

the medical profession learned to maneuver in an increasingly complex world.

The archival digging that was important to the study paid off, and readers will be fascinated by many of the stories uncovered in newspapers, official records, and private papers. Indeed, it is in providing concrete, anecdotal evidence that the book will make its main contribution. For example, the diary of Lizzie Woods, from 1888 to 1898 the Portsmouth Hospital supervisor, provides revealing daily detail about hospital life.

For all its value in providing local examples of national trends, the book is, unfortunately, not fully satisfying as historical scholarship. First, the authors' or publisher's decision not to include notes keyed to the text is frustrating. The authors provide notes at the end of each chapter to indicate their major research sources and to make connections to historical literature, but the lack of references to document particular points will make it difficult for future scholars to build on this study.

A second cause for disappointment in the book as history lies in the authors' frequent use of present-day therapeutic knowledge for comparison with the past. Repeated references to the present make it difficult for the authors to provide a historical context for the events they recount, requiring instead consciousness of a medical march of progress, which somewhat distorts our understanding of the processes of historical change.

The omission of certain aspects of the town's medical "biography," most notably the experience of the people who sought out medical help and advice, is a further limitation. The authors give attention to people around regular physicians, including sectarian practitioners, nurses, and hospital administrators and volunteers, but they say little about patients. The study is lengthy as it is and sources for this group are much more difficult to obtain, but representation of the patients' perspective would have significantly enriched the story.

Estes, whose work is already known and admired among medical historians, and Goodman, whose contribution in local archives work is evident and welcome, have nevertheless made a significant contribution with this book. Portsmouth, New Hampshire, will now enter the growing list of American communities whose medical experiences have been examined carefully and thoroughly by historians. Such local studies continue to be crucial to the collective endeavor of uncovering our medical past.

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## Melts in the Earth

**Magmatic Processes.** Physiochemical Principles. B. O. MYSEN, Ed. Geochemical Society, University Park, PA, 1987. x, 500 pp., illus. \$65; to Geochemical Society members, \$45. Special Publication no. 1. From a conference, Kona, HI, June 1986.

The objective of *Magmatic Processes: Physiochemical Principles* is twofold: to honor Hatten S. Yoder upon his retirement as director of the Geophysical Laboratory of the Carnegie Institution of Washington and to summarize the current state of research on magmatic processes. The 30 papers that make up the volume succeed nicely in the first task, and they touch on most of the important questions of igneous geology, geochemistry, and geophysics. How are magmas formed and how do melts reach the surface? Are melts deep in the earth similar to those near the surface, or are their properties fundamentally different? What can be inferred about magmatic processes from the igneous rocks and volcanic structures observed in the field? What exactly are the igneous processes associated with subduction zones and the formation of continental crust? Such questions are among the most basic in the earth sciences, and they form the main themes of this book.

The great variety of the contributions is a fitting tribute to Hatten Yoder's far-ranging interests during his 38-year career at the Geophysical Laboratory. As might be expected, due emphasis is given to phase equilibria pertaining to igneous rocks, both their experimental determinations and their geological applications. (Some of the authors are: D. C. Presnall and J. D. Hoover; P. J. Wyllie; D. H. Green, T. J. Falloon, and W. R. Taylor; K. Yagi and H. Takeshita; and M. L. Sykes and J. R. Holloway.) Yet the physical properties of silicate liquids (C. T. Herzberg; C. M. Scarfe, B. O. Mysen, and D. Virgo), of partially molten rock (D. L. Turcotte), and of magma chambers (R. T. Helz; M. P. Ryan; G. Brandeis and C. Jaupart) are also discussed at length. In addition, there is a good representation of numerical studies involving phase equilibrium and fluid dynamical models (S. Clark, F. J. Spera, and D. A. Yuen; M. S. Ghiorso and P. B. Kelemen; H. Nekvasil and C. W. Burnham). Notably missing are observational data pertaining to the application of radiogenic or noble-gas isotopic techniques and theoretical studies of the molecular modeling of silicate melts. However, these omissions are largely amended by the diversity of laboratory and field studies that are described (D. G. Fraser and W. Rammensee; A. Navrotsky; D. B. Dingwell; F. R. Boyd and S. A. Mertzman; D. K. Bailey and

R. Macdonald; W. G. Ernst). Furthermore, several of the papers are really compact reviews that emphasize recent results (for example, D. L. Anderson; I. Kushiro; H. P. Taylor; B. O. Mysen).

The quality of the papers is generally high, with a few notable exceptions. However, some of the leading scholars in igneous research are not included, nor is their work adequately represented. These deficiencies weaken the impact of an otherwise stimulating book. A particular strength of this volume is its illustration of the geophysical approaches used to study igneous processes: in the field from the outcrop to the global scale, in the laboratory, and through modeling studies. This appropriately reflects the current trend of making geophysical studies as important to understanding magmatic processes as geochemical and geological studies have been in the past. In this regard, *Magmatic Processes* succeeds well in summarizing the present directions of igneous research.

The book is one of the most impressively produced proceedings volumes that I have seen. Considerable effort must have been put into the preparation and typesetting of the papers as well as the compilation of an extensive index. Yet it was produced in well under one year.

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## Books Received

**Constraints Theory and Relativistic Dynamics.** G. Longhi and L. Lusanna, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xvi, 351 pp., illus. \$56. From a workshop, Florence, Italy, May 1986.

**Contemporary Moral Controversies in Technology.** A. Pablo Iannone, Ed. Oxford University Press, New York, 1987. xvi, 336 pp., illus. \$29.95; paper, \$12.95.

**Fourth International Conference on Emerging Nuclear Energy Systems.** G. Velarde and E. Minguez, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xiv, 481 pp., illus. \$90. Madrid, June–July 1986.

**Genetic Improvement in Yield of Wheat.** Edward L. Smith, Ed. Crop Science Society of America and American Society of Agronomy, Madison, WI, 1986. x, 114 pp., illus. Paper, \$18. From a symposium, Atlanta, GA, Nov. 1981. CSSA Special Publication no. 13.

**International Meeting on Advances on Phase Transitions and Disorder Phenomena** (Amalfi, Italy, June 1986). G. Busiello *et al.*, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). x, 577 pp., illus. \$79.

**Leslie Peltier's Guide to the Stars.** Leslie C. Peltier. AstroMedia, Milwaukee, WI, and Cambridge University Press, New York, 1987. xiv, 185 pp., illus. Paper, \$11.95.

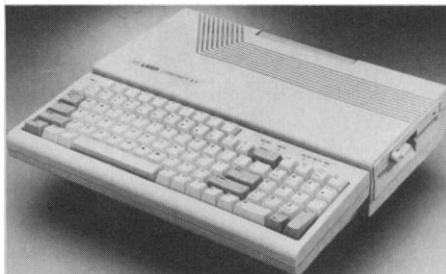
**Niels Bohr.** A Centenary Volume. A. P. French and P. J. Kennedy, Eds. Harvard University Press, Cambridge, MA, 1987. xvi, 403 pp., illus. Paper, \$14.95. Reprint, 1985 ed.

**Partial Differential Equations of Hyperbolic Type and Applications.** Giuseppe Geymonat, Ed. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). x, 178 pp., illus. \$37.

## Products & Materials

### IBM-Compatible Compact PC

The LASER Compact XTE personal computer is fully compatible with the IBM XT and all of its software. The computer comes with 640 kilobytes of random-access memory and is expandable to 1 megabyte. An Enhanced Graphics Adapter is built in, allowing the LASER Compact XTE to dis-



play 64 colors (16 at once) with high-resolution graphics of 640 by 350 pixels. Also built in is a clock with a rechargeable battery. The computer has one 5.25-inch disk drive and an interface for a second. Other interfaces include a parallel printer port, a RS-232 serial port, and a joystick port. Video Technology Computers. Circle 620.

### Statistical Consulting Software

StatChoice is a software program that advises the user on the best statistical method to analyze a particular set of behavioral or medical data. After the user enters information on the variables, the software displays the relations between the variables graphically. Then StatChoice proceeds through decision trees until it displays the best statistical procedure, its assumptions, and alternate procedures. Utilities with the program can perform statistical power and Bayesian analyses and calculate type 1-error rates. The computers for which StatChoice is available are the Apple II family, the IBM PC family, and the Macintosh. PSG Publishing. Circle 629.

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.

### Computer Graphics Display System

The Le Mans Colographic Display System can draw 1 million fully transformed two-dimensional (2-D) vectors per second and 250,000 fully transformed 3-D vectors per second. Also, it can generate 25,000 smooth-shaded polygons per second. The monitor shows 1280 by 1024 pixels. Chromatics. Circle 625.

### Kit for Inducing Mutations

The Site-Directed Mutagenesis Kit induces mutations with the gapped-duplex method. This method prevents such problems as primer displacement, nucleotide misincorporation, and secondary structure inhibition. The kit contains vectors, strains, Klenow fragments, T<sub>4</sub> DNA ligase, nucleotides, and buffers for 25 experimental and 5 control reactions. Boehringer Mannheim Biochemicals. Circle 624.

### C-Language Compiler

QuickC is a fast C-language compiler that allows programmers to edit, compile, and debug programs from within the same development environment. Compilation and executable speeds are comparable to Turbo C. Features include in-memory compilation of 10,000 lines per minute, mouse support, and an integrated source-level debugger. Also, QuickC contains a graphics library with screen-control functions. The compiler has on-line, context-sensitive help. The user can find and correct as many as 26 errors before needing to recompile; an in-memory utility recompiles only what has changed. QuickC is available on both 5.25- and 3.5-inch disks. The compiler requires an IBM PC or compatible computer, 384 kilobytes of memory, MS DOS 2.0 or later, and a double-sided disk drive. Microsoft. Circle 623.

### Micromanipulator

The TPI/de Fonbrune Micromanipulator uses a pneumatic drive to transfer one-handed joystick motion in the *x*, *y*, and *z* axes to a microtool. Compatible with almost all microscopes, it can be set up for both right-handers and left-handers. Mechanical controls on the receiver unit make rapid coarse adjustments while the pneumatically controlled joystick is used for fine adjustments such as focusing, positioning, and

experimental operations. The ratio of the amount of joystick movement to the amount of microtool movement can be varied from 50:1 to 2500:1. The receiver unit has binding posts that permit the use of microelectrodes, and it has adjustable and fixed instrument holders. Schluter Instruments. Circle 633.

### pH and Ion Meter

The *p*H 12 *p*H-ion-selective electrode meter is a palm-sized, portable meter with a direct readout. The meter automatically recognizes five standard buffers and enters temperature-corrected values for standardiza-



tion or calibration. Only when the measurement approaches stability is it displayed and locked. The meter has a resolution selector of 0.1 or 0.01 for *p*H. Beckman Instruments, Scientific Instruments Division. Circle 622.

### Literature

*Series 30 Microbalances* is a six-page color brochure about a line of balances that can be calibrated in-house and require no special handling or installation procedures. Cahn Instruments. Circle 614.

*Electronic Instruments Catalog and Buyer's Guide* features digital multimeters, electrometers, picoammeters, scanners, switching cards, and other electronic test and measurement equipment. Keithley Instruments. Circle 615.

*Peak-to-Peak Applied Separation Techniques, #145* is an applications bulletin concerning trace gas analysis in helium standards. GOW-MAC Instrument. Circle 616.

*Introducing the 112 UV/VIS Detector* is a brochure about a compact ultraviolet and visible light detector for high-performance liquid chromatography and low-pressure chromatography. Gilson Medical Electronics. Circle 617.

*Superconductor Research Materials* lists 35 metals and compounds in various purities for superconductor research. Johnson Matthey, AESAR Group. Circle 618.

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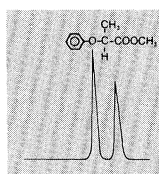
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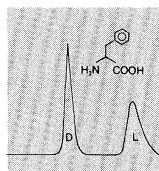
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**Science/Administration:** have Ph.D., postdoctorate, senior postdoctorate, associateships, fellowships, worked with NAS, NASA, NATO, industry and government grants, graduate teaching in U.S., Asia, and Europe. Box 116, SCIENCE.

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The National Oceanic and Atmospheric Administration seeks applications for the position of **ASSISTANT ADMINISTRATOR/DIRECTOR** of the National Weather Service (NWS). The NWS provides meteorological, hydrological, and climatic forecast services and products nationally and internationally. Position is in the Senior Executive Service; salary to \$77,500 based on qualifications. Minimum qualifications include a bachelor's degree in meteorology or atmospheric science, with at least 5 years of professional experience. Contact: **Evelyn Fritz: 301-443-8834** for application forms. Applications must be received prior to closing date of 21 September 1987. *An Equal Opportunity Employer.*

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## POSITIONS OPEN

### ASSISTANT PROFESSOR OF BIOCHEMISTRY UNIVERSITY OF COLORADO, BOULDER

Applications are sought for one tenure-track position to begin in September 1988. One priority is in macromolecular crystallography or a related area of structural biochemistry; however an appointment may be made in an alternative field. Applications in all areas of biochemistry are welcome, and those with approaches that interface with other areas of chemistry are encouraged. Applicants should send curriculum vitae, representative reprints, statement of research plans and three letters of reference to: **Biochemistry Search Committee, Department of Chemistry and Biochemistry, University of Colorado, Campus Box 215, Boulder, CO 80309-0215.** The applications will be evaluated 1 November 1987, although later applications may be considered if the position has not been filled. *The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities, and disabled individuals.*

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plant molecular and developmental biology  
molecular and developmental neurobiology

but we will consider exceptional applicants in other fields.

*We encourage applications from women and minority groups.* Applications should include curriculum vitae, reprints of publications, statement of research plans, and three letters of recommendation, solicited by the applicant. Complete applications should be received no later than 15 September 1987 and sent to: **Diane Baldwin, Administrator, CDB Search Committee, Biological Laboratories, Harvard University, 16 Divinity Avenue, Cambridge, MA 02138.** *Harvard University is an Affirmative Action/Equal Opportunity Employer.*

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*Minorities and women are encouraged to apply.*

**ASSISTANT PROFESSOR, MICROBIOLOGY.** The Department of Biology at Tennessee Technological University is seeking a microbiologist with experience in teaching general bacteriology to fill a tenure-track position at the assistant professor level, available September 1987. The individual will be expected to teach general bacteriology and medical microbiology, develop a vigorous, independent research program, and to direct graduate student research. Candidates must have a Ph.D. in microbiology, be committed to excellence in teaching, and have a demonstrated record of research activity. Applications containing a statement of teaching and research interests, curriculum vitae, and a list of four references should be sent to:

**Microbiologist Search Committee  
Department of Biology, Box 5063  
Tennessee Technological University  
Cookeville, TN 38505**

Closing Date: 4 September 1987, or until filled.

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### ASSISTANT PROFESSOR OF PHYSIOLOGY

The Department of Physiology is seeking candidates for a faculty (12-month tenure-track) position at the assistant professor level. The Department currently has an orientation in cardiopulmonary physiology with a concentration in the regulation of organ fluid balance. We are seeking an individual whose research interests are in cardiovascular or pulmonary physiology, and who is preferably pursuing these interests at the cellular level, but with an integrative view toward the whole organism. Requirements include Ph.D. or M.D., completion of 2 years of postdoctoral training, a sound background in general physiology, and the ability to develop own research program. Will be responsible for teaching endocrine physiology in the Medical Physiology Course. Opportunities exist for collaborative research and participation in graduate education. Submit curriculum vitae, statement of research interests, and the names of three references by 25 September 1987, to

**Northeastern Ohio Universities  
College of Medicine  
c/o The Office of Human Resources  
Michael B. Maron, Ph.D.  
P.O. Box 95  
Rootstown, OH 44272**

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## POSITIONS OPEN

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**ASSISTANT PROFESSOR OF SOILS/WATERSHED MANAGEMENT.** The University of Michigan, School of Natural Resources, is seeking applicants for the position of assistant professor of soils/watershed management. Nine-month tenure-track research and teaching position. Applicants should have their primary training, research, and experience in soils/watershed management with an ability to apply this expertise broadly. A Ph.D. degree and experience in teaching and research and in applying these principles to natural resource management and planning are essential. A strong background in quantitative sciences, ecology, and soil chemistry also is required. Send curriculum vitae, statement of research interests, examples of major publications, transcripts, and three letters of recommendation by 31 October 1987 to: **Dr. James E. Crowfoot, Dean, School of Natural Resources, 3516 Dana Building, The University of Michigan, Ann Arbor, MI 48109-1115.** Telephone: 313-764-2550. *The University of Michigan is a Non-discriminatory Affirmative Action Employer.*

**SEARCH EXTENDED.** Applications are invited for a tenure-track position at the **ASSISTANT PROFESSOR** level as well as a **POSTDOCTORAL POSITION.** Candidates for the professorial position will be expected to teach as well as develop a productive, independently funded research program in neuropharmacology, biochemical pharmacology, toxicology, or cancer biology. The postdoctoral position is in neuropharmacology. Curriculum vitae, statement of research plans, and three letters of recommendation should be sent by 20 September 1987 to: **Dr. M. Ebadi, Professor and Chairman, Department of Pharmacology, College of Medicine, University of Nebraska Medical Center, 42nd Street and Dewey Avenue, Omaha, NE 68105.** *Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT/ASSOCIATE PROFESSOR.** Department of Plant and Soil Sciences, University of Massachusetts, Amherst. Tenure-track, academic-year position in soil biochemistry available spring semester 1988. Research, teaching, and advising in area of expertise. Areas of investigation may include biological metabolism, transformation, or degradation of organic components added to the soil environment. Ph.D. degree in soil science, biochemistry, microbiology, environmental toxicology, or related field required at time of appointment. Salary commensurate with qualifications and experience. Apply by sending letter and résumé postmarked by 25 September 1987, and requesting that transcripts and three letters of recommendation be sent to: **Allen V. Barker, Chairman of Search Committee, Plant and Soil Sciences, Bowditch Hall, University of Massachusetts, Amherst, MA 01003.** *The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT/ASSOCIATE PROFESSOR OF NUTRITIONAL SCIENCES.** Tenure-track position available in the Division of Nutritional Sciences at Cornell University. Teaching and advising in maternal, child, and adolescent nutrition; research in human nutrition using either animal models or human subjects. Ph.D. and postgraduate research experience relevant to human nutrition are required. Send letter of application, curriculum vitae, statement of teaching and research interests, and names and addresses of three references by 1 November 1987, to: **Dr. M. H. Stipanuk, Division of Nutritional Sciences, Savage Hall, Cornell University, Ithaca, NY 14853.** *Cornell University is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### ASSISTANT/ASSOCIATE PROFESSORSHIPS IN NEUROBIOLOGY

The Department of Anatomy and Cell Biology, Georgetown University School of Medicine is currently seeking applications for two tenure-track positions for neurobiologists at either the assistant or associate professor level. Applicants must have a Ph.D. degree, at least 2 years of postdoctoral experience, and have demonstrated the ability to conduct independent research. Preference will be given to applicants with research interests in vertebrate neurodevelopment, regeneration, or aging of the nervous system. Candidates with a strong background in molecular biology are encouraged to apply. Teaching involves participation in a team-taught medical neurobiology course. Application deadline 15 October 1987. Send curriculum vitae, description of research interests, and the names of three references to: Dr. Lawrence F. Kromer, Department of Anatomy and Cell Biology, Georgetown University, School of Medicine, 3900 Reservoir Road, NW, Washington, DC 20007.

### BASIC NEUROSCIENTIST

The Ohio State University College of Medicine seeks applications for a tenure-track position at the assistant or associate professor level in our expanding interdisciplinary neuroscience program. The position requires research expertise in cellular-molecular biology of neurons or biophysics of excitable or receptor-mediated membrane functions. The successful applicant will be expected to maintain a nationally competitive research program, and to participate in the development of educational programs in neuroscience. Candidates should have an M.D., Ph.D., or equivalent, and a minimum of 2 years of postdoctoral training. Preference will be given to candidates with funded research in progress. Substantial start-up funds are available. A tenure-track appointment will be in the Department of Anatomy, Pharmacology, Physiology or Physiological Chemistry depending upon the area of competence of the appointee.

Please submit curriculum vitae, statement of current research interests, and three to five letters of reference to: Dr. James S. King, Neuroscience Program, Department of Anatomy, 4066 Graves Hall, The Ohio State University, Columbus, OH 43210 by 30 October 1987.

*Equal Opportunity/Affirmative Action Employer.*

### BIOCHEMIST—HPLC RESEARCH AND DEVELOPMENT

Supelco, Inc., a subsidiary of Rohm and Haas Company and a leading manufacturer of chromatography products, has an opening for an innovative biochemist in our HPLC Research and Development department. You will select HPLC applications for biochemical samples, and perform sample preparation and multistep chromatographic separations. You should have a Ph.D. in biochemistry or biology (or the equivalent in education and experience), plus hands-on industrial or academic experience in HPLC/LC chromatography and biochemical separation procedures. You should also have excellent written and oral communication skills. We can offer you a professional environment in scenic central Pennsylvania (far from the rat race, but near Penn State), plus a competitive salary, excellent benefits, and a real opportunity for professional growth. For confidential consideration, please send your résumé and salary history to: Personnel Office, Supelco, Inc., Supelco Park, Bellefonte, PA 16823. An Equal Opportunity Employer.

### CELL BIOLOGIST: ION TRANSPORT ION-CHANNEL REGULATION

Postdoctoral fellow or research associate to join a research group investigating the cellular basis of cystic fibrosis. Should be experienced in ion-transport, patch-clamp recording, or microelectrode recording. Special emphasis will be on studies of channel regulation by intracellular messengers. The position is available 1 September 1987 and is fully funded for 3 years. A well-equipped and staffed laboratory for cellular electrophysiology studies of excised and cultured tissue will be provided. Write for further information, or apply directly by sending curriculum vitae and names of references to: Dr. Jeffrey J. Wine, Cystic Fibrosis Research Laboratory, Building 420, Stanford University, Stanford, CA 94305-2130. *Equal Opportunity/Affirmative Action Employer.*

## VISITING PROFESSORSHIPS AT WEIZMANN INSTITUTE

The Weizmann Institute of Science, Rehovot, Israel, offers a limited number of Visiting Professorships in the Natural and Exact Sciences, including the **Erna and Jakob Michael Visiting Professorships 1988/89** and the **Joseph Meyerhoff Visiting Professorships 1988/89**.

The Visiting Professorships are intended for candidates already holding the rank of Full Professor or equivalent and will be for a duration of two months to one year.

Deadline for submission of completed applications: December 31, 1987.

For further information and application forms, please contact: The Academic Secretary, The Weizmann Institute of Science, Rehovot 76100, Israel.



**WEIZMANN  
INSTITUTE  
OF SCIENCE**

## PROTEIN CHEMIST

Outstanding opportunity to purify and characterize novel human tumor derived growth factors. Experience in high performance purification techniques essential. Salary dependent upon experience. Position available immediately, initial commitment 2 years. Send CV and references to: Dr. Marc Lippman, Medicine Branch, Building 10, Room 12N226, National Cancer Institute, National Institutes of Health, 9000 Rockville Pike, Bethesda, MD 20892.

NIH  
is an

*Equal Opportunity Employer*

The Medicinal Chemistry Department of  
**BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc.**  
is seeking a

## Computational Chemist

with Ph.D. and postdoctoral training and experience in molecular modeling.

Applicants should be well versed in modern computational methods and should have an interest in applying/developing novel methods and concepts for the design of drugs. Selected candidate will work in a drug discovery program dedicated to development of therapeutically useful peptidomimetics.

Preferred areas of interest and expertise include protein modeling based on homology, peptide conformation, molecular dynamics and QSAR.

BOEHRINGER INGELHEIM offers a highly competitive compensation and benefits package, relocation assistance, an excellent work environment and the opportunity to have your contributions recognized at our DANBURY, CT. facility.

For immediate consideration, please submit your resume to: Dept. JC-1J, R & D, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. An equal opportunity employer m/f/h/v.



**Boehringer  
Ingelheim**



## POSITIONS OPEN



Agricultural Research Service  
United States Department of Agriculture

### CEREAL GENETICS/PHYSIOLOGY FORAGE AND CEREALS RESEARCH UNIVERSITY PARK, PA

Cereals genetics/physiology research position. The USDA, Agricultural Research Service (ARS), has an immediate opening to determine physiological and morphological bases for tolerance to abiotic (heat and cold) stress in oats, develop techniques for accurate measurement of genetic tolerance to abiotic stress, and to screen oat populations and develop germplasm with superior tolerance to stress. Must have knowledge of plant genetics and breeding, plant physiology, and field plot procedures. Ph.D. desirable. Salary is commensurate with experience: GS-11/12/13 (\$27,172/\$38,727). Must be U.S. citizen. Application deadline is 15 September 1987. For research program information contact: **R. R. Hill, Jr., USDA-ARS, U.S. Regional Pasture Research Laboratory, Curtin Road, University Park, PA 16802; telephone: 814-863-0939.** For application procedure/forms contact: **Sandra Thomas, 301-344-3950.** Applications in response to this advertisement should be marked 7E028. Send application to: **Sandra Thomas, USDA-ARS Personnel Division, Personnel Operations Branch, Building 003, Room 123, BARC-West, Beltsville, MD 20705.**

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

**CHAIRPERSON, DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY.** University of Maryland School of Pharmacy. Applications are invited for the position of Professor and Chairperson. The department is composed of six full-time faculty, with 22 predoctoral students currently enrolled in its M.S. and Ph.D. programs in pharmacology/toxicology. The department maintains active research programs in neuropharmacology, biochemical pharmacology and toxicology, in addition to performing an integral educational role in the professional degree programs (B.S. and Pharm. D.) in pharmacy. Applicants must have a distinguished research record and proven leadership, administrative, and teaching capabilities. Knowledge of and interest in pharmacy and health care systems will be given consideration. Salary and starting date are negotiable. Send letter of interest and curriculum vitae to: **Dr. Stuart Speedie, Chairman, Search Committee, UMAB School of Pharmacy, 20 North Pine Street, Baltimore, MD 21201, by 15 October 1987. The University of Maryland is an Equal Opportunity/Affirmative Action Employer.**

**CHAIRPERSON, DEPARTMENT OF BIOCHEMISTRY, COLORADO STATE UNIVERSITY (CSU).** In conjunction with a new Biochemistry Building scheduled for completion in 1989, we are searching for a new chairperson with a proven record of excellence in research and teaching of biochemistry or molecular biology. Applications or nominations should be sent to: **V. G. Murphy, Search Committee Chairman, 100 Glover, Colorado State University, Fort Collins, CO 80523. Telephone: 303-491-5253.** Applications should contain a letter of intent, curriculum vitae, names and addresses of three or more references and three representative publications. Review of applications will begin 15 October 1987, but applications will be accepted until suitable candidates are found. *CSU is an Equal Employment Opportunity/Affirmative Action Employer.* Equal Opportunity Office: 314 Student Services Building.

**CONNECTICUT—CHAIRPERSON, ORAL DIAGNOSIS.** Full-time, tenurable position directing a department which encompasses oral diagnosis, medicine, pathology, and radiology. An earned doctorate, preferably in dental medicine or medicine is required. Advanced education in oral pathology, oral medicine, or oral radiology and Board-certification in one of these disciplines or equivalent education and experience is highly desirable. Research and administrative experience essential. Send résumé to: **Dr. Richard Topazian, University of Connecticut Health Center, Farmington, CT 06032. An Affirmative Action/Equal Opportunity Employer M/W/H.**

## POSITIONS OPEN

### CHAIRPERSON— MICROBIOLOGY/IMMUNOLOGY

The Loma Linda University, School of Medicine, invites applications and nominations for the position of Chairperson of the Department of Microbiology and Immunology.

A candidate should have either an M.D. or Ph.D. degree or both and have demonstrated leadership and productivity in teaching and research. Experience in academic administration is desirable. Loma Linda University is a private institution where education is conducted within a Christian environment. *The University is a religiously qualified, Equal Opportunity Employer.*

Nominations and applications should be sent to: **B. Lyn Behrens, Dean of School of Medicine, Loma Linda University, Loma Linda, CA 92350.** Applications should include curriculum vitae and the names of three references. Closing date for applications is 30 November 1987.

### DEAN SCHOOL OF HEALTH SCIENCES FLORIDA INTERNATIONAL UNIVERSITY THE STATE UNIVERSITY OF FLORIDA AT MIAMI

The University is inviting applications and nominations, for the position of Dean of the School of Health Sciences. Candidates should have an earned doctorate in a health or related field, extensive experience in academic administration, and demonstrated ability to generate community support and obtain external funding for research and development. Nominations for the position must be received prior to 28 September 1987. Completed applications, letter of interest, curriculum vitae, and three references, must be received on or before 8 October 1987. For further information, contact: **Reba L. Anderson, Search and Screen Committee Chair, Florida International University, School of Health Sciences, Miami, FL 33199; Telephone: 305-554-3446. An Affirmative Action, Equal Opportunity/Equal Access Employer and Institution, Member of the State University System of Florida. We hire only U.S. citizens and lawfully authorized alien workers.**

### DIRECTOR VIRGINIA MASON RESEARCH CENTER

Virginia Mason Research Center (VMRC) is the research component of the Virginia Mason Medical Center, a major Pacific Northwest regional referral center which also includes Virginia Mason Clinic and Hospital. Requisite qualifications and experience include the following: demonstrated experience and effectiveness in research program planning and development, and personnel recruitment; expertise in establishing relations with governmental and private sponsors of biomedical research; financial planning and management experience; current or past involvement in biomedical research; M.D. and/or Ph.D. in biomedical sciences preferred.

*Equal Opportunity Employer Affirmative Action Employer. Minorities and women are especially encouraged to reply.* Send curriculum vitae before 15 November 1987 to: **Richard H. Winterbauer, M.D., President, Board of Directors, VMRC, 1000 Seneca Street, Seattle, WA 98101.**

**DIRECTOR, CLINICAL CYTOGENETICS LABORATORY.** The Department of Radiation Health, Graduate School of Public Health, University of Pittsburgh, is seeking a faculty member to direct its Clinical Cytogenetics Laboratory, which emphasizes the assessment of radiation overexposure, diagnosis of leukemia and other neoplastic diseases, monitoring of therapeutic efficacy of bone marrow transplantation and chemotherapy. Other functions include participation in radiation cytogenetics research and radiobiology teaching of graduate students. Ph.D. required in cytogenetics, radiobiology, or related field, and American Board of Medical Genetics certification in Clinical Cytogenetics preferred. Please send résumé to: **Niel Wald, M.D., Department of Radiation Health, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA 15261 or telephone: 412-624-2732** for additional information. *Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

Applications and nominations are invited for the position of **DIRECTOR** of the Ralph L. Smith Mental Retardation Research Center located at the University of Kansas Medical Center, Kansas City. The Director is responsible for stimulating and supporting this Research Center's multidisciplinary program of research in mental retardation and related aspects of human development, which is carried out as part of a three-site University of Kansas Mental Retardation Research Center. The Director is expected to provide leadership to a group of researchers and their students and associates working in 35 laboratories, by helping in the planning of research programs, seeking support for these programs, and cooperating with the other components of the three-site Center. Qualifications include: M.D. or Ph.D. with experience in biomedical research, research administration, and leadership involving groups of researchers, with focus on problems related to mental retardation or other human developmental deficiencies. Prefer principal investigator on federally funded research grant. Tenure-track faculty appointment will be offered in an appropriate academic department. Salary is competitive and commensurate with responsibilities, abilities, and experience. Send nominations or applications with curriculum vitae and names of 3 to 5 references before 1 October 1987, to: **A. L. Chapman, Ph.D., Dean of Graduate Studies and Research, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103. The University of Kansas is an Affirmative Action/Equal Opportunity Employer.**

**DIRECTOR, DIVISION OF APPLIED BIOLOGY.** Harbor Branch seeks a Director for its Division of Applied Biology (mariculture and environmental science). The successful candidate should be at the Ph.D. level, accomplished in field, with the capacity to handle administrative duties for a staff of approximately 20 people. He/she should also have a proven ability and interest in attracting extramural funding. Position will open 1 September 1987. Materials are requested as soon as possible, however, start date is negotiable. Forward current curriculum vitae, list of publications, representative papers, and the names of three references to:

**Dr. Jay Langfelder, Managing Director  
Harbor Branch Oceanographic Institution, Inc.  
5600 Old Dixie Highway  
Ft. Pierce, FL 34946**

*Equal Opportunity/Affirmative Action Employer*

### DIRECTOR, AIDS RESEARCH CENTER

University of California, San Francisco (UCSF) and San Francisco General Hospital (SFGH). A committee has been established at UCSF to recommend the appointment of a basic scientist to serve as Director of a 20,000-square-foot research unit under construction at SFGH. The Director will be given a tenured faculty appointment within a basic science department at UCSF and will help recruit additional investigators to form a multidisciplinary program to study AIDS with modern technologies. Applicants should have strong credentials in the fields of virology, immunology, or cell biology. Direct inquiries and curricula vitae to: **Harold Varmus, M.D., Professor of Microbiology, c/o Dean's Office, University of California, San Francisco, CA 94143-0410. UCSF is an Affirmative Action/Equal Opportunity Employer. Minorities and women encouraged to apply.**

### DIRECTOR HELEN SCOTT PLAYFAIR MEMORIAL NEUROSCIENCE UNIT

The University of Toronto and the Toronto Hospital are seeking a Director for the Helen Scott Playfair Memorial Neuroscience Unit. The successful candidate will be an internationally recognized neuroscientist who will qualify for the rank of professor. The Playfair Neuroscience Unit is housed in a large teaching hospital and comprises a group of basic and clinical neuroscientists. The individual should personally be conducting research in a major area of current concern in neuroscience. Salary to be negotiated. *The University of Toronto encourages both men and women to apply for positions.* Applications, including current curriculum vitae, should be directed to: **Dr. John H. Dirks, Dean, Faculty of Medicine, University of Toronto, Toronto, Ontario M5S 1A8. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.**

## POSITIONS OPEN

**DEPUTY DIRECTOR**, Office of Systems Development. The National Weather Service (NWS), NOAA, U.S. Department of Commerce, is seeking applicants for a senior executive position, Deputy Director, Office of Systems Development located in Silver Spring, Maryland. Salary is negotiable from \$64,700 based upon experience, scientific achievements, and qualifications. The incumbent is responsible for leading the introduction of advanced meteorologic and hydrologic observing, interactive information processing, and communications technology into the operations of the NWS; coordinating joint technical projects in NOAA involving other major line components of NOAA and other Federal Agencies. Serves as the focal point for planning, specification, design, demonstration, etc. of automated systems aimed at improving NWS programs. Qualifications requirements include: strong educational background and wide experience in the field of atmospheric sciences; professional knowledge and practical experience in theories, principles and practices of modern system development, engineering and applied research; executive competence in broad areas of administration such as program planning and evaluation, organizational representation and liaison, resource acquisition and administration, and human resource utilization including Equal Employment Opportunity. To apply: Interested persons should contact: **Evelyn Fritz, 301-443-8834** for application forms. Reference Vac. #NOAA87-20EF. Applications must be received prior to the closing date of 28 September 1987. *An Equal Opportunity Employer.*

### DIRECTOR OF LOMBARDI CANCER CENTER AT GEORGETOWN UNIVERSITY

Georgetown University School of Medicine seeks an Investigator/Administrator as Director of its Vincent T. Lombardi Cancer Center. An applicant or nominee may hold an M.D. or Ph.D. or both, may currently be a member of a basic science or clinical department, and should have a background in biomedical research in oncology with appropriate administrative experience.

Curriculum vitae and references should be sent before 1 October 1987 to:

**Milton Corn, M.D.**  
Dean, School of Medicine  
Georgetown University  
NW 104 Medical-Dental Building  
3900 Reservoir Road, N.W.  
Washington, D.C. 20007

*Georgetown University is an Affirmative Action/Equal Opportunity Employer.*

### ELECTRON MICROSCOPY SCIENTIST

M.D. or Ph.D. with experience in cell biology research and strong electron microscopy background including TEM, SEM, STEM, EDXA, and quantitative morphometry is required. In addition to standard methods of sample preparation, applicants should be familiar with immunocytochemical and enzyme localization methods. Applicant should have experience in the writing of grants and procurement of grant support. Position involves full-time research within the Department of Medicine with potential for a faculty appointment. Collaboration with other investigators is encouraged. Send résumé, with publications, to: **G. Weinbaum, Ph.D., Chief Research Division, Department of Medicine, The Graduate Hospital, 19th and Lombard, Philadelphia, PA 19146.** An affiliate of the University of Pennsylvania. *Equal Opportunity Employer M/F/H/V.*

UCLA Engineering Research Center for the Control of Hazardous Substances: Applications are invited for the position of **EXECUTIVE DIRECTOR**. Coordinate university/industry research programs, workshops; on-line management responsibilities; report to Center Director. Candidates should have a doctorate in engineering, and 25 years of background in relevant industry R&D; senior management experience. Some experience with university programs desirable. Curriculum vitae with three references should be sent to: **Dean Nicholas Alexopoulos, Chair, Search Committee, ERC for Hazardous Substances Control, 7400 Boelter Hall, UCLA, Los Angeles, CA 90024-1600.**



The University  
of  
British Columbia

## ATMOSPHERIC SCIENCE

The Departments of Oceanography and Geography at the University of British Columbia have funding to establish a new programme in Atmospheric Science. There will be four new faculty positions: one senior and three junior tenure-track together with new teaching and technical support staff. The senior appointee will be the chairman of the programme providing academic leadership. The group together with existing climatological and oceanographic expertise will offer new degree and diploma programmes in meteorology and atmospheric science at the undergraduate and graduate levels and will conduct research into the causes and consequences of climatic variability at all scales.

Applications are invited from outstanding candidates in relevant fields of atmospheric science and physical oceanography. Applicants should be prepared to teach undergraduate and graduate level courses in physical, dynamical or synoptic meteorology, or oceanography and to contribute to related degree programmes in the environmental sciences. Research interests must complement and extend existing work in boundary layer and mesoscale climatology, hydrology, dynamic oceanography, air-sea interaction and remote sensing, and/or develop new research in climatic change and atmosphere-ocean coupling. The chairman and one junior appointment will be made in Geography and two junior appointments will be made in Oceanography.

Applications and requests for further information should be sent to the Chairman of the Search Committee, Dr. T.R. Oke, Department of Geography, The University of British Columbia, Vancouver, B.C., Canada, V6T 1W5 (Tel: (604) 228-2900). Applicants should send a personal resume, names of three referees and sample research publications. Ph.D. required, salary commensurate with experience. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. **Appointments commence January 1, 1988 or July 1, 1988. Application deadlines: for chairman, October 15, 1987, for junior positions, November 15, 1987.**

## SENIOR CENTRAL NERVOUS SYSTEM PHARMACOLOGIST

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is seeking highly-qualified candidates for a Senior Scientist position in the Central Nervous System Research Division.

Applicants must have a doctoral degree in pharmacology or biochemistry with at least two years postdoctoral training.

The Senior Scientist will study the effects of cerebral ischemia on the metabolic aspects of nerve and glial cell function. Candidates should have a working knowledge of cerebral metabolism, membrane biochemistry, and neuroanatomy; since they will be expected to establish models of ischemia, evaluate the biochemical effects of ischemia in these models and participate in the discovery of therapeutic agents for the treatment of ischemia-related damage.

Qualified candidates should send their curriculum vitae to:



**John W. Crooks**  
Manager, College Relations (CNS)<sup>3</sup>  
Eli Lilly and Company  
Lilly Corporate Center  
Indianapolis, Indiana 46285

*Equal Opportunity Employer*

## POSITIONS OPEN

**ELECTRON MICROSCOPIST** (Research associate) with baccalaureate degree (minimum) and extensive experience in the independent study of human cells and tissues. Expertise must include at least three of the following techniques: immunocytochemistry, histochemistry, cryo-ultramicrotomy, post-embedding immunolabeling, immunogold labeling with silver enhancement (IGSS); video microscopy. The successful candidate will have major responsibility for design and implementation of experiments in fields of mast cell and neutrophil biology. Additional expertise in two of the following areas is required: quantitative image analysis, EM of viruses or macromolecules; autoradiography; data analysis; microcomputers. Please send résumé and names/addresses of three references to:

**Dr. Marc M. Friedman**  
Chair, Search Committee  
D.M.V.I.

Georgetown University Medical Center  
5640 Fishers Lane  
Rockville, MD 20852

*An Equal Opportunity/Affirmative Action Employer.*

**FACULTY POSITION IN ORGANIC OR INORGANIC CHEMISTRY.** The Department of Chemistry at Washington University in St. Louis invites applications for a faculty position in organic or inorganic chemistry, effective September 1988. Primary attention will be given to applicants at the assistant professor level, but candidates with distinguished records will be considered for higher level appointments. Liberal start-up funds will be made available to the successful applicant. Candidates are requested to submit by 1 November 1987, a curriculum vitae and a moderately detailed statement of research interests and professional objectives, and arrange to have three letters of reference sent to: **Professor John R. Blecke, Chairman, Search Committee, Department of Chemistry, Washington University, St. Louis, MO 63130.** *Washington University is an Equal Opportunity/Affirmative Action Employer.*

## UNIVERSITY OF FLORIDA FACULTY POSITION

The Department of Pharmacology and Therapeutics of the College of Medicine, in cooperation with the Geriatric Research, Education, and Clinical Center (GRECC) of the Gainesville VA Medical Center, invites applications for a full-time, tenure-track assistant professor. Applicants must have a Ph.D. and postdoctoral research experience preferably in molecular approaches to autonomic or endocrine pharmacology. The successful applicant will be expected to conduct research in support of the overall geropharmacologic emphasis of the GRECC. Salary will be commensurate with level of experience and accomplishment. Applicants should send curriculum vitae including bibliography and names of three references to: **Dr. Philip Scarpace, Box J-267 JHMHC, Gainesville, FL 32610** before 1 October 1987 with anticipated starting date as early as 1 January 1988. *An Equal Opportunity/Affirmative Action Employer.*

## FOREST RESEARCH SCIENTIST

Northrop Services, Inc. is seeking a forest research scientist with knowledge of air pollution effects on forests. Position requires a B.A. or B.S. in forestry, forest ecology or related discipline, plus 4 years of relevant research experience or a comparable background. Applicants must have superior oral and written communication skills. Major duties include reviewing and summarizing current air pollution effects literature relating to western forests; maintaining computer files on literature, research and mailing lists; and preparing funding packages and budget records. Closing date is 4 September 1987. Send curriculum vitae, summary of courses and grades, and names of three references to: **Susan Carey, Northrop Services, Inc., 1600 S.W. Western Boulevard, Corvallis, OR 97333.** *Equal Opportunity Employer.*

## POSITIONS OPEN

### FACULTY POSITION WORCESTER POLYTECHNIC INSTITUTE

The Department of Biology and Biotechnology of Worcester Polytechnic Institute invites applications for a tenure-track faculty position at the assistant or associate professor level beginning between 1 January and 1 September 1988. Candidates must have a Ph.D. and at least 2 years of postdoctoral research experience. The successful candidate will have a demonstrated capacity for an independent research career and a commitment to excellence in both undergraduate and graduate education. Applicants for appointment as associate professor must have an ongoing research program and teaching experience. Preference will be given to candidates with teaching capability in the area of molecular biology and genetics, and whose research complements existing strengths of the department, including gene structure and function, plant physiology and molecular biology, neurophysiology, and bioprocess technology. Applicants should submit curriculum vitae, summary of past and future research, and three letters of recommendation to: **Search Committee, Department of Biology and Biotechnology, Worcester Polytechnic Institute, Worcester, MA 01609.** Applications will be accepted until 1 October 1987.

### FACULTY POSITIONS KING ABDULAZIZ UNIVERSITY FACULTY OF METEOROLOGY, ENVIRONMENT AND ARID LAND AGRICULTURE JEDDAH, SAUDI ARABIA

Applications are being accepted by the Faculty of Meteorology, Environment and Arid Land Agriculture, King Abdulaziz University for the following three faculty positions:

1. HORTICULTURAL SCIENTIST
2. FLORICULTURE SCIENTIST
3. ANIMAL BREEDING SCIENTIST

Applicants should hold a Ph.D. in horticulture, floriculture, animal breeding, or a closely related field, and possess a proven record in teaching and research. Candidates should submit curriculum vitae, including a list of publications, statements of research interests and teaching experience, and three letters of reference to:

**Dr. Dwayne A. Suter**  
Associate Dean  
College of Agriculture  
Texas A&M University  
College Station, TX 77843

In addition to an attractive salary, King Abdulaziz University offers a generous housing and furniture allowance, end of contract gratuity, 60 days of paid summer leave each year, baggage allowance, educational allowance for school-age children, transportation allowance, and annual round-trip air fares.

Term of employment is for 1 year with opportunity for renewal.

### FACULTY POSITIONS IN MOLECULAR AND STRUCTURAL BIOLOGY

The Department of Biochemistry and Molecular Biology plans a major expansion in the general areas of molecular biology and structural biochemistry. Tenure-track faculty positions at ranks commensurate with experience are open for qualified candidates with a commitment to excellence in research and graduate teaching in the general areas of structural and molecular biology. The combined facilities of the Department of Biochemistry and Molecular Biology and the Analytical Chemistry Center including state-of-the-art instrumentation for biological NMR (500, 300, and wide bore 270 MHz), protein and nucleic acid analysis, GC and FAB mass spectrometry, and computational chemistry will be used for support and development of research programs in areas such as molecular modeling, macromolecular structure, function and engineering, gene regulation and expression. Applicants should send curriculum vitae, list of publications, and a summary of research interests, and arrange to have three letters of recommendation submitted on their behalf to: **Dr. John DeMoss, Department of Biochemistry and Molecular Biology, The University of Texas Medical School of Houston, P.O. Box 20708, Houston, TX 77225.** *An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

## POSITIONS OPEN

### FACULTY POSITION BIOCHEMISTRY/MOLECULAR BIOLOGY

The Department of Biochemistry, University of Arkansas for Medical Sciences, invites applications for a tenure-track position at the assistant or associate professor level. Preference will be given to candidates with expertise in the area of the molecular biology and protein engineering of glycosylated and/or membrane proteins who have established an independent research program. However, applications are also encouraged from those who have a Ph.D. with a minimum of 2 years of significant postdoctoral experience using molecular genetics to solve problems of protein structure and function. This is an opportunity for an energetic researcher to join an academic program committed to excellence in research and teaching. Those interested should submit their curriculum vitae, a summary of research accomplishments and future plans, and three letters of recommendation by 1 October 1987 to: **Ernest Peck, Chairman, Biochemistry, University of Arkansas for Medical Sciences, Slot 516, 4301 West Markham, Little Rock, AR 72205.** *UAMS is an Affirmative Action/Equal Opportunity Employer.*

Harvard University: The Department of Psychology invites inquiries from persons qualified for appointment to a **FULL PROFESSORSHIP** in the area of cognition, broadly construed to span cognitive psychology and cognitive science. Competence in computational modeling or cognitive neuroscience is highly desirable. Candidates should indicate their interest by writing to: **Brendan Maher, Chairman, Department of Psychology, Harvard University, Cambridge, MA 02138.** Curriculum vitae and the names of potential referees should be included. Applications from women and members of minority groups are especially welcome. The closing date for applying is 25 November 1987.

### HEAD MICROCHEMISTRY CORE FACILITY SLOAN-KETTERING INSTITUTE

The Sloan-Kettering Institute of Memorial Sloan-Kettering Cancer Center is searching for a person to organize and head a microchemistry core laboratory that will service the Institute's needs for oligonucleotide synthesis, peptide synthesis, and protein sequencing. Documented experience is essential. Please submit curriculum vitae and references to:

**Dr. Arthur J. Lustig**  
Department of Molecular Biology  
Sloan-Kettering Institute  
1275 York Avenue  
New York, NY 10021

Deadline for submission of applications is 15 October 1987.

### IMMUNOLOGIST DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY, BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY

Applications are invited for a tenure-track position in immunology at the **ASSISTANT PROFESSOR** level. Candidates should have a Ph.D. or M.D. degree and at least 2 years of postgraduate research training in immunology. The successful candidate is expected to develop a strong independent research program and participate in the teaching of graduate and medical students. The Department currently has well-funded research programs in the molecular and biochemical aspects of pathogenesis, lymphokines, B cell development, leukocyte structure and function, and virology. The Department is well equipped for cellular, biochemical, and molecular research efforts. In addition, the Departmental faculty benefit from the presence of the core laboratories of the Oncology Research Center, the Program in the Biology of Inflammation, and the newly developing Center for Molecular Genetics. Ample funds and space are available to support new faculty. Please send curriculum vitae and names of three references to: **Dr. Steven B. Mizel, Department of Microbiology and Immunology, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, NC 27103.** *Wake Forest University is an Affirmative Action/Equal Opportunity Employer.*



## ANALYTICAL CYTOLOGY

A postdoctoral position is available in analytical cytology at the National Flow Cytometry Resource. Candidate should have a multidisciplinary background in either genetics, carcinogenesis, growth regulation, tumor immunology, or related fields plus experience in innovative data analysis techniques. Collaborative projects with outstanding investigators from around the world are extant and can be an integral part of the position. Applicants should have a strong desire to gain experience in cell/molecular biology, an interest in analytical techniques, and an appreciation of flow cytometry technology and its potential.

The NRCR is a national "user" facility jointly sponsored by the Division of Research Resources of NIH and the Department of Energy. Interested candidates should send a resume to Dr. L. Scott Cram, Director of the National Flow Cytometry Resource, LS-4, MS M888, Los Alamos National Laboratory, Los Alamos, New Mexico 87545.

TO FORMALLY APPLY, please send a curriculum vitae, employment application, three letters of reference, and graduate and undergraduate transcripts to: Carol M. Rich, Human Resources Development Division, POSTDOC-AA, Los Alamos National Laboratory, Los Alamos, New Mexico 87545.

Affirmative Action/Equal Opportunity Employer



# Virologists

**Several PhD level positions** are available at our research laboratory in Glasgow, Delaware. The successful candidates will be members of a team of scientists that is pursuing viral diagnostic methods of clinical relevance. To qualify you should have at least 2 years of postdoctoral experience working with mammalian virus systems and a documented record of productivity. Experience with human retroviruses is highly desirable.

**There are additional openings** for Virologists with product development experience. Background in viral diagnostics, human retroviruses, transfer of products to manufacturing, and technical support is highly desirable.

**At the world renowned Du Pont Company,** you'll find a highly stimulating scientific environment, with ample opportunity for professional growth and recognition. We offer highly competitive compensation commensurate with experience, plus liberal benefits including relocation. For immediate consideration, send curriculum vitae, a list of professional references, and a statement of research interests to: K.L. Mays, Employee Relations Department, Room X50900, Du Pont Company, Wilmington, Delaware 19898.



U.S. Citizenship or Permanent Visa required.  
An Equal Opportunity Employer M/F/H/V

## POST DOCTORAL POSITION

Available immediately in a laboratory actively engaged in the development of new drugs and therapeutic strategies for the treatment of solid tumors. Applicants should be well versed in all aspects of mammalian tissue culture and have some experience in working with animals. Knowledge of flow cytometry, cell sorting and normal tissue toxicity assays is desirable. This position requires self-motivation and ability to work independently. Joint appointment will be held in an appropriate department of Harvard Medical School.

Send C.V. and names, addresses and phone numbers of 3 references to:  
Dr. Beverly A. Teicher.

**DANA-FARBER  
CANCER INSTITUTE**

44 Binney Street, Boston, MA 02115

An Affirmative Action/Equal Opportunity Employer

## Medical Research Council AIDS Research in Uganda **Senior Scientific Appointment**

The Medical Research Council has been invited by the Ugandan Government to assist with the development of a research programme on AIDS in that country. The Council wishes to appoint a Senior Scientist to plan and initiate this research in consultation with the Ugandan Authorities, the WHO, and other relevant agencies.

The research programme is expected to be primarily epidemiological, focusing on questions such as heterosexual transmission, transmission from mother to offspring, and the evaluation of preventative measures. However, there should also be opportunities for clinical, virological, and behavioural research. It is expected that a multi-disciplinary team will be established to undertake these studies. A clinical qualification and experience of working in the tropics are highly desirable, but applicants with other relevant qualifications and experience can also be considered. The post is open to foreign nationals as well as to British subjects.

An initial appointment for up to 5 years will be offered. The person appointed will be based in Uganda but with an attachment to an appropriate University or Institute in the UK. The Council will arrange for the post holder to be able to spend a period of 1-2 years at the host institution after returning from Uganda. Attractive terms and conditions of service will be offered.

For further details of the post and application forms please contact Dr D R James, Medical Research Council, 20 Park Crescent, London W1N 4AL to whom completed applications should be sent. The closing date for applications is 1 September 1987.

**MRC**  
Medical Research Council

## POSITIONS OPEN

### IMMUNOLOGIST— EXPERIMENTAL PATHOLOGIST

A tenure-track position exists at the assistant professor or associate professor level for an immunologist interested in investigating immune defense mechanisms. The successful candidate will be provided the opportunity to develop his/her own independent research program and to interact with other researchers engaged in studying immunity to infectious agents, tumors, and allografts.

Trudeau Institute is a free-standing, not-for-profit pure research institute located on the shore of Saranac Lake, 10 miles from Lake Placid, NY.

Send résumé and the names of three references to:

**Dr. Robert J. North, Director**  
Trudeau Institute  
P.O. Box 59  
Saranac Lake, NY 12983

### ST. GEORGE'S UNIVERSITY SCHOOL OF MEDICINE

**INSTRUCTOR DEMONSTRATOR** in histology for St. George's University School of Medicine, Grenada, West Indies, is required for the semester beginning January 1988. Recent doctoral graduate required. Experience in teaching histology to medical students preferred. Person appointed will take responsibility for practical instructions. Salary by arrangement. Further information available for those interested. Please forward curriculum vitae to:

**Dr. Nelly Golarz, Chairman of Histology**  
c/o Mrs. R. A. Horton  
Foreign Medical School Services Corporation  
One East Main Street  
Bay Shore, NY 11706

St. George's University students are approved for clinical teaching in hospitals in New York, New Jersey, and the United Kingdom.

Yale University **INVERTEBRATE PALEONTOLOGIST**. The Department of Geology and Geophysics is soliciting applications for an assistant professor in invertebrate paleontology to begin in the academic year 1988 to 1989. A curriculum vitae, list of publications, and the names of three references should be sent by 1 October 1987 to: **Karl K. Turekian, Chairman, Department of Geology and Geophysics, Yale University, Box 6666, New Haven, CT 06511.**

*Yale University is an Equal Opportunity/Affirmative Action Employer and encourages applications from all qualified scientists.*

Harvard University. The Department of Psychology is searching for **JUNIOR APPOINTEES** (initially for a 5-year term), beginning 1 July 1988 in the areas of animal behavior and developmental psychology. A special interest in psychological measurement and statistics would be desirable, though not essential. Applications should include a current curriculum vitae, and applicants should ask at least three individuals familiar with their work to write directly to: **Brendan Maher, Chairman, Department of Psychology, Harvard University, 33 Kirkland Street, Cambridge, MA 02138.** Applications received after 25 November 1987 may not be considered. *Applications from women and members of minority groups are especially welcome.*

### LIPOPROTEIN BIOCHEMIST

Applications are invited for appointment as Section Head of Lipoprotein Biochemistry in a newly-established Cardiovascular Research Center whose focus is on a multidisciplinary approach to mechanisms initiating and potentiating atherosclerosis. Position entails establishment of a research group in the area of lipoprotein biochemistry and metabolism which will interface with other scientists of varied expertise. Applicants should be established in the field, with demonstrated ability to obtain major funding and actively collaborate with other disciplines. The Center will be housed in a new research building scheduled for completion in the summer of 1988. Start-up funds are available, and salary and fringe benefits are attractive. Please send a statement of research interests and complete curriculum vitae to **Box 124, SCIENCE.**

## POSITIONS OPEN

### UNIVERSITY OF OTAGO DUNEDIN, NEW ZEALAND LECTURER IN HUMAN NUTRITION

Applications are invited for the position of Lecturer in Human Nutrition in the Faculty of Home Science. Applicants should have a Ph.D. degree in nutrition or equivalent qualification and relevant experience. Teaching includes undergraduate and graduate courses in the Faculties of Home Science and Science. The appointee is expected to develop a research program. Current research interests of the department include: trace elements; community and social nutrition; nutritional aspects of diabetes, coronary heart disease, and hyperlipidaemia. Research and teaching experience in clinical nutrition, metabolic nutrition, or nutrition education would be an advantage but candidates with other interests are encouraged to apply.

Appointment will commence as early as possible in 1988. Commencing salaries will be established within the appropriate scale: Lecturer: \$NZ32,000 to \$NZ38,500 per annum. Senior Lecturer: \$NZ40,700 to \$NZ51,700 per annum.

An exceptionally well-qualified applicant may be considered for appointment at the level of senior lecturer.

Intending applicants are invited to write for further details, available from the undersigned, **P.O. Box 56, Dunedin, New Zealand.** Applications quoting reference number A87/31 close in Dunedin on 30 September 1987. **D. W. Girvan, Registrar.**

### MICROBIOLOGIST/IMMUNOLOGIST

A tenure-accruing faculty position at the rank of assistant professor is available in the Department of Biomedical Sciences, University of South Alabama for individuals with training in microbiology/immunology. Qualifications include Ph.D. in microbiology or immunology, a commitment to excellence in undergraduate teaching, and evidence of productivity in research. Post-doctoral training is preferred. Duties will include teaching microbiology and immunology in a cross-disciplinary undergraduate program in biomedical sciences and development of an active research program. Applicants should submit curriculum vitae, an outline of research plans, and the names and addresses of references. Application deadline is 30 September 1987, or until filled. Send applications to: **Dr. Harold Jones, Chair, Department of Biomedical Sciences, University of South Alabama, 135 Life Sciences Building, Mobile, AL 36688.** *Equal Employment Opportunity/Affirmative Action Employer.*

### MOLECULAR BIOLOGIST

The Division of Atherosclerosis and Lipoprotein Research, Baylor College of Medicine and the Methodist Hospital, Department of Medicine, Houston, Texas, is undertaking a major expansion of research activities in the molecular biology of regulatory mechanisms of biosynthesis and catabolism of apolipoproteins, lipoproteins, cholesterol, and acyl lipids. Previous experience in the lipoprotein field is not necessary, and those with expertise in other areas are encouraged to apply. Established investigators with an ongoing research program and national funding are particularly encouraged to apply. Please send a statement of research interests, curriculum vitae, a listing of previous and current grant support, and names of four individuals who will provide letters of recommendation. Please direct correspondence to: **Dr. Louis C. Smith, Chairman, Molecular Biology Search Committee, The Methodist Hospital, Department of Medicine, Mail Station A-601, 6565 Fannin, Houston, TX 77030.** The position is now open. Candidates will be evaluated until the position is filled.

### MOLECULAR BIOLOGY

Applications are invited for appointment as Section Head of Molecular Biology in a newly-established Cardiovascular Research Center whose focus is on a multidisciplinary approach to mechanisms initiating and potentiating atherosclerosis. Position entails establishment of a research group in the molecular biology of vascular cells or lipoproteins which will interface with other scientists of varied expertise. Applicants should be established in the field, with demonstrated ability to obtain major funding and actively collaborate with other disciplines. The Center will be housed in a new research building scheduled for completion in the summer of 1988. Start-up funds are available, and salary and fringe benefits are attractive. Please send a statement of research interests and complete curriculum vitae to **Box 123, SCIENCE.**

## POSITIONS OPEN

### MOLECULAR BIOLOGISTS

Baxter, MicroScan Division, develops and manufactures computer controlled and operated electronic instrumentation and disposables for use in the clinical laboratory. Research involves systems dealing with Rapid Identification and Susceptibility Testing.

Our growth requires the addition of four individual knowledgeable in Gene Probe technology. Qualified individuals will be familiar with one or more of a variety of techniques including probe preparation, cloning, nucleic acid sequencing, and synthesis methodologies. Chemists with a background in organic synthesis, nucleic acid chemistry, and chemical modification of matrices will be considered.

Two of the positions require Ph.D.'s, and the other two positions require a Master's degree. The educational background will be in microbiology, molecular biology, chemistry or a related field.

Baxter is a leader in the Health Care Industry and we offer excellent salary and benefits to the individuals who qualify for our positions. If you feel that you have the skills we need, send your résumé stating current salary to: **Vice President, Human Resources, 1584 Enterprise Boulevard, West Sacramento, CA 95691.** *Equal Opportunity Employer.*

### THE COLLEGE OF STATEN ISLAND OF THE CITY UNIVERSITY OF NEW YORK NEUROSCIENCE FACULTY POSITION SEARCH EXTENDED

The College of Staten Island invites applications for a full-time tenure-track position (beginning 1 September 1988) in molecular neuroscience. Candidates must be qualified to participate in the City University's Ph.D. program in biology. A notable record of research, publication, grant support, and dissertation supervision is required. Opportunity to assume a leadership position within the Center for Developmental Neurosciences. Rank: Commensurate with experience and record of scholarship. Salary range: \$40,000 to \$68,000. Send curriculum vitae and names of three references by 15 November 1987 to: **Dr. Barry Bressler, Vice President for Academic Affairs, The College of Staten Island/CUNY, 715 Ocean Terrace, Staten Island, NY 10301.** *Equal Opportunity/Affirmative Action Employer.*

### OCEAN MODELER/DYNAMICIST

Ph.D. scientist for research and ocean prediction work with group actively engaged in research in dynamics, modeling, and real-time forecasting to attack the problem of mesoscale variability in the North Pacific. A systematic approach involving dynamical model forecasts and data assimilation with remotely sensed and dedicated in situ data sets is intended. Degree and experience in oceanography, meteorology, fluid dynamics, or applied mathematics required. *Applications from qualified female and minority group members are especially welcome.* Please apply with résumé and references or address inquiries to:

**Professor Allan R. Robinson**  
Harvard University  
Division of Applied Sciences  
29 Oxford Street  
Cambridge, MA 02138

**PHARMACOLOGIST, GS-403-12.** Naval Health Research Center in San Diego needs pharmacologist to plan and conduct behavioral pharmacological research studies of effects of pharmacological agents on health, performance, sleep, alertness, and autonomic function in human subjects. A doctorate degree or equivalent in pharmacology with specialization in effects of pharmacological agents on human subjects, SF171, and transcripts are required. Telephone: **J. Banks, 619-225-2911** for information.

**POSTDOCTORAL ASSOCIATE** position available immediately to study neuroanatomical circuitry and neuropeptide distribution in the primitive nervous system of *Hydra*. Position requires experience in electron microscopy and interest in 3-D computer reconstruction and immunocytochemistry. Salary from \$19,000 per year. Send curriculum vitae and three letters of reference to: **Dr. Jane A. Westfall, Department of Anatomy and Physiology, Kansas State University, VMS, Manhattan, KS 66506** prior to 1 December 1987. *Equal Opportunity/Affirmative Action Employer.*



**Deutsches  
Krebsforschungszentrum  
Stiftung des öffentlichen Rechts**

At the Institute of Biochemistry of the Deutsches Krebsforschungszentrum (DKFZ) a position has become available at the level of **HEAD OF THE DIVISION OF "MOLECULAR TOXICOLOGY"**

The candidate will be appointed by the DKFZ jointly with the Faculty of Pharmacy of the University of Heidelberg in accordance with the requirements for a professorship (C3) in "Molecular Toxicology".

The candidate will be expected to carry out research in the field of carcinogenesis (mechanisms of initiation and promotion) with emphasis on molecular biological approaches.

In addition to academic experience the candidate should have extensive research experience proven by established record of publications. A record of molecular biological experience and animal experimentation is especially desirable.

Applications of candidates with several years of postdoctoral experience should be mailed including a c.v. and the list of publications, by September 15, 1987 to the **Stiftungsvorstand des Deutschen Krebsforschungszentrums, Im Neuenheimer Feld 280, D-6900 Heidelberg 1, Federal Republic of Germany.**

**Im Neuenheimer Feld 280  
6900 Heidelberg  
Telefon 4841**

## Inflammation/ Arthritis Research Opportunities



An equal opportunity employer

Pfizer Central Research, an industry leader in the area of inflammation/arthritis research, has several opportunities for scientists to contribute to the discovery of new anti-inflammatory and anti-arthritic drugs. You will join well established and growing teams of scientists in these areas and will work in newly constructed and well equipped laboratory facilities. Current therapeutic interests encompass immunological approaches to inflammatory diseases, mechanisms involved in pain production/transmission and innovative manipulations of the arachadonic acid cascade and cytokines.

A PhD, appropriate postdoctoral training and a record of accomplishments in your research endeavors are required. Fields of training/experience being considered include experimental pathology, cell biology, biochemistry and molecular biology, particularly in the context of research problems in immunology, inflammation and pain/analgesia. A strong base of experience with *in vivo* models is especially desirable for one of the openings. Demonstrated project management skills and/or previous industrial experience are welcome but not essential.

This position offers an excellent opportunity for professional recognition and career growth. We also offer competitive compensation, benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and description of research accomplishments to: Dr. Jerry K. Larson, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

## DNA PROBE DIAGNOSTICS

**MOLECULAR BIOLOGISTS** with Ph.D. or equivalent in related field needed to accelerate development of nucleic acid probe diagnostic methods and products. **Promega** is significantly expanding its effort in detection of infectious disease agents using nonradioactive technologies. Candidates should have background knowledge and ability to guide development in more than one of the following areas: infectious disease, rDNA and nucleic acid probe technology, chemical modification of nucleic acids, enzyme purification, tissue culture. Successful applicants will demonstrate excellence in independent research, communication, and scientific management.

**STAFF SCIENTISTS** with B.S. or M.S. degrees and experience are also needed for this project.

## RESEARCH PRODUCTS

**BIOCHEMISTS** with B.S. or M.S. degree in related field with experience in large scale protein purification or in synthesis and purification of oligonucleotides.

**MOLECULAR BIOLOGIST** with B.S. or M.S. degree and experience in the construction of cDNA libraries.

Promega



Send curriculum vitae and references to: **Personnel Director, Product Operations, Promega Corporation, 2800 S. Fish Hatchery Rd., Madison, WI 53711.** Equal opportunity employer.

## Pharmacologists

Anaquest is a recognized specialist in the development and manufacture of inhalation anesthetics. Our products provide a critical contribution to the acute care of patients. Our continued growth has led to 2 exceptional opportunities at our facility in Murray Hill, NJ.

You will be involved in designing and conducting pharmacological research studies. This includes the development of one or more anesthesia-related research areas. To qualify, you should have a B.S./M.S. in Pharmacology, Biochemistry or related field. Experience in a variety of neurochemical methodologies such as HPLC analysis of catecholamines and neurotransmitter release is a plus.

We offer competitive salaries and excellent benefits along with the opportunity to work alongside some of the industry's finest. If visibility, recognition and the opportunity to work for a leader are consistent with your career goals, send your resume to: Anaquest, Human Resources, Dept. BG, 100 Mountain Ave., Murray Hill, NJ 07974.

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Anaquest



BOC Health Care

## Professional Opportunities Biotechnology

Current expansion and planned future growth at BIOTX, (Biosciences Corp. of Texas) an emerging leader in biotechnology, are creating challenging and rewarding career opportunities for talented research scientific personnel on an ongoing basis. We seek creative, motivated individuals with strong records of achievement in the following fields:

- Ph.D Level- (Post Doctoral Experience Preferred)  
Cell, Molecular Biology  
Immunology & Biochemistry
- M.S./B.S Level- Immunoassay Development  
Hybridoma/Tissue Culture Production  
Biochemistry

Qualified applicants are invited to submit C.V., resume, and the names of three references in confidence. BIOTX offers opportunity for growth and advancement, a highly competitive compensation package, benefits, and the unique satisfaction of working in an entrepreneurial environment with other motivated professionals. Equal Opportunity Employer. Submit background materials to:

### BIOTX

(Biosciences Corp. of Texas)  
Vice President R&D  
4900 Fannin St.  
Houston, Texas 77004

## VIROLOGISTS

Southern Research Institute has immediate positions available for two Ph.D. virologists to participate in expanded research programs in antiviral drug development for government and industry. Positions require a Ph.D. in virology or other appropriate field with specialization in virology. Preference will be given to candidates with training or experience in retrovirology, especially with human immunodeficiency virus (HIV), or in work with exotic RNA viruses.

Research involves evaluation and development of new drugs for use in treatment of AIDS and other viral diseases. Some work will be conducted in a BL-3 containment facility.

Responsibilities include work on current and anticipated research contracts and grants, supervision of junior staff members, the writing of research proposals and reports, and collaboration with other scientists in the conception, development, and performance of virus-related research programs. Opportunity available to publish and present papers at scientific meetings.

Located in a 20-acre complex with a staff of over 700, Southern Research Institute is a diversified, not-for-profit research organization in its fifth decade of operation. The metropolitan Birmingham area, with a population of approximately one million, offers a mild four-season climate, lower-than-average cost of living, many recreational and cultural opportunities, and a variety of convenient and attractive housing alternatives. To apply, contact Denise Johnson, Personnel Administrator:



SOUTHERN RESEARCH INSTITUTE  
Personnel Office, Dept. B-220  
P.O. Box 55305  
Birmingham, AL 35255-5305

An Affirmative Action/Equal Opportunity Employer

## DIRECTOR

### 7-GeV Advanced Photon Source Construction Project

Argonne National Laboratory plans to construct a 7-GeV Advanced Photon Source, a high-brilliance synchrotron x-ray facility strongly endorsed by national research advisory groups and favorably reviewed by the Department of Energy. Preconstruction R&D and the conceptual design are at an advanced stage, and construction funding is scheduled to begin in October 1988. Current plans indicate a total project cost of about \$400 million with an expected completion date in 1994.

We seek an individual to direct construction of this major project. Responsibilities will include direct managerial leadership for the APS Project through its detailed engineering design phase, assembly of a project team responsible for the construction, and direction of the construction project. The successful candidate must have the capability to direct a large, complex technical construction project and to meet well-defined schedule and cost objectives, preferably demonstrated by past accomplishment. A background in technical design and construction is essential, but both accelerator design and construction management experience is preferred. This background will normally include an advanced degree in either physics or engineering. The importance of this project to advancing our national technological competitiveness and the magnitude of the undertaking make this a challenging and rewarding position that requires a highly capable and experienced person.

Candidates should submit a resume by October 1, 1987, detailing relevant experience, explicitly describing involvement with construction projects and including the names of at least three persons who can provide letters of recommendation, to

Dr. Alan Schriesheim, Director  
c/o R. A. Johns, Appointment Officer  
Box D-8 PS-31218-55  
Argonne National Laboratory  
9700 S. Cass Avenue  
Argonne, Illinois 60439  
Equal opportunity employer



## DETONATION MECHANICS

The Naval Weapons Center, China Lake, California, the Navy's major research, development, test and evaluation activity, is seeking an experienced scientist to head the Detonation Mechanics Branch in the Ordnance Systems Department. This work group conducts both theoretical and experimental investigations into the nature of detonations, and provides predictive and test support to the weapons development community at the Naval Weapons Center.

Individuals with a Phd in Physics or Physical Chemistry and experience in measuring detonation parameters, knowledge of computer simulation techniques, experience in handling and characterizing explosives and supervisory and management experience are encouraged to apply.

The Naval Weapons Center is located in California's Mojave Desert and offers the unique combination of challenging technical work in a small town environment.



To apply send a resume to:  
Professional Recruitment Office  
Code 09202, Ann 092-326-LJ-87  
Naval Weapons Center  
China Lake, California 93555

US Citizenship Is Required/Equal Opportunity Employer

## ENDOWED CHAIR OF MOLECULAR BIOLOGY

Applications and nominations for an endowed Chair of Molecular Biology are being sought. The candidate should be an internationally recognized scholar with an established record of significant achievements in molecular biology. Expertise in viral, microbial, plant or animal molecular biology is appropriate. A Ph.D. in microbiology, genetics, biochemistry, molecular biology, immunology or related field is required.

The appointee will be expected to serve as catalyst in developing a center of excellence in molecular biology, to supervise and contribute to the education and training of graduate students and post-doctoral associates, and to interact with other research programs. Considerable funds are available to help equip and operate a laboratory. Three support faculty positions in molecular biology are to be filled following appointment of the chair. St. Jude Children's Research Hospital and the University of Tennessee Medical School are in close proximity to our campus.

Applications should include curriculum vitae, statement of research interests and the names of at least three references. Applications and inquiries may be directed to James F. Payne, Molecular Biology Search Committee, Biology Department, Memphis State University, Memphis, TN 38152. Applications will be accepted until a suitable candidate is found.

*An Equal Opportunity/Affirmative Action University*

## BEHAVIORAL NEUROSCIENTIST

The Laboratory of Clinical Studies, National Institute on Alcohol Abuse and Alcoholism invites applications for a Fellowship position to study the effects of ethanol and other drugs on human psychomotor performance and cognition. Unique opportunity to become an active member of a multidisciplinary research team which integrates pharmacological, psychological, electrophysiological, and neuroradiologic approaches to the study of behavior. State-of-the-art equipment and experienced technical support available. Familiarity with Fortran and Macro (Digital) is desirable. The position is that of a Fellow with a salary range of \$17,000 to \$47,788 per annum commensurate with qualifications and is located on the National Institutes of Health campus in Bethesda, MD. Applications are invited from individuals having a Ph.D. in a neuroscience-related field. Interested candidates should submit their Curriculum Vitae and names of three references to: **Michael J. Eckardt, Ph.D., Chief, Section of Clinical Brain Research, LCS, NIAAA, Building 10, Rm. 3C-218, 9000 Rockville Pike, Bethesda, MD 20892.** Position is available now and is expected to be filled by September 15, 1987.

*An Equal Opportunity Employer*

### ***You Can't Do Better Than With Abbott Diagnostics' Molecular Biology Group.***

Not when our renowned Molecular Biology Department is a driving force behind our world leading Diagnostics Division. Not when you can be joining a Division responsible for the first diagnostic tests for Hepatitis B, Rubella, German Measles and most recently AIDS, and which is at the scientific cutting edge of the fast-growing diagnostics field. And not when you're part of the \$4 billion Abbott Laboratories and our superior management and business strengths.

We seek both Ph.D.'s with 2-8 years experience and Master's or Bachelor's degree candidates with 1 year experience in laboratory research, preferably with a background applicable to the following areas:

#### **MOLECULAR NEUROBIOLOGY**

Expertise in receptor purification, cDNA cloning and a knowledge of mammalian neurobiology also needed.

#### **PROTEIN PURIFICATION**

Expertise in micro scale purification technology with experience in instrumentation and computers a must.

#### **TISSUE CULTURE**

Experience in ELISA assays of products from tissue cultures.

#### **ONCOGENES**

Publication in this area is desirable.

#### **POST-DOCTORAL PROGRAM**

We also seek recent graduates with a strong record of achievement and a solid GPA.

### ***Or With Our Clinical Immunology Research Group.***

Candidates should have a Ph.D. in Immunology, Microbiology or Biochemistry and 2+ years post-doctoral experience in a clinical immunology research department. BS & MS positions are also available.

Abbott is headquartered in an attractive suburban area on the Lake Michigan shoreline just 30 miles north of Chicago. In addition to an outstanding scientific environment, Abbott provides excellent salaries, full benefits including profit sharing and stock retirement plan, and exceptional opportunities for professional growth under a management team voted as one of the five best by Dun's Magazine in 1986. For confidential consideration, please send a detailed resume with bibliography of publications and a minimum of three contactable references (please include academic transcript for post-doctoral positions) to: **Peggy Taylor/Corporate Placement, Dept SM/8-21.** Abbott is an Affirmative Action Employer.

**ABBOTT**  
ABBOTT PARK IL 60064

*"Health Care Worldwide"*



## POSITIONS OPEN

### PLANT ECOLOGIST

The Archbold Biological Station (ABS) invites applications for a position at the level of assistant research biologist (equivalent to assistant professor) in the field of plant ecology. The appointee will be expected to develop a strong research program which includes both long-term field studies of Station vegetation and contemporary topics in ecology. Additional duties will include curating a small herbarium, directing the research of graduate and undergraduate students, aiding in management of the Station property, and interacting with visiting botanists. Competence in biostatistics and mathematical aspects of ecology and willingness to consult with the scientific staff in these areas would enhance the application. Experience in fire ecology is also desirable. The Station is located in south-central peninsular Florida 8 miles south of the town of Lake Placid. Major habitats represented on the 4300-acre main property include slash pine-turkey oak woodlands, sand pine scrub, scrubby flatwoods, low flatwoods, bayheads, and seasonal ponds. The Station's research and support facilities include laboratories, library, reference collections, darkroom, machine and carpenter shops, animal rooms, outdoor cages, greenhouse, and living accommodations for visiting investigators and students. Applications must include curriculum vitae, cover letter describing research plans, the names and addresses of three to five individuals who can be contacted for letters of reference, and transcripts of college course work. Preferred starting date is January 1988, but is negotiable. Send application by 30 September 1987 to: **Dr. James L. Wolfe, Executive Director, Archbold Biological Station, POB 2057, Lake Placid, FL 33852. Telephone: 813-465-2571. ABS is an Equal Opportunity/Affirmative Action Employer.**

Baylor University—**PLANT SYSTEMATIST:** The Biology Department is currently accepting applications for a tenure-track faculty position at the rank of assistant professor beginning no later than August 1988. The successful candidate must document research experience in plant systematics involving contemporary methods. Responsibilities include: teaching a senior-graduate level course in plant taxonomy, a freshmen level course, and a course of his/her own choosing; supervising research at the bachelor's and master's level; and supervising the curation of our herbarium. Preference will be given to candidates with postdoctoral research and/or teaching experience. Baylor University is a private institution with an enrollment of approximately 11,000 selectively admitted students. The biology faculty of seventeen members emphasizes research in ecology, genetics, and related areas of biology. Submit a letter of application including a statement of current and future research interests, a résumé, and the names of three referees. Address applications to: **Chairperson, Search Committee, Biology Department, Baylor University, Waco, TX 76798.**

*Baylor University is an Equal Opportunity/Affirmative Action Employer and is under the patronage and general direction of the Baptist General Convention of Texas.*

**POSTDOCTORAL ASSOCIATE** position available immediately for a biochemist with training in protein chemistry to work in the field of coagulation and fibrinolysis. The regulatory role of the plasma proteinase inhibitors will be emphasized. Experience with cell culture or receptor biology is desirable. Send letter outlining research interests, curriculum vitae, and references to: **Steven L. Gonias, M.D., Ph.D., Department of Pathology, Box 214 University of Virginia Medical Center, Charlottesville, VA 22908. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available immediately for neurophysiologist with strong interests in animal behavior. Research will involve physiological and anatomical studies using intracellular recording and single-neuron staining techniques. Send curriculum vitae and three letters of recommendation to: **Dr. J. Bastian, Department of Zoology, University of Oklahoma, Norman, OK 73019. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** for research on transgenic animals. Work includes microinjection of genes into eggs, development of transgenic mouse lines expressing new gene constructs, and analysis of resulting phenotypes. A background and/or interest in neurobiology preferred. Apply with curriculum vitae to: **Dr. R. L. Brinster, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA 19104.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** in virus receptor biology. Will join an active research group with the goal of identifying the cell receptor molecule for hepatitis B virus. Applicants should have experience in virology, molecular genetics, or antibody production and use. Send curriculum vitae and three letters of recommendation before 1 October 1987 to:

**Mark E. Peebles, Ph.D.  
Immunology/Microbiology Department  
Rush Medical College  
1653 West Congress Parkway  
Chicago, IL 60612**

*Rush Medical College is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available in hematopoiesis and cell proliferation. Areas of research include the quantitation of hematopoietic pluripotential and committed progenitor stem cells, long-term culture of bone marrow in vitro, analysis of hematopoietic growth factors and in vivo studies of hematopoietic kinetics. Send curriculum vitae to: **Dr. David A. Lipschitz, Department of Medicine, University of Arkansas for Medical Sciences, Slot 508, 4301 West Markham, Little Rock, AR 72205.**

**POSTDOCTORAL POSITION IN MICROBIAL PHYSIOLOGICAL ECOLOGY.** A position is open for the study of the regulation of decomposition of soil organic matter at the biochemical level. Specific classes of substrates of interest are cell wall polymers, organic phosphorus, and proteins. Position is currently available. Send curriculum vitae and names of referees to: **Dr. A. E. Links, Biology Department, Clarkson University, Potsdam, NY 13676. Clarkson University is an Affirmative Action/Equal Opportunity Employer. Deadline is 30 September.**

**POSTDOCTORAL POSITION** available immediately at Center for Radiation Oncology, Vanderbilt University Medical School to study the role of glutathione and protein thiols in modifying cellular toxicity produced upon exposure to hyperthermia and x-irradiation. Applicants should have Ph.D. in biochemistry or related field, and send curriculum vitae plus three references to: **Michael Freeman, Ph.D., Vanderbilt Center for Radiation Oncology, Vanderbilt Hospital E-1200, MCN, Nashville, TN 37232. Equal Opportunity Employer/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available now for pharmacologist/biochemist to examine the role of increased ionized calcium in toxicity produced by halogenated hydrocarbon toxins. Experience with calcium-activated enzymes or isolation and characterization of mutant populations of somatic cell lines desirable. Curriculum vitae and names of three references to: **Dr. Leon Moore, Department of Pharmacology, Uniformed Services University, 4301 Jones Bridge Road, Bethesda, MD 20814.**

**POSTDOCTORAL POSITIONS ON BEHAVIORAL NEUROSCIENCE TRAINING GRANT** available immediately in Biopsychology Division and Neural and Behavioral Biology Program at the University of Illinois at Urbana-Champaign. Laboratories include those of **Michael Gabriel** (electrophysiology of learning), **Martha Gillette** (neurophysiology of circadian rhythms), **Rhanor Gillette** (motor patterning), **William Greenough** (CNS plasticity), **Janice Juraska** (sex differences in brain and behavior development), **Victor Ramirez** (regulatory endocrinology), **Edward Roy** (neuroendocrinology and behavior), **Michael Salmon** (sensory patterning) and **Evelyn Satinoff** (sleep, thermoregulation and circadian rhythms). Stipend \$16,000 to \$23,000. Send curriculum vitae and three letters of recommendation to: **Dr. Edward Roy, Department of Psychology, University of Illinois, 603 East Daniel Street, Champaign, IL 61820. The University of Illinois is an Equal Opportunity Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study the effects of adriamycin on the level of peroxidation, the glutathione-dependent detoxifying system and the molecular events linked to multistage tumor promotion in mouse epidermis in vivo and in vitro. Strong background in biochemistry and chemical carcinogenesis, as well as demonstrated ability to conduct independent research. Send résumé and three letters of reference to: **Dr. J. P. Perchellet, Division of Biology, Center for Basic Cancer Research, Ackert Hall, Kansas State University, Manhattan, KS 66506. KSU is an Equal Opportunity Employer.**

**POSTDOCTORAL POSITION IN AUDITORY NEUROSCIENCE** available in a laboratory devoted to an interdisciplinary approach to understanding the neuronal circuitry of the cochlear nucleus. Opportunities exist to work on multi-unit recording and/or intracellular recording and marking (HRP) studies. Previous anatomical experience is desirable. Please send curriculum vitae and two reference letters to: **Dr. H. F. Voigt, Boston University, Department of Biomedical Engineering, 110 Cummings Street, Boston, MA 02215. Telephone: 617-353-2817.**

**POSTDOCTORAL POSITION** available immediately in laboratory studying human molecular genetics. The principal research focus is the biology of mammalian sex chromosomes. Control of gene expression via X chromosome inactivation, as well as X and Y homology, pairing, and recombination, are being studied along with the mechanisms of several inherited diseases. Extensive use is made of somatic cell genetics, molecular methods, and clinically derived chromosome rearrangements. A recent Ph.D. degree with experience in cloning and sequencing methods is required. Send curriculum vitae with the names of three references to: **Larry J. Shapiro, M.D., Professor of Pediatrics and Biological Chemistry, Howard Hughes Medical Institute/UCLA School of Medicine, Division of Medical Genetics, 1000 West Carson Street, Torrance, CA 90509.**

**POSTDOCTORAL POSITION** now available for a 3-year study of a transmembrane signaling system in intestinal mucosa, specifically, the receptor-mediated activation of the enzyme guanylate cyclase by a bacterial peptide. The research involves radioligand binding studies, and the purification and characterization of membrane proteins. Send curriculum vitae and the names of three references to: **Dr. Arnold A. White, Dalton Research Center, University of Missouri, Columbia, MO 65211.**

**POSTDOCTORAL POSITIONS** are currently available for training in studies related to synaptic functioning in the mammalian central nervous system. Approaches are those in which the fourteen participating faculty are engaged in research at the systemic, cellular, subcellular and molecular levels. The participating faculty represent a wide range of expertise in techniques, including molecular biological, biochemical, immunological, electrophysiological and structural, and utilize a wide variety of tissue preparations, ranging from tissue extracts, to tissue culture, to intact animals. Clinical research training is also available under the supervision of **Dr. Roger Duvoisin**, related especially to the basal ganglia and Parkinson's disease. The Robert Wood Johnson (formerly Rutgers) Medical School is located in New Brunswick and Piscataway, New Jersey, on the campus of Rutgers University, between New York and Philadelphia. Please send curriculum vitae and three letters of recommendation to: **Dr. David Egger, Acting Chairman, Department of Anatomy, University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School, 675 Hoes Lane, Piscataway, NJ 08854-5635. An Equal Opportunity/Affirmative Action Employer, M/F/H/V.**

**POSTDOCTORAL POSITIONS** open immediately to study the transcriptional regulation and function of the recently identified human  $\theta 1$  globin gene [see *Nature*, 326, 717-720], molecular genetics of human RNA polymerase II subunit genes, and/or homologous recombination in primate cells. Persons with Ph.D. degree and research experience in cells, proteins, and/or nucleic acids are encouraged to apply. Send curriculum vitae and reference to: **Dr. James Shen, Department of Genetics, University of California, Davis, CA 95616.**

## INDUSTRIAL POSITIONS BIOANALYTICAL SYSTEMS, INC. TECHNICAL CENTER

Bioanalytical Systems, a leader in the application of specialized chromatographic and electrochemical instrumentation to problems of biochemical analysis, is augmenting its technical staff in the following positions: **Study Director, BAS Analytics** Creative, technically-oriented individuals are needed for a new contract research venture within an established company. 3-5 years of demonstrated managerial and technical growth in a pharmaceutical or contract analytical environment is desired. A Ph.D. or M.S. degree in analytical biochemistry or chemistry, with experience in chromatography methods development at the trace level, is expected. **Analytical Immunochemist** We are seeking applicants with a Ph.D. in biochemistry or immunochemistry who have at least 1-3 years experience in antibody isolation, characterization, and assay development. Persons with B.S. or M.S. degrees and related experience are also invited to apply. **Applications Specialist, Biotechnology** A Ph.D. in analytical chemistry or biochemistry (or equivalent experience) is required. The successful candidate must be familiar at the bench level with modern analytical methods for proteins and nucleic acids. The scientist chosen will be responsible for the identification of new applications areas in biotechnology and suggest appropriate analytical schemes for new instrumentation.

Staff members will work in the well-equipped laboratories of our Technical Center, in a team-oriented R/D environment of scientific and engineering specialists. Our close proximity to Purdue University and its cultural and scientific resources is also attractive. Qualified applicants should forward a resume, with salary requirements, to:

**Bioanalytical Systems, Inc.**  
**Mrs. Lina Reeves-Kerner**  
2701 Kent Avenue  
West Lafayette, IN 47906

## ELECTRONICS TECHNICIAN/ ENGINEER (BS/MS Degree)

We seek an Electronics Technician/Engineer with a BS, plus 2 yrs. exp., or an MS in Electronics, preferably with exp. in the field of NMR (Nuclear Magnetic Resonance) or MRI (Magnetic Resonance Imaging). The position requires trouble-shooting and improving NMR spectrometers, including high resolution and *in vivo* NMR systems. The position will include interaction with the users of the new NIH, NMR Center and involvement in the design and development of probes and coils for spectroscopy and imaging. Exp. with rf electronics, computer hardware and software preferred. Salary range depends on qualifications and experience. Position location is Bldg. 10, National Institutes of Health, Bethesda, MD.

For further information contact: **Dr. Jack S. Cohen, Clinical Pharmacology Branch, Division of Cancer Treatment, National Cancer Institute, National Institutes of Health, 9000 Rockville Pike, Bldg. 10, Rm. 6N105, Bethesda, MD 20892. Telephone: (301) 496-3390.** An Equal Opportunity Employer.



## The London Regional Cancer Centre

### CHIEF PHYSICIST FOR A REGIONAL CANCER CENTRE

The London Regional Cancer Centre of the Ontario Cancer Treatment and Research Foundation invites applications for the position of Chief Physicist. This Centre is associated with Victoria Hospital and the University of Western Ontario in London, Ontario. This comprehensive Cancer Centre sees 3,500 new patients per year within a multidisciplinary clinical framework. In addition, it conducts its own research programs in basic, interface and clinical cancer research. A new comprehensive Cancer Centre with state-of-the-art radiotherapy and research facilities is currently under construction, scheduled to open in April 1988.

The successful candidate's predominant responsibility will be to provide leadership for the research programs of the Physics Department in the Centre. The present Head of Clinical Physics is responsible for the service component of the Department and will report directly to the Chief Physicist. Although the current staff complement consists of three physicists and a dosimetrist, in addition to the Chief Physicist position, it is hoped to expand this complement by another two physicists and dosimetrists in the near future. The expanded Department will have a strong Academic bias and new requirements will reflect this objective.

A PhD is a pre-requisite for this appointment and it is anticipated that the candidate would be of sufficient stature to be eligible for a senior academic appointment in the Departments of Radiation Oncology, Medical Biophysics (Faculty of Medicine) or the Department of Physics, University of Western Ontario.

Salary is open to negotiation, will be based upon the candidate's previous training and experience and will be in accordance with the salary scales of the Ontario Cancer Treatment and Research Foundation. Applications with curriculum vitae and the names of three current referees should be forwarded to:

**Dr. Leslie Levin, Director,  
London Regional Cancer Centre,  
391 South Street,  
London, Ontario.  
N6A 4G5  
(519) 679-9890**

*The Ontario Cancer Foundation is an equal opportunity employer but is directed by Canadian Immigration authorities to state that "preference will be given to Canadian citizens and permanent residents of Canada".*

Deadline for applications is September 30th, 1987.

## INTERNATIONAL LABORATORY FOR RESEARCH ON ANIMAL DISEASES INTERNATIONAL LIVESTOCK CENTRE FOR AFRICA

### 1. VETERINARIAN (Ref. SC/87/3) 2. ANIMAL PRODUCTION SCIENTIST (Ref. INT/8/87)

The International Livestock Centre for Africa (ILCA), Addis Ababa, Ethiopia and the International Laboratory for Research on Animal Diseases (ILRAD), Nairobi, Kenya are conducting collaborative research on the productivity of trypanotolerant livestock under different levels of tsetse/trypanosomiasis risk in various locations in West Africa. The two vacancies are in a research team of 5 professionals undertaking studies on the productivity, at village level, of N'Dama cattle in the Gambia and Senegal, based at the International Trypanotolerance Centre (ITC) in the Gambia.

Applicants for the veterinarian post should hold a veterinary degree and a higher degree in an area such as parasitology or pathology would be an advantage. Applicants will have a minimum of 2 years experience in large animal clinical medicine, preferably in the tropics. Preference will be given to candidates who have had previous experience in field studies in trypanosomiasis. Fluency in English and French is required.

Applicants for the animal production post must be animal science graduates with experience of cattle productivity research, including preferably experience in nutrition research in a tropical environment. Applicants should also have a post-graduate qualification or proven research ability in the handling, analysis interpretation and reporting of quantitative animal production data.

These are international staff positions and the salary will be paid in US dollars. The contract length will be two years, subjects to extension of the project for a 3 year period from May 1988. Initial salary level will be determined by qualifications and experience. Moving and education allowance are paid, a house at the duty station in Bansang or elsewhere as required is provided, and there are medical and retirement benefits. Application should include a current *curriculum vitae* and the names and addresses of three referees. Applications citing the reference number should be sent by September 4, 1987 to:

**c/o Chief Personnel Officer  
ILRAD  
P.O. Box 30709  
NAIROBI,  
Kenya**

## RESEARCH INSTITUTE POSITIONS THE HOSPITAL FOR SICK CHILDREN TORONTO

The Division of Cell Biology is seeking two staff members with research interests in Membrane Biology. Applicants should have post-doctoral experience in one or more of the following areas:

- a) cell surface receptors;
- b) signal transduction mechanisms/growth factors/hormones
- c) ion or non-electrolyte transport or
- d) membrane biosynthesis and dynamics

The successful candidates will be expected to conduct a vigorous, independent research program and to contribute to the teaching at the University of Toronto.

Appointments will be at a rank equivalent to Assistant or Associate Professor. Send Curriculum Vitae, a brief description of research interests and the names of three referees before October 1, 1987 to: **Dr. Sergio Grinstein, Research Institute.**



555 University Avenue, Toronto, Ontario M5G 1X8

**THE HOSPITAL FOR SICK CHILDREN**

## RESEARCH SCIENTISTS RESEARCH ASSOCIATES

### DEPARTMENT OF MOLECULAR CELL BIOLOGY

**Amgen**, a leading biotechnology research and product development corporation, has opportunities for research scientists and research associates to make significant contributions in the area of eukaryotic gene expression.

The **research scientist** positions require a Ph.D. in molecular biology or related field and experience, preferably postdoctoral, in eukaryotic molecular genetics and cell culture methodology. Additional experience in cell biology and virology is desirable.

The **research associate** positions require a B.A. in biology, biochemistry or related field and two years of experience in cell culture and/or recombinant DNA methodology or a M.A. and one year experience.

**Amgen** offers an attractive compensation and benefits package, including equity participation, and is located in an attractive community northwest of Los Angeles.

Qualified candidates are encouraged to submit a resume, including references to:

**Recruitment, Dept. 100**

**AMGEN**

**1900 Oak Terrace Lane**

**Thousand Oaks**

**CA 91320**

**Equal Opportunity Employer**



## SENIOR TOXICOLOGIST Ophthalmic Devices

Alcon Laboratories, Inc., is a \$400 million multinational pharmaceutical company and a recognized industry leader in ophthalmic research. Due to continued growth, we are seeking an achievement-oriented Senior Toxicologist with the ability to make significant contributions within our Research & Development Division.

The successful candidate will:

- Design, supervise and analyze preclinical safety studies for surgical ophthalmic devices and ophthalmic drugs
- Prepare technical reports and toxicology segments of government submissions
- Perform basic research for development of improved techniques for assessing drug/biomedical device safety

Qualifications include:

- Ph.D. in Toxicology or DVM with related experience
- 0-3 years experience in conducting preclinical safety evaluations
- Highly developed written and verbal communication skills

We offer an excellent opportunity for professional growth and recognition within a stimulating research environment. In addition, we offer a competitive salary, a comprehensive benefits package and a desirable Ft. Worth location with recreational, cultural and economic advantages indigenous to the Sunbelt. For immediate consideration, please send resume, in strict confidence, to: **Tom D. Faver, Employee Relations - Employment Manager, Alcon Laboratories, Inc., P.O. Box 6600, Ft. Worth, TX 76115.**

Equal Opportunity Employer, M/F/V/H • Principals Only. Please



## IMMUNOLOGISTS/IMMUNOCHEMISTS/ TUMOR AND CELL BIOLOGISTS

### CENTER FOR MOLECULAR MEDICINE AND IMMUNOLOGY

The **CENTER FOR MOLECULAR MEDICINE AND IMMUNOLOGY**, a specialized cancer research and treatment center, is recruiting for **senior and junior researchers**. The Center is devoted to basic and applied multidisciplinary research aimed at improving the management and control of cancer and allied diseases. Potential candidates should be experienced in biochemical, genetic, and molecular biological techniques to study problems in the areas of molecular immunology, immunobiology, and molecular genetics. Special consideration will be given to those individuals with interest in tumor immunity, immunochemistry, tumor imaging and therapy, tumor biology, and tumor genetics. Excellent laboratory facilities are available to successful candidates expected to develop independent and vigorous research programs. Applicants must hold a Ph.D. or M.D. degree and have demonstrated excellence in research. The levels of appointment and salary are commensurate with qualifications and experience. Junior research candidates will be expected to indicate evidence of their potential by a publication record appropriate to their experience, as well as letters of recommendation. Senior research candidates must show evidence of a strong research accomplishment and grant support. **Postdoctoral candidates** are invited to apply.

The Center is located on the Newark campus of the University of Medicine and Dentistry of New Jersey (UMDNJ) and is closely affiliated with several of UMDNJ's clinical research and educational programs. In close proximity are excellent opportunities for educational, research, and cultural exchange among the many outstanding institutions within the greater New Jersey-New York Metropolitan area. Ample housing exists in several adjacent communities and within short commuting distances of both the Center and New York City.

Applications, to include curriculum vitae, bibliography, a statement of career and research goals and the names of three references should be sent to:

**David M. Goldenberg, Sc.D., M.D.**

**President**

**Center for Molecular Medicine and Immunology**

**1 Bruce Street, Newark, New Jersey 07103**

*An Equal Opportunity Employer*

THE UNIVERSITY OF TEXAS M. D. ANDERSON  
HOSPITAL & TUMOR INSTITUTE  
DEPARTMENT OF TUMOR BIOLOGY



POSTDOCTORAL  
FELLOWSHIPS

The University of Texas M. D. Anderson Hospital & Tumor Institute is one of the largest Comprehensive Cancer Centers in the world. Located in the Texas Medical Center with two medical and graduate schools and a number of hospitals and institutes, the UT Cancer Center offers tremendous opportunities to qualified postdoctoral candidates in the laboratories of one of the following faculty members:

**Dr. James C. Chan:** Monoclonal antibody studies of retroviral activation of cellular oncogene products.

**Dr. Elizabeth A. Grimm:** Molecular mechanisms of cytotoxic lymphocyte activation, especially lymphokine-activated killer cells and tumor cell surface components recognized by the immune system.

**Dr. Jim Klostergaard:** Molecular mechanisms of monocyte/macrophage tumor cell cytotoxicity.

**Dr. Edwin C. Murphy, Jr.:** Mechanisms of pre-mRNA processing and the molecular basis of metal carcinogenesis using retroviral models.

**Dr. Garth L. Nicolson:** Mechanisms of tumor malignancy, role of cell surface receptors, growth factors and oncogenes in metastasis.

**Dr. Michael A. Tainsky:** Human cell culture systems for the identification of new oncogenes and the study of their role in multistage carcinogenesis.

**Dr. W. K. Alfred Yung:** Growth factors and oncogene expression in growth regulation and tumor progression of human gliomas.

Candidates should be recent Ph.D. graduates in biochemistry, molecular biology, virology or immunology. Send a letter describing research interests and experience, a recent curriculum vitae and three references to the faculty above in the **Dept. of Tumor Biology (108), The University of Texas M. D. Anderson Hospital & Tumor Institute, 1515 Holcombe Blvd., Houston, Texas 77030.**

*The University of Texas is an Equal Opportunity/Affirmative Action Employer offering competitive salaries.*

SCIENTIFIC  
PROGRAM MANAGER,  
NEUROBIOLOGY (COMPUTATIONAL)

The Office of Naval Research (ONR) is seeking a highly qualified individual to plan and manage an external contract research program in neurobiology by leading U.S. scientists with emphasis on computational strategies. This is a Civil Service position at the GS-13, 14 or 15 grade level (\$38,727-\$69,976), depending on qualifications.

The successful candidate will conceive, organize and direct research and development programs in biological neural systems which are concerned with the organization, structural basis, and functional architectures of information processing networks in neural systems (biological intelligence). Program management responsibilities require knowledge of biological neural systems and computational analysis of neural system processing functions with expertise in at least two of the following areas: biochemical, electrical and morphological basis of synaptic plasticity; neuropharmacological and neuroanatomical characterization of defined neural pathways; parallel processing architectural analysis; and neural-behavioral relationships.

Applicants must have a Ph.D. plus a minimum of one year of experience or an equivalent combination of education and experience. To apply, please send a resume, list of publications and a Standard Form 171, Application for Federal Employment, to:

OFFICE OF THE CHIEF OF NAVAL RESEARCH  
Personnel Operations, Code 01242P  
Attn: Announcement #87-77(S)  
800 North Quincy Street, Arlington, VA 22217-5000

Applications must be received by 30 October 1987. For further information and supplemental forms, please call (202) 696-4705. An Equal Opportunity Employer, U.S. Citizenship required.

NATIONAL INSTITUTE OF DIABETES &  
DIGESTIVE & KIDNEY DISEASES  
NATIONAL INSTITUTES OF HEALTH  
PUBLIC HEALTH SERVICE

Applications are invited for the following vacancies:

**Postdoctoral position in biochemistry/molecular biology,** to study defects in synthesis and secretion of lipase by cultured cells of mice born with Combined Lipase Deficiency (cf J. Biol. Chem. 260:2552, 1985). Experience in cell culture and protein biochemistry desirable. Robert O. Scow, Building 6, Room 113 (telephone 301-496-2366).

**Postdoctoral position in molecular biology** to study negative and positive trans-acting gene regulation mediated at transcription and translation levels by human virus gene products and their interaction with viral and cellular control elements. Candidate should have experience in molecular biology or protein chemistry. Barrie J. Carter, Building 8, Room 301 (telephone 301-496-0604).

**Postdoctoral position in mammalian developmental biology,** research focuses on mechanisms that control gene expression during oogenesis and early development in the mouse and involves a wide range of molecular experimental approaches. Ideally, candidates will be trained in current DNA/RNA methodologies and have an interest in early mouse development. Jurrien Dean, Laboratory of Cellular and Developmental Biology, Building 6, Room B1-08 (telephone 301-496-2738).

**Postdoctoral position in molecular biology,** to study the activity, post-translational modifications and the intracellular targeting of lysosomal enzymes using molecular biology approaches. Richard L. Proia, Building 10, Room 9D-15 (telephone 301-496-2710).

**Postdoctoral position in cell biology,** to study development and hormonal effects in bone cells. Applicants must have experience in cell culture and molecular biology. S. J. Marx, Building 10, Room 9C-101 (telephone 301-496-5052).

**Postdoctoral positions in Cell Biology/Physiology,** to do light and electron microscope studies on chromaffin cells. Enhanced video and immunofluorescence techniques are being used to follow membrane turnover during exocytosis and endocytosis (Neurochem. Int. 9, 391, 1986). Charles Edwards, Building 8, Room 403 (telephone 301-496-4208).

**Postdoctoral position in immunochemistry,** to investigate cell receptors for antibodies responsible for cytopenias induced by allo- and auto-immunization and drug sensitization. Applicants should have experience in protein and peptide chemistry, immune assays generally and general biochemistry. N. Raphael Shulman, Building 10, Room 8C101 (telephone 301-496-4787).

Qualified applicants should send a curriculum vitae, bibliography, short statement of research interests, and the names of three references to the appropriate person at the NIDDK, NIH, 9000 Rockville Pike, Bethesda, MD 20892. Appointments can be offered to both U.S. citizens and other qualified applicants.

The NIH is located in Maryland close to Washington, D.C. It has nearly 3000 scientists carrying out research in 12 Institutes. The intramural program of the NIDDK has over 500 doctoral level scientists working on a broad range of basic and applied biomedical problems in 21 different groups.

AN EQUAL OPPORTUNITY EMPLOYER.

## POSITIONS OPEN

**POSTDOCTORAL POSITION**—Applications are invited to join a multi-disciplinary group investigating the growth, differentiation, and transplantation of cultured epidermis. Investigations are to encompass biochemical, immunological, and molecular genetic approaches using a unique cell culture model. Experience in molecular biology and Ph.D. or M.D. degree required. Send curriculum vitae to: **Dr. John M. Hefton, Department of Surgery, Cornell University Medical College, 1300 York Avenue, New York, NY 10021.**

**POSTDOCTORAL POSITION** available in neurobiology to study regeneration of peripheral and central nerves. Experience in use of animal models, cell biology, and immunochemistry desirable. Send curriculum vitae and three letters of reference to: **R. W. Mahley, M.D., Ph.D., Gladstone Foundation Laboratories for Cardiovascular Disease, University of California, P.O. Box 40608, San Francisco, CA 94140.**

**POSTDOCTORAL POSITION** available immediately for molecular biologist/geneticist to study genetics of cation transport in prokaryotes. Involves study of  $Mg^{2+}$  regulation of gene expression, structural analysis of  $Mg^{2+}$  transport genes, and reconstitution of  $Mg^{2+}$  transport proteins in *S. typhimurium*. Send résumé with three references to: **Dr. M. E. Maguire, Department of Pharmacology, Case Western Reserve University, Cleveland, OH 44106.**

*Equal Opportunity Action Employer.*

**POSTDOCTORAL POSITION** available immediately for cell/molecular biologist to study hormonal regulation of  $Mg^{2+}$  transport,  $Mg^{2+}$  regulation of hormone response in normal and  $Mg^{2+}$ -deficient eukaryotic cells, and isolation of eukaryotic gene(s) for  $Mg^{2+}$  transport proteins. Send résumé including three references to: **Dr. Michael E. Maguire, Department of Pharmacology, Case Western Reserve University, Cleveland, OH 44106.**

*Equal Opportunity/Affirmative Action Employer.*

Risk Communication and Management: **POSTDOCTORAL POSITION** to work with a research team pursuing experimental studies in risk communication and public understanding. Require familiarity with the literature in risk perception. Would like background in experimental psychology and/or experience in radon, solar UV, dam safety, 60-Hz fields, auto safety, carcinogenic chemicals or similar technical risks. Send résumé and selected papers to: **M. Granger Morgan, Head, Department of Engineering and Public Policy, Carnegie Mellon University, Pittsburgh, PA 15213.**

**POSTDOCTORAL POSITIONS** available immediately for biochemical and molecular studies on rotaviruses and respiratory syncytial virus. Previous experience in molecular virology is desirable. Starting salary of \$22,000. The Gamble Institute is a non-profit, independent research facility affiliated with the Christ Hospital whose goal is to combine excellence in basic research with clinical applications. Interested candidates should send curriculum vitae and names of three references to: **Richard L. Ward, Ph.D., James N. Gamble Institute of Medical Research, 2141 Auburn Avenue, Cincinnati, OH 45219. Telephone: 513-369-2582. An Equal Opportunity/Affirmative Action Employer.**

**TWO POSTDOCTORAL POSITIONS** are immediately available for studies on membrane and secretory protein synthesis in polarized epithelial cells. Emphasis is placed on defining the molecular mechanisms that regulate intracellular sorting of proteins. Systems under examination include pancreatic acinar cell and renal tubular cells in culture. Candidates should have experience in techniques of cell culture and use of monoclonal antibodies, or experience in cDNA cloning and development of eukaryotic expression vectors. Individuals with backgrounds in related areas of cell biology and biochemistry are encouraged to apply. Salary is comparable to starting NIH postdoctoral fellowships; adjustments for previous experience can be made. The positions are available for two years with the possibility of extension. Please send curriculum vitae and names of three references to:

**Dr. James D. Jamieson  
Yale University School of Medicine  
Department of Cell Biology  
333 Cedar Street, P.O. Box 3333  
New Haven, CT 06510**

*Yale University School of Medicine is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**TWO POSTDOCTORAL POSITIONS** available immediately. M.D. or Ph.D. in the biological sciences to investigate influences of interleukin-1 and other immune factors upon liver cell function. Background in liver cell culture is desirable. Also, M.D. or Ph.D. to study the use of monoclonal antibody immunoconjugates. Background in immunochemical techniques and cell culture is desirable. Curriculum vitae and names of three references to: **Dr. Ronald Tompkins, ACC 3A—Suite 364, Massachusetts General Hospital, Boston, MA 02114.**

**POSTDOCTORAL RESEARCH ASSOCIATE** Site-specific mutagenesis, molecular cloning. Construct vectors for site-specific mutagenesis of *his* genes of *S. typhimurium* by chemical carcinogens and mutagens that produce cyclic adducts in the base-pairing region. Experience in molecular cloning necessary, background in mutagenesis desirable. Available immediately, salary competitive. Send curriculum vitae and three letters of recommendation to: **L. J. Marnett, Department of Chemistry, Wayne State University, Detroit, MI 48202. Wayne State University is an Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE** needed. Research on the charge transport properties of electrically conductive polymers. (This project receives federal funding support from the U.S. Department of Defense.) Training and supervision of undergraduate and graduate students. Applicant must be able to operate computerized equipment, such as electrochemistry and spectroscopy. Must be knowledgeable in the discipline of materials chemistry and electro-chemistry. Ph.D. degree required with major field of study in chemistry. Must have 6 months of experience as an analytical chemist. Forty hours per week, 8:00 a.m. to 5:00 p.m., \$1,200.00 per month. Apply at: **The Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. #4640164. Ad paid by an Equal Employment Opportunity Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE AND VISITING ASSISTANT PROFESSOR OF MATHEMATICS.** Experience required in teaching mathematics and multidisciplinary research on survival analyses for aquatic populations stressed by toxic chemicals. Ph.D. in applied mathematics, with major in mathematical ecology required. Expertise expected in modeling individual organisms and aquatic populations employing expertise in difference, ordinary, and partial differential equations. Send curriculum vitae to: **Dr. T. G. Hallam, Department of Mathematics, University of Tennessee, Knoxville, TN 37996-1300 by 10 September 1987. An Equal Employment Opportunity Title IX/Section 504 Employer.**

### POSTDOCTORAL RESEARCH ASSOCIATE

Biochemist with tissue culture and protein chemistry background needed immediately for NIH-funded position on multidisciplinary project to characterize the role of hormones in pilosebaceous cell differentiation. Experience in molecular biology techniques desirable. Apply to: **Dr. R. L. Rosenfield, Department of Pediatrics, University of Chicago, 5841 South Maryland, Chicago, IL 60637.**



Agricultural Research Service  
United States Department of Agriculture

### POSTDOCTORAL RESEARCH ASSOCIATE U.S. REGIONAL PASTURE RESEARCH LABORATORY, UNIVERSITY PARK, PA

The USDA, Agricultural Research Service (ARS) has an immediate opening for a postdoctoral research associate position. The incumbent will participate in a multidisciplinary research team effort directed toward isolating and characterizing genes which regulate reproduction in buffel grass. Ph.D. within the past 3 years is required, and experience or knowledge desired in plant physiology, genetics, and molecular biology. Length of appointment is 2 years. U.S. citizenship is required. Salary is commensurate with experience; GS-11/12 (\$27,172 to \$32,567). For information regarding position and application forms contact: **Dr. David L. Gustine, USDA-ARS, U.S. Regional Pasture Research Laboratory, Curtin Road, University Park, PA 16802, telephone number: 814-863-0949.** Applications in response to this advertisement should be marked 7E029 and will be accepted until position is filled.

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

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE**—Position available for an electrophysiologist to characterize the properties of central axons which have regenerated along peripheral nerve implants. Preference given to applicants experienced in spinal cord physiology and/or tract-tracing, and histological techniques. Please send curriculum vitae with names of three references to: **Dr. Julia K. Terzis, Microsurgical Research Center, Eastern Virginia Medical School, 700 Olney Road, Norfolk, VA 23507.**

Wonderful opportunity for **POSTDOCTORAL TRAINING** in signaling mechanisms for peptide growth factors. Study how the insulin receptor increases the activity of a set of Ser/Thr kinases which are protected by inhibitors of phosphoprotein phosphatases (PNAS 84, 1502). **Dr. T. Sturgill, Department of Pharmacology, Box 419, University of Virginia Medical Center, Charlottesville, VA 22908.**

**POSTDOCTORAL TRAINING IN REGULATION OF VASCULAR SMOOTH MUSCLE.** A training-grant position (with institutional supplementation) is open to study the control of ion transport and receptor coupling by second messengers (phosphoinositides, cyclic nucleotides, and calcium), and their role in hypertension. This position will be complementary for individuals with a background in biochemistry, biophysics, physiology, or pharmacology, and will provide training in a fast growing and well funded area of research. Send curriculum vitae to: **Dr. Allan W. Jones, Chair, Department of Physiology, MA415 Medical Sciences Building, University of Missouri, Columbia, MO 65212.**

*The University of Missouri is an Equal Opportunity Employer with special initiatives to recruit women and minorities.*

### PROTEIN STRUCTURE AND FUNCTION

**POSTDOCTORAL POSITION** available immediately in biochemistry/molecular biology to study the catalytic and regulatory mechanisms of the allosteric enzyme aspartate transcarbamylase. This project involves the creation and analysis of mutant versions of this enzyme by in vitro methods. Candidates should have a Ph.D. in biochemistry or molecular biology and have experience in some of the following areas: site-directed mutagenesis, enzyme purification, kinetics, allosteric enzymes. Send résumé, the names of three references to: **Dr. Evan R. Kantrowitz, Department of Chemistry, Boston College, Chestnut Hill, MA 02167.**

*An Equal Opportunity/Affirmative Action Employer.*

### PROTEIN STRUCTURE FACILITY

The LSU Medical Center is seeking a **STAFF MEMBER** for its Protein Structure Facility. The facility is principally responsible for providing amino acid sequence analyses and chemically synthesized peptides to the local research community. State-of-the-art instrumentation is in place for protein/peptide microsequencing, peptide synthesis, high-performance liquid chromatography (HPLC) and amino acid analysis. Opportunities for collaborative research are available. Applicants should hold a baccalaureate or higher degree in an appropriate science and be experienced in quantitative analysis, protein chemistry, or modern chemical separation procedures. Practical knowledge of electronics and computerized analysis is desired. On-site training will be provided as needed. The anticipated starting date is fall 1987. Salary will be competitive and commensurate with experience. Send résumé or curriculum vitae with the names of three references to: **Dr. William T. Morgan, Department of Biochemistry and Molecular Biology, LSU Medical Center, 1901 Perdido Street, New Orleans, LA 70112. Equal Employment Opportunity/Affirmative Action Employer.**

**RESEARCH ASSOCIATE**, position available immediately to study the mechanism of nutritional effects on cell membrane receptors and enzymes, M.S. or Ph.D. required. Experience in receptor binding, assay of guanine-binding regulatory proteins and adenylate cyclase desirable.

Send résumé and addresses of three references to **Dr. S. Q. Alam, LSU Medical Center, Biochemistry Department, 1100 Florida Avenue, New Orleans, LA 70119. Equal Employment Opportunity/Affirmative Action.**



## [ DIRECTOR OF MATHEMATICAL AND INFORMATION SCIENCES ]

(#86-452)

The Air Force Office of Scientific Research, Air Force Systems Command, located at Bolling Air Force Base in Washington DC, invites applications from individuals with background in Government, university and industrial mathematical or information sciences research. An earned Bachelor's degree with 24 semester hours of math is required. An earned Master's degree is desirable, and a PhD (or equivalent) in the mathematical sciences is highly desired. The Director is responsible for the management of the Air Force Basic research program in mathematical and information sciences under contract to universities and in Air Force Laboratories. A strong background and publication record in one or more of the mathematical or information sciences fields of control theory in information science, computational mathematics, applied analysis, probability and statistics, optimization, and discrete mathematics is required. Experience should include technical, program supervision, planning and budgeting. The position is Senior Executive Service (General) with a salary range of \$64,700 to \$73,400. No prior Government service is required. Send Standard Form 171, "Application for Federal Employment", as well as narrative statements addressing: (1) technical qualifications; and (2) managerial qualifications, including a list of publications to:

**Civilian Personnel Office  
1776 MSSQ/DPCA-86-  
ATTN: Mrs. Davis  
Andrews AFB, MD 20331-5964**

*Include Announcement # 86-452 on your application.  
Application must be received by 30 Sept 1987.*

AN EQUAL OPPORTUNITY EMPLOYER

## ASSOCIATE EDITOR SCIENCE MAGAZINE

Editorial position available for a Ph.D. earth scientist with two or three years research experience and publications in the refereed literature. The successful candidate should be well-versed in both quantitative and qualitative aspects of geophysics, geochemistry, and atmospheric and oceanographic sciences. General interest in physical sciences is expected. Initial duties will include editing manuscripts for clarity and style, with progress to wide responsibilities in manuscript selection. Previous editorial experience not required. This is a full-time position in our Washington, D.C. editorial office.

Please submit résumé with cover letter, including salary requirements, to:

**Carolyn Bell  
SCIENCE Magazine  
1333 H Street, NW  
Washington, D.C. 20005**

*We are an Equal Opportunity Employer.*

**Merck Sharp & Dohme Research Laboratories is currently offering several excellent career opportunities for Molecular Biologists/Cell Biologists to join the expanding Department of Cellular and Molecular Biology. Research in this department is applied to the analysis and expression of genes of potential pharmaceutical interest.**

### MOLECULAR BIOLOGISTS

Responsibilities for these positions will include the utilization of a broad spectrum of techniques, including construction of cDNA and genomic DNA libraries, DNA/RNA preparation, blot analyses, DNA sequencing, plasmid vector construction, and transfection and culturing of microbial and mammalian cells.

An M.S. or B.S. degree in Biochemistry, Molecular Biology, or the equivalent with at least 2 years of broad and significant experience in molecular biology is required.

### CELL BIOLOGIST

Responsibilities for this position will include maintenance, characterization and analysis of mammalian and invertebrate cultured cell lines, serum-free media development, scale-up culture, and cell and media harvesting and processing. In addition, molecular biological procedures, such as DNA/RNA preparation, plasmid vector construction, DNA transfection, and transient and stable gene expression analysis will be performed.

An M.S. or B.S. degree in Cell Biology, Biochemistry, or the equivalent, with at least 2 years of significant experience in mammalian cell culture is required. Experience in molecular biological techniques is a plus.

**Excellent salary and benefits programs accompany these positions at our modern research buildings in West Point, Pennsylvania and Rahway, New Jersey.**

**Please send your resume, three professional references who we may contact, and salary requirements in complete confidence to:**

**If interested in RAHWAY, NJ** (Molecular Biologist and Cell Biologist positions) respond to the address below:

**Mr. Jacques P. Kueny  
Merck Sharp & Dohme Research Laboratories  
Research Personnel (R80M-TL1)  
P.O. Box 2000, Rahway, NJ 07065**

**If interested in WEST POINT, PA** (Molecular Biologist position only) respond to the address below:

**Mr. Jacques P. Kueny  
Merck Sharp & Dohme Research Laboratories  
Research Personnel (W42-2)  
West Point, PA 19486**

## Merck Sharp & Dohme Research Laboratories

EEO/AA/VH Employer



# MERCK & CO., INC.

# SeaPharm

## VIROLOGIST/ MICROBIOLOGIST

We have a newly created position for a Ph.D. senior scientist to develop, characterize and use animal models of infectious disease for new drug therapy evaluation. Emphasis will be on models for herpes, influenza and other viral diseases, as well as selected mycotic infections such as Candida. Successful candidates will interact with scientists in antiviral, antifungal and immunomodulatory drug discovery programs. Applicants should have a doctorate in virology, microbiology or related science and have 3-5 years of experience in the use of small animal disease models for the evaluation of antiviral drugs. Knowledge of preclinical therapeutic drug development useful.

SeaPharm Inc., is an international biotechnology firm devoted to the development of novel therapeutics from marine organisms. Its U.S. locations are in Princeton, New Jersey and Fort Pierce, Florida with foreign research activities in Australia, New Zealand, Japan and Israel. SeaPharm offers competitive salaries, benefits and a relocation program.

Send letter of application and complete resume to K. Filion, SeaPharm Inc., 791 Alexander Road, Princeton, NJ 08540.

M/F EOE

## NATIONAL CANCER INSTITUTE National Institutes of Health, Public Health Service CANCER PREVENTION FELLOWSHIP PROGRAM, CPFP

THE DIVISION OF CANCER PREVENTION AND CONTROL is accepting applications for CPFP. The primary purpose of this program is to attract individuals from a multiplicity of health science disciplines into the field of cancer prevention and control research. The program provides for: participation in DCPC Cancer Control Academic Program (a formal four-month course in cancer prevention and control); 20 months at NCI working directly with individual preceptors on ongoing cancer prevention and control projects and the NCI Year 2000 Goals; one year at a DCPC-approved cancer control program or State Health Department (may be optional). Funding permitting, up to 10 Fellows will be accepted for up to three years of training, beginning on August 28, 1988.

**APPLICANTS MUST (BY THE DEADLINE):** (1) Possess an M.D. or D.O. degree from an accredited medical school in the U.S., Puerto Rico, or Canada. (Foreign medical graduates—American citizens or Resident Aliens who have received their medical degree from a medical school outside the U.S., Puerto Rico and Canada and that is listed in the World Health Organization's *World Directory of Medical Schools*—must be certified by the Educational Commission for Foreign Medical Graduates [ECFMG]. Current certification, ECFMG or Foreign Medical Graduate Examination in the Medical Sciences [FMGEMS], is required for all foreign medical graduates.) Must have satisfactorily completed an internship (PG1) approved by the Council on Medical Education. (However, application will be accepted when internship is an integral part of medical school curriculum or incorporated as part of residency training.) —OR— Possess other accredited U.S., Puerto Rican, or Canadian doctoral degree (Ph.D., Dr. P.H., D.D.S., etc.) in a discipline related to cancer prevention and control research; biomedical, medical, nutritional, public health or behavioral sciences. (Foreign doctoral graduates must provide documented evidence that the foreign education is comparable to doctoral education received in accredited institutions noted above.); (2) Possess U.S. citizenship or be a resident alien eligible for citizenship within four years; (3) Complete and return the application packet by the deadline (including arranging for official academic transcripts and four, current, original letters of reference to be sent directly by the academic institutions and referees to the CPFP Coordinator).

For questions concerning the program's scientific or administrative aspects, please call Dr. David Poskanzer or Ms. Nancy Garner, respectively. Application packets may be obtained by sending a *POSTCARD* with your name and home address to **CPFP Coordinator, NIH/NCI/DCPC/CCAB, Blair Building, Room 4A05, 9000 Rockville Pike, Bethesda, MD 20892-4200**, or call (301) 427-8788. Please do not send any material until after you have read the instructions in the application packet.

**DEADLINE FOR RECEIPT OF APPLICATIONS: JANUARY 15, 1988**  
(The NIH is an Equal Opportunity Employer)

## BRL Technical Services

Join Bethesda Research Laboratories' growing Technical Services Group. This group provides technical support for BRL products through the Tech-Line,™ workshops, seminars, Focus, and the applications laboratory. Innovative scientists with good communication skills and experience in molecular biology techniques are sought for the following positions:

### **Staff Scientist (Ph.D)**

- Teach DNA - sequencing and recombinant DNA workshops
- Develop new applications in the laboratory
- Present techniques seminars
- Handle technical questions

### **Technical Specialist (B.S./M.S.)**

- Handle technical questions
- Develop new applications in the laboratory
- Assist at workshops

These positions offer competitive salary and benefits. Travel is required. Send your resume in confidence to:

Mr. Richard L. Hotaling, Jr., *Personnel Manager*  
**GIBCO/BRL Division**, Life Technologies, Inc.  
8717 Grovemont Circle, Gaithersburg, MD 20877  
Attn: Dept. NS 8/21 An equal opportunity employer. M/F/H/V

## RESEARCH SCIENTIST IMMUNOLOGY

Ayerst Laboratories Research, Inc., a subsidiary of Fortune 100 American Home Products Corporation has a challenging opportunity for a Research Scientist at our state-of-the-art facility to support our growing research efforts.

An immunologist/immunopharmacologist, Ph.D. is sought for our immunoregulation section to join an active auto-immunity program. The successful candidate will have experience in the modulation of the auto-immune response. Knowledge of both in-vitro and in-vivo cell-cell interaction and flow cytometry would be an advantage.

Ayerst offers an excellent salary and benefits package together with opportunities for career advancement. Interested candidates should send a resume indicating their current salary to:

**Personnel Manager, Dept. PW**

**Ayerst**

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LABORATORIES  
RESEARCH, INC.**

**CN 8000**  
**Princeton, NJ 08543-8000**  
Equal Opportunity Employer M/F/H

## Biochemical Pharmacologist



At the new Rorer...we're focusing on the future! Rorer Central Research is emerging as a vibrant "can do—will do" organization committed to becoming a world class pharmaceutical industry leader. An immediate opportunity to make a significant contribution to our rapid growth exists in our General Pharmacology Group located in suburban Philadelphia, PA.

The successful candidate will have a PhD in Pharmacology, Biochemistry or related field and at least 2 years post-doctoral experience. A strong interest in the various aspects of drug discovery research will be required for this position which reports directly to our Director of Biology.

The time to enhance your career is now. Qualified individuals are invited to submit a resume, in confidence, to **Barbara F. Lippmann, Rorer Central Research, 640 Allendale Rd, King Of Prussia, PA 19406**. An equal opportunity employer, M/F.



**Rorer Central Research**  
*Focusing on the future.*

## POST DOCTORAL RESEARCH ASSOCIATE

**40 hours per week**  
**\$20,140 per year**

Job focuses on the purification and functional characterization of human B Cell growth factor (BCGF) and its putative receptor, via (1) the establishment of BCGF-dependent or responding B cell line, (2) the development of monoclonal antibodies to BCGF and its receptor, and (3) the uses of a series of affinity chromatographic column, electrophoresis, and HPLC. Extensive experience in tissue culture and hybridoma techniques. Basic knowledge in biochemistry is also required. Ph.D., major in the field of immunology.

Contact:

**Job Order #656169**  
**La. Office of Employment Security**  
**6701 Airline Hwy**  
**Metairie, LA 70127**

Equal Opportunity Employer

## Manager, Computer Science Branch

### GE Corporate R&D

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To lead the Computer Science Branch in exploring advanced computer technology that will significantly improve software productivity at GE—world leader in aerospace, aircraft engines, financial services, medical electronics, and diversified core businesses.

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A professional with the demonstrated intellectual capability to successfully spearhead research into the next generation of integrated tools and software development.

Requires PhD in Computer Science/ Engineering or Engineering, and contemporary perspective of Computer Science, who will use demonstrated program management skills to recruit and command the respect of technical staff.

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professional  
environment

GE R&D Center is one of the world's leading laboratories in research and product innovation. We are known for encouraging and developing technical and senior management talents. Another plus...it typically requires only 10-15 minutes commuting home to lab.

...offering  
location and  
career  
advantages

Upstate Adirondack resort area with excellent cultural, recreational, educational and cost-of-living advantages. Easy access to Boston, Montreal, and New York City. Fully competitive salary with liberal relocation and comprehensive benefits.

Write to

Send resume to Mr. Neff T. Dietrich,  
University Relations and Recruiting,  
Ref. 181HS, GE R&D Center, P.O. Box 8,  
Schenectady, NY 12301.



An equal opportunity employer

## POSITIONS OPEN

**RESEARCH ASSOCIATE, M.S. OR Ph.D., 2- to 3-year position** available immediately to study effect of dietary factors on development of hypertension in a variety of rat models. Interest in endocrinology, steroid hormones, and HPLC desirable. Send curriculum vitae to: **Dr. David J. Morris, Department of Laboratory Medicine, The Miriam Hospital, 164 Summit Avenue, Providence, RI 02906.** An Equal Opportunity Employer, M/F.

### RESEARCH ASSOCIATE AMERICAN RED CROSS

The American Red Cross seeks an individual to conduct developmental studies in blood cell preservation and platelet immunology. Doctorate or equivalent in biochemistry, physiology, or related disciplines, and relevant research and development experience with blood cells required. Located in Rockville, Maryland near Shady Grove Metro. Salary \$28,500 and up commensurate with experience and education. Excellent benefits and free parking. Send résumé and references to:

**Thomas P. Higgins  
Position G105  
National Headquarters  
American Red Cross  
Washington, DC 20006**

*An Equal Opportunity Employer M/F/V/H.*

**RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW (DNA CHEMISTRY/MOLECULAR BIOLOGY).** Position available immediately at \$24,000 per year, renewable yearly, for Ph.D. to develop and evaluate non-radiometric (DNA-enzyme conjugate) methods to detect solid- or solution-phase DNA-DNA hybridization reactions for direct clinical diagnosis of bacterial infections. Background in DNA chemistry and the coupling of DNA to proteins and/or to solid-phase supports desirable. Submit curriculum vitae and references to: **Dr. Michael Norgard, Department of Microbiology, University of Texas Health Science Center at Dallas (UTHSCD), 5323 Harry Hines Boulevard, Dallas, TX 75235.** UTHSCD is an Affirmative Action/Equal Opportunity University.

## POSITIONS OPEN

**RESEARCH ASSOCIATE:** Position available to conduct research in membrane cytoskeleton interactions in lymphocytes, platelets and endothelium. Requirements: Ph.D. and 2 to 3 years of experience in membrane biochemistry and enzymology. Salary \$21,000 per annum, 40 hours/week. Send résumé and this ad to: **Job #4539760, Job Service of Florida, 701 S.W. 27 Avenue, Room 15, Miami, FL 33136,** not later than 4 September 1987.

### RESEARCH ASSOCIATES BIOSCIENCES

The College of Biological Sciences, University of Minnesota, has a limited number of non-faculty openings for scientists who have completed the Ph.D. and some postdoctoral training and who wish to continue independent research careers. While such research associates may work in collaboration with faculty, they will be expected to obtain independent funding, including stipend, prior to appointment. Appointments must be renewed annually but may be continued indefinitely, depending on funding, facilities, and evaluation of contribution.

Participating units are the Departments of Biochemistry, Botany, Ecology and Behavioral Biology, Genetics and Cell Biology, Microbiology, the Bell Museum of Natural History, the Gray Freshwater Biological Institute, the Biological Process Technology Institute and the Plant Molecular Genetics Institute. Availability of positions in each unit will depend on space, facilities, research interests, and success in obtaining external funding.

Apply to: **The Research Associate Program, College of Biological Sciences, University of Minnesota, 140 Gortner Lab, 1479 Gortner Avenue, St. Paul, MN 55108.** Provide curriculum vitae and list of publications, a 1 to 2 page statement of research plans, a list of facilities and equipment required, and three letters of recommendation. Indicate the unit or faculty member with which affiliation is desired.

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

## POSITIONS OPEN

**RESEARCH ASSOCIATE—IMMUNOPARASITOLOGY.** Position available for applicant with 3 to 5 years of postdoctoral experience to study immunoregulation of *Trypanosoma cruzi* infections in mice. Salary: \$24,000. Send curriculum vitae and names of referees to: **Dr. R. E. Kuhn, Department of Biology, Wake Forest University, Winston-Salem, NC 27109** by 15 September 1987.

**RESEARCH BIOCHEMIST.** This position, within our Protein Chemistry Facility, requires a B.S. with at least 1 year of biochemistry laboratory experience, or an M.S. in a biological science. The successful candidate will participate in the isolation and structural characterization of growth factors and have the opportunity to become skilled in the operation of such instruments as the automatic gas phase protein sequencer, peptide synthesizer and amino acid analyzer. Applicants should forward résumé with three letters of reference to: **The Personnel Office, Dr. John Crabb, W. Alton Jones Cell Science Center, 10 Old Barn Road, Lake Placid, NY 12946.** Refer to Job No. 87-15. Affirmative Action/Equal Employment Opportunity.

### RESEARCH POSITION MOLECULAR BIOLOGY/IMMUNOLOGY

The Veterinary Infectious Disease Organization (VIDO), University of Saskatchewan has a position for a molecular biologist with a strong interest in immunology; a major program to study basic and molecular immunology and biology of bovine and porcine recombinant lymphokines is currently underway. Expertise and interest in handling mRNA, cDNA cloning and DNA sequencing are required. Individuals also interested in using molecular biology techniques and probes in the understanding of receptor expression, and intracellular antigen processing will merit more immediate consideration.

Inquiries and applications should be directed to:

**Dr. L. A. Babiuk  
Veterinary Infectious Disease Organization  
124 Veterinary Road  
Saskatoon, Saskatchewan  
Canada S7N 0W0**

## National Institutes of Health National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Division of Kidney, Urologic, and Hematologic Diseases

**Academic Physician or Ph.D.—BC/BE** with interest in developing the basic scientific aspects of the renal, lower urinary tract, and hematopoietic systems. Full-time position. Time available to pursue research interests. Salary is negotiable, commensurate with qualifications and experience. How to apply: Submit an Application for Federal Employment (SF-171), curriculum vitae, bibliography, and names of three references to:

**Mr. Clifford Moss  
Personnel Officer, NIDDK  
Building 31, Room 9A34  
9000 Rockville Pike  
Bethesda, MD 20892  
Telephone (301) 496-4231**

*NIH is an equal opportunity employer; women and minorities are encouraged to apply. U.S. citizenship required.*

## Research Scientist Fermentation Group

Praxis Biologics, a research-driven, results-oriented company recognized as a pioneer in the development of pediatric vaccines, is currently seeking a dedicated professional to join our Fermentation Group.

This position requires a PhD in microbiology, a strong background in bacterial physiology, biochemistry and instrumentation along with a minimum of 3 years post-doctoral experience in fermentation research and development.

In this position you will conceive, organize and conduct vaccine product research and developmental programs using small scale fermentors and shaker flasks.

We offer a competitive salary and a comprehensive benefits package. Please send resume including salary history to: Praxis Biologics, Human Resources Department, 300 East River Road, Rochester, NY 14623.

## PRAXIS BIOLOGICS

An equal opportunity employer, m/f.

Research and product development scientists wanted to help bring a series of proprietary immunotoxin conjugates to market.

### Immunotoxin Cancer Therapy

ImmunoGen, Inc. is dedicated to commercializing its immunotoxin conjugate cancer therapy technologies developed in conjunction with the Dana-Farber Cancer Institute in Boston, MA.

Increased scientific staff is now required as ImmunoGen enters clinical trials on its first round of commercial products. The Company is seeking *experienced* scientists (three at senior levels and three at junior levels) in the fields of:

### Biochemistry & Protein Chemistry Cell Biology & Tissue Culture

These positions offer the potential for considerable career growth in an atmosphere of multidisciplinary, innovative research and product development.

Duties will include: development of methods for large-scale production of antibodies, toxins and immunoconjugates for clinical trials; *in vitro* and *in vivo* toxicity testing; efficacy testing; and development of new therapeutic products based on monoclonal antibodies and other targeting agents.

ImmunoGen offers an excellent salary and benefit package as well as an opportunity for equity participation. The Company is now moving into a fully-equipped, state-of-the-art laboratory in Cambridge, Massachusetts—midway between the campuses of Harvard and MIT.

Please send a detailed resume including salary history and a statement describing your scientific interests and career goals. Confidentiality is assured. All responses will be acknowledged.

Reply to: **Dr. Walter Blattler, ImmunoGen, Inc.,**  
124 Mt. Auburn Street, Suite 200, Cambridge, MA 02138

## Regional Medical Associate

### Pharmaceutical Marketing

Currently we have an opening in the Rocky Mountain Region for a Regional Medical Associate to combine both scientific expertise and marketing skills. The selected candidate will report directly to the Regional Vice President and will be headquartered in Denver or Phoenix. Responsibilities are to establish effective relationships within key medical institutions, providing scientific liaison and indepth information essential to appropriate use of SK&F's products. Will also have training responsibility at the Representative, Medical Staff and Pharmacy levels. 50% travel.

Qualifications include Pharm.D. or Ph.D. in Pharmacology, Biochemistry, Microbiology or other Life Sciences. Must possess initiative, strong communication skills, and interest in Marketing.

In addition to an independent work environment where personal and professional growth are a way of life, we offer an outstanding compensation/benefits package geared to today's market. Please send resume and current earnings to:

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## NEUROSCIENCE RESEARCH

The Neuroscience Research Group of the highly successful \$4 billion Abbott Laboratories is continuing its strong basic research efforts in the discovery of novel pharmacological agents to treat neurological and psychiatric disorders. Our interdisciplinary program, ranging from molecular biology to behavior, offers exceptional opportunity and exposure for the following positions:

### Behavioral Pharmacologist

We seek a Ph.D. with a minimum of 2 years postdoctoral experience and a record of significant research accomplishments. Preference will be given to candidates who have worked in the area of mechanisms of learning, memory, and cognitive functions.

### Cell Biologist

Candidates should be interested in working on the cell biology of endothelial cells *in vitro* with an emphasis on the mechanism of endocytotic translocation. Ph.D. with postdoctoral experience and a strong publication record required.

### Receptor Autoradiography

Candidate should have a Ph.D. degree, 2 years or more of postdoctoral training and a record of accomplishment in the use of autoradiography to localize neurotransmitter receptors in the CNS. Experience with other contemporary anatomical techniques is highly desirable.

Recognized by *Dun's Magazine* as one of the nation's five best-managed companies for 1986, Abbott offers a superior scientific and business environment. Located just 30 miles north of Chicago in an attractive suburban setting, we offer an excellent salary and benefits package which includes profit sharing and stock retirement plan. For confidential consideration, please send your resume with salary history to: **Patricia Handy/Corporate Placement, Dept. S/8-21.** Abbott is an Affirmative Action Employer.

**ABBOTT**  
ABBOTT PARK IL 60064

"HEALTH CARE WORLDWIDE"



## POSITIONS OPEN

Department of Agriculture, Agricultural Research Service, **RESEARCH PHYSIOLOGIST (NUTRITION)**, GS-11/12 (\$27,172 to \$42,341), depending on qualifications. The Western Human Nutrition Research Center in San Francisco, California is seeking candidates for the position of research physiologist. Candidate is responsible for planning/conducting independent research in area of energy metabolism. Must have knowledge of (i) human nutritional assessment, (ii) bioenergetics, (iii) experimental design. Ph.D. in nutritional sciences or closely related field desirable. Must be a U.S. citizen. For information on the research program and/or position contact: **Dr. Nancy L. Keim, 415-556-5800**. For information on application procedures/forms contact: **Rita Millard, 301-344-3138**. Applications must be received by 30 September 1987. Applications in response to this advertisement must be marked 7W022. *An Equal Opportunity Employer.*

**RESEARCH POSITION IN CARDIOVASCULAR PHARMACOLOGY AND PHYSIOLOGY** available in well-supported cardiology laboratory. Human, animal, and bench research in cardiovascular pathophysiology and pharmacology. Ph.D. or commensurate degree in related science. Contact: **John B. Kostis, M.D., Department of Medicine, University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School, CN-19, New Brunswick, NJ 08903-0019. Equal Opportunity/Affirmative Action Employer, M/F/H/V.**

**RESEARCH POSITION:** Cellular Immunology and Molecular Biology. The Pulmonary Unit (Medical Services) of the Massachusetts General Hospital has a staff opening for a Ph.D. with a strong background and experience in cellular immunology and molecular biology to work in newly expanded laboratory facilities. Experience in the use of *in vitro* techniques, including cell culture work, and interest in environmental/occupational immunology are desirable. Please send curriculum vitae and a brief description of research interests to: **L. C. Ginns, M.D., Pulmonary Unit, Bulfinch 1, Massachusetts General Hospital, Boston, MA 02114. An Equal Opportunity/Affirmative Action Employer.**

**RESEARCH POSITION:** Biochemical Pharmacology and Psychopharmacology. Faculty position available for M.D. or Ph.D. with training and experience in measurements of biogenic amines and metabolites, receptor binding, pharmacokinetics, and subcellular fractionation techniques. Faculty rank and salary commensurate with experience. Send curriculum vitae and names of three references to: **Dr. A. Halaris, Department of Psychiatry, Case Western Reserve University, Cleveland Metropolitan General Hospital, 3395 Scranton Road, Cleveland, OH 44109.**

### RESEARCH POSITION IMMUNOLOGY—IMMUNOCHEMISTRY— INFECTIOUS DISEASES

The Veterinary Infectious Disease Organization (VIDO), University of Saskatchewan has a position for an immunologist with a strong interest in cellular immunology and immunopotentiality using recombinant lymphokines to participate in research programs on economically important diseases of food-producing animals. Major projects are in the area of bacterial pneumonias and viral enteritis of cattle and swine and viral/bacterial synergism. Projects are underway on mechanisms of immunity and potentiation of the immune response to a variety of natural and synthetic antigens. Applicants should have a degree in microbiology or veterinary medicine, together with a Ph.D. in immunology and an interest and experience in at least one of the following areas: immunopotentiality of immune responses to natural and synthetic viral and bacterial antigens, serological techniques, and assays for humoral and CM1 responses. The successful candidate will be involved in one or more of the above projects with ample opportunity to initiate new projects involving diseases of gastrointestinal and respiratory systems. A strong interest in the application of modern immunological techniques to the solution of problems related to the diagnosis and control of infectious diseases in animals, particularly swine, is essential. Inquiries and applications should be directed to:

**Dr. L. A. Babiuk  
Veterinary Infectious Disease Organization  
124 Veterinary Road  
Saskatoon, Saskatchewan  
Canada S7N 0W0**

## POSITIONS OPEN

### RESEARCH POSITION BACTERIAL-MUCOSAL IMMUNOLOGIST

The Veterinary Infectious Disease Organization (VIDO), University of Saskatchewan has a position for an immunologist with a strong interest in mucosal immunity and immunoprotein of the immune response using recombinant lymphokines. Individuals with an interest and expertise in mammary gland immunity and bacterial mastitis will merit more immediate consideration.

All inquiries and applications should be directed to:

**Dr. L. A. Babiuk  
Veterinary Infectious Disease Organization  
124 Veterinary Road  
Saskatoon, Saskatchewan  
Canada S7N 0W0**

### RESEARCH SCIENTIST

Applications are invited for the position of research scientist. Minimum qualification includes a Master's degree in biomedical engineering with 2 years of research experience in the area of biomechanics. Preferred qualifications include 2 years of experience in kinematics as applied to gait analysis and software development for real time kinematic data analysis. Major responsibilities will be development of analytical software in support of research programs relating to gait and upper extremity analysis, assist in the design and implementation of algorithms for finite element analysis. The salary is \$33,115 per year. Send résumés to: **New York State Job Service, 55 Church Street, White Plains, NY 10601. Refer to J.O. 0705467; DOT #019061010.**

### RESEARCH SCIENTIST—IMMUNOLOGY

Position available for a research scientist who will be part of a team investigating the basic and clinical implications of biologic response modifier therapy. Requirements include Ph.D. or M.D. in immunology with postdoctoral experience and demonstrated research accomplishments. Molecular biology training highly desirable.

Send curriculum vitae, training, and details of research interests to:

**Hulbert Silver, M.D., Ph.D.  
Head, Department of Advanced Therapeutics  
Cancer Control Agency of BC  
600 West 10th Avenue  
Vancouver BC  
V5Z 4E6 Canada**

### SENIOR BIOCHEMIST

Position available to study mechanisms linking hyperlipidemia to thrombosis. Ph.D. or M.D. degree required, plus 1 or 2 years of postdoctoral experience in the areas of cholesterol metabolism or lipid biochemistry. Salary negotiable. Find out more about excellent benefits including free health/dental/life insurances, retirement plan, 3 weeks of paid vacation after 1 year of employment, generous sick leave plan, and more. Call us immediately, collect at 305-674-3100, or send your résumé to: **Personnel Department, Miami Heart Institute, 4701 North Meridian Avenue, Miami Beach, FL 33140-2999.**

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The University of Venda situated in Republic of Venda, Southern Africa invites applications for the following post: **SENIOR LECTURER/LECTURER—BOTANY**. Requirements: M.Sc./Ph.D. in plant development, or molecular biology or plant physiology. Reply with full curriculum vitae to:

**Assistant Registrar Personnel  
University of Venda  
Private Bag X2220  
SIBASA  
Republic of Venda**

The Environmental Defense Fund seeks a **SENIOR LEVEL PROFESSIONAL** with an advanced degree in economics, development planning or a related field, as well as several years of experience in international development, ecology and resource economics. She or he will work in a research and advocacy campaign to promote in the World Bank, IMF and other international financial institutions development that is ecologically sustainable, participatory, and more appropriate for local environmental and social conditions. Write: **Bruce Rich, EDF, 1616 P Street, NW, Washington, DC 20036.**

## POSITIONS OPEN

Anatomy department with strength in developmental biology seeks **SENIOR MOLECULAR BIOLOGIST** to conduct independent research, cooperate with investigators in this and other departments, and participate in the teaching program of the department. Submit curriculum vitae and three references to: **Dr. Dale E. Bockman, Department of Anatomy, Medical College of Georgia, Augusta, GA 30912. Equal Opportunity/Affirmative Action Program.**

**SENIOR RESEARCH FELLOW** in Division of Nutrition and Endocrinology. The individual appointed should already have 1 year of postdoctoral experience in the separation, characterization, and biological investigation of growth factor proteins in human biological fluids. Experience in protein HPLC, gel filtration techniques, and electrophoresis is essential for this position. Although appointment will be for 1 year in the first instance, it is anticipated that there could be renewal for a further 2 years. Send résumé to: **Dr. David Rose, American Health Foundation, 1 Dana Road, Valhalla, NY 10595. An Equal Opportunity Employer M/F/H/V.**

**SENIOR RESEARCH FELLOW** for university located in northeastern Ohio to develop research program, including a laser facility for experimental studies, in the general area of nonlinear optics of liquid crystals and polymer liquid crystals. Write proposals for extramural support; contribute to incipient programs in optical studies of liquid crystalline materials; participate in university/industry cooperative research program; and provide research problems and support for graduate students. Requires Ph.D. in physics or chemistry plus 1 year of postdoctoral research in liquid crystals. Forty hours per week, \$40,000 per year. Qualified applicants reply immediately with résumé to: **M. Rush, JO#1119022, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

**SENIOR SCIENTIST POSITION IN MARINE SCIENCES AT THE EDGERTON RESEARCH LAB;** provides scientific leadership for a combined marine biology/chemistry laboratory; provides oversight for research programs involving staff scientists and investigators; and initiates grant proposals in own area of expertise. Must demonstrate ability to act as spokesperson for the laboratory and to work with other departments in incorporating research into the New England Aquarium's program goals. Required qualifications: a Ph.D. in marine sciences with strong emphasis in biology; at least 5 years of additional experience in coordinating scientific research programs; an established publication record; and a history of successfully funded research. The laboratory presently includes five Ph.D.'s, one M.S. and four technical staff, in addition to the Department Manager and Administrative Associate. Send letter of application and curriculum vitae to: **Personnel Manager, New England Aquarium, Central Wharf, Boston, MA 02110. The New England Aquarium is an Affirmative Action/Equal Opportunity Employer.**

**SENSORY NEUROPHYSIOLOGIST:** Tenure-track possibility for position available at assistant professor level. Serious commitment to collaborative work within the Microsurgical Research Center. Expertise required to characterize electrophysiologically the properties of central axons which have regenerated along peripheral nerve implants. Preference given to applicants experienced in spinal cord neurophysiology, and tract-tracing and histological techniques. Please send curriculum vitae with three letters of recommendation to: **Dr. Julia Terzis, Microsurgical Research Center, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501.**

**SOIL-PLANT RELATIONSHIPS—TWO POSTDOCTORAL POSITIONS** (1 year minimum). (i) Field and laboratory research using radioactive and stable isotopes to assess plant/soil nutrient relationships. Training in soil chemistry, plant physiology, and use of isotopes desirable. (ii) Field and laboratory research on plant/soil moisture relationships and plant water relations. Training in soil physics, plant water relations, micrometeorology, and computer skills desirable. Applicants must have completed Ph.D. at time of application. Send résumé and names of three references to: **James H. Richards and Martyn M. Caldwell, Ecology Center, Utah State University, Logan, UT 84322-5230.** Closing: 10 September 1987 or until suitable applicant found. *USU is an Affirmative Action/Equal Opportunity and IRCA Employer.*

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Mr. Richard L. Hotaling, Jr.  
*Personnel Manager*  
Dept. TM 821  
**Life Technologies, Inc.**  
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Gaithersburg, MD 20877

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## **Opportunities in Biotechnology**

Repligen Corporation is a biotechnology company that develops and produces biochemical and biocatalytic products for the health care, personal care and industrial markets. We are seeking highly qualified candidates for the following:

### **Mammalian Cell Expression**

- **Principal Investigator** - 208A2. PhD with 5+ yrs.' experience.

This is a senior scientist position to establish and direct a mammalian cell expression laboratory to produce recombinant proteins. The successful candidate will possess an exceptional record of achievement and have proven program management skills.

### **Molecular Biology**

- **Research Scientist** - 206A2. PhD with 2+ yrs.' experience.
- **Research Associate** - 204AB2. MS with 0-2 yrs.' experience or BS/BA with 2-4 yrs.' experience.

Applicants should have skills in genetic engineering, protein purification and/or basic immunological methods.

### **DNA Sequencing**

- **Research Scientist/Research Associate** - 207A. PhD or BS/MS in Biochemistry/Microbiology and at least 1-2 yrs.' lab experience.

The successful candidate will supervise our DNA sequencing and synthesis service including coordination of sequencing projects.

### **Microbiology/Biochemistry**

- **Research Scientists** - 206CD. PhD with 2+ yrs.' experience.
- **Research Associate** - 204F. MS with 0-2 yrs.' experience or BS with 2-5 yrs.' experience.

Successful candidates will have expertise in microbial physiology, cell surface components, and/or growth studies. Experience with binding analysis and receptor studies will be useful.

### **Organic Chemistry**

- **Research Associate** - 204D2. BS/MS Chemistry or Biochemistry with 2+ yrs.' experience.

Successful candidate will have at least 2 yrs.' experience in isolation and characterization of natural products or organic synthesis. A working knowledge of HPLC would be desirable.

### **Protein Chemistry/ Process Development**

- **Research Scientists** - 206B2C. PhD with 2+ yrs.' experience.
- **Research Associate** - 204F. MS/BS with 2+ yrs.' experience.

Successful candidates must have at least 2 yrs.' experience in developing and scaling up methods for purification of therapeutic proteins produced by recombinant techniques, and working knowledge of GMP manufacturing procedures. Experience with bacterial fermentation of mammalian cell culture a plus.

### **Peptide/Protein Chemistry**

- **Research Associate** - 204H. BS with 2-4 yrs.' experience.

Successful candidate will have a working knowledge of protein microcharacterization, including peptide mapping and microsequencing. Knowledge of chemical modification or immobilization a plus.

### **Manufacturing**

- **Manufacturing Technician** - 302A2. BS/BA in Biology, Chemistry or related life sciences, or AA and at least 2 yrs.' related experience.

Applicants must have previous experience in large-scale protein purification and ion exchange chromatography. CGMPs is advantageous but not required.

Repligen Corporation offers a competitive salary, excellent benefits and equity participation. Submit cover letter, resume and references to the **Personnel Director, Repligen Corporation, One Kendall Sq., Bldg. 700, Cambridge, MA 02139.** (Please refer to job code number when applying.) An Equal Opportunity Employer.

# **RepliGen**

## POSITIONS OPEN

**TECHNICAL SPECIALIST—CHINA.** Bachelor of Science degree in chemical engineering and 2 years of experience in research and analysis with instruments using static, reverber, dynamic, and HDC techniques. Proficiency in oral and written Mandarin Chinese. In lieu of Bachelor's degree and 2 years of experience, will accept Master's degree in chemical engineering and 1 year of stated experience. Work as a technical specialist with marketing personnel in developing new markets, especially Chinese markets, for company's scientific instruments. Interface with Chinese scientists with a view toward increasing market share by analyzing their companies' technical needs. Ensure appropriate analysis of customers' samples with stated techniques. Contact Chinese sales and service representatives to evaluate performance of company's instruments and solve technical problems. Conduct technical seminars and prepare technical sales literature for Chinese market. Salary \$30,900 per year. Apply in person or with résumé to: 1275 Clarendon Avenue, Avondale Estates, GA 30002, or to the nearest Georgia Job Service Center. Control #GA 5233560.

The Division of Urology, UCLA School of Medicine, is recruiting a **UROLOGIST** to function as a full-time faculty member primarily in the areas of urodynamics and female urology. Applicants must be Board-certified or Board-eligible, have extensive experience and made sufficient contributions to clinical research in urodynamics, bladder reconstruction and female urology. The applicant must be capable of organizing and supervising a section of neurourology and female urology in a large clinical department. Applicants should submit curriculum vitae, bibliography, and names of references. *UCLA is an Equal Opportunity/Affirmative Action Employer.* Inquiries should be addressed to: Chief, Division of Urology, UCLA School of Medicine, Los Angeles, CA 90024-1738.

**VESTIBULAR FUNCTION SPECIALIST:** Faculty position with responsibility for teaching, and research and administration of modern vestibular lab. Salary and rank negotiable, *An Equal Opportunity, Affirmative Action Employer.* Contact: Robert Mathog, M.D., Professor and Chairman, Department of Otolaryngology, Wayne State University, 540 East Canfield, Detroit, MI 48201.

**VETERINARY CLINICAL PATHOLOGIST.** Department of Veterinary Pathology, Purdue University, invites applications for a faculty position. Preference will be given to candidates with demonstrated extramural funding success who will complement our research in toxicologic pathology, bone marrow culture systems, bronchoalveolar lavage and cerebrospinal fluid profiling, or neutrophil function. The investigator also is expected to supervise graduate students and teach graduate courses in his/her specialty. Please send curriculum vitae and names of three references to: Dr. F. R. Robinson, Head, Department of Veterinary Pathology, Purdue University, West Lafayette, IN 47907. Applications will be accepted until 1 September 1987 or until the position is filled. *Purdue University is an Affirmative Action/Equal Opportunity Employer.*

## AWARDS

### REQUEST FOR NOMINATIONS

The Ecological Society of America invites nominations for the ESA Corporate Award. This award, given annually in one of six categories, recognizes a corporation, business, or individual for accomplishment in incorporating ecological concepts, knowledge, and practices in planning and operating procedures. This year's category is Environmental Education, which includes organizations producing educational materials in print, film, video, software, or multi-media formats; conducting workshops or training sessions; or providing other types of educational products or services primarily concerned with environmental education. Nominations should be made by 1 November 1987. To receive information about criteria for selection and nomination procedures, contact: Dr. J. C. Randolph, ESA Corporate Award Committee, School of Public and Environmental Affairs, Indiana University, Bloomington, IN 47405. Telephone: 812-335-5058.

## COURSES

### HOW TO MAKE MICROCAPSULES A HANDS-ON COURSE

A 3-day laboratory course designed to teach the art and science of microcapsule making. Suitable for biologists, pharmacists, chemists, life scientists, and engineers. Enrollment limited to twelve. Lectures and laboratory sessions by Dr. Curt Thies, Professor of Chemical Engineering at Washington University in St. Louis. Fall session: 11 to 14 October and 15 to 18 November 1987. For information call: 314-889-6066.

24 September 1987 and 29 October 1987: The Biotechnology Division of Fisher Scientific is sponsoring a Mind Broadening Adventure on "SOME DO'S AND DON'TS AND HOW TO'S IN CELL CULTURE" to be held at the Denver Marriott Southeast and the Houston Marriott Medical Center, respectively. For further information and details, write to: S. Daniel Makover, Ph.D., Fisher Scientific, 711 Forbes Avenue, Pittsburgh, PA 15219 or call: 412-562-1702.

## GRANTS

**RESEARCH AND EXCHANGE PROGRAM WITH CHINA.** The Committee on Scholarly Communication with the People's Republic of China (CSCPRC) announces the Visiting Scholar Exchange Program. Offers grants to Americans in natural sciences and engineering for short-term research in China and to Chinese for scholarly exchange in U.S. Application deadline: 10 October 1987. Write to: CSCPRC, National Academy of Sciences, 2101 Constitution Avenue, Washington, DC 20418. Telephone: 202-334-2718.



American Health Assistance Foundation is accepting **RESEARCH GRANT APPLICATIONS** for Coronary Heart Disease Research and National Glaucoma Research up to \$25,000.

For further information, please write to: American Health Assistance Foundation, c/o Carolyn P. Krym, 15825 Shady Grove Road, Suite 140, Rockville, MD 20850. Deadline 30 November 1987.

## TRAINING PROGRAM

**POSTDOCTORAL TRAINING OPPORTUNITIES** are regularly available with the College of Biological Sciences at the University of Minnesota. Inquiries may be directed to the Departments of Biochemistry, Botany, Ecology and Behavioral Biology, and Genetics and Cell Biology, as well as the following research programs: Bell Museum of Natural History, Biological Process Technology Institute, Cedar Creek Natural History Area, Gray Freshwater Biological Institute, the Lake Itasca Forestry and Biological Station, and the Plant Molecular Genetics Institute.

For information about possible openings in these programs, please write to (include curriculum vitae and specify departments of interest):

University of Minnesota  
College of Biological Sciences  
123 Snyder Hall  
1475 Gortner Avenue  
St. Paul, MN 55108

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

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIP.** Position for recent Ph.D. for research in the cell biology and lipid biochemistry of blood cells and vascular cells. Appointment at Harvard Medical School and the affiliated Brigham and Women's Hospital. Starting time flexible. Send curriculum vitae and names of three references to: Dr. Andrew I. Schafer, Hematology Division, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115. *Equal Opportunity Employer.*

## FELLOWSHIPS

**ALEXANDER HOLLAENDER DISTINGUISHED POSTDOCTORAL FELLOWSHIP PROGRAM** provides research opportunities in the life, biomedical, and environmental sciences. Fellowships are tenable at various U.S. Department of Energy laboratories and university laboratories with programs supportive of the Office of Health and Environmental Research. Stipend is \$35,000. A doctoral degree received after 1 April 1986 is required, as is U.S. citizenship or PRA status. Deadline is 19 January 1988. For application materials contact: Hollaender Postdoctoral Fellowships, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117. Telephone: 615-576-3190.

**POSTDOCTORAL FELLOWSHIP—A** 2-year postdoctoral research fellowship position is available in the Division of Medical Oncology, Jefferson Medical College for 1 August 1987 to study the role of HLA in human sarcomas. Candidates should have a Ph.D. degree with strong background in performing gel electrophoresis as well as basic immunology. Tissue culture experience is suggested, but not mandatory. Please submit curriculum vitae and the names of three references to: Susan F. Slovin, Ph.D., Michael J. Mastrangelo, M.D., Division of Medical Oncology, Jefferson Medical College, Thomas Jefferson University, 1015 Walnut Street, Philadelphia, PA 19107. *Thomas Jefferson University is an Affirmative Action/Equal Opportunity Employer.*

**FELLOWSHIPS** are available for pre- and postdoctoral study in the Pharmacology Graduate Program of the Grace Cancer Drug Center, Roswell Park Memorial Institute, a Graduate Division of the State University of New York at Buffalo. Stipends and tuition waivers are available for eligible candidates. The program offers diversified training related to the pharmacological, molecular, and biochemical basis for drug action with emphasis on cancer therapeutics. Specific areas include: cellular differentiation and growth regulation, cellular ultrastructure, oncogenes, drug resistance, immunopharmacology and metabolic regulators, inhibition or alteration of nucleic acid, protein and membrane components, pharmacokinetics and drug metabolism, mechanisms of carcinogenesis, genetic basis for drug action, preclinical and clinical pharmacology, medicinal chemistry, and toxicology. U.S. citizens and permanent residents may send applications to:

E. Mihich, M.D., Chairman  
Graduate Pharmacology Program  
Roswell Park Memorial Institute  
Grace Cancer Drug Center  
666 Elm Street  
Buffalo, NY 14263

Please include curriculum vitae and indicate two references.

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**POSTDOCTORAL FELLOWSHIP IN MOLECULAR BIOLOGY OF MEGAKARYOCYTES.** Ph.D. to participate in studies of expression and structural/functional relationships of cloned megakaryocyte genes for PF4 and glycoproteins IIb and IIIa. Studies will involve in situ hybridization and site-directed mutagenesis. Experience with recombinant DNA methodologies and/or megakaryocyte biology needed. Send résumé, statement of research interest, and names of three references to: Dr. Mortimer Poncz, The Children's Hospital of Philadelphia, 1 Civic Center Boulevard, Philadelphia, PA 19104. *Affirmative Action/Equal Opportunity Employer.*

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Fellows will be expected to devote their entire fellowship period solely to research activity at the basic and/or clinical levels. During their fellowships period, they will work closely with their sponsors. It is anticipated that by the conclusion of the fellowship period, fellows will be able to begin independent research programs applying basic science to the solution of clinical problems.

### AMOUNT OF FELLOWSHIP:

\$40,000 per year for three years,  
beginning July 1988

### DEADLINE FOR APPLICATIONS:

November 16, 1987

## S E L E C T I O N C O M M I T T E E

### **Daniel E. Bergsagel, M.D., D.Phil.**

Ontario Cancer Institute/  
Princess Margaret Hospital

### **John R. Durant, M.D.**

Fox Chase Cancer Center

### **Emil Frei, III, M.D.**

Harvard Medical School/  
Dana-Farber Cancer Center

### **George Klein, M.D.**

The Karolinska Institute

### **Joshua Lederberg, Ph.D.**

The Rockefeller University

### **Albert H. Owens, Jr., M.D.**

The Johns Hopkins University  
School of Medicine

### **Henry C. Pitot, M.D., Ph.D.**

McArdle Laboratory for Cancer  
Research

### **Phillip A. Sharp, Ph.D.**

Massachusetts Institute of  
Technology Cancer Research  
Center

### **Richard J. Steckel, M.D.**

Jonsson Comprehensive Cancer  
Center, UCLA

### **Haruo Sugano, M.D.**

Japanese Foundation for  
Cancer Research

### **E. Donnall Thomas, M.D.**

Fred Hutchinson Cancer  
Research Center

### **James D. Watson, Ph.D.**

Cold Spring Harbor Laboratory

Rules and official application forms are available from: Secretary, Bristol-Myers Cancer Research Fellowships, 345 Park Avenue, Room 43-38, New York, NY 10154; Telephone (212) 546-4337.



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