academic record. They are expected to introduce molecular methods into clinical oncology and to work in close collaboration with both clinicians and basic scientists. Close links in research already exist between the Clinic for Surgery and the Deutschen Krebsforschungszentrum (German Cancer Research Centre). The successful candidate should assume head of the clinical aspect of this cooperation.

Applicants must have basic medical qualification as well as habilitation, or comparable higher academic degree.

Please apply until the 15th of October 1993 with the usual documentation to: **Prof. Dr. G. Bastert, Dekan der Fakultät für Klinische Medizin I der Universität Heidelberg, Im Neuenheimer Feld 3456, 69120 Heidelberg.**



NATIONAL UNIVERSITY OF SINGAPORE

FACULTY OF SCIENCE

Applications are invited for **Faculty positions/appointments** in one of the following departments from candidates who must possess a relevant PhD degree. Preference will be given to those who are able to teach in more than one of the areas listed under the Department they are applying to and with proven ability in research.

BOTANY

Molecular Biology
Biotechnology
Recombinant DNA-Technology
Gene Transfer Systems
Molecular Genetics

Biochemistry
Physiology
Development botany
Morphogenesis
Plant Pathology

CHEMISTRY

Analytical Chemistry
Inorganic Chemistry
(main group elements)

Electrochemistry
Materials Science

PHYSICS

Materials Science
Computational Physics
Experimental Nuclear Physics with experience in XRF/PIXE/RBS

ZOOLOGY

Marine Microbiology/Molecular Biology
Fish/Crustacean Immunology

Insect Molecular Biology

COMPUTATIONAL SCIENCE PROGRAMME

Geometric Modelling
Scientific Visualization

Parallel Processing
Statistical Computing

Gross annual emoluments range as follows:

Lecturer	S\$51,500 - 65,620
Senior Lecturer	S\$59,970 - 106,030
Associate Professor	S\$93,700 - 129,870

(US\$1.00 = S\$1.61 approximately)

The commencing salary will depend on the candidate's qualifications, experience and the level of appointment offered. In addition, a 13th month allowance and an Annual Variable Component may be payable under the flexible wage system applicable to staff on normal contracts.

Leave and medical benefits will be provided. Depending on the type of contract offered, other benefits may include: provident fund benefits or an end-of-contract gratuity, a settling-in allowance of S\$1,000 or S\$2,000, subsidised housing or a housing allowance, education allowance for up to three children subject to a maximum of S\$16,425 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore. Staff members may undertake consultation work, subject to the approval of the University, and retain consultation fees up to a maximum of 60% of their gross annual emoluments in a calendar year.

There are eight faculties in the National University of Singapore with a current student enrolment of some 17,500. All departments are well-equipped with a wide range of facilities for teaching and research.

All academic staff have access to the following computer and telecommunications resources: a networked microcomputer (an IBM compatible or Apple McIntosh); an IBM mainframe computer with 16 MIPS of computing power; an NEC SX supercomputer with 650 MFLOPS of computing power; departmental laser printers; a wide spectrum of mainframe and microcomputer software; voice-mail. The campus-wide network, which is based on the high speed optical fibre based FDDI technology, links up all the academic staff and student microcomputers, UNIX workstations and provides access to the mainframe computer, the supercomputer, UNIX hosts, the on-line library catalogue, CD-ROM databases, Televue, Internet and BITNET.

Application forms and further information on terms and conditions of service may be obtained from:

**The Director
Personnel Department
National University
of Singapore
10 Kent Ridge Crescent
Singapore 0511**

**The Director
North America Office
National University
of Singapore
55 East 59th Street
New York, NY 10022, U.S.A.
Tel: (212) 751-0331**

Enquiries may also be sent through BITNET to: **PERPL @ NUS3090**, or through **Telefax: (65) 7783948**

POSITIONS OPEN

RESEARCH FELLOW IN ENDOCRINOLOGY AND NEUROENDOCRINOLOGY

Two positions for up to 3 years available immediately for recent Ph.D. or M.D. graduates to pursue basic science research. Faculty research interests include: vasopressin gene expression and hormone release; reproductive physiology of the testes; biochemical regulation of thyroid hormone metabolism; regulation of glucose metabolism in NIDDM, obesity and hypertension. Experience with basic molecular biology techniques strongly preferred. Applicants must be U.S. citizens or permanent residents. Send curriculum vitae, relevant reprints, a brief description of research interests, and a list of references to: Alan G. Robinson, M.D., Division of Endocrinology, E1140a Biomedical Science Tower, University of Pittsburgh, Pittsburgh, PA 15261.

POSTDOCTORAL POSITION

Targeted drug delivery, cancer biology, mechanism of anticancer drug action (see *JACS* 114: 8318, 1992; *Biochemistry* 32: 5352, 1993; *Anal. Biochem.* 212: 285, 1993). Send curriculum vitae and names of three references to: Dr. T.G. Burke, The Ohio State University College of Pharmacy, 500 West 12th Avenue, Columbus, OH 43210-1291.

POSTDOCTORAL POSITION

Opening is in the area of plant gene regulatory mechanisms. Emphasis on developmental aspects and utilization of molecular, genetic and biochemical techniques. Seeking to isolate or construct mutations in cloned DNA-binding proteins. In addition, structure-function studies with the cloned factors will also be carried out. Knowledge of molecular techniques and training in at least one of these areas, not necessarily in plants, is highly preferred. Experience in Arabidopsis desirable. One year appointment with possibility of renewal. Send curriculum vitae to: Dr. Eric Lam, AgBiotech Center, Waksman Institute of Microbiology, Rutgers State University, NJ 08854, USA.

POSTDOCTORAL FELLOWSHIP. Available immediately for molecular biologist with recent Ph.D. or M.D. to work as part of an interdisciplinary team investigating cellular receptors involved in cell motility. Applicants should have experience in molecular cloning techniques; experience in biochemistry helpful. The appointment is for two years with an opportunity for career advancement.

Please send curriculum vitae including names and addresses of three references to: Douglas Cines, M.D., Hematology-Oncology, 7 Silverstein Pavilion, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104.

POSTDOCTORAL FELLOW—Molecular Oncology Program—Position immediately available to conduct study on the molecular basis of cellular resistance to cytotoxic drugs. Experience in molecular biology preferred. Please send curriculum vitae and two letters of reference to: Gary Kruh, M.D., Ph.D. c/o Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. *Equal Opportunity Employer M/F.*

POSTDOCTORAL RESEARCH ASSOCIATE

Two positions are available for a Postdoctoral Research Associate immediately to investigate the molecular basis for retinal degeneration in transgenic animal models. Applicants should have M.D. or Ph.D. in biochemistry or cell biology, and experience in molecular biology is preferred. Competitive salary is available. The University of Illinois at Chicago Eye Center is well equipped, modern research facility in the heart of Chicago. Please send summary of research experience and curriculum vitae with the names and telephone numbers of three references to: Jovita Banks (#005), Department of Ophthalmology & Visual Sciences, University of Illinois at Chicago, 1855 West Taylor Street (M/C 648), Chicago, IL 60612. *UIC is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL FELLOW

A position is available this year to study an important sexually transmitted human parasite. *Trichomonas vaginalis*. The research focuses on the molecular characterization of the genes encoding for the adhesins and proteinases involved in host cytoadherence. Positions to perform structure-function analysis of the adhesins, to clone genes of prominent adaptive response immunogens, and to delineate the environmental signals involved in the regulation of gene expression are also available. Please send letters of recommendation, curriculum vitae and publications to: Dr. John F. Alderete, Department of Microbiology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7758. *UTHSCSA is an Affirmative Action/Equal Employment Opportunity Employer.*

POSTDOCTORAL POSITION available immediately for Ph.D. or M.D. to study the molecular biology and function of cloned expressed calcium channels. Experience in molecular biology required. NIH-funded project uses multiple approaches to characterize recombinant dihydropyridine receptors and ryanodine receptors in *Xenopus* oocytes and in planar lipid bilayers. Send curriculum vitae and three references to: Dr. Andrew R. Marks, Molecular Medicine Program, Brookdale Center of Molecular Biology, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. FAX: 212-860-9279; Telephone: 212-241-0309. *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Postdoctoral position available to study hematopoietic stem cell specific genes. Requires Ph.D. with strong background in molecular biology. Position available as of January 1994. Please send curriculum vitae and 3 letters of recommendation to: Donald Small, M.D., Ph.D., Oncology Center 3-109, The Johns Hopkins University School of Medicine, 600 North Wolfe Street, Baltimore, MD 21287-5001. FAX: (410) 955-8897.

Ph.D.—**POSTDOCTORAL POSITION** is available in the Division of Gastroenterology at our 581-bed major teaching hospital affiliated with SUNY Stony Brook School of Medicine. Primary focus of research is the study of mechanisms and control of epithelial and muscle function in animal models of inflammatory bowel disease. Candidate should have a Ph.D. with experience in cell biology, molecular biology and/or immunology. The position is funded for at least two years. Send curriculum vitae and the names of three references to: Employment Specialist, Human Resources Department, Winthrop-University Hospital, 259 First Street, Mineola, LI, NY 11501. *Equal Opportunity Employer, M/F/D/V.*

POSTDOCTORAL POSITION: Endothelial/Vascular Cell Biology: Available October 1993, NIH funded project to study mechanisms of microvascular endothelial cell differentiation under shear stress. Ph.D. and significant molecular biology experience required. Please send curriculum vitae and 3 letters of reference to: Dr. B.J. Ballermann, The Johns Hopkins University School of Medicine, Room 943 Ross Research Building, 720 Rutland Avenue, Baltimore, MD 21205. *The Johns Hopkins University is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION—fully funded and available immediately. Successful candidate will study early signal transduction events following B cell antigen receptor activation [*Science* 258:123 (1993)]. Projects employ molecular and protein chemical techniques to establish *in vivo* mechanisms whereby the receptor activates kinases and other signal transducers. If interested please send curriculum vitae and statement of interests to: Dr. Marcus Clark, Department of Medicine and Committee on Immunology, University of Chicago, 5841 South Maryland Avenue, MC0930, Chicago, IL 60637. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL/RESEARCH ASSOCIATE—Cell Biochemistry/Molecular Biology—Person to participate in research involving regulation of cell proliferation by lipids and related substances in transfected cells. Please send curriculum vitae to: SS c/o Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. *Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available for studying the mechanisms of plant viral RNA replication. Ph.D. in biochemistry, molecular biology, or related field required; experience with recombinant DNA or protein purification is desirable. Send curriculum vitae and names of three references by August 31, 1993, to: Dr. Theo Dreher, Agricultural Chemistry, Oregon State University, ALS 1007, Corvallis, OR 97331-7301. *OSU is an Affirmative Action/Equal Employment Opportunity Employer and is responsive to dual-career needs. POSITION #001-1456.*

POSTDOCTORAL POSITION immediately available to study a recently identified erythroid cell-specific transcription factor (MCB 13, 2776 (1993)). Its function in establishment and maintenance of the erythroid cell will be examined by molecular studies and by biological analyses during ES cell differentiation and embryonic development. Expertise in molecular biology and cell culture are desirable. Please send curriculum vitae, a brief summary of research experience, and three reference letters to: Dr. James J. Bieker, Brookdale Center for Molecular Biology, The Mount Sinai School of Medicine, Box 1126, One Gustave L. Levy Place, New York, NY 10029-6574. *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION IN NEUROSCIENCE is available at Wright State University. Research involves faculty in the departments of Emergency Medicine and Physiology and Biophysics and centers on glial cell ion channels and their regulation by cell volume. Candidates must possess a Ph.D. or M.D. Preference will be given to individuals with experience in whole cell patch clamp or fluorescence ratio imaging. Salary is commensurate with level of experience. Submit curriculum vitae, a description of research interests, and three letters of reference to: James Olson, Cox Institute, 3525 Southern Boulevard, Kettering, OH 45429 before November 1, 1993. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN CELLULAR NEUROBIOLOGY available for recent or upcoming Ph.D. graduate interested in using state-of-the-art electrophysiological and molecular biological techniques to study the roles of excitatory amino acids and second messenger/protein kinase systems in synaptic plasticity in mammalian brain slices. Send curriculum vitae, three references, and statement of research interests to: DR. P. JEFFREY CONN, DEPARTMENT OF PHARMACOLOGY, EMORY UNIVERSITY SCHOOL OF MEDICINE, ATLANTA, GA 30322. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION

Available immediately to study the molecular mechanisms of homologous recombination reactions. Self-motivated, careful individuals with a background in biochemistry or molecular biology are encouraged to apply. Send a letter of research interest, curriculum vitae, and names of three references to: Dr. Kenji Adzuma, The Rockefeller University, Box 169, 1230 York Avenue, New York, NY 10021. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL FELLOW IN NEUROBIOLOGY/MOLECULAR BIOLOGY

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 neurotransmitter gene regulation in the olfactory system. Send curriculum vitae to: Dr. Harriet Baker, Molecular Neurobiology, Burke Medical Research Institute, 785 Mamaroneck Avenue, White Plains, NY 10605.

POSTDOCTORAL FELLOWSHIP available immediately for a Ph.D., M.D., or D.V.M., to participate in a study to assess the efficacy of therapeutic measures to ameliorate age-related cognitive impairments in nonhuman primates. Experience in neuropsychology or neuropharmacology is preferred. Computer proficiency and knowledge of sterile techniques are highly desirable. Send curriculum vitae and two letters of recommendation to: Donald L. Price, M.D., The Johns Hopkins University School of Medicine, 558 Ross Research Building, 720 Rutland Avenue, Baltimore, MD 21205-2196.

THE PATH TO DISCOVERY

Millennium, Inc., an emerging biopharmaceutical company, will become the global leader in the commercial application of genetics and genomics to human therapeutics.

Our molecular and cellular biology programs will explore the molecular mechanisms of newly identified genes and their roles in various disease states. These technologies and insights will result in the identification of disease genes, their function and the development of disease specific therapeutics.

GENE DISCOVERY/GENOMICS

Scientists

As a scientist with an interest in genomics technologies, you will participate in a multi-faceted program directed toward the identification and cloning of disease-related genes. We are looking for individuals with leadership abilities in each of the following areas: YACs, gene-mapping technologies, cDNA library construction and screening, and high-throughput automated sequencing. Publication in leading scientific journals will be actively encouraged. PhD, with appropriate Post Doctoral experience. **SC-01.**

Research Associates

In the cDNA core group, you will use your extensive knowledge of both construction and screening of cDNA libraries for the purpose of new gene discovery. You will also work to further develop and automate these technologies. BS/MS with 5+ years of relevant experience. **SC-02.**

Research Associates

Within our sequencing group, you will have the opportunity to participate in a state-of-the-art, high-throughput, automated sequencing facility. This group performs a vital function in the gene discovery efforts of the company. BS/MS in biological sciences. **SC-03.**

BIOLOGY

Scientists

As a PhD with Post Doctoral experience, you will take a lead role in exploring the molecular mechanisms of various disease states, while establishing independent research programs and collaborations. You will make extensive use of the core facilities and gene discovery programs within the genomics group. You must have in-depth experience in mammalian molecular and cell biology. Publication in leading scientific journals will be actively encouraged. **SC-04.**

Research Associates

BS/MS level scientist with 5 years' experience in Molecular Biology, Biochemistry or Biology. Must be flexible, and excel in some of the following areas: molecular cloning, PCR, YACs, protein chemistry, *in vivo* methods, prokaryotic/eukaryotic expression systems, constructing and screening cDNA and genomic libraries, and in situ hybridization. **SC-05.**

BIOINFORMATICS

Scientists

Innovative scientist with demonstrated expertise in the field of DNA and protein sequence analysis. You will be required to develop algorithms and software to extract maximal information on gene organization and function from large amounts of genomic and transcribed sequence. You will work closely with scientists in genomics and molecular and cellular biology in an integrated effort to explore the molecular mechanisms of important disease states. This role is pivotal to the success of the research programs. **SC-06.**

Computer Network Analyst

You will install, develop and maintain a sophisticated information network to handle the extensive needs of the genomic, automated sequencing and biology components of the research program. You will work closely with scientists in the analysis of DNA and protein sequence structure. You should have experience in UNIX/Sun and Macintosh-based systems and be flexible in your approach. **SC-07.**

Bioinformatics is a critical component of the Millennium approach.

Enjoy the rewards of a collaborative environment, the challenge of progressive science, the incentive of stock ownership, and a generous compensation package. Please fax or send your C.V., indicating position code, to: **Millennium, Inc., Human Resources, One Kendall Square, Building 600E, Cambridge, MA 02139, FAX: (617) 374-9379; Attn: Tony Zaritheny.** An Equal Opportunity Employer, M/F/D/V.

MILLENNIUM, INC.



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RESEARCH MOLECULAR BIOLOGIST

This opportunity in the field of medicinal molecular biology will interest you if you are a qualified researcher who wishes to join a strong team actively engaged in the development of novel therapeutic approaches in the treatment of allergic and respiratory diseases. Current efforts are directed toward identifying and characterizing novel G-protein linked receptors and developing procedures for discovering ligands which modulate their function. Our researchers are strongly encouraged to contribute to research journals and present their work at scientific meetings.

To qualify, you require a PhD in Molecular Biology and postdoctoral experience. Experience in the areas of research previously described is desirable.

This position is permanent and we offer an excellent salary, benefits package and opportunity for growth within a dynamic and progressive organization.

If you would like to explore this opportunity, please write in strictest confidence giving full particulars, including salary expectations and the name of three references, to: **Human Resources Associate, Merck Frosst Canada Inc., P.O. Box 1005, Pointe-Claire - Dorval, Quebec H9R 4P8.**

Merck Frosst is committed to employment equity, and encourages applications from women, Aborigines, persons with disabilities and members of minority groups. We offer a smoke-free work environment.

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TWO ENDOWED CHAIR POSITIONS

The Department of Chemistry at North Carolina State University has received gifts for the endowment of two chaired positions: the Howard Schaeffer Chair from Burroughs Wellcome Company, and a Chair from Glaxo, Inc. The Glaxo Chair is designated to support a research program in the area of Pharmaceutical Chemistry, broadly construed, whereas the Schaeffer Chair is unrestricted as to the area of research. The Department wishes the research programs of the faculty appointed to these chairs to complement one another as well as existing research programs in the Department.

Applications for the Schaeffer Chair are now requested from investigators with established and vigorous research programs. Letters of interest, accompanied by a curriculum vitae including publications and current and past research support should be sent to: **Dr. Janet Osteryoung, Head, Department of Chemistry, North Carolina State University, Raleigh, NC 27695-8204.**

North Carolina State University is the state's largest technical institution and a land grant university. The Department of Chemistry is currently undergoing extensive renovation of existing facilities as part of a \$2.4 million NSF infrastructure grant. The Department maintains state-of-the-art instrumentation for research in NMR and MS and has ready access to nearby facilities such as the NC Supercomputing Center in the Research Triangle Park. The Department is committed to expanding the Graduate Program, and has doubled the size of the entering graduate class over the last three years. Several junior-level positions have been filled recently and additional searches at the junior level are underway.

Applications for the Schaeffer Chair will be reviewed until the position is filled. North Carolina State University is an Equal Opportunity/Affirmative Action employer and encourages applications from women and minorities.

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We are seeking postdoctoral scientists to join ongoing research programs applying Accell® gene delivery technology toward applications in tumor gene therapy, genetic immunization and therapeutic peptide delivery. The qualified candidates will have broad knowledge of cell and molecular biology, and should also have specialized training in immunological techniques, molecular oncology or tumor biology. Previous experience with animal models of human disease would be a valuable asset.

Agracetus has a state-of-the-art facility located near the University of Wisconsin. We offer an outstanding salary and benefits package. Please send your resume to: Vice President of Research, Agracetus, Inc., 8520 University Green, Middleton, WI 53562. Equal opportunity employer.



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APPLICATIONS ARE INVITED FOR RESEARCH SCIENTIST AND RESEARCH ASSOCIATE OPENINGS AT ECOGEN-EUROPE S.r.l. SUCCESSFUL CANDIDATES WILL PARTICIPATE IN INSECTICIDAL NEMATODE DISCOVERY AND STRAIN DEVELOPMENT PROGRAMS.

Candidates for Research Scientist should have a Ph.D. degree in organismal biology, nematology, or entomology, and a proven research record. Preference will be given to candidates with postdoctoral experience. We seek individuals capable of working independently yet able to collaborate effectively, with strong technical abilities, and excellent communication skills. Research experience with nematodes would be useful but is not an essential requirement.

Candidates for Research Associate should have a M.S. degree or B.S. degree in organismal biology, nematology, or entomology, and at least four years of research experience. We seek individuals able to make detailed observations, analyze data, and participate in interpreting results.

Ecogen-Europe S.r.l. is a subsidiary of Ecogen Inc., an internationally recognized leader in agricultural biotechnology. Ecogen-Europe is located in a state-of-the-art research facility in the beautiful Umbria region of Italy, near Perugia, an area rich in cultural and recreational diversity.

We offer a competitive compensation and benefits package and a highly professional environment. Applicants from EEC member countries are particularly encouraged. For immediate consideration, please submit a comprehensive resume and the names, addresses, and phone numbers of three references to: RAG93-2, Human Resources Department, Ecogen Inc., 2005 Cabot Boulevard West, Langhorne, PA 19047-1810, USA. Fax (215) 757-2956. An EOE Employer.

1994 COLGATE-PALMOLIVE POST-DOCTORAL FELLOWSHIP IN *IN VITRO* TOXICOLOGY

Consistent with its long-standing commitment to advance the development of non-animal methods for product safety assurance, the Colgate-Palmolive Company sponsors this Post-Doctoral Fellowship Award through the Society of Toxicology, directed toward the study of *in vitro* toxicology, including dermal, ocular, mutagenesis, molecular biology, cell culture, or metabolism.

This award will be made for one year with an award for an additional year based on agreement between Colgate-Palmolive and the post-doctoral fellow. The award includes an annual stipend of \$22,000, and additional funds that may be used for supplies, equipment, or research-related travel for a maximum award of \$33,500 per year. Total administrative costs to the awardee's institution may not exceed 8 percent annually.

The award is available to post-doctoral trainees in their first year of study beyond the Ph.D., M.D., or D.V.M. degree who are employed by academic institutions, Federal/National laboratories or research institutes worldwide. Doctoral students who anticipate completion of their degree prior to September 1, 1994 may also apply, although the doctoral degree must have been conferred before this fellowship is awarded. The application consists of a three-page description of the

proposed research, the applicant's CV, graduate transcripts, reprints and letters of recommendation. A letter from the current or proposed post-doctoral advisor, who is a member of the SOT, must be submitted that describes the nature and extent of commitment of research or other institutional resources to the applicant.

Finalists will be interviewed at the 1994 Annual Meeting of the SOT, March 13-17, in Dallas, Texas; travel expenses will be paid by Colgate-Palmolive.

Announcement and official presentation of the award will take place at the Awards Banquet on March 16. Funding may commence at that time, or no later than September 1, 1994.

Completed applications must be received at the SOT Headquarters no later than October 1, 1993. For further information and an application package, contact:

**Colgate-Palmolive Post-Doctoral Award
c/o Education Committee
Society of Toxicology
1101 14th Street, N.W., Suite 1100
Washington, DC 20005-5601
Fax: (202) 371-1090**

BIOTECHNOLOGY OPPORTUNITIES

Progenics Pharmaceuticals, Inc. is a privately held biopharmaceutical company specializing in the development of therapeutics, vaccines and diagnostics for HIV infection. The company is situated on an attractive campus in Westchester County, 20 miles north of Manhattan. Our rapid expansion is creating opportunities for scientists at all levels. We are particularly interested in individuals for the following positions:

Senior Investigator - Immunology

Strong background in the humoral or cellular immune response to infectious diseases. Requires a Ph.D. and a minimum of 3 years of postdoctoral experience; industrial experience an asset.

Staff Scientists/Postdoctoral Scientists/ Research Associates

Individuals with a B.S., M.S., or Ph.D. and a background in one or more of the following areas: immunology, cell and molecular biology, virology. Experience preferred in membrane biology, monoclonal antibody production, or assay development.

Production/Process Development Scientists

Individuals at all levels with experience in the production of recombinant proteins in eucaryotic cells using bioreactors, protein purification, pilot scale production. Knowledge of regulatory affairs an asset.

Candidates should send their C.V., a description of their research experience and the names and addresses of three references to: **Human Resources I, Progenics Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, NY 10591.**



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In New Drug Discovery

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Senior Research Investigator

We are seeking a Senior Research Investigator to provide biochemical assay expertise for our drug discovery programs. The qualified candidate will collaborate with discovery projects to implement screening assays for the identification of new drug candidates from chemical and natural product inventories. This will require the extensive use of biological data. Requirements for the position include a Ph.D. in biochemistry or molecular pharmacology, preferably with postdoctoral experience and good communication and supervisory skills. Experience with enzymology and/or receptor biology with a knowledge of ELISA assay techniques will also be helpful.

Searle, a wholly-owned subsidiary of Monsanto Company, offers a competitive salary and benefits. Please send curriculum vitae to: **Senior Research Investigator (BK); SEARLE Human Resources - BBSE; c/o Monsanto Company; 700 Chesterfield Parkway, St. Louis, MO 63198.** An Equal Opportunity Employer M/F/D/V.

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Staff Scientist, Pharmacology

Cytel is a biotechnology company committed to the discovery, development and commercialization of immunotherapeutics for the treatment of serious human diseases. Our strength is the integration of molecular immunology with leading edge pharmaceutical technologies.

This is a unique opportunity for an experienced pharmacologist to play a key role at Cytel. The individual we are seeking will be responsible for in vitro and animal research aimed at defining the intrinsic activity and understanding the mechanism(s) of action and pharmacodynamics of Cytel's lead drug candidates in the areas of inflammation and antigen recognition. This individual will interact closely with senior level scientists, as well as Cytel's safety/pharmacokinetics group and extramural collaborators. Responsibilities also include participation on multidisciplinary project teams and assisting with preparation of regulatory filings.

The successful candidate should have a Ph.D. in Pharmacology or a related scientific discipline, with 3+ years industry experience in biopharmaceuticals. An understanding of inflammation, cellular immunology and animal models of disease is desirable. Good interpersonal and communication skills are also required.

Cytel offers competitive salaries, fully paid health care benefits and stock options. Our state-of-the-art research and development facility is located in San Diego's biotechnology center near La Jolla. To explore a career with Cytel, please send your curriculum vitae to: Stephen H. Israel, Vice President, Administration, Cytel Corporation, 3525 John Hopkins Court, San Diego, CA 92121. We are an equal opportunity employer.

CYTEL

POSTDOCTORAL FELLOWSHIPS IN THE DEPARTMENT OF ANATOMY AND NEUROBIOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

Several positions for research in individual laboratories in the Department are available for candidates who have demonstrated research promise at the predoctoral or postdoctoral level. The emphasis of research in the Department is the Neurosciences with special expertise in neuromorphology, sensory physiology, and molecular neurobiology. The faculty of the Department and their research interests are:

- Dr. Robert H. Blanks: Eye movement control, physiology of upper airway.
- Dr. James H. Fallon: Chemical neuroanatomy, transmitters and growth factors.
- Dr. Christine M. Gall: Limbic/olfactory anatomy, neurotrophic factors, neuronal gene expression.
- Dr. Roland A. Giolli: Visuomotor system: structure/function relationships.
- Dr. Edward G. Jones: Transmitter regulation in primate cerebral cortex.
- Dr. Glenn H. Kageyama: Oxidative metabolic development and plasticity.
- Dr. Leonard M. Kitzes: Auditory system anatomy and physiology.
- Dr. W. Ian Lipkin: Neurotropic viruses, viral vectors.
- Dr. Sandra E. Loughlin: Monamines, peptides and growth factors and their receptors.
- Dr. Diane K. O'Dowd: Function and regulation of ion channels in *Drosophila* and development of functional synaptic connections in mouse cortex.
- Dr. Charles E. Ribak: Epilepsy, neurotransmitters and hippocampal circuits.
- Dr. Richard R. Robertson: Developmental neurobiology of cerebral cortex.
- Dr. Malcolm N. Semple: Information processing in the auditory system.
- Dr. Martin A. Smith: Cellular and molecular aspects of synaptogenesis.
- Dr. John E. Swett: Spinal cord and peripheral nervous system.
- Dr. John H. Weiss: Mechanisms of degeneration of central neurons.

Applications or inquiries for additional information should be sent to: **Dr. Edward G. Jones, Professor and Chairman, Department of Anatomy and Neurobiology, University of California, Irvine, Med Surge II, Room 364, Irvine, CA 92717-1875.**

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B E C T O N D I C K I N S O N

SENIOR SCIENTIST

This position in the Drug Delivery Department is responsible for developing approaches toward the efficient, iontophoretic transdermal delivery of proteins. Will also be responsible for the chemical and physical characterization of peptides and proteins including skin interactions and for applying these insights to approaches for stabilizing peptides.

This position requires a Ph.D. in protein chemistry, biochemistry, enzymology or pharmaceutical science with at least 2 years of industrial experience, preferably in a pharmaceutical environment. Experience and a published record of accomplishment in protein chemistry is required. Must have the ability to conduct independent creative research in an interactive, multidisciplinary environment. Excellent communication skills are essential.

*For immediate consideration, send your resume to:
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Research Center, 21 Davis Drive, Research Triangle
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T H E R E W A R D S O F D I S C O V E R Y



Vice Chancellor for Health Affairs and Dean, School of Medicine The University of Mississippi Medical Center

The University of Mississippi Medical Center at Jackson invites nominations for the position of Vice Chancellor for Health Affairs. The Vice Chancellor for Health Affairs is the chief executive officer of the separately funded health sciences campus of the University of Mississippi and reports directly to the Chancellor of the University. The Vice Chancellor also serves as Dean of the School of Medicine.

The Mississippi Medical Center, established in 1955, is the state's only health sciences campus. It includes Schools of Medicine, Nursing, Health Related Professions and Dentistry; Graduate Programs in the Medical Sciences; and the 593-bed University Hospital, teaching hospital for all programs and the state's principal tertiary care center. The institution offers residency training for physicians in 25 specialties and residencies in both general practice and advanced education in general dentistry. Total enrollment in all programs for fall 1992-1993 was 1631. Currently, there are 421 full-time and 186 part-time faculty. Operating budget for the 1993-1994 fiscal year is \$245.6 million.

The Medical Center occupies a 164 acre tract of University-owned land in the heart of Jackson, the state capital. A Department of Veterans Affairs Medical Center is on the campus and serves as a major teaching affiliate.

The Medical Center has just initiated a \$76.9 million expansion project for the University Hospital. Among the new facilities are a new children's hospital, a perinatal center, a diagnostic radiology building and two parking garages.

The Vice Chancellor for Health Affairs coordinates the teaching, technical, administrative and service functions of the Medical Center. Candidates must have a doctorate, with an M.D. degree preferred; extensive experience in medical education, including significant prior experience in administration; and have a record of scholarly contributions and participation in appropriate professional organizations.

Review of candidates will begin November 1, 1993, and will continue until a replacement is named. Those who wish to submit an application should write Dr. Winfred L. Wiser, Professor of Obstetrics and Gynecology and Department Chairman, The University of Mississippi Medical Center, 2500 North State Street, Jackson, Mississippi 39216-4505. Those who wish to submit a nomination for the dual position should send Dr. Wiser the nominee's name, telephone number and address.

EQUAL OPPORTUNITY EMPLOYER, M/F/D/V.

Research

CellPro, Incorporated is a Seattle area biotechnology company focused on developing, manufacturing, and marketing of affinity cell separation systems for use in therapeutic, research, and diagnostic applications. We are currently seeking qualified candidates for the following positions.

SCIENTIST ANTIBODY DISCOVERY

As a member of our research team the successful candidate will be responsible for providing scientific leadership for the discovery, development and acquisition of novel monoclonal antibodies for use in our cell separation technology. This individual will generate, modify and evaluate new monoclonal antibodies, and utilize molecular biology techniques to bioengineer novel antibodies. Activities will include working with an interdisciplinary team to develop new ligands and capture systems for use in new medical devices.

Candidates with a Ph.D. in biochemistry, immunology or molecular biology and a minimum of 8 years experience in monoclonal antibody development are encouraged to apply. Previous experience with development of biopharmaceuticals or diagnostic products is preferred. Excellent communication skills and the ability to work collaboratively are required.

RESEARCH ASSOCIATE MOLECULAR GENETICS

The successful candidate will participate in the development of methods for purification and analysis of extremely rare cell types. This will involve the development of in situ hybridization techniques for very small numbers of cells.

Candidates with a BS or MS in Genetics or related discipline with 5+ years cytogenetics, with particular emphasis on fluorescent in situ hybridization (FISH) are encouraged to apply. Experience with DNA analysis, particularly PCR is also desirable. Excellent communication skills and the ability to work collaboratively are required.

In addition to our leading technology and the Pacific Northwest lifestyle, CellPro offers competitive salaries, stock option plans and an excellent benefit program. For immediate consideration, please send your resume/c.v. and a list of professional references to:



**Human Resources,
CellPro, Incorporated
22322 20th Ave., SE,
Suite 100
Bothell, WA 98021-8446.
FAX (206)485-4787.**

Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION IN GENETIC EPIDEMIOLOGY. Immediate opening in the Population Genetics Laboratory for an individual with a strong background in statistical genetics to work under the direction of **Drs. Jean MacCluer and John Blangero**. The successful candidate will join a large and highly interactive group to work on projects aimed at detecting single gene effects on complex diseases and their risk factors. A Ph.D., M.D. or other doctorate is required. Experience with methods of complex segregation analysis and linkage analysis preferred. Annual salary between \$23,691 and \$33,280 commensurate with relevant experience. Interested individuals should send curriculum vitae, brief statement of research interest, and names, addresses, and telephone numbers of three references to: **Personnel Manager (347), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78228-0147.**

Equal Opportunity Employer, M/F.

POSTDOCTORAL AND GRADUATE STUDENT FELLOWSHIPS

The University of Cincinnati College of Medicine offers a modern interdepartmental training program in environmental molecular and cellular carcinogenesis and mutagenesis. Cincinnati is a leading academic and industrial center for environmental studies providing numerous employment opportunities. Experimental approaches within the program include the role of growth factors and oncogenes in cellular transformation, the use of transgenic cells and animals, and molecular toxicology. Participating faculty are: **Dr. Kathleen Dixon** (molecular mechanisms of mutagenesis); **Dr. Tom Dostschman** (growth factor gene ablation and carcinogenesis); **Dr. Michael Lieberman** (growth factors, oncogenes, and differentiation); **Dr. John Loper** (P450 systems in yeast); **Dr. Daniel Nebert** (molecular biology of drug metabolism); **Dr. Steven Potter** (insertional mutagenesis in transgenic mice); **Dr. Peter Stambrook** (mutagenesis in transgenic cells and mice; oncogenes and cell cycle); **Dr. James Stringer** (recombination and gene targeting in ES cells and mice); and **Dr. David Warshawsky** (mechanisms of chemical carcinogenesis).

Positions are immediately available and are funded through a national research training program. Applicants must have U.S. citizenship or permanent residency and have completed a Ph.D. degree or equivalent. Candidates should send curriculum vitae and three letters of recommendation to: **Dr. Peter J. Stambrook, Department of Anatomy and Cell Biology, University of Cincinnati College of Medicine, Cincinnati, OH 45267. An Equal Opportunity/Affirmative Action Employer.**

MYASTHENIA GRAVIS FOUNDATION FELLOWSHIP

Postdoctoral Research Fellowship available for outstanding candidate with M.D., Ph.D., D.V.M. or equivalent degree, conducting research pertinent to myasthenia gravis (MG), in the laboratory of a qualified senior investigator; investigations concerned with mechanism of neuromuscular transmission; immunology, molecular or cell biology of the neuromuscular synapse; the etiology/pathogenesis, diagnosis or treatment of MG. Submit by November 1, 1993. Stipend competitive.

For specifics on submitting Fellowship, please write or call: **The Myasthenia Gravis Foundation, 53 West Jackson Boulevard, Suite 660, Chicago, IL 60604, telephone: 800/541-5454.**

POSTDOCTORAL INTRAMURAL RESEARCH TRAINING AWARD (IRTA) FELLOWSHIP

Neuropsychologist to join research team using positron emission tomography (PET) in studies of human drug abuse. Active collaboration with the nearby Johns Hopkins Medical Institutions. Fellowship requires Ph.D. degree, knowledge of neuropsychological testing and analysis. Would participate in developing research protocols and in supervising and interpreting collection of psychometric data. Salary commensurate with experience. Position is a training opportunity for individuals with up to, but not exceeding, 3 years of research experience. Send curriculum vitae, statement of experience, and names of 3 references to: **Edythe D. London, Ph.D., Chief, Neuroimaging & Drug Action Section, NIDA, P.O. Box 5180, Baltimore, MD 21224. The NIDA/ADDAD Research Center is an Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL SCIENTIFIC RESEARCH OPPORTUNITIES IN INDIA.

Three- to twelve-month fellowships in India awarded to U.S. citizens in 1993-4. For information, contact: **Jeanine Marie Greene, Academy for Educational Development, 1255 23rd Street, NW, Washington, DC 20037.**

UNIVERSITY OF WASHINGTON RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW

Position available immediately for a research associate or postdoctoral fellow to study the biology/biochemistry of cell-associate cytokines in hematopoiesis. Candidates should have substantial experience in protein purification and molecular techniques. Candidates with Ph.D. or M.D. are preferred. Support for 1 to 2 years is anticipated. Send curriculum vitae with a statement of research interests to: **Dr. Michael Lilly, Medical Oncology (1110NC), Seattle VA Medical Center, 1660 Columbian Way South, Seattle, WA 98108. The University of Washington is an Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

Positions are available on an ongoing basis to conduct research within different research groups in the Institute of Molecular Biology at the University of Oregon. The purpose of this notice is to establish and maintain a pool of qualified applicants. Ph.D. in Molecular Biology or related field is required. *Women and minorities are urged to apply.* Salary dependent upon experience. For application materials, please call (503) 346-5151. *An Equal Opportunity/Affirmative Action institution committed to cultural diversity and compliance with the Americans with Disabilities Act.*

POSTDOCTORAL ASSOCIATE position is available to study cumulative effects of prolonged ozone exposure on carbon source/sink relationships in sugar maple seedlings by examining carbon allocation and partitioning and concomitant changes in shoot and root growth over three growing seasons. A Ph.D. in plant physiology or physiological ecology is required. Send cover letter, curriculum vitae and names/addresses of three referees to: **Dr. Mary A. Topa, Boyce Thompson Institute for Plant Research, Tower Road, Ithaca, NY 14853-1801. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

To study follicular dendritic cells and cancer. Available December 1, 1993. The effect of FDC on malignant cell growth and differentiation will be studied using a variety of lymphomas as models. Applicants with a strong background in cellular and molecular immunology are encouraged to apply. Submit statement of research interests, curriculum vitae, and names and addresses of three references by October 15, 1993, to: **Dr. John G. Tew, Box 678 MCV, Richmond, VA 23298-0678. Virginia Commonwealth University is a culturally diverse Equal Opportunity/Affirmative Action Employer. Women, minorities, and persons with disabilities encouraged to apply. U.S. citizenship required by funding source.**

PROTEIN CHEMIST

Growing pharmaceutical company seeks a biochemist to take responsibility for isolating, purifying, and characterizing proteins. Advanced degree with experience in enzymology, neuroscience, and/or growth factors highly desirable. Send curriculum vitae and names of three references to: **Pharmavene Inc., 35 West Watkins Mill Road, Gaithersburg, MD 20878.**

RESEARCH TRAINING FOR DENTAL GRADUATES

Candidates are sought for advanced postdoctoral research supported by an NIH training grant at the University of Louisville School of Dentistry. Areas of research include Cell and Molecular Biology, Immunology, Endocrinology, Microbiology, and Biochemistry. Candidates should have a D.D.S. or D.M.D. degree, and a postgraduate degree, or a proven interest in basic or clinical research. Salaries for these three-year positions are competitive. Contact: **Ms. Linda Peace, 301 School of Dentistry, 501 South Preston Street, Louisville, KY 40292; Telephone: (502) 588-7507; FAX: (502) 588-7240.**

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE

Postdoctoral/Research Associate positions available immediately for study and training in cellular or molecular biology relating to gene expression. Preference will be given to applicants with Ph.D. and prior experience in microscale protein purification or functional analysis of gene promoters. Send applications to: **David Stiles, Molecular and Cellular Section, School of Biological Sciences, Lexington, KY 40506. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

Position is available for NIH-funded research for a recent Ph.D. graduate to study molecular mechanisms of cell cycle control, G1 check points including pRb and p53, and how these may be manipulated to influence cell growth and differentiation processes in neoplastic skeletal muscle cells. Applicants should have a strong background in molecular/cell biology techniques including cloning, PCR sequencing, directed mutagenesis, engineering constructs under inducible promoters, use of retroviral vectors, transfection techniques. Send curriculum vitae with names of 3 references to: **Dr. J. Houghton, Department of Molecular Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. Equal Opportunity/Affirmative Action Employer.**

FISHERIES BIOLOGIST/HYDROLOGIST/GEO-MORPHOLOGIST.

Boise Cascade Corporation is seeking a fisheries biologist, hydrologist or geomorphologist to develop and implement programs for fisheries, watershed, and cumulative effects evaluations on its lands, and to provide expertise and direction to the company on fisheries and watershed issues. Qualifications include an M.S. plus two years of experience or Ph.D. in fisheries biology, geomorphology, hydrology or closely related field. Knowledge of stream fish habitat and watershed analyses as well as familiarity with GIS and modeling approaches is desired. Strong interpersonal skills with the ability to effectively interact with a variety of audiences is important. Salary range: \$40,128 to \$60,600. Application deadline: September 30, 1993. Send letter of interest, résumé and list of at least 3 references to: **Ms. Luci McDonald, Boise Cascade Corporation, P.O. Box 50, Boise, ID 83728. Boise Cascade is an Equal Employment Opportunity Employer.**

PART-TIME CONSULTING POSITIONS AVAILABLE.

The Futura Institute is conducting a comparative assessment of recent advances in information systems technology in the United States, Russia, and China. The current focus is on Russia and China and is limited to research and applications in the areas of LAN, massive parallel processing, neural networks, supercomputing, and optical computing. Work involves evaluating current research in China and Russia. Travel/relocation not required. Flexible hours. Qualified applicants will possess Ph.D.'s in computer science or have project manager experience in hardware or software development, and have recent work experience in Russia or China. Native language fluency is required. Foreign scientists on temporary visa status are especially encouraged to apply. Send curriculum vitae and summary of research/work experience to: **The Futura Institute, P.O. Box 2988, Laurel, MD 20709. Confidentiality is assured. The Futura Institute is an Equal Opportunity Employer.**

SENIOR LABORATORY TECHNICIAN MOLECULAR EVOLUTION

The Smithsonian Tropical Research Institute, Balboa, Panama, invites applications for the position of Senior Laboratory Technician in molecular evolution. The successful candidate will have primary responsibility for the day-to-day management (including data analysis) of a laboratory engaged in the use of DNA to answer questions of evolution, phylogeny and population genetics. This is a U.S. federal government position on the GS-11 grade (Salary \$33,623 and housing allowance). Minimum qualifications are a Master's degree in biology and at least two years of experience in a laboratory engaged in DNA sequencing and related techniques. Knowledge of statistics, methods of phylogenetic analysis, computer programming and fluency in both English and Spanish are highly desirable. Please send by September 16, 1993, curriculum vitae and three letters of recommendation to: **Office of Human Resources, Smithsonian Tropical Research Institute, Box 2072, Balboa, Panama.**

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StressGen Biotechnologies is a dynamic and rapidly growing biopharmaceutical company devoted to medical applications of stress proteins. StressGen has initiated R&D programs aimed at producing stress protein-based immunotherapeutic agents. The following openings are available:

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MOLECULAR BIOLOGISTS: Ph.D. in Molecular Biology with 2 or more years postdoctoral experience in a variety of microbial expression systems and in the production and characterization of recombinant proteins. Successful candidate will be responsible for: the molecular design and development of viral and bacterial vaccines; the production and characterization of genetically engineered protein-based adjuvants and vaccine immunogens; modifying existing expression systems for optimal foreign gene expression; and the generation of novel proprietary expression systems.

VACCINE/ADJUVANT FORMULATION SCIENTIST: A Scientist with expertise in vaccine antigen presentation to stimulate cellular, humoral, and mucosal immune responses is required. Individuals with experience in the use of adjuvants in human vaccine formulations and in novel antigen delivery systems will be given special consideration. Successful candidate will be responsible for formulating new and effective vehicles for delivering our genetically engineered vaccines.

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Please note that only those individuals selected for an interview will be contacted.

BIOCHEMISTS: The successful candidate will work within the Reagent Division to implement and optimize protocols for the characterization, purification, manufacture and quality control of antibodies, recombinant proteins and DNA products. Responsibilities include methods development, assay qualification, writing of SOP's and management of a quality control program. A Ph.D. in Biochemistry or equivalent relevant experience are required. Candidate must also have experience with HPLC, ELISA, SDS-PAGE, enzyme assays and GMP.

CELLULAR IMMUNOLOGISTS, (Junior and Senior Positions): Ph.D. in Immunology with two or more years of postdoctoral experience. Experience in the design, implementation and analysis of recombinant vaccines is required. Both positions require a sound knowledge of cellular immunology and in vitro analysis of T and B cell function. The senior position also requires industrial experience in vaccine development and familiarity with regulatory issues.

DIRECTOR, ENVIRONMENTAL HEALTH

The University of Cincinnati College of Medicine announces a search for the position of Director (Chair) of the Department of Environmental Health.

Founded 65 years ago as the Kettering Laboratory, the Department of Environmental Health is the largest and most diverse in the Medical Center. The Department has the distinction of being the first Center for Environmental Health in the U.S. With its faculty of 50, this department fulfills a vital scholarly and community-directed mission encompassing interests from environmental molecular toxicology to clinical, occupational and environmental health research. The department has highly successful training programs for graduate students at the masters, doctoral and postdoctoral levels in toxicology, occupational safety, occupational medicine, epidemiology and biostatistics, environmental and industrial hygiene and risk assessment as well as a fully ACGME accredited Occupational Medicine Residency Training Program.

We seek an individual with an outstanding record of scholarly contributions to the broad field of environmental health. It is expected that the successful candidate will be creative, innovative, demonstrate vision for advancement of environmental health, possess a strong commitment to graduate and postgraduate education, and have demonstrated organizational, managerial and leadership skills.

Applications are invited from scientists/physicians with a record of achievement in scholarship, education and leadership and are accepted until filled. Please send curriculum vitae and bibliography and the names of at least 3 references to:

Dr. Arnold Schwartz
Chairman, Search Committee
Chairman, Dept. of Pharmacology and Cell Biophysics
University of Cincinnati College of Medicine
231 Bethesda Avenue
Cincinnati, OH 46267-0575

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POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE. Investigation of synaptic integration in mammalian retina using patch-clamp recording from slices. Position open October 1, 1993. Must have previous experience either with retina or with single-cell electrophysiology. Salary \$26,000 plus health. Send curriculum vitae and three references to: **Professor Gordon L. Fain, Departments of Ophthalmology and Physiological Science, Jules Stein Eye Institute, UCLA School of Medicine, Los Angeles, CA 90024. FAX: (213) 825-0841.**

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New position available to manage the product demonstration activities of Molecular Structure Corporation. Duties will include performing X-ray experiments with prospective customers, training customers in the field, and supporting the sales and marketing organization. Macromolecular X-ray experience required. Small molecule X-ray experience desired. Please send curriculum vitae and the names of three references to: **Jan M. Troup, Molecular Structure Corporation, 3200 Research Forest Drive, The Woodlands, TX 77381.**

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STAFF SCIENTIST

The Life Sciences Division at Lawrence Berkeley Laboratory seeks applicants to direct the high resolution genetic mapping component of the LBL Human Genome Center or develop an independent biology project in the human genome program. Appointment will be at the Staff Scientist 2 or 3 level depending upon the qualifications of the selected candidate. Applicants should have a broad background in molecular biology, biochemistry, or molecular genetics research with expertise in *in vitro* manipulations of nucleic acids and enzymes that operate on nucleic acids, and a working knowledge of the practices and principles of genome analysis, including DNA sequencing, polymerase chain reaction, and QTL genetics. Send curriculum vitae, short synopsis of research interests, a list of publications, and names of three references to: **Dr. Sylvia Spengler, c/o Lawrence Berkeley Laboratory, Staffing Office, Box #JSC11323, One Cyclotron Road, Building 938A, Berkeley, CA 94720. An Equal Opportunity Employer.**



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Minorities and women are encouraged to apply. ARS is an Equal Opportunity Employer.

MEETINGS

NUCLEIC ACID—PROTEIN INTERACTIONS, 4TH ANNUAL SCHWEPPE SYMPOSIUM, SEPTEMBER 20-21, 1993. Sponsored by Northwestern University Cancer Center, Center for Biotechnology, and Markey Program in Developmental Biology. Sessions include Transcription factors as developmental regulators; Lygand Activators as transcription factors; inducible transcriptional responses; RNA: Protein Interactions; chromatin; structure/function of nucleic acid binding proteins and de-regulation of transcription in disease. For information and registration contact: **Office of CME, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611-3008. Telephone: 312-503-8533 or FAX: 312-503-0146.**

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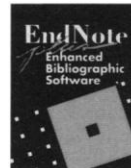
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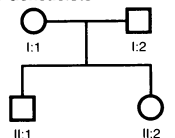


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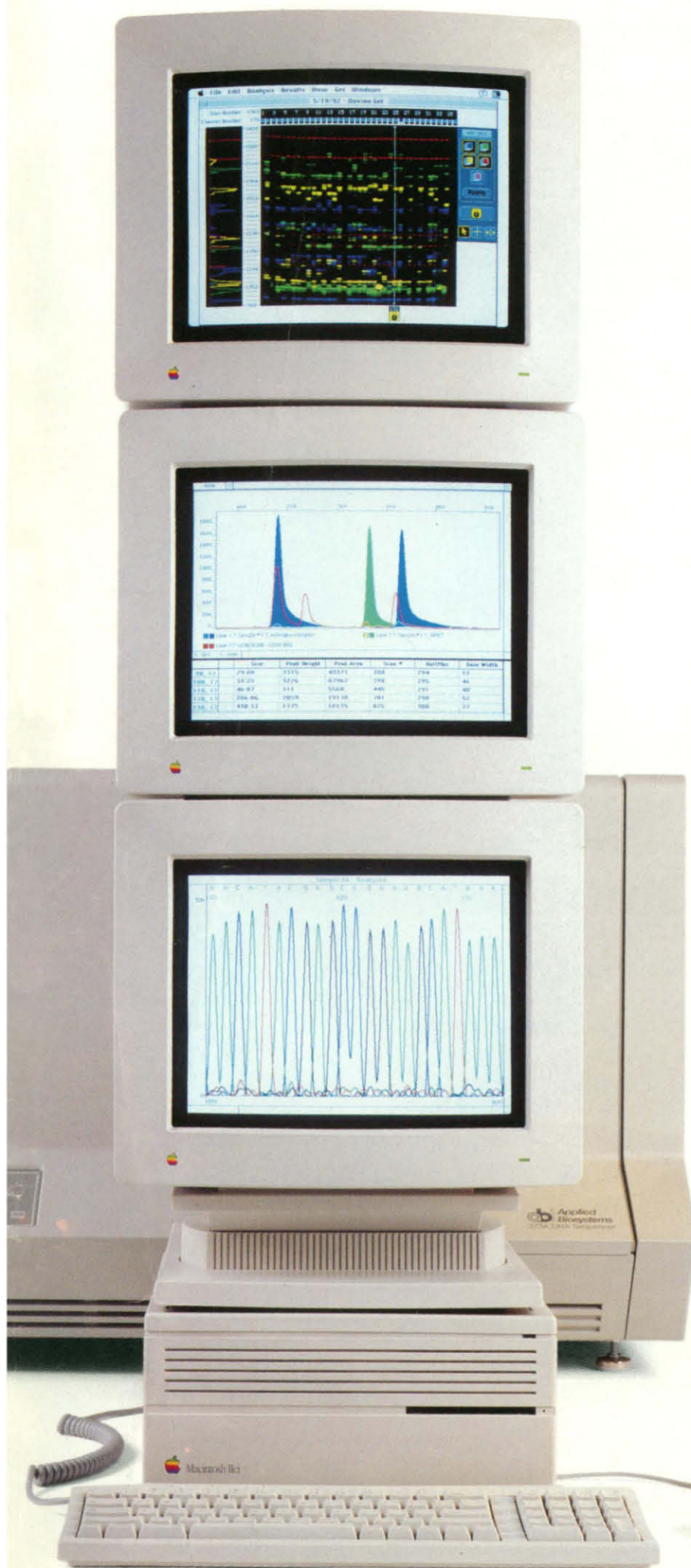
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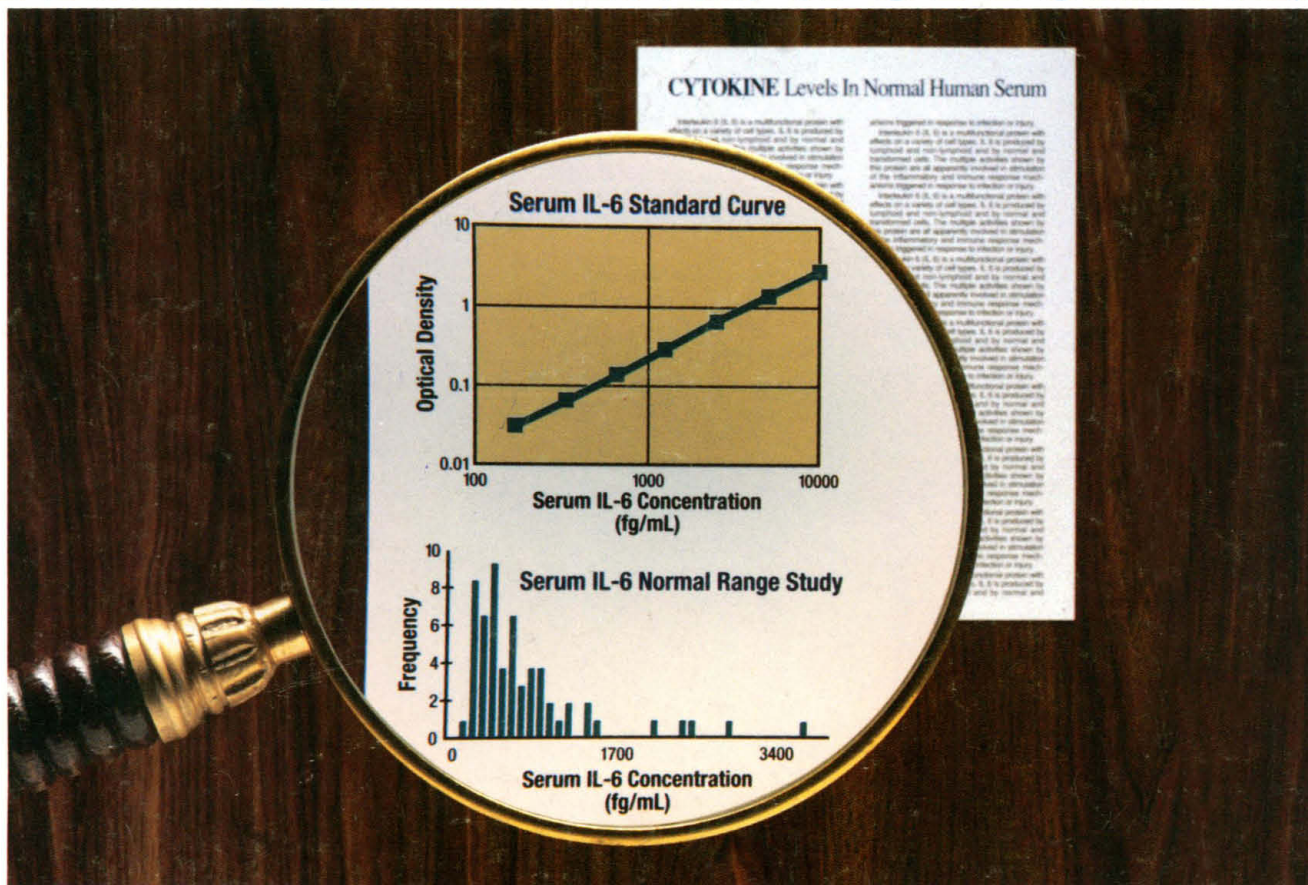
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