

ble that active research physicists of their stature have taken the time to prepare a book that will allow others to learn the subject systematically. Indeed, theirs is the only comprehensive textbook on string theory currently available, and it is excellent in many ways. Because of this and the general fervor in the field, physicists in one research group have affectionately dubbed the book "the greatest story ever told," or "the greatest story ever written."

The book is intended for advanced physics graduate students and other scientists with some technical understanding of quantum field theory and particle physics. For such readers the first chapter provides a quick tour of the history of string theory, its relation to gravity, and the important role of conformal invariance. The chapter clearly describes one of the most startling facts about string theory, namely that a path-integral formula for a correlation function in a two-dimensional free-field theory can be interpreted and evaluated as a scattering amplitude for particles in a higher-dimensional space-time. In subsequent chapters string quantization is treated in the light-cone and modern covariant methods, the various superstring theories are discussed, and operator and functional methods for the calculation of tree and one-loop amplitudes are presented. Chapters 12 through 15 are very useful as an introduction to many of the modern mathematical methods that enter into string theory and its phenomenological interpretation.

Certainly the book's greatest strength is the way in which it brings modern methods into the treatment. For example, there is a nice discussion of the relation between the GSO projection and spin structures on Riemann surfaces. However, conformal field theory, which many regard as the simplest approach to string theory, is not adequately treated. There are other places where the treatment seems confusing and even wrong, some of which were brought to my attention by puzzled students. For example, the discussion in chapter 3 of the beta function and conformal invariance of the nonlinear sigma model is at best misleading, partly because it is based on a different form of the background field expansion from that used in the research literature. The functional methods that are the subject of chapter 11 are very important. The original literature is difficult to read, and the book does attempt to explain several points in more detail. However, I did not find these explanations as illuminating as I would have hoped. One elementary error occurs in the treatment of the Neumann function (vol. 2, p. 200) where the flux conservation constraint is neglected, so that there is, under most con-

ditions, no solution to the equations given.

The shortcomings of this book lie in the treatment of specific topics, not in the overall scope or structure. They can be corrected in a later edition. Serious readers may get stuck at some points and are advised to consult an experienced string theorist. They should realize that the second wave of string theory developed so quickly that there was no time for the usual process of pretesting the material in graduate courses. It is rare that a book on an active subject of research appears early enough to be as useful as this one.

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Massachusetts Institute of Technology,  
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## Reprints of Books Previously Reviewed

**Biology of Spiders.** Rainer F. Foelix. Harvard University Press, Cambridge, MA, 1987. Paper, \$14.95. Reviewed 218, 46 (1982).

**An Introduction to Science Studies.** The Philosophical and Social Aspects of Science and Technology. John Ziman. Cambridge University Press, New York, 1987. Paper, \$14.95. Reviewed 229, 458 (1985).

**The Physicists.** The History of a Scientific Community in Modern America. Daniel J. Kevles. Harvard University Press, Cambridge, MA, 1987. Paper, \$12.95. Reviewed 199, 524 (1978).

## Books Received

**Biotechnology in Agricultural Chemistry.** Homer M. LeBaron *et al.*, Eds. American Chemical Society, Washington, DC, 1987. xxii, 367 pp., illus. \$64.95. ACS Symposium Series, 334. From a symposium, Chicago, IL, Sept. 1985.

**The Book of Squares.** Leonardo Pisano (Fibonacci). Academic Press, Orlando, FL, 1987. xx, 124 pp., illus. \$19.95. Translated from the Latin and annotated by L. E. Sigler.

**Crystallographically Ordered Polymers.** Daniel J. Sandman, Ed. American Chemical Society, Washington, DC, 1987. viii, 287 pp., illus. \$69.95. ACS Symposium Series, 337. From a symposium, New York, April 1986.

**Detection of Bacterial Endotoxins with the Limulus Amebocyte Lysate Test.** Stanley W. Watson, Jack Levin, and Thomas J. Novitsky, Eds. Liss, New York, 1987. xx, 528 pp., illus. \$78. Progress in Clinical and Biological Research, vol. 231. From a conference, Woods Hole, MA, Sept. 1985.

**The Development of Behavioral States and the Expression of Emotions in Early Infancy.** New Proposals for Investigation. Peter H. Wolff. University of Chicago Press, Chicago, IL, 1987. viii, 291 pp., illus. \$32.50.

**Evaluation of Multicomputers for Image Processing.** L. Uhr *et al.*, Eds. Academic Press, Orlando, FL, 1987. xiv, 346 pp., illus. \$35. Based on a workshop, Tucson, AZ, 1984.

**The Implementation of the Icon Programming Language.** Ralph E. Griswold and Madge T. Griswold. Princeton University Press, Princeton, NJ, 1987. xii, 336 pp., illus. \$39.50. Princeton Series in Computer Science.

**Infinite Lie Algebras and Conformal Invariance in Condensed Matter and Particle Physics.** K. Dietz and V. Rittenberg, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). x, 201 pp., illus. \$44. Proceedings of the Johns Hopkins Workshop on Current Problems in Particle Theory, 10 (Bonn, F.R.G., Sept. 1986).

**Infopower.** Biophysics and Biosociology of Mind. Paul S. Henshaw and Sylvan J. Kaplan. Dorrance, Bryn Mawr, PA, 1987. x, 289 pp., illus. \$18.95.

**Intercalation in Layered Materials.** M. S. Dressel-

haus, Ed. Plenum, New York, 1986. xiv, 497 pp., illus. \$89.50. NATO Advanced Science Institutes Series B, vol. 148. From a school, Erice, Italy, July 1986.

**Internal Structure of Fault Zone.** Chi-yuen Wang, Ed. Birkhäuser, Boston, 1987. 373 pp., illus. Paper, \$29. Reprinted from *Pure and Applied Geophysics*, vol. 124.

**An Introduction to Biophysics with Medical Orientation.** I. Tarján, Ed. Akadémiai Kiadó, Budapest, 1987. 423 pp., illus., + plates. \$46. Translated from the Hungarian edition (Budapest).

**Introduction to Biostatistics.** Robert R. Sokal and F. James Rohlf. 2nd ed. Freeman, New York, 1987. xiv, 363 pp., illus. \$37.95.

**Introduction to Multinuclear NMR.** Theory and Application. Claude H. Yoder and Charles D. Schaeffer, Jr. Benjamin/Cummings, Menlo Park, CA, 1987. xii, 335 pp., illus. Paper, \$27.95.

**Nutritional Toxicology.** Vol. 2. John N. Hathcock, Ed. Academic Press, Orlando, FL, 1987. xvi, 300 pp., illus. \$65. Nutrition: Basic and Applied Science.

**Organoselenium Chemistry.** Dennis Liotta, Ed. Wiley-Interscience, New York, 1987. x, 422 pp., illus. \$65.

**Parallel Processing Techniques for Simulation.** M. G. Singh, A. Y. Allidina, and B. K. Daniels, Eds. Plenum, New York, 1986. viii, 301 pp., illus. \$49.50. Applied Information Technology. From a workshop, Manchester, England, Oct. 1985.

**Participative Systems at Work.** Creating Quality and Employment Security. Sidney P. Rubinstein, Ed. Human Sciences Press, New York, 1987. 180 pp. \$24.95.

**Patterns, Defects and Microstructures in Non-equilibrium Systems.** Applications in Materials Science. D. Walgraef, Ed. Nijhoff, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). xviii, 377 pp., illus. \$85.50. NATO Advanced Science Institutes Series E, no. 121. From a workshop, Austin, TX, March 1986.

**Planning for Groundwater Protection.** G. William Page, Ed. Academic Press, Orlando, FL, 1987. xii, 387 pp., illus. \$45.

**The Plant Kingdom.** Harold C. Bold and John W. La Claire II. 5th ed. Prentice-Hall, Englewood Cliffs, NJ, 1987. x, 309 pp., illus. Paper, \$18.25.

**Plant Tissue and Cell Culture.** C. E. Green *et al.*, Eds. Liss, New York, 1987. xiv, 509 pp., illus. \$47. Plant Biology, vol. 3. From a congress, Minneapolis, MN, Aug. 1986.

**The Plasma Proteins.** Structure, Function, and Genetic Control. Vol. 5. Frank W. Putnam, Ed. 2nd ed. Academic Press, Orlando, FL, 1987. xiv, 418 pp., illus. \$64.

**Pollution Physiology of Estuarine Organisms.** Winona B. Bernberg *et al.*, Eds. Published for the Belle W. Baruch Institute for Marine Biology and Coastal Research by University of South Carolina Press, Columbia, SC, 1987. xiv, 458 pp., illus. \$42.95. Belle W. Baruch Library in Marine Science, no. 17. From a symposium, Georgetown, SC, Oct. 1985.

**Polymer Fracture.** Hans-Henning Kausch. 2nd ed. Springer-Verlag, New York, 1987. xiv, 456 pp., illus. \$139. Polymers. Properties and Applications, vol. 2.

**Polymer Pioneers.** Peter J. T. Morris. Center for the History of Chemistry. Philadelphia, PA, 1986. 88 pp., illus. Paper, \$7.50.

**Rootstocks for Fruit Crops.** Roy C. Rom and Robert F. Carlson, Eds. Wiley-Interscience, New York, 1987. xii, 494 pp., illus. \$54.95.

**Rubber Technology.** Maurice Morton, Ed. 3rd ed. Van Nostrand Reinhold, New York, 1987. x, 638 pp., illus. \$42.95. Sponsored by the Rubber Division of the American Chemical Society.

**Russian Drinking.** Use and Abuse of Alcohol in Pre-Revolutionary Russia. Boris M. Segal. Rutgers Center of Alcohol Studies, New Brunswick, NJ, 1987. xxii, 383 pp. \$29.95; paper, \$19.95. Monographs of the Rutgers Center of Alcohol Studies, no. 15.

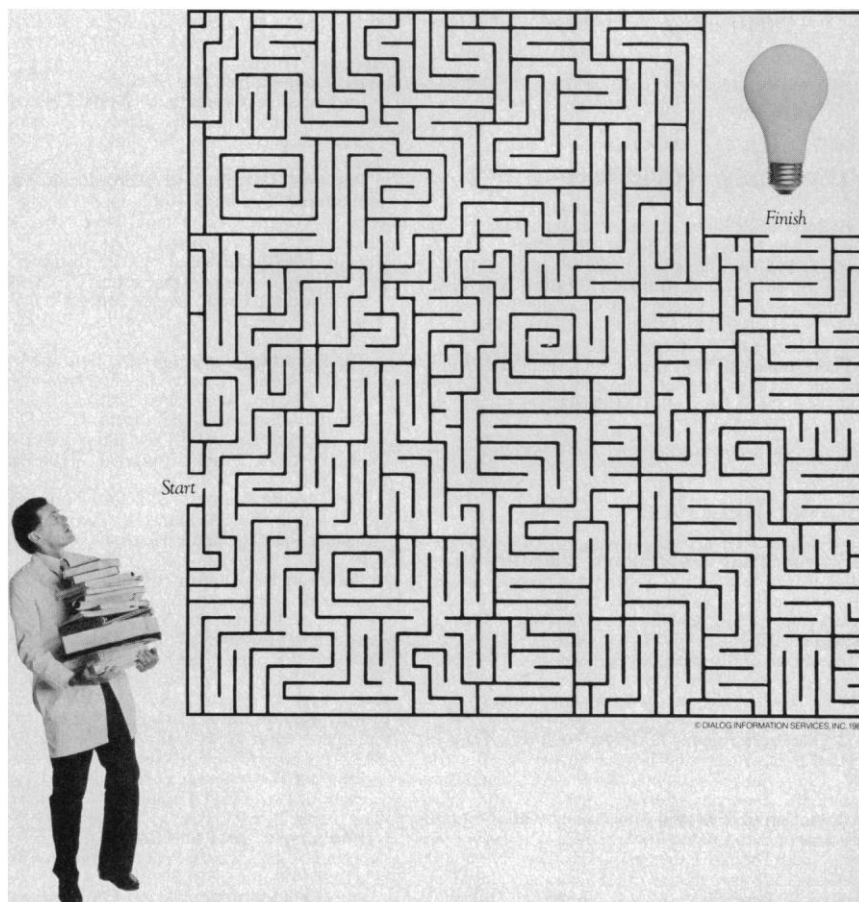
**Schrödinger Operators.** With Application to Quantum Mechanics and Global Geometry. H. L. Cycon *et al.*, Springer-Verlag, New York, 1987. x, 319 pp. Paper, \$23.50. Texts and Monographs in Physics. Based on a course, Thurnau, F.R.G., summer 1982.

**Science and Civilisation in China.** Vol. 5, Chemistry and Chemical Technology. Part 7, Military Technology. The Gunpowder Epic. Joseph Needham, with Ho Ping-Yü, Lu Gwei-Djen, and Wang Ling. Cambridge University Press, New York, 1987. xxxiv, 703 pp., illus. \$99.50.

**The Scientific Study of Flint and Chert.** G. de G. Sieveking and M. B. Hart, Eds. Cambridge University Press, New York, 1986. xiv, 290 pp., illus. \$79.50. From a symposium, Brighton, U.K., April 1983.

**The Search for Connections.** Studies of Regeneration in the Nervous System of the Leech. John G.

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Nicholls. Sinauer Associates, Sunderland, MA, 1987. x, 86 pp., illus. Paper, \$19.95. Magnes Lecture Series, vol. 2.

**Soil Fertility and Organic Matter as Critical Components of Production Systems.** R. F. Follett *et al.*, Eds. Soil Science Society of America and American Society of Agronomy, Madison, WI, 1987. x, 166 pp., illus. \$22. SSSA Special Publication, no. 19. From a symposium, Chicago, IL, Dec. 1985.

**Space Research in the Federal Republic of Germany.** Karl-Heinz Preuss and Rolf H. Simen, Eds. Inter Nationes, Bonn, 1987. 114 pp., illus. Paper. Translated from the German.

**Spatial Aspects of Influenza Epidemics.** A. D. Cliff, P. Haggett, and J. K. Ord. Pion, London, U.K., 1987 (U.S. distributor, Methuen, New York). x, 280 pp., illus. \$52.50

**The Spider.** John Crompton. Lyons, New York, 1987. 254 pp., illus. Paper. \$8.95. Reprint, 1950 edition.

**Statistical Design for Research.** Leslie Kish. Wiley, New York, 1987. xiv, 267 pp., illus. \$34.95. Wiley Series in Probability and Mathematical Statistics.

**Statistical Models for Optimizing Mineral Exploration.** T. K. Wignall and J. DeGeoffroy. Plenum, New York, 1987. xii, 432 pp., illus. \$75.

**Statistical Physics.** H. Eugene Stanley, Ed. North-Holland (Elsevier), New York, 1986. xviii, 432 pp., illus. Paper, \$12. From a conference, Boston, MA, Aug. 1986.

**Stellar Populations.** Colin A. Norman, Alvio Renzini, and Monica Tosi, Eds. Published for the Space Telescope Institute by Cambridge University Press, New York, 1987. x, 245 pp., illus. \$32.50. Space Telescope Science Institute Symposium Series, 1. From a meeting, Baltimore, MD, May 1986.

**Stochastic Methods in Biology.** M. Kimura, G. Kallianpur, and T. Hida, Eds. Springer-Verlag, New York, 1987. vi, 229 pp., illus. Paper, \$22.80. Lecture Notes in Mathematics, vol. 70. From a workshop, Nagoya, Japan, July 1985.

**Strong Interactions and Gauge Theories.** J. Tran Thanh Van, Ed. Editions Frontières, Gif sur Yvette, 1986. x, 679 pp., illus. \$69. From a meeting, Les Arcs, France, March 1986.

**Symplectic Geometry and Analytical Mechanics.** Paulette Libermann and Charles-Michel Marle. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). xvi, 526 pp. \$89. Mathematics and its Applications. Translated from the French by Bertram Eugene Schwarzbach.

**The Szeletian and the Transition from Middle to Upper Palaeolithic in Central Europe.** P. Allsworth-Jones. Clarendon (Oxford University Press), New York, 1986. xx, 412 pp., illus. + plates. \$105.

**Tailoring Genes for Crop Improvement.** An Agricultural Perspective. George Bruening *et al.*, Eds. Plenum, New York, 1987. x, 228 pp., illus. \$49.50. Basic Life Sciences, vol. 41. From a conference, Davis, CA Sept. 1985.

**Teaching Health Statistics.** Twenty Lesson and Seminar Outlines. S. K. Lwanga and Cho-Yook Tye, Eds. World Health Organization, Geneva, Switzerland, 1986. viii, 230 pp. Paper, \$23.40.

**Testing in Software Development.** Martyn A. Ould and Charles Unwin, Eds. Published for the British Computer Society by Cambridge University Press, New York, 1986. x, 124 pp., illus. Paper, \$16.95.

**Tethers in Space.** Peter M. Bainum *et al.*, Eds. Published for the American Astronautical Society by Univelt, San Diego, CA, 1987. xviii, 765 pp., illus. \$80; paper, \$70. Advances in the Astronautical Sciences, vol. 62. From a conference, Arlington, VA, Sept. 1986.

**Theory of Planetary Atmospheres.** An Introduction to Their Physics and Chemistry. Joseph W. Chamberlain with Donald M. Hunten. 2nd ed. Academic Press, Orlando, FL, 1987. xiv, 481 pp., illus. \$49.50. International Geophysics Series, vol. 36.

**Theory of Reflection.** Of Electromagnetic and Particle Waves. John Lekner. Nijhoff, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). xii, 279 pp., illus. \$78.50. Developments in Electromagnetic Theory and Applications, 3.

**Three-Dimensional Machine Vision.** Takeo Kanade, Ed. Kluwer, Norwell, MA, 1987. x, 609 pp., illus. \$85. Kluwer International Series in Engineering and Computer Science.

**VLSI CAD Tools and Applications.** Wolfgang Fichtner and Martin Morf, Eds. Kluwer, Norwell, MA, 1987. xiv, 552 pp., illus. \$69.50. Kluwer International Series in Engineering and Computer Science. From a school, Beatenberg, Switzerland, July-Aug. 1986.

**Weather and Forecasting.** Storm Dunlop and Francis Wilson. Collier (Macmillan), New York, 1987. 160 pp., illus. Paper, \$8.95. Macmillan Field Guides.

## Products & Materials

### *Mac Software Recognizes Handwriting*

Personal Writer 15 is a computer software and hardware package that allows the user to interact with a Macintosh computer by means of pen and paper instead of a keyboard or mouse. The package contains a digitizer, an electronic pen, and character-recognition software. The user prints or draws with the pen on paper on the digitizer. The software learns to recognize each user's printed handwriting. Transparent to and compatible with all Macintosh software, Personal Writer 15 can delete, correct, and insert. A 100,000-word dictionary is built in. Personal Writer 15 operates on the Macintosh Plus, SE, and II computers with at least 1 megabyte of memory; a hard disk is recommended. Anatex. Circle 545.

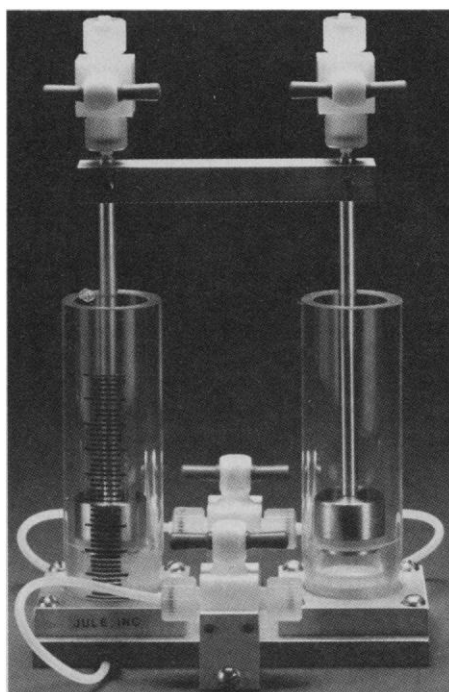
### *Word Processor with Document Management*

Word 4.0 is a word-processing package updated to be faster than the 3.11 version and to run on the new IBM PS/2 computers. The user can toggle between text-entry mode and WYSIWYG (what you see is what you get) mode, which displays the text as it will print, including italics, subscripts, superscripts, and small caps. The WYSIWYG mode has a resolution of 640 by 480 pixels and can display 16 of a possible 256,000 colors at once. Macros may be edited and may be assigned to any function or control key; macros may also contain conditional statements, looping, and prompts. The document manager allows the user to search for documents by author, operator, date, document title, keywords, or comments. In addition, a directory of documents may be sorted according to this information. Even words and phrases within the document may be used as search criteria. Other features include highlighting of revisions, a spreadsheet link, a 130,000-word spelling checker, simplified creation of style sheets, and the ability to draw boxes and lines with

the cursor keys. A third-party software package named EXACT allows mathematical equations to be embedded within a Word document. Word 4.0 operates on IBM PC, IBM PS/2, and compatible computers with 320 kilobytes of memory and two drives. Microsoft. Circle 547.

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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.

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Two tenure-track positions are available at the assistant or associate professor level in the Department of Anatomy and Cell Biology at the University of Virginia. The department stresses research, and candidates are expected to maintain independent programs of investigation. Emphasis is on cellular, reproductive, and developmental biology. Preference for one of the positions will be given to candidates who are applying the approaches of molecular biology to one of these disciplines. Medical school teaching responsibilities for one position are in gross anatomy; for the second position they are flexible with options including cell biology-histology. Interested persons should send their curriculum vitae and the names of three references to: **Dr. Charles J. Flickinger, Department of Anatomy and Cell Biology, Box 439, University of Virginia Medical Center, Charlottesville, VA 22908.** *An Affirmative Action/Equal Opportunity Employer.*

### ASSOCIATE DIRECTOR OF IMMUNOPATHOLOGY

Saint Luke's Hospital, a progressive 474-bed teaching hospital, affiliated with Case Western Reserve University, currently has a full-time position available for an associate director of immunopathology.

Doctoral Scientist (Ph.D.) in Immunology. Experienced preferred, 2 to 4 years in clinical immunology. Some research. A wide gamut of testing including surface markers, T and B cells, serology, and flow cytometry.

Interested candidates should submit a résumé to:

**The Employment Office:**  
**Saint Luke's Hospital**  
11311 Shaker Boulevard  
Cleveland, OH 44104

*An Equal Opportunity Employer M/F/H*

### ASSISTANT PROFESSOR UNIVERSITY OF SOUTHERN CALIFORNIA

Biomedical chemist: assistant professor (tenure-track), School of Pharmacy, University of Southern California. Outstanding candidates with graduate training in any field of chemistry and research interests in the broad area of peptide/protein chemistry relating to the neurosciences considered. Candidates should have interests in the molecular or physical basis of protein structure/function relationships or protein engineering. Experience in NMR, theoretical calculations, and molecular graphics, or site-directed mutagenesis desirable. Collaboration opportunities exist with strong research groups in molecular biology, neuropharmacology, and peptide drug targeting/delivery. The candidate will be expected to participate in graduate and professional training programs. Submit curriculum vitae, statement of research goals and accomplishments, and names of three references by 15 November 1987 to: **Dr. Michael B. Bolger, University of Southern California School of Pharmacy, 1985 Zonal Avenue, Los Angeles, CA 90033-1086.**

*Equal Opportunity Employer M/F/H.*



## POSITIONS OPEN

The Department of Neurosciences, UMDNJ-New Jersey Medical School is seeking a highly qualified individual for a faculty appointment at the rank of **ASSISTANT PROFESSOR**. The individual selected should have a Ph.D. degree, as well as postdoctoral experience in the neurosciences. Preference will be given to individuals with experience in molecular biology, neuropharmacology, and neurochemistry, particularly in areas with relevance to human neurologic disease. Please send curriculum vitae and three supporting letters to: **Stuart D. Cook, M.D., Professor and Chairman, Department of Neurosciences, UMDNJ-New Jersey Medical School, 185 South Orange Avenue, Newark, NJ 07103-2757. An Equal Opportunity/Affirmative Action Employer M/F/H/V.**

**ASSISTANT PROFESSOR**, tenure-track position in zoology. Qualifications: Ph.D. in a field appropriate to responsibilities described below. Responsibilities: teaching in aquatic biology, limnology, fisheries, and general biology; commitment to scholarship/research. Effective: 11 January 1988. Send letter of application describing teaching and research interests, curriculum vitae, official transcripts, and three letters of recommendation to: **Dr. Robert Taylor, Search Committee, #33, Department of Life Sciences, Eastern New Mexico University, Portales, NM 88130 by 13 November 1987. ENMU is an Affirmative Action/Equal Opportunity Employer.**

## ASSISTANT PROFESSOR

The Department of Biology at Northeastern University is seeking a **PLANT MOLECULAR BIOLOGIST** or **PLANT PHYSIOLOGIST** to interface with the existing plant science program. The appointment is at the assistant professor level and is tenure-track to begin September 1988. Candidates must have a Ph.D. in the area of plant molecular biology/plant physiology or a related plant science and postdoctoral experience in one of the above areas. We seek an individual with demonstrated potential for developing an externally funded research program and for contributing to the teaching program in the plant science area. Applicants should submit curriculum vitae, statement of research and teaching goals, and three letters of reference by 15 November 1987 to: **Dr. Daniel C. Scheirer, Chairman of the Search Committee, Department of Biology, Northeastern University, 360 Huntington Avenue, Boston, MA 02115. Northeastern is an Equal Opportunity/Affirmative Action, Title IX University.**

## ASSISTANT PROFESSOR CELLULAR BIOLOGY

The Department of Biology, Rice University, is soliciting applicants for an assistant professorship that will become available for the academic year 1988-1989. Of special interest are individuals with demonstrated research ability in the area of cellular signaling mechanisms but exceptional applicants in other areas of cellular biology working at the molecular level will also be considered. Applicants should send a résumé and a brief outline of future research to: **Cell Biology Search Committee, Department of Biology, Rice University, P.O. Box 1892, Houston, TX 77251.** Applicants should also arrange for three letters of reference to be sent to this committee. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

## ASSISTANT PROFESSOR NEUROBIOLOGY

The Department of Biology, Rice University, invites applications for a tenure-track appointment in neurobiology, starting in the 1988 to 1989 academic year. Applicants should have a strong interest in developing an independent research program. Particular areas of interest are related to intercellular communication and include developmental neurobiology, neuroendocrinology, and synaptic physiology. Qualified candidates in other areas of neurobiology will be seriously considered on their merits. Applicants should forward curriculum vitae and a general statement of future research interests to: **Chairman of Neurobiology Search Committee, Department of Biology, Rice University, P.O. Box 1892, Houston, TX 77251.** Applicants should also arrange for three letters of recommendation to be sent to this address. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### PAPANICOLAOU COMPREHENSIVE CANCER CENTER UNIVERSITY OF MIAMI SCHOOL OF MEDICINE

Recently funded 5-year grants on Multiple Drug Resistance and under a New Drug Discovery Project have created the following immediate openings in our Experimental Therapeutics Division:

**ASSISTANT PROFESSOR:** To work on biochemical or molecular biology of drug resistance in human solid tumors. Relevant experience or publications will be preferred.

**POSTDOCTORAL ASSOCIATES:** With experience and interest in clonogenic assays, experimental therapy, biochemical pharmacology of anthracyclins, or analytical pharmacology of new nucleosides or natural products of marine and plant origin.

Interested candidates may send their curriculum vitae with names of three referees to: **Mrs. Susan Martin, Assistant Director for Personnel, Papanicolaou Comprehensive Cancer Center, P.O. Box 016960 (D8-4), Miami, FL 33101. Affirmative Action/Equal Opportunity Employer.**

### ASSISTANT PROFESSOR OF MOLECULAR BIOLOGY CASE WESTERN RESERVE UNIVERSITY DEPARTMENT OF MOLECULAR BIOLOGY AND MICROBIOLOGY

Applications are invited for the position of Assistant Professor of Molecular Biology (tenure track). We are looking for candidates with strong training records and interesting, original research plans. We offer a highly interactive research atmosphere in a well-equipped, expanding department, with recently remodeled space. Cleveland offers pleasant neighborhoods with affordable housing close to the university and easy access to outstanding cultural institutions. An information packet describing the department, the school, and the community can be obtained by writing to us or by calling 216-368-3420. Please submit curriculum vitae that includes a summary of research plans and the names of at least three people willing to provide letters of recommendation to: **Charles Miller, Search Committee Chairman, Department of Molecular Biology and Microbiology, School of Medicine, Case Western Reserve University, Cleveland, OH 44106. An Equal Opportunity/Affirmative Action Employer.**

**ASSISTANT PROFESSOR, FOOD MICROBIOLOGY.** Tenure-track position with responsibilities including approximately 70% research and 30% extension. Ph.D. in microbiology, food science, or related area; demonstrated research and teaching capability. Submit curriculum vitae, description of research interests, transcripts, three letters of reference by 1 December 1987 to: **Richard A. Scanlan, Head, Food, Science and Technology, Oregon State University, Corvallis, OR 97331. Telephone: 503-754-3131. OSU is an Affirmative Action/Equal Employment Opportunity Employer, and complies with Section 504 of the Rehabilitation Act of 1973.**

**ASSISTANT PROFESSORSHIP IN PHYSIOLOGY.** The Department of Physiology at the University of North Dakota School of Medicine is currently soliciting applications for outstanding individuals for a tenure-track position at the assistant professor level. The Ph.D. or M.D. degree and postdoctoral experience, publications, and ability to obtain extramural support are essential. Some teaching experience is highly desirable. The individual must have a strong commitment to medical and graduate education and to conducting an independent research program. Preference will be given to individuals with interest and publications in neurophysiology, neurochemistry, neuroendocrinology, and related disciplines. Special consideration will be given to those individuals who have a research interest in aerospace medicine or are willing to develop programs in this area. Duties will include teaching of medical, graduate, and undergraduate students; conducting independent research; and service on committees. Salary is negotiable based on credentials. Prior to 15 December 1987 applications should be submitted with curriculum vitae including publications and three letters of reference to: **Dr. Stanley J. Brumleve, Chairman, Department of Physiology, University of North Dakota School of Medicine, Grand Forks, ND 58202. The University of North Dakota is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**ASSISTANT PROFESSOR—DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY.** The School of Pharmacy has available a tenure-track position for spring semester 1988. Applicants should have a Ph.D. in the pharmaceutical or natural biological sciences. Send curriculum vitae and references to: **Personnel Office, Southwestern Oklahoma State University, Weatherford, OK 73096. Deadline: 1 November 1987. Affirmative Action/Equal Employment Opportunity.**

## ASSISTANT/ASSOCIATE PROFESSOR OF PATHOLOGY

The Department of Pathology at The University of Oklahoma Health Science Center (OUHSC), College of Medicine, invites applications for a tenure-track position, available immediately, from individuals with strong research credentials in experimental pathology. Applicants should hold Ph.D. or M.D. or equivalent degree, have two or more years of postdoctoral training, and have demonstrated ability to conduct independent research. Research will need to complement ongoing departmental research in the basic biology of cellular differentiation and de-differentiation. Willingness to participate in departmental and interdepartmental research is essential. Applicants will be expected to perform independent research, obtain extramural funding, and participate in the teaching of graduate and professional students. Modern laboratory space, core equipment, and competitive salary will be provided to the successful candidate. Applicants should send curriculum vitae, present and future research plans, most significant reprints, and the names and addresses of three references by 1 November 1987 to: **Dr. L. E. DeBault, Department of Pathology, OUHSC, P.O. Box 26901, Oklahoma City, OK 73190. The University of Oklahoma is an Affirmative Action/Equal Opportunity Employer.**

## ASSISTANT/ASSOCIATE PROFESSOR OF BIOCHEMISTRY PROTEIN STRUCTURE/SPECTROSCOPY

The Department of Biochemistry, University of Virginia School of Medicine is seeking to fill a tenure-track position at the assistant or associate professor level. The position is available 1 July 1988. The Department is reopening a search for candidates with research interests in the areas of protein structure or protein structure-function relationships of either membrane or globular proteins. Individuals with expertise in spectroscopic techniques, such as FT-IR and NMR, are particularly encouraged to apply. Candidates should have a strong background in quantitative biochemistry, biophysics, chemistry, or physics and must have a Ph.D. degree and significant postdoctoral experience or their equivalent. Interested individuals should submit curriculum vitae, a brief outline of future research plans, representative reprints describing past research, and three letters of reference by 1 November 1987 to:

**Chairman, Faculty Search Committee  
Department of Biochemistry  
University of Virginia School of Medicine  
Charlottesville, VA 22908**

*Equal Opportunity Employer/Affirmative Action*

## THE CENTER FOR NEUROSCIENCE DEPARTMENT OF ANATOMY AND NEUROBIOLOGY COLLEGE OF MEDICINE THE UNIVERSITY OF TENNESSEE MEMPHIS

Positions of **ASSOCIATE AND FULL PROFESSOR** are available. Rank and salary will be commensurate with qualifications. Candidates must show evidence of strong research achievement. The department is the center of a rapidly expanding, multidisciplinary neuroscience program. Candidates must be pursuing research programs in neuroscience, especially molecular, neurochemical, and genetic approaches. The position also requires teaching in anatomical courses. Please submit by 15 November 1987, curriculum vitae, statement of research interests, and names of three individuals who can be contacted for letters of reference to: **S. T. Kitai, Chairman, Department of Anatomy and Neurobiology, College of Medicine, The University of Tennessee, Memphis, 875 Monroe Avenue, Memphis, TN 38163.**

*University of Tennessee Memphis is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSORSHIP IN PHYSIOLOGY.** The Department of Physiology at the University of North Dakota School of Medicine is currently soliciting applications for outstanding individuals for a tenure-track position as assistant professor. The Ph.D. or M.D. degree and postdoctoral experience, publications, and ability to obtain extramural support are essential. Some teaching experience is highly desirable. The individual must have a strong commitment to medical and graduate education and to conducting an independent research program. We are seeking applicants in the area of cardiovascular physiology who have a demonstrated potential of achievement in research. Preference will be given to individuals who can apply molecular biological techniques to the study of the cardiovascular system. Special consideration will also be given to those individuals who have a research interest in aerospace medicine. Duties will include teaching of medical, graduate, and undergraduate students; conducting independent research; and service on committees. Salary is negotiable based on credentials. Prior to 15 December 1987 applications should be submitted with curriculum vitae including publications and three letters of reference to: **Dr. Stanley J. Brumleve, Chairman, Department of Physiology, University of North Dakota School of Medicine, Grand Forks, ND 58202.** *The University of North Dakota is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT RESEARCH SCIENTIST.** Applications are invited for a full-time position to conduct grant-supported study of the enzymology of opsin kinase. Position requires preparation of the kinase and its substrates, study of the kinetics of opsin phosphorylation, inhibitors of phosphorylation, preparation of antibodies to the kinase, structural studies, and supervision of technician/student. Ph.D. and postdoctoral experience required with training and expertise in biochemistry, enzymology, organic synthesis and experience or interest in vision research. Recruiting deadline 15 November 1987 to start 1 January 1988. Candidates should submit a letter of application stating research goals, curriculum vitae, and three letters of reference to: **Paul A. Hargrave, Ph.D., Professor, Department of Ophthalmology, Box J-284 JHMH, University of Florida, Gainesville, FL 32610.** *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

### ASSOCIATE DIRECTOR INSTITUTE OF ECOLOGY

Applications are being sought for the position of associate director of the Institute of Ecology at the University of Georgia. The associate director will assist in all phases of the planning and administration of the institute and will have primary responsibility for maintaining the research facility and supervising research and office personnel. The associate director will also be expected to develop an active research program in applied ecology, to promote and conduct special workshops and symposia on ecological topics, and to assist in securing funds for institute research and service projects. Candidates must demonstrate research and leadership abilities and have at least 5 years of previous administrative experience. Salary and academic rank are negotiable. The position is available for filling by 1 January 1988, and the closing date for receipt of applications is 1 November 1987. Applicants should send curriculum vitae and have three letters of reference sent to: **Dr. H. Ronald Pulliam, Director, Institute of Ecology, University of Georgia, Athens, GA 30602.** *Equal Employment Opportunity/Affirmative Action Institution.*

The Department of Psychology, University of South Carolina is looking for a **BEHAVIORAL NEUROSCIENTIST** to occupy a tenure-track position at the rank of assistant professor beginning in August 1988 pending administrative approval. The candidate should have plans for an active program of research involving either humans or animals (or both) and be both willing and able to obtain outside research support. A serious interest in teaching both undergraduate and graduate courses is also expected. Send curriculum vitae, reprints of recent publications, three letters of reference, and a detailed outline of research plans by 30 November 1987 to: **Chair, Behavioral Neuroscientist Search Committee, Department of Psychology, University of South Carolina, Columbia, SC 29208.** *The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.*

## Immunodiagnostic Scientists/Associates

Triton Biosciences Inc., an entrepreneurial subsidiary of Shell Oil Co., is an emerging force in the development of diagnostic and therapeutic products for human health care.

Excellent opportunities exist for innovative researchers in our Immunodiagnostic department. Qualified candidates for the position of Research Scientist will have a Ph.D. and at least 3-5 years of combined post-doc and/or industrial experience. Research Associate candidates should have a BS/MS and 3+ years experience.

### Cancer Diagnosis

Will evaluate reagents, tumor antigens and monoclonal antibodies for their utility in monitoring and management of human tumors. Previous cancer research experience at the molecular or clinical chemistry level preferred. Protein purification skills desired.

### Immunoassay Development

Significant background in immunochemistry as applied to assay feasibility and development required. Experience in diagnostic testing for infectious disease antigens and antibodies using expressed or peptide antigens and monoclonal antibodies is desired.

Triton is located in the San Francisco Bay Area and offers competitive salaries and benefits including relocation assistance. For prompt consideration, submit your C.V. with salary requirements and references to: Triton Biosciences Inc., Box DR, 1501 Harbor Bay Parkway, Alameda, CA 94501. Triton is an Equal Opportunity Employer.



Triton Biosciences Inc.

## POSTDOCTORAL FELLOWSHIP Macromolecular Crystallography

Abbott Laboratories Protein Crystallography Group now offers an excellent opportunity to join leading scientists, Drs. J.W. Erickson and C. Abad-Zapatero, as a research fellow. Under the auspices of a newly established Postdoctoral Fellowship Program in our Pharmaceutical Products Division's Discovery Group, this position will be one to three years in duration, with potential for a staff appointment. Your involvement with our \$4 billion health care company will include research into one of a number of structural problems in the areas of neurosciences, immunosciences, and cardiovascular, inflammatory, bacterial and viral disease. We'll encourage your participation in our team efforts and attendance at scientific meetings, as well as provide support in publishing your results.

If you have a Ph.D. in macromolecular crystallography or a closely related field, we invite you to consider this opportunity within our rational drug design team. Our Protein Crystallography Laboratory is equipped with two Rigaku 12 kw rotating anode X-ray generators, a Rigaku high speed diffractometer, and a Nicolet-Xentronics area detector, as well as state-of-the-art computing and graphics facilities.

In addition to a superior scientific environment and outstanding management recognized as among the best in the nation, we offer a generous salary and full benefits including profit sharing and a stock retirement plan. We are located in an attractive suburban area just 30 miles north of Chicago. For confidential consideration, please send your resume with salary history to: **Patricia Handy/Corporate Placement, Dept. SCI/10-2.** Abbott is an Affirmative Action Employer.

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## POSITIONS OPEN

### BIOCHEMIST/IMMUNOCHEMIST

Bacterial Genetics Group  
Advanced Genetic Sciences, Inc.  
6701 San Pablo Avenue  
Oakland, CA 94608

Research directed towards exploitation of immunoassay detection technology. Applicant should hold a Ph.D. in biochemistry or immunology, or have equivalent postdoctoral experience. Experience with chemical modification of proteins preferable. Salary and level of appointment commensurate with experience. Send curriculum vitae and names, addresses, and telephone numbers of three reference to: **Personnel Manager, Code QLX** at the above address.

### BIOCHEMISTRY AND MOLECULAR BIOLOGY UNIVERSITY OF IOWA

The Department of Biochemistry in the College of Medicine of the University of Iowa is entering a period of expansion and seeks highly qualified applicants for faculty positions at the **ASSISTANT PROFESSOR** (tenure-track) to **PROFESSOR** (tenured) levels. Salaries are competitive and will depend on qualifications and experience. Support for equipping laboratories and initiating research programs will be excellent. Applicants with research in any area of modern biochemistry will be considered. However, preference will be given to applicants whose research interests involve the structure and regulation of eukaryotic genes, intracellular signaling mechanisms, or the structure and function of proteins. Since our long-term objective is to develop or augment critical masses in a small number of areas, applicants with research interests related to those of the present faculty are particularly welcome. In the final analysis, quality of research, not a specific research area, will be the primary criterion.

All applicants must have a relevant graduate degree (Ph.D., M.D. or both, or equivalent foreign degree). Applicants for assistant professor rank should have at least 2 years of productive postdoctoral experience and the potential to initiate and maintain a vigorous research program. Applicants for associate or full professor rank should have well-funded, ongoing research programs and significant national stature in their research areas. In addition to establishing or continuing successful research programs, faculty participate in the department teaching programs. The training of graduate students and participation in appropriate graduate programs also is expected.

Applications, including complete curriculum vitae and the names of at least three references, or nominations should be sent to: **Alan G. Goodridge, Professor and Head, Department of Biochemistry, College of Medicine, University of Iowa, Iowa City, IA 52242.** *The University of Iowa is an Affirmative Action/Equal Opportunity Employer.*

**BIOCHEMISTRY FACULTY POSITION.** A tenure-track position is anticipated in the Biochemistry Division of the Chemistry Department at Wayne State University. Applicants at all levels are welcome. Candidates will be expected to establish an active research program in an area that complements the interests of the existing faculty and to teach in the biochemistry curriculum. The department has core facilities for DNA synthesis and sequencing and for large-scale fermentation. Biochemistry faculty participate in the University Centers for Molecular Biology and Chemical Toxicology and the Comprehensive Cancer Center of Metropolitan Detroit. Applicants should have a Ph.D. and postdoctoral experience. Send curriculum vitae, brief summary of research interests, and three letters of recommendation to: **Dr. Richard Lintvedt, Chairman, Department of Chemistry, Wayne State University, Detroit, MI 48202 by 15 November 1987.** *Wayne State University is an Equal Opportunity/Affirmative Action Employer.*

### BIOLOGIST—ADAMS STATE COLLEGE

Regular track position starting 26 August 1988, teaching 12 to 13 semester hours of undergraduate courses involving modern cellular biology. Ph.D. with demonstrated excellence in teaching. Grant-writing ability preferred, interest in undergraduate research, and computer experience. Rank and salary negotiable. *Equal Opportunity Employer.* Send letter of application, résumé, official transcripts, and three letters of reference by 15 January 1988 to: **Dr. Veryl F. Keen, Adams State College, Alamosa, CO 81102.** Telephone: 303-589-7256.

## POSITIONS OPEN

### DEPARTMENT OF BIOCHEMISTRY MICHIGAN STATE UNIVERSITY

The Department of Biochemistry seeks applicants for tenure-track faculty positions at academic ranks commensurate with experience. Applications are sought from well-trained **BIOCHEMISTS** with highly productive research records. We encourage applications from investigators working toward the mechanistic understanding of fundamental questions in protein biochemistry, cellular and molecular biology, and plant biochemistry. Serious consideration will be given to candidates in biochemical toxicology.

The Department of Biochemistry has a large faculty conducting research in a wide variety of areas including physical biochemistry, enzymology, plant biochemistry, intermediary metabolism, toxicology, immunochemistry, and cellular-, molecular-, developmental-, and neurobiology, affording its members both a stimulating scientific atmosphere and good opportunities for research collaboration. The department occupies a modern research building with well-equipped research laboratories, and faculty may be appointed in any of four colleges (Natural Science, Agriculture and Natural Resources, Human Medicine, and Osteopathic Medicine).

Applicants should have demonstrated productivity and evidence of potential for independent research. In order to assure consideration, applications should be received by 1 November 1987. Applicants should have curriculum vitae, a description of research accomplishments and future interests, and three letters of references on their behalf sent to: **Dr. Jack Preiss, Chairperson, Department of Biochemistry, Box S, Michigan State University, East Lansing, MI 48824.** *Michigan State University is an Equal Opportunity/Affirmative Action Employer.*

**BIOMEDICAL ENGINEER.** Pennsylvania manufacturer of medical monitoring instrumentation seeks an individual for conceptual design, clinical testing, new product, and market development. Position will lead to product line manager. Submit résumé to: **Box 141, SCIENCE.**

### CELL BIOLOGIST

The Department of Anatomy and Cell Biology at the University of Florida invites applications for a tenure-track position at the assistant professor level to be filled by 1 September 1988. The applicant should have a Ph.D. or equivalent, at least 2 years of postdoctoral experience and demonstrated ability to develop an independent research program. The candidate's research should be directed toward understanding basic cellular and/or developmental processes, including events at the molecular level. The appointee will be expected to take an active role in an expanding graduate program and participate in one of the following general courses taught by the department: embryology, cell biology, histology, or gross anatomy. Previous teaching experience is not required, but there must be a strong interest in becoming accomplished in one of these areas. Applicants should send complete curriculum vitae with reprints and names of three references to: **Dr. Carl Feldherr, Chairman of Search Committee, Department of Anatomy and Cell Biology, Box J-235 JHMHSC, University of Florida College of Medicine, Gainesville, FL 32610-0235.**

Application deadline: 15 December 1987.

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

### CLINICAL MICROBIOLOGIST ASSISTANT PROFESSOR

Position available in the Department of Pathology, University of Louisville School of Medicine, for individuals with Ph.D. degree in clinical microbiology. The position is based at the Veterans Administration Medical Center, an affiliated hospital with 335 beds with an active outpatient service and providing over half a million weighted microbiology tests per year. Candidates must have a successful record of interest in basic and/or clinical research and effectiveness in teaching microbiology to pathology residents. *Women and members of minority groups are strongly encouraged to apply.* Please submit curriculum vitae and four letters of recommendation to: **Bogdan Nedelkoff, M.D., Department of Pathology, University of Louisville School of Medicine, Louisville, KY 40292.** *An Equal Employment/Affirmative Action Employer.*

## POSITIONS OPEN

### CHAIRMAN DEPARTMENT OF BIOLOGY THE UNIVERSITY OF MISSISSIPPI

Applications or nominations are sought for the position of Chairman of the Department of Biology, The University of Mississippi, Oxford campus. The department consists of 18 full-time faculty who offer a variety of research specialties for graduate studies leading to the M.S. and Ph.D. degrees. A current focus is on the development of a strong freshwater biology research program, which is complemented by active and growing programs in other areas. The department chairman will have the responsibility for providing leadership to the department as it aggressively pursues this new phase of development, while maintaining excellence in its undergraduate curriculum. We anticipate that as many as four positions will be filled during the next 2 years. The successful candidate for the position must possess a doctoral degree and present evidence of teaching and research excellence, the latter to include successful grantsmanship and scholarly publications. The research specialty of the position is open, but the needs of the department will be taken into account during the review and selection process. We anticipate that the position will be filled at the level of professor. Starting date: 1 July 1988. A letter of application, curriculum vitae, and the names and addresses of three references should be sent to: **Dr. Bailey Ward, Chairman, Biology Chairman Search Committee, Department of Biology, College of Liberal Arts, The University of Mississippi, University, MS 38677.** Deadline for applications: 1 December 1987, or until position is filled. *The University of Mississippi is an Equal Opportunity Employer.*

### CHAIRMAN DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS

The College of Medicine, University of Tennessee, Memphis, requests applications for the position of Professor and Chairman of its Department of Physiology and Biophysics. The department is composed of a distinguished faculty whose members have active, well-funded research programs. It is located on the campus of one of the nation's largest health science centers. Applicants should hold the Ph.D. and/or M.D. degree or equivalent, be distinguished investigators, have strong credentials in the educational area and be capable of providing vigorous academic leadership for this major basic science department. Candidates are requested to submit curriculum vitae and names and addresses of three references no later than 1 December 1987, to: **Murray Heimberg, Ph.D., M.D., Chairman, Physiology and Biophysics Advisory Committee, The University of Tennessee, Memphis, College of Medicine, 800 Madison Avenue, Memphis, TN 38163.**

*As an Equal Opportunity Employer, The University of Tennessee, Memphis is committed to an aggressive Affirmative Action effort, and encourages minority applications.*

### CHIEF VETERANS ADMINISTRATION COOPERATIVE STUDIES PROGRAM COORDINATING CENTER AT WEST HAVEN, CONNECTICUT

The Veterans Administration invites applications of qualified candidates for the position of Chief, Cooperative Studies Program Coordinating Center at the West Haven, Connecticut, VA Medical Center. The center is one of four national centers that provide statistical data processing and managerial support for VA cooperative studies. Responsibilities include: (i) the scientific and administrative supervision of 10 to 15 ongoing multicenter clinical trials relevant to care of veteran patients; (ii) the management of an established statistical and data processing coordinating center of 30 to 35 employees; and (iii) participation on a management team that advises the chief of the Cooperative Studies Program on the overall direction of the program. Applicants must be U.S. citizens with a doctoral degree or equivalent experience in biostatistics or a related field. Experience in biomedical research, multicenter clinical trials, and administration is essential. This is a federal civil service appointment at the GS-15 level (salary range \$53,830 to \$69,976). Send requests for application information to: **Daniel Deykin, M.D., Chief, Cooperative Studies Program (151-J), VA Medical Center, 150 South Huntington Avenue, Boston, MA 02130.** *The Veterans Administration is an Equal Opportunity/Affirmative Action Employer.*

## Postdoctoral and Research Associate Positions

Postdoctoral and research associate (BS/MS) positions are available immediately to study targeted anti-viral agents for the treatment of AIDS. These positions are part of a new NIAID sponsored drug discovery effort to utilize the techniques of structural biology, molecular biology, enzymology, and organic chemistry to develop anti-HIV agents based on HIV structural and mechanistic studies. Background in recombinant DNA methodology, biochemistry, and/or virology desirable. Send curriculum vitae with names of three references to: W. Gary Tarpley, The Upjohn Company, Cancer and Viral Diseases Research, 7252-267-4, Kalamazoo, Michigan 49001. An Equal Opportunity Employer, M/F

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## Medicinal Chemist

The Medicinal Chemistry Department of Smith Kline & French Laboratories seeks an outstanding organic chemist to work in a state-of-the-art research facility in the Philadelphia suburbs, near Valley Forge. The selected individual will assist in the design and synthesis of receptor antagonists and molecules destined to interrupt enzymatic processes. Experience in synthetic organic chemistry is essential.

The successful candidate will possess the following:

- B.S. or M.S. in Chemistry or equivalent experience.
- Excellent working knowledge of reaction mechanisms.
- Skill in modern methods of isolation and purification of reaction products.
- Experience in the use of modern physical methods to determine the structure of reaction products.
- An ability to communicate results effectively.

We offer an excellent compensation, benefits and relocation package as well as the opportunity for personal and professional growth. For confidential consideration, send your C.V. and names of three references to Mr. Robert F. Obst, R0090, R&D Senior Employment Consultant, SmithKline Beckman Corporation, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

# SK&F

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# BIOANALYTICAL CHEMIST

BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., a major researcher, developer, manufacturer and marketer of prescription and over-the-counter drugs, is seeking a dedicated Chemist for our Biochemistry Department located in DANBURY, CT.

The individual we seek to join our committed team of scientists should have a BS/MS in Biochemistry, Chemistry or Pharmaceutical Sciences or equivalent. Plus, 2 to 3 years laboratory experience in analytical assay methods development for quantitative trace analysis of chemicals and/or drugs in biological fluids using HPLC, GC and GC-MSD. You should be able to implement state-of-the-art analytical techniques including operation, maintenance and troubleshooting and should be proficient in technical writing and oral communication on scientific matters.

BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., offers a competitive compensation and benefits package, relocation assistance and an opportunity to have your contributions recognized.

For immediate consideration, please send your resume to Dept JC-1JB, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. We are an equal opportunity employer m/f/h/v.



## Boehringer Ingelheim

## Visiting Scientist Immunology

A postdoctoral Visiting Scientist position is open within the Medical Products Department at Du Pont's Glenolden Laboratory in Pennsylvania. The successful candidate will conduct innovative basic research in immunoregulation with special emphasis on lymphokines and their cellular receptors. Candidate should possess a Ph.D. and one or more years of experience in Immunology or Molecular Biology. The appointment will be for one year, renewable for a second year upon mutual agreement.

At the world renowned Du Pont Company, you'll find a highly stimulating scientific environment in addition to an excellent salary. To be considered, please send resume, bibliography and references by November 30, 1987 to: Dr. Richard Robb, Glenolden Laboratory, E.I. Du Pont de Nemours and Company, 500 S. Ridgeway Avenue, Glenolden, PA 19036.



U.S. Citizenship required.  
An Equal Opportunity Employer M/F



**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)*



**Boston University**  
**Faculty Positions**  
**in Chemistry**

As part of its \$110-million development in science and engineering, Boston University seeks applicants for 4 new chemistry tenure-track assistant (or senior) professorships, to begin in September 1988. We have specific needs for assistant professors in inorganic and materials chemistry, chemical physics, and in biochemistry. Beyond these specific areas, we welcome highly qualified applicants across all ranks and areas of research. The department is located in a new \$20-million, 6-floor research complex, equipped with modern instrumentation and support facilities, including full machine and electronics shops and support staff, 400 MHz NMR, Finnigan MAT 90 high-resolution CG-MS, Evans & Sutherland molecular modelling system, dedicated departmental VAX/VMS (3) and SUN/UNIX (9) computers, and IBM 3090 with vector facility. Aggressive startup laboratory and equipment allocation will be provided. Send resume and a brief statement of research interests, and have three letters or recommendation sent to:

**Faculty Development Committee,  
 Department of Chemistry,  
 Boston University,  
 590 Commonwealth Avenue, Boston,  
 Massachusetts 02215.**

Boston University is an affirmative action/equal opportunity employer.

**Research Scientist (Ph.D.)  
 Mammalian Cell Culture**

The Fine Chemical Division of The Upjohn Company has an opening in its Bioprocess Research and Development unit for a Ph.D. Cell Biologist. This position deals with laboratory and pilot plant research and development related to the production of monoclonal antibodies and recombinant proteins from mammalian cell culture. A strong background in mammalian cell culture with knowledge of molecular genetics and protein chemistry would be desirable.

Kalamazoo is a mid-sized Southwestern Michigan community offering an excellent mix of cultural/recreational opportunities including lakes, nearby colleges, and a four-season climate. The Upjohn Company offers an excellent salary, benefits and relocation plan. For confidential consideration, please call toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you. Please refer to Ad Number 1407-F when calling.

**Upjohn**

**A second century of caring.**

An Equal Opportunity Employer, M/F

**QUIDEL, a rapidly growing pharmaceutical company in La Jolla, California, currently has career opportunities for Senior Research Scientists in its Therapeutics department. As members of the Research team, these individuals will play vital roles in the development and evaluation of new therapeutic products. Specific requirements are:**

**SENIOR RESEARCH SCIENTIST/BIOLOGY**

Ph.D. in Pharmacology or Immunology, with postdoctoral experience. Candidates must be adept at handling small animals and in immunological techniques. Previous experience with immunopharmacological models, animal handling, surgery and in-vitro immunoassays required.

**SENIOR RESEARCH SCIENTIST/  
 BIOCHEMISTRY**

Ph.D. in Biochemistry, with postdoctoral experience in protein purification, chemistry and analytical methods. Experience in purification of cloned protein from bacteria required. Large scale purification of proteins, familiarity with PAGE and immunoassays desired.

Salary is commensurate with background and experience. Excellent benefits package which includes employee incentive stock option program. Qualified individuals should send their resume to:

**QUIDEL**  
**Attn: Personnel Department**



11077 North Torrey Pines Rd., La Jolla, CA 92037  
 Equal Opportunity Employer M/F/H

# Research Scientist

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 staff.

This position requires a PhD and at least 3 years' experience in the expression of foreign genes in baculovirus or yeast systems.

Applicants should send resumes including salary history to: Praxis Biologics, Human Resources Department, 300 East River Road, Rochester, NY 14623.

**PRAXIS  
BIOLOGICS**

An equal opportunity employer, m/f.

## POSTDOCTORAL FELLOWSHIPS


### DEPARTMENT OF MOLECULAR ONCOLOGY



The Department of Molecular Oncology at the Roche Institute of Molecular Biology is accepting applications from candidates interested in developing research careers in broad aspects of gene regulation.

Ongoing research is focused primarily on the *fos* proto-oncogene and the human retroviruses HTLV 1 and HIV. Research areas include: molecular basis of cell transformation, transcriptional and post-transcriptional regulation, site-directed mutagenesis, prokaryotic and eukaryotic expression systems, structure-function relationships of regulatory proteins and nucleic acid-protein interactions.

Successful candidates will be appointed for Fellowships which may be extended annually for 1-3 years. Initial stipend will be \$22,000 with annual increments upon renewal. For consideration, please send your resume and letter of interest to: **Drs. Tom Curran or Craig Rosen, The Roche Institute of Molecular Biology, Nutley, New Jersey 07110.** We are an equal opportunity employer.

**Roche Institute of Molecular Biology**  
 Hoffmann-La Roche Inc.



## EXECUTIVE DIRECTOR

### Oak Ridge Associated Universities

The Board of Directors of the Oak Ridge Associated Universities invites nominations and applications for the position of Executive Director. Oak Ridge Associated Universities is a private not-for-profit association of 49 colleges and universities with a staff of more than 500 and a current operating budget of approximately \$35 million with offices in Oak Ridge, TN, and Washington, DC. It conducts research, educational and information programs in the areas of energy, health, and the environment for the U.S. Department of Energy (DOE), other private and governmental organizations, ORAU member institutions, and other colleges and universities. ORAU is a management and operating contractor for DOE. Activities include the administration of pre- and post-doctoral fellowships, basic and applied research in biomedicine and physics, policy studies, and management of major research facilities.

Responsibilities of the Executive Director include: Direction of all programs, facilities, and personnel; provision of strong leadership in pursuing new initiatives and new directions for ORAU; overall responsibility for cooperative activities and relationships with member institutions; representation of ORAU to federal agencies, corporations, foundations, universities, and other organizations; and strategic planning.

It is desirable that candidates for the position have the following qualifications: Earned doctorate in science, engineering, medicine or a related field; experience as a faculty member or familiarity with university administration, governance, etc.; research experience; familiarity with government agencies, funding procedures, and proposal preparation; management experience, including fiscal, personnel, and program/project responsibility; familiarity with private foundations and other 501(c)3 institutions; strong interpersonal skills; and ability to communicate well orally and in writing.

The position will be available on or before July 1, 1988. The Search Committee will begin its review of applications November 2, 1987. Salary and starting date are negotiable. Applications should include a letter stating an interest in the position, a complete resume, and names and addresses of at least three references. Applications will be considered confidential.

Applications and nominations should be sent to:

Dr. Paul F. Parks  
Vice President for Research  
202 Samford Hall  
Auburn University, AL 36849

ORAU is an EEO/AA Employer

## POSITIONS OPEN

Department of Psychology, University of New Orleans is continuing its search for a **CHAIRPERSON** to begin Fall 1988. The department has 20 faculty members, and Ph.D. programs in applied biopsychology and applied developmental psychology. Applicants with record of superior research accomplishments, a consistent history of extramural funding, and administrative experience should send curriculum vitae and have letters of reference sent to: **Jack McLean, Ph.D., Professor and Chair, Department of Psychology, University of New Orleans, New Orleans, LA 70148. The University of New Orleans is an Equal Opportunity Institution.**

The Cognitive Sciences Department at the University of California, Irvine has two tenure-track openings at the Assistant Professor level: one for an **EXPERIMENTAL PSYCHOLOGIST**, the other for a **COGNITIVE NEUROPSYCHOLOGIST**. Applicants for the experimental position should be prepared to teach a three-quarter undergraduate experimental psychology course. Applicants for the neuropsychology position should be prepared to teach undergraduate courses in learning and memory. Both positions also entail research and graduate teaching. Preference will be given to candidates whose research interests complement those of existing faculty. Applicants should send letters of interest, curriculum vitae, selected publications, and names of three references to: **Experimental Search Committee, or Neuropsychology Search Committee, Cognitive Science Department, University of California, Irvine, CA 92717.** Applications should be submitted by 15 December 1987. *UCI is an Affirmative Action/Equal Opportunity Employer.*

**CYTOGENETICIST:** The Genetics Center is seeking an assistant director for our large, full-service cytogenetics laboratory. Certification or eligibility by the American Board of Medical Genetics is preferred. Responsibilities include supervising the clinical laboratory, developing clinical or basic research projects, and teaching. Send curriculum vitae to: **Wendy L. Golden, Director, Cytogenetics Laboratory, The Genetics Center, Case Western Reserve University, Cleveland, OH 44106.**

### CYTOGENETIC TECHNOLOGISTS

Positions open immediately for senior and/or supervisory technologists. Experience in prenatal diagnosis and/or cancer cytogenetics desired. Excellent salary and benefits. Please call 1-800-VIVIGEN or send résumé to:

**Kathy Richkind, Laboratory Director  
c/o Vivigen  
435 St. Michael's Drive  
Santa Fe, NM 87501**

### DIABETES RESEARCH

A growing, private nonprofit research institute and a progressive group of scientists are actively recruiting personnel to pursue molecular approaches to the study of tissue transplantation, regeneration and the complications of diabetes (retinopathies, neuropathies, and nephropathies). A minimum of 2 years of postdoctoral experience is required, preferably in embryology, vascular biology, histology, and/or areas related to the mechanism of growth factor action. Initial salary, equipment, and supplies will be provided with the understanding that the selected individuals will develop an independent research plan and participate in institutional program projects. Send curriculum vitae, statement of research interest, and the names of three references to: **Andrew Baird, Ph.D., Whittier Institute for Diabetes and Endocrinology, 9894 Genesee Avenue, La Jolla, CA 92037.**

### DIRECTOR/CENTER FOR HAZARDOUS WASTE MANAGEMENT

The University of Northern Iowa (UNI) is seeking applicants for the position of Director/Small Business Assistance Center for the Safe and Economic Management of Solid Waste and Hazardous Substances.

Requires B.A. (an advanced degree preferred) in related field and 2 to 5 years of experience in interpreting and evaluating government regulations and/or experience in handling hazardous substances. Salary commensurate with experience. Applications will be accepted until position is filled—screening begins 1 October 1987. Send letter of application, résumé, and names and telephone numbers of three references to: **Anita Dougherty, 137 Latham Hall, UNI, Cedar Falls, IA 50614-0343. Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

### DEAN COLLEGE OF LETTERS AND SCIENCE MONTANA STATE UNIVERSITY

Nominations and applications are invited for the position of Dean of the College of Letters and Science at Montana State University, a multifaceted land-grant institution of 10,000 students. The College, composed of 300 faculty and over 1,800 undergraduate and graduate majors, seeks a candidate with the following qualifications: a terminal degree in a discipline represented in the College; an established reputation for research and creativity; experience in university teaching, preferably at both the undergraduate and graduate levels; knowledge of and appreciation for the teaching methods, scholarship, and educational goals in the departments of Letters and Science; experience in budgetary matters and personnel management; and demonstrable leadership and administrative capabilities.

Starting date is 1 July 1988, and salary is negotiable. Interested individuals should send a formal letter of application addressing interest and qualifications, a résumé, and names, addresses and phone numbers of three references by 1 December 1987, to: **Office of Vice President for Academic Affairs, Search Committee; Dean of Letters and Science, 211 Montana Hall, Montana State University, Bozeman, MT 59717.**

*An Equal Opportunity/Affirmative Action Employer.*

### CORNELL UNIVERSITY POSITION ANNOUNCEMENT DIVISION OF NUTRITIONAL SCIENCES DIRECTOR

The Division is a multidisciplinary academic unit within the College of Human Ecology and the College of Agriculture and Life Sciences. In 1986-87 the Division had a faculty of 55, a technical/support staff of 100, 260 undergraduate majors and 128 graduate students, and a research budget of \$6,770,000. The director is expected to play a leadership role in the national and international nutrition community; seek public and private funds, and prepare and administer the Division's annual budget.

Candidates should have a Ph.D. and/or M.D. or their equivalent and have demonstrated achievements sufficient to qualify for a tenured full professor appointment in the university. Demonstrated ability to secure private and public funds in support of the unit is highly desirable.

Interested applicants should submit, by 15 December 1987, curriculum vitae and the names and addresses of three to five references to:

**Dean David L. Call  
College of Agriculture  
and Life Sciences  
Cornell University  
122 Roberts  
Ithaca, NY 14853**

Further information can be obtained from the same address.

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

**DIRECTOR OF MEDICAL PSYCHOLOGY.** The University of California, Los Angeles (UCLA), Department of Psychiatry and Biobehavioral Sciences and the Department of Psychology seek a senior professor of great distinction for a joint appointment. The candidate will serve as Professor of Psychology and Medical Psychology and will be expected to provide leadership in the medical psychology program in the UCLA Neuropsychiatric Institute and Hospital and teach in the Department of Psychology. The candidate should have a research record of the highest quality, with direct or indirect relevance to human behavior in health or disease, outstanding teaching ability, and superior administrative skills. The candidate should be eligible for licensure as a psychologist in the state of California.

Interested persons should send a letter of interest, curriculum vitae, and the names of three persons, who could serve as references, to:

**David Shapiro, Ph.D., Chair  
Joint Psychiatry-Psychology Search Committee  
Department of Psychiatry  
UCLA  
760 Westwood Plaza  
Los Angeles, CA 90024-1759**

To be assured of full consideration, applications should be received by 1 January 1988. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**DIRECTOR.** The Central Savannah River Area (CSRA) Science Education Partnership invites applications for the Directorship of the CSRA Science Education Center at the University of South Carolina (USC) at Aiken. The center is dedicated to the enhancement of science teaching for all children in grades kindergarten to 12. The director will hold a joint appointment with the appropriate academic department of USC-Aiken. The successful candidate will have at least one degree in a natural science, mathematics, or engineering and extensive experience or an advanced degree in an appropriate educational field. The position is available in January 1988 and the deadline for applications is 1 November 1987. Interested applicants should send a complete résumé to: **Dr. W. A. Pirkle, Dean, College of Mathematical, Natural and Health Sciences, USC-Aiken; 171 University Parkway, Aiken, SC 29801.** For additional information, telephone: 803-648-6851, extension 158. *An Affirmative Action/Equal Opportunity Employer.*

The Pennypack Watershed Association invites applications for a **DIRECTOR—PENNYPACK WILDERNESS.** Responsibilities include activities involved with operation of 800-acre enclosed wilderness area in suburbs of Philadelphia, development of land use and management plan, identification and promotion of ecological research projects with universities which center upon and enhance the wilderness, implementation of projects to improve wildlife habitat, and administration of program to protect, conserve, and improve pristine nature of wilderness. Applicants must have master's or higher degree in one of biological sciences, such as botany, field biology, or ecology. A minimum of 5 years of experience with administrative and program responsibilities at a governmental forest or private facility such as a sanctuary is required. Salary negotiable, commensurate with experience. Send résumé and three references to: **David B. Witwer, Executive Director, Pennypack Watershed Association, 2955 Edge Hill Road, Huntingdon Valley, PA 19006.**

**DIRECTOR, PSYCHOSOCIAL ONCOLOGY UNIT.** The Cancer Center at the University of Rochester School of Medicine and Dentistry is seeking an M.D. or Ph.D. with experimental and/or clinical research experience in the psychosocial aspects of medicine to direct an interdisciplinary research/teaching/patient care program in psychosocial oncology. With a joint appointment in the Department of Psychiatry, responsibilities would include independent and collaborative research in the Cancer Center, medical student teaching, supervision of postdoctoral fellows in oncology and psychiatry, and psychosocial consultations. Rank and salary are dependent upon qualifications. Direct inquiries to: **Dr. Robert Ader, Search Committee Chair, Department of Psychiatry, University of Rochester Medical Center, Rochester, NY 14642. The University of Rochester is an Equal Opportunity Employer.**

### DIRECTOR LABORATORY ANIMAL MEDICINE COLLEGE OF MEDICINE

The Office of the Dean at the College of Medicine, Howard University is seeking a laboratory animal medicine veterinarian to serve as director of its AAALAC-accredited animal facility.

The candidate must have a D.V.M./V.M.D. degree from an accredited school of veterinary medicine, be ACLAM Board-certified or eligible, be licensed in the District of Columbia, and have experience in the administration and management of animal care and use programs. Among other duties, the director is expected to act as consultant to basic and clinical science researchers, evaluate research protocols, plan future growth and development of the facility, prepare and submit reports to regulatory and accrediting agencies, and serve as a member of the Institutional Animal Care and Use Committee. An academic appointment relevant to the candidate's research interest is possible.

Interested individuals should submit a letter describing their interest and qualifications for this position, current curriculum vitae, and the names and addresses of three references, by 20 October 1987, to:

**Russell L. Miller, M.D.  
Dean  
College of Medicine  
Howard University  
Washington, DC 20059**

*Howard University is an Affirmative Action/Equal Opportunity Employer, M/F/H.*

**CHEMIST  
NATIONAL INSTITUTES  
OF HEALTH  
PUBLIC HEALTH SERVICE**

Individual, to supervise immunology laboratory in Kinshasa, Zaire, with skills in cellular immunology and/or tissue culture, virology, AIDS related research. Opportunity for some independent work and publication credit for the Public Health Service, National Institutes of Health, National Institutes of Allergy and Infectious Diseases, Laboratory of Immunoregulation. Extra benefits provided because of overseas location.

Chemist; GS-12 - \$27,000/\$35,000 per annum plus 20% post differential and housing allowance.

**Contact - Dr. Christopher Brown  
(301) 496-1343 or (202) 686-5543.  
U.S. Citizenship required.**

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

## CARDIOVASCULAR PHARMACOLOGIST

The Pharmaceutical Research Division of Warner-Lambert/Parke-Davis has an immediate opening for a senior scientist in cardiovascular research. The successful candidate will lead a group of scientists in the development, evaluation and recommendation of strategies for the discovery of novel agents in the treatment of heart failure.

Qualified applicants will possess the following:

- Ph.D. or equivalent in pharmacology or physiology with strong background in hemodynamic analysis of drug action.
- 3-5 years postdoctoral research experience in cardiovascular research. Desired though not essential, experience would include familiarity with preclinical models of heart failure.
- Excellent oral and written communication skills, including a documented record of scientific achievement as evidenced by publications.

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Interested, qualified candidates should forward curriculum vitae and salary requirements to: **Ms. S. Hultquist, Human Resources, WARNER-LAMBERT/PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, MI 48105.**

**WARNER  
LAMBERT**

"EQUAL OPPORTUNITY IN ACTION"

## POSTDOCTORAL POSITION

A postdoctoral position is available immediately for an individual with an interest and strong background in phospholipid biochemistry. GC-MS experience is desirable. State-of-the-art methodology will be employed to investigate mechanism of leukotriene and PAF biosynthesis and pathogenesis. Please send curriculum vitae to: Maureen Quigley, Professional Employment Representative, Dept. D, American Cyanamid Company, Lederle Laboratories, Pearl River, NY 10965. We are an equal opportunity employer.



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## PROJECT MANAGER

### ■ Land and Water Quality Studies

EPRI, on the San Francisco Peninsula, an R&D firm chartered to provide research and development for all segments of the U.S. electric utility industry, seeks a senior professional to develop technical requirements and to initiate and manage research contracts in land and water quality studies. Specifically, you will develop research concepts, prepare project implementation strategies, and manage research on the environmental behavior and fate of chemicals (especially organics) discharged by utility operations.

Candidates will have a PhD/Earth Sciences (or equivalent related field), 5-10 years experience in conducting and directing research in groundwater quality and soils contamination, experience in conducting geochemical and hydrochemical experiments and modeling. Proven management ability in contract research and good communication skills required. Knowledge of electric utility industry wastes desirable.

EPRI offers a stimulating environment, competitive salaries and comprehensive benefits. For immediate consideration, please send your resume, including salary requirements, to D. Staten, Human Resources Dept. SCI-723, EPRI, 3412 Hillview Avenue, P. O. Box 10412, Palo Alto, CA 94303. An equal opportunity employer.

**EPRI**  
ELECTRIC POWER  
RESEARCH INSTITUTE

## POSITIONS OPEN

### DIRECTOR HEALTH EFFECTS RESEARCH LABORATORY RESEARCH TRIANGLE PARK NORTH CAROLINA \$64,700 to \$70,500

The U.S. Environmental Protection Agency (EPA) is seeking highly qualified candidates for the position of Director, Health Effects Research Laboratory (HERL). The HERL is responsible for providing health effects research that serves as the foundation for health-related regulatory decisions. The Laboratory is organized into three staff offices and six research divisions, with a total of approximately 325 EPA employees and 250 on-site contractor and cooperative agreement employees. Research is carried out using a variety of approaches: animal research, including in vitro and in vivo studies; human clinical investigations; and epidemiologic studies. Disciplines represented within HERL include neurotoxicology, reproductive toxicology, pulmonary and cardiovascular toxicology, genetic toxicology, immunotoxicology, and microbiology.

The Director provides scientific leadership for the mission-oriented research programs and directs and supervises the multidisciplinary scientific staff. Included in the Director's responsibilities are research planning, implementation, and evaluation, scientific input into the development of health science policy, direction of technical and administrative activities, and management of HERL's \$45 million per year budget.

To meet the requirements of the position, applicants should have an advanced degree (doctorate preferable) in either the biological, health, or physical sciences, and substantial professional experience demonstrating scientific leadership and research management experience. Applicants must meet the technical and executive qualifications described in the Vacancy Announcement. Call or write for a copy of the Vacancy Announcement and application form SF-171 to: **Edna Morse, Environmental Protection Agency, SES and Executive Resources Unit, PM-224, 401 M Street, SW, Washington, DC 20460. The telephone number is 202-382-3328.**

Applications must be postmarked by 30 November 1987.

*EPA is an Equal Employment Opportunity Employer.*

### DIRECTOR REGIONAL PRIMATE RESEARCH CENTER UNIVERSITY OF WASHINGTON

Responsibilities include the development and administration of scientific programs and resources that match emerging biomedical needs. Candidates must meet qualifications for tenured appointment as a senior member of an academic department at the University of Washington and have a national reputation as a biomedical scientist, preferably involving substantial use of nonhuman primate models. Candidates should also have experience in science administration. Send letter of interest and curriculum vitae to: **Dr. Milo Gibaldi, Associate Vice President for Health Sciences, School of Pharmacy, SC-69, University of Washington, Seattle, WA 98195.** Application deadline is 1 November 1987.

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

**FACULTY OPENINGS.** The Chemistry Department of Hunter College of the City University of New York seeks applicants for several new positions. Although all areas of chemistry and levels of appointments will be considered, special attention will be given to applicants whose research will benefit from instrumentation and new facilities made available by an RCMI grant from NIH. This grant includes funds for a high field wide-bore NMR spectrometer (in addition to our present JEOL TGX-400 and GE QE-300 instruments), a VAX-driven Evans and Sutherland molecular graphics system, and a facility complete with automated oligonucleotide and peptide synthesizers and protein sequencer. An x-ray crystallography laboratory group is in place. External funding at about \$1 million annually supports several other state-of-the-art laboratories in our department. The department also seeks analytical and inorganic chemists who will complement research interests of our faculty.

*We particularly encourage minority candidates to apply.* Provide résumé, short statement of research interests, and three letters of recommendation to: **Professor J. Wijnen, Chair, Chemistry Department, Hunter College of CUNY, New York, NY 10021.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### EDITOR

International scientific and technical publisher seeks acquisitions editor, preferably in the biomedical sciences, for a position in its New York City office. Broad scientific interests and advanced degree or relevant experience required. Please submit résumé, publications list, and cover letter with salary requirements to: **Gordon and Breach, 50 West 23rd Street, New York, NY 10011.**

### ENVIRONMENTAL HEALTH SCIENTIST

The Board on Environmental Studies and Toxicology (BEST) of the National Research Council (NRC) is seeking a senior professional in the area of toxicology, epidemiology, environmental health science, or a closely related biological or biomedical field. This individual will act as project director for a study on biologic markers. Duties will include working with a committee of experts, directing a small research staff, and providing intellectual overview of the report. A Ph.D., M.D., or equivalent is required with several years in research, teaching, or administration in toxicology, epidemiology, pharmacology, environmental health science, or a closely related science. Must understand the utilization of scientific information in decision making and have the ability to integrate data from a wide variety of disciplines.

Applicants should submit in confidence curriculum vitae and a recent publication or writing sample and names of references to: **NRC/BEST, NAS 358, 2101 Constitution Avenue, NW, Washington, DC 20418.** *Equal Opportunity Employer.*

### FACULTY POSITION IN BIOCHEMISTRY/MOLECULAR BIOLOGY UNIVERSITY OF CALIFORNIA AT SANTA BARBARA

The Department of Biological Sciences at the University of California, Santa Barbara, invites applications for a tenure-track faculty position from outstanding scientists interested in the study of eukaryotic systems by combined biochemical and genetic approaches. Applicants must have a Ph.D. degree and postdoctoral training. The successful applicant will be expected to conduct a vigorous independent research program and to contribute to teaching in genetic regulation and general biochemistry at the graduate and undergraduate levels. The assistant professor level is preferred although, in the case of an outstanding research record, a tenured appointment will be considered. The position is effective 1 July 1988. Applicants should submit their curriculum vitae, selected reprints, and a brief description of previous and anticipated research by 1 December 1987. Applicants should also arrange to have at least three letters of reference sent to: **Dr. Leslie Wilson, Chairman, Department of Biological Sciences, University of California, Santa Barbara, CA 93106.**

*An Equal Opportunity/Affirmative Action Employer. Proof of U.S. citizenship or eligibility for U.S. employment will be required prior to employment (Immigration Reform and Control Act of 1986).*

### FACULTY POSITION IN MICROBIOLOGY ASSISTANT PROFESSOR TENURE-TRACK

Applicants should have postdoctoral experience and demonstrated research capability. The successful applicant will be expected to establish an independent, externally funded research program focusing on a significant problem in microbiology, with a preference for the basic biology in microbial pathogenesis using physiological, molecular, or genetic approaches. Teaching responsibility will include an undergraduate/graduate level course in human pathogenic microbiology. Position available August 1988. Send curriculum vitae, statement of research interests, and three letters of recommendation to: **Dr. Dwane Wylie, Microbiology Search Committee, School of Biological Sciences, University of Nebraska-Lincoln, Lincoln, NE 68588-0118.** Applications will be reviewed 9 November 1987, but will be accepted until a suitable candidate is found.

*Affirmative Action/Equal Opportunity Employer*

## POSITIONS OPEN

### BOSTON UNIVERSITY FACULTY POSITION IN BIOCHEMISTRY

As part of its \$110-million expansion in science and engineering at Boston University, the Department of Chemistry seeks applicants for tenure-track positions at the assistant professor or senior level in biochemistry, to begin in September 1988. Our preference is for individuals who will use x-ray crystallography, NMR, and other spectroscopies, and/or recombinant DNA techniques for studying problems in protein or nucleic acid structure and function, membranes or other supramolecular assemblies. The successful candidate will become a member of an existing core of chemistry, physics, and biology faculty with interests in these areas. Aggressive startup laboratory and equipment allocations will be provided. Send résumé and a brief statement of research interests, and have three letters of recommendation sent to:

**Biochemistry Faculty Development Committee  
Department of Chemistry  
Boston University  
590 Commonwealth Avenue  
Boston, MA 02215**

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

### FACULTY POSITIONS IN MOLECULAR BIOLOGY

The Department of Biology at the University of Virginia invites applications from molecular biologists who use structural and/or molecular genetic approaches to study fundamental problems in biology. Positions at the assistant professor or more senior levels are available immediately as part of an expanding program in molecular biology. Our search will consider candidates in all areas of molecular biology research including macromolecular structure and function, nuclear or cytoplasmic function, and developmental and neuronal regulation. Send résumé, description of research program, summary of teaching interests, and three letters of reference by 15 November 1987 to: **Molecular Biology Search Committee, Department of Biology, University of Virginia, Charlottesville, VA 22901.** *Equal Opportunity/Affirmative Action Employment.*

### FACULTY POSITION IN MARINE BIOLOGY

The University of Guam Marine Laboratory invites applications for a tenure-track, 12-month position with initial contract for 3 years at the assistant professor level in areas of marine plant physiology, tropical fish larval biology, or biochemical genetics of tropical marine species. Position available spring 1988. Ph.D. and research experience essential. Responsibilities include establishing an active research program, thesis supervision at the M.S. level, and teaching six contact hours per week. Excellent facilities available for marine biological research. Benefits include up to \$3,000 relocation expenses for selected applicant and family. Applicants should send curriculum vitae, names and addresses of three references, and copies of selected publications to: **Director, Marine Laboratory, University of Guam, UOG Station, Mangilao, Guam 96923.** *An Equal Opportunity/Affirmative Action Employer.*

### FULL PROFESSOR AND CHAIRPERSON DEPARTMENT OF BIOLOGICAL SCIENCES

Fordham University invites applications for the position of full professor and chairperson of the Department of Biological Sciences. Applicants should have a Ph.D. in molecular biology or related discipline, an outstanding record of research accomplishment, significant external funding, and a commitment to undergraduate and graduate training. While the specific area of research within molecular biology is open, preference will be given to those studying gene expression at the DNA level. The individual chosen is expected to provide leadership for the department's rapidly expanding research programs in cell biology, and ecology and systematics. The department offers the B.S., M.S., and Ph.D. degrees and has 18 faculty members, 45 graduate students, and close to 200 undergraduate majors. Applications should be sent by 1 December 1987 to: **Dr. Sergio Abreu, Chairperson, Department of Biological Sciences, Fordham University, Bronx, NY 10458.** *Fordham University is an Affirmative Action/Equal Opportunity Employer.*



## POSITIONS OPEN

### FACULTY POSITIONS IN CHEMISTRY

The Chemistry Department at the University of California, Berkeley, solicits applications for several positions of assistant professor of chemistry, beginning in the fall of 1988. Creative and energetic candidates who show exceptional promise in research and teaching are sought. The individuals selected for these positions will be expected to establish outstanding research programs. Candidates should send curriculum vitae, a proposed research program, and arrange to have three letters of recommendation sent to: **Professor Clayton H. Heathcock, Chairman, Department of Chemistry, University of California, Berkeley, CA 94720.** The deadline for receipt of applications is 1 December 1987. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

The Department of Ecology and Evolutionary Biology, University of California, Irvine (UCI), announces **FOUR FACULTY POSITIONS:** three tenure-track (assistant professor) and one tenured (associate professor). Rather than specify the areas of search, primary emphasis will be on the quality of individual applicants. However, special attention will be paid to underrepresented areas within the department; these include plant physiological ecology, behavioral ecology, population and quantitative genetic theory, and macroevolution. Departmental strengths include animal physiological ecology and ecological energetics, population and community ecology, mathematical and quantitative ecology, and experimental evolutionary genetics. We are interested in both empirical and theoretical approaches to ecological and evolutionary problems, and we strive to achieve a balance between these. We are looking for candidates of exceptional merit, and postdoctoral experience is usually required. *UCI is an Equal Opportunity/Affirmative Action Employer.*

Please send letter of application, curriculum vitae, key publications, statement of research interests and goals, and the names, addresses, and telephone numbers of four references to:

Search Committee  
Department of Ecology and Evolutionary Biology  
University of California  
Irvine, CA 92717

Candidates should arrange for references to submit letters of evaluation directly to the search committee at the time of their application.

Deadline for receipt of applications and supporting letters is 1 December 1987.

The Department of Land, Air and Water Resources, University of California, Davis, announces a **POSITION IN GEOHYDROLOGY.** This is a tenure-track (11-months plus 1 month paid vacation) position of teaching and research. Appointment will be at the assistant/associate professor level at a salary commensurate with qualifications.

Qualifications: Combination of academic degrees in earth sciences and hydrology with a Ph.D. in one of these or related field of study emphasizing the influence of geochemical and geophysical processes controlling retention and movement of chemicals in subsurface water. The appointee will participate with other faculty in teaching and advising in geohydrology at the undergraduate and graduate levels.

Applications: Send statements of research interests and teaching background; official undergraduate and graduate transcripts; copies of publications, reports, current manuscripts, a summary or abstract of Ph.D. dissertation; and names, addresses, and telephone numbers of three references by 4 January 1988 to: **M. E. Grismer, Chair, Geohydrologist Search Committee, Department of Land, Air and Water Resources, University of California, Davis, CA 95616, telephone: 916-752-3243/0453.** It is expected that the appointee will be available for service on or about 1 May 1988.

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

**IMMUNOLOGY POSTDOCTORAL POSITION** available at Vanderbilt University School of Medicine. This position is available immediately to study the mechanism of lymphocyte-mediated cytotoxicity of tumor cells. Candidates need skills in immunology or biochemistry. All interested candidates should forward résumés to: **James T. Forbes, Ph.D., Medical Oncology, A2127 Medical Center North, Vanderbilt University, Nashville, TN 37232.**

## INFECTIOUS DISEASE RESEARCH

Bristol-Myers is a worldwide leader in the research, development, and marketing of sophisticated pharmaceutical, medical care, consumer and nutritional products. Currently, our Pharmaceutical Research & Development Division, located in Wallingford, CT, has positions available for Infectious Disease Research Scientists who are looking to continue their career in our "world class" research environment.

**RESEARCH SCIENTIST**—Requires Ph.D with well-developed leadership skills and post-doctoral experience in pathogenic microbiology/immunology. Experience with in vivo models of infectious disease and preferably, in the evaluation of antimicrobial/immunotherapeutic agents.

**ASSOCIATE SCIENTIST**—Requires MS in Biology/Microbiology with 3 or more years experience. Knowledge of in vitro test principles and methodologies a must. The successful candidate will supervise in vitro evaluation of antibacterial and antifungal agents. A background in computer applications and automation desirable.

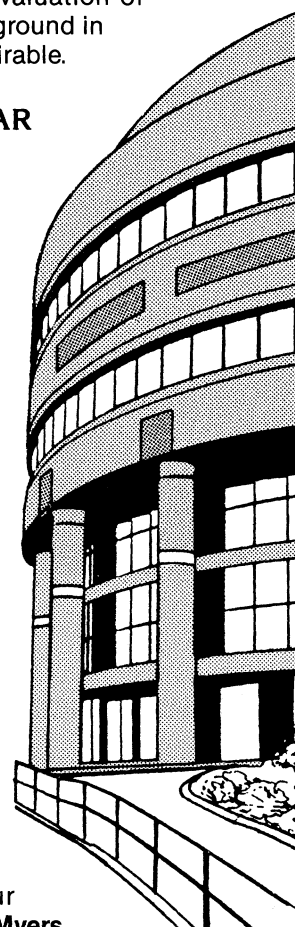
**ASSOCIATE SCIENTIST/MOLECULAR BIOLOGY**—Requires MS/BS with 1 to 3 years molecular biology experience. A background in bacterial molecular biology with emphasis in mechanisms of pathogenesis is preferred. Familiarity with standard molecular biology techniques such as DNA isolation, cloning and sequencing would be a significant asset.

**VIRAL BIOCHEMIST**—Requires Ph.D. in Biochemistry, Virology, or related field. Experience in the area of nucleosides/nucleotides, purifying and assaying proteins and enzymes, and determining kinetic parameters for enzyme reactions is essential. Familiarity with HPLC desirable. The successful candidate will join a research team dedicated to exploring mechanisms of action and selectivity of nucleoside and nucleotide analogs with antiviral activity.

Bristol-Myers offers an excellent salary and a comprehensive benefit package including relocation assistance. For confidential consideration, forward your resume, including salary history to: **Bristol-Myers Company, Pharmaceutical Research & Development Division, Department PD/NY38, P.O. Box 5100, Wallingford, CT 06540.** An equal opportunity employer. (Principals Only Please)

## BRISTOL-MYERS

Pharmaceutical Research & Development Division



## POSITIONS OPEN

### HUMAN MOLECULAR GENETICIST

The Division of Medical Genetics, Emory University School of Medicine, is seeking applications for a tenure-track assistant professor position. The successful candidate is expected to participate in ongoing genetic linkage studies using RFLPs, to develop an independent research program in some aspect of human molecular genetics, and to participate in graduate and postdoctoral training. To apply, send curriculum vitae and a synopsis of current and future research interests to:

**Dr. Louis J. Elsas, II, Director**  
Division of Medical Genetics  
Emory University  
2040 Ridgewood Drive, Room 130  
Atlanta, GA 30322

Deadline for receipt of applications is 1 December 1987.

Position available for Ph.D. with at least 2 years of postdoctoral training to be appointed as **INSTRUCTOR IN INTERNAL MEDICINE**. Interests of laboratory are cell biology and cellular interactions of endothelial cells with circulating lymphocytes. Willingness to participate in teaching human anatomy in the laboratory to freshmen medical students is desired. Send curriculum vitae to: **Peter E. Lipsky, M.D., Director, Harold C. Simmons Arthritis Research Center, University of Texas Health Science Center at Dallas, Southwestern Medical School, 5323 Harry Hines Boulevard, Dallas, TX 75235-9030. An Equal Opportunity Employer.**

Position available for Ph.D. in immunology with at least 2 years of postdoctoral training to be appointed as **INSTRUCTOR IN INTERNAL MEDICINE**. Interests of laboratory are immunobiology of human B lymphocytes and the pathogenesis of rheumatic diseases. Will conduct a research laboratory devoted to human B cell biology. Send curriculum vitae to: **Peter E. Lipsky, M.D., Director, Harold C. Simmons Arthritis Research Center, University of Texas Health Science Center at Dallas, Southwestern Medical School, 5323 Harry Hines Boulevard, Dallas, TX 75235-9030. An Equal Opportunity Employer.**

**MASS SPECTROMETRIST:** To supervise and train technical personnel, be responsible for the operation and maintenance of equipment, and run samples in support of research programs in a general service mass spectrometry laboratory. Requirements: 2 to 5 years of experience with high resolution mass spectrometry and computer hardware/software, Ph.D. in chemistry, physics, or related field or M.S. and equivalent experience. Preference will be given to candidates with experience supervising graduate assistants, working in an open shop environment and running VG mass spectrometry systems. The nontenure-track position as research assistant professor has a negotiable and competitive salary. The position also offers an opportunity to collaborate with existing research programs in the Department of Chemistry. Send résumé and names, addresses, and telephone numbers of three references to: **Gregory J. Meisner, Laboratory Instrumentation Manager, Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260. Deadline for receipt of applications is 31 October 1987. The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.**

### MICROBIAL PHYSIOLOGY

The University of Nevada, Las Vegas, Department of Biological Sciences invites applications for a tenure-track appointment at the rank of **ASSISTANT PROFESSOR**. The individual selected will be expected to develop a vigorous research program in microbial physiology. Preference will be given to applicants whose interests complement those of a faculty with strength in environmental biology and whose research will permit collaborative training opportunities at the graduate level. The successful candidate will also have a strong commitment to teaching in a comprehensive undergraduate curriculum in the life sciences. Ph.D. in a biological science required and postdoctoral experience preferred. Apply by 30 October 1987 with an application containing curriculum vitae, description of research and teaching interests, representative reprints, and three letters of recommendation to: **Dr. Penny S. Amy, Chair, Microbial Physiology Search Committee, Department of Biological Sciences, University of Nevada, Las Vegas, NV 89154. UNLV is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### MOLECULAR BIOLOGIST

Tenure-track, assistant professor appointment effective August 1988 for a molecular biologist trained in cellular/developmental biology or genetics with research interests in embryonic cell interactions or genetic control of development. The Department has 30 faculty and offers B.S., M.S., and Ph.D. programs. It occupies new, well-equipped facilities. A Ph.D. is required; postdoctoral training and teaching experience are assets. Application review will begin 20 November 1987. Submit a résumé, transcripts of all academic work, and three letters of reference to: **R. G. Sherman, Department of Zoology, Miami University, Oxford, OH 45056. Minorities and women candidates are strongly encouraged to apply. Miami University is making every effort to create a diverse, heterogeneous faculty and staff.**

**MOLECULAR BIOLOGIST:** Tenure-track position at level of assistant/associate professor for fall 1988, contingent upon budgetary approval. Expected to establish strong, independent research program; teach introduction to molecular biology, and advanced courses in his/her area of speciality. Preference will be given to those candidates interested in evolutionary molecular biology, developmental biology, or symbiosis, and who possess enthusiasm for sharing molecular biological methods with strong existing programs within the department. Postdoctoral experience and demonstrated promise for teaching excellence and for obtaining extramural support are required. Deadline: 15 December 1987. Send curriculum vitae, statement of research goals, and three reference letters to: **Chairman, Molecular Biology Search Committee, Biology Department, University of New Mexico, Albuquerque, NM 87131. Affirmative Action/Equal Opportunity Employer.**

### MOLECULAR BIOLOGIST/ MICROBIOLOGIST

**Bacterial Genetics Group**  
Advanced Genetic Sciences, Inc.  
6701 San Pablo Avenue  
Oakland, CA 94608

Research on genetic basis of antibiotic biosynthesis in fluorescent pseudomonads and bacterial degradation of xenobiotics. [For partial background, see *J. Bact.* **165**, 696 (1986), and *AEM* **52**, 1183 (1986).] Applicants should hold a Ph.D. in molecular biology, microbiology, or a related field. Experience with protein purification is desirable. Salary and level of appointment commensurate with experience. Send curriculum vitae and names, addresses, and telephone numbers of three referees to: **Dr. Neal Guttererson** at the above address.

**MOLECULAR BIOLOGIST:** The Institute for Basic Research seeks applicants for a position as laboratory head. The applicant should possess postdoctoral training and experience in molecular cloning, developmental gene regulation and gene mapping, and have an interest in the use of transgenic animals for studying brain development. Please send a letter of application and statement of research interests together with curriculum vitae and references to: **Dr. David L. Miller, c/o Personnel Ref. #492, Search Committee Chairman, New York State Institute for Basic Research in Developmental Disabilities, 1050 Forest Hill Road, Staten Island, NY 10314.**

### MOLECULAR/CELLULAR NEUROBIOLOGIST

**ASSISTANT PROFESSOR** position in the Neurobiochemistry Group of the UCLA Mental Retardation Research Center. Of particular interest are candidates with demonstrated ability to develop an outstanding research program in the molecular/cellular biology of nervous system development. Start-up funds and excellent university salary and benefits are available. Recruitment will continue until a candidate is identified. Please send curriculum vitae, names of four references, and a brief summary of research accomplishments and future research direction by 1 November 1987 to:

**Dr. Jean deVellis, Chairman, Search Committee**  
Neurobiochemistry Group  
Mental Retardation Research Center  
University of California, Los Angeles  
760 Westwood Plaza  
Los Angeles, CA 90024

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

## POSITIONS OPEN

### MOLECULAR BIOLOGIST VIROLOGIST

Florida Atlantic University invites applications for a tenure-track faculty position at the assistant professor level starting in August 1988. A **MOLECULAR GENETICIST/MOLECULAR BIOLOGIST**, with expertise in recombinant DNA technology, or a **VIROLOGIST** are sought to establish graduate research and teaching programs in respective subject areas. Responsibilities also include undergraduate teaching. Forward curriculum vitae, reprints, transcripts, statement of research goals, and three letters of recommendation to: **Dr. G. Alex Marsh, Chairman, Department of Biological Sciences, Florida Atlantic University, Boca Raton, FL 33431. Applications should be received by 15 December 1987. FAU is an Affirmative Action/Equal Opportunity Institution.**

### MOLECULAR BIOLOGY/ONCOLOGY FACULTY OF MEDICINE QUEEN'S UNIVERSITY

Applications for positions at the level of assistant professor are invited from molecular and developmental biologists interested in problems related to cell growth, differentiation, and neoplastic transformation. Successful candidates will join an interdepartmental research group involved in molecular and cellular studies in various areas of basic and clinical oncology. Excellent laboratory facilities and equipment are available. Establishment funding will be provided with the expectation that the individuals concerned will obtain external support within 2 to 3 years.

Send curriculum vitae, statement of research interests, representative publications, and names of three referees to:

**Roger G. Deeley, Ph.D.**  
Stauffer Research Professor  
Department of Pathology  
Queen's University  
Kingston, Ontario, K7L 3N6

*In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian Citizens and permanent residents. Candidates of both sexes are equally encouraged to apply.*

Closing date for applications: 15 December 1987.

### MOLECULAR GENETICIST

The Department of Molecular Biology and Biochemistry of the University of California, Irvine seeks an assistant professor, working with both a genetic and a molecular orientation on a contemporary biological problem. Any biological system may be used. Candidates should be well grounded in biochemistry and molecular biology, and have training or substantial research experience in genetics. Curriculum vitae, statement of research interests, and the names and addresses of three references should be sent to: **Dr. Rowland Davis, Molecular Genetics Search Committee, Department of Molecular Biology & Biochemistry, University of California, Irvine, Irvine, CA 92717. Closing date to assure consideration: 1 December 1987. Minorities are particularly encouraged to apply.**

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

The University of California, San Francisco, School of Dentistry invites applications for a **POSITION IN ORAL RADIOLOGY AND DIAGNOSTIC IMAGING** at the assistant or associate professor ladder or in residence level. Applicants must have an outstanding teaching record in oral diagnostic imaging and a strong research program in an allied area. Applicants' academic background should include a D.D.S. or equivalent degree and it is desirable to have research training at the Ph.D. level. Responsibilities of the position will include technical supervision of the oral radiology service and the establishment of strong collaborative patient care and research relationships with the Department of Radiology in the School of Medicine. Please submit curriculum vitae by 15 February 1988 to: **Dr. Gary Armitage, Room D-4014, Box 0762, University of California, San Francisco, School of Dentistry, San Francisco, CA 94143. The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

## National Institute On Aging National Institutes of Health

The Biomedical Research and Clinical Medicine Program is seeking applicants for the position of Health Scientist Administrator to serve as director for its Geriatric Research and Training Program. Specific responsibilities include developing and managing a program of research and training grants, with major emphasis on development of new initiatives to promote geriatric research on important clinical problems. Applicants should have completed all requirements for an M.D. or Ph.D. (or equivalent doctoral) degree in the biological or allied health sciences. Applicants must have experience which demonstrates ability to work independently in planning and conducting research. The position will be filled through the Civil Service or Commissioned Corps of the U.S. Public Health Service. The grade of the position is a GS-13/14 with a salary range of \$38,727-\$59,488 depending on the qualifications of the applicant selected. Physicians may be eligible for a bonus of up to \$10,000 above these levels. Benefits include a retirement plan, health and life insurance, sick and annual leave. Duty Station - Bethesda, Maryland. U.S. Citizenship required.

Any applicant not currently employed in the Federal Government as a Health Scientist Administrator will be required to obtain an eligible notice of rating. Submit application for Federal Employment (SF-171), curriculum vitae, and bibliography to: Ms. Ann Baldwin, Personnel Office, National Institute on Aging, Building 31, Room 2B63, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20892. Applications must be received or postmarked by November 1, 1986. Call Ms. Baldwin at (301) 496-5347 for further information.

**NIH IS AN EQUAL OPPORTUNITY EMPLOYER**

## Synchrotron Radiation Source: Head of Scientific Research

The Synchrotron Radiation Source (SRS) at Daresbury Laboratory provides large scale research facilities for the academic and industrial community and supports a vigorous research programme in a wide range of scientific disciplines. The SRS has recently been upgraded and further development is planned. A new post has been created for a senior scientist to manage the experimental research programme.

The Head of Scientific Research will be a senior member of the Laboratory management team responsible to the Director. He/she will manage the overall research programme, develop the experimental facilities and direct the in-house research programme. He/she will maintain contacts with users at home and abroad.

The successful applicant will be an active research scientist.

The Council is prepared to consider a secondment or other type of fixed term appointment.

The salary will be within the scale £24,765 - £28,215. There is a non-contributory superannuation scheme. Some assistance with expenses for house sale and purchase may be available.

Applicants should write to the Director, Professor L. L. Green, no later than 31st October 1987 giving details of qualifications and experience.

Further information about this post is available from the Director at Daresbury Laboratory, Science and Engineering Research Council, Daresbury, Warrington, Cheshire. WA4 4AD England. Telephone 0925-603119.

**Daresbury**  
SCIENCE & ENGINEERING  
RESEARCH COUNCIL



## International Laboratory of Marine Radioactivity International Atomic Energy Agency Monaco

The I.A.E.A. seeks the services of a young marine geochemist for its International Laboratory of Marine Radioactivity (ILMR) in Monaco. He/she will be responsible for projects in radionuclide monitoring and geochemical studies in the marine environment and will be expected to interact with laboratories in other countries where Agency supported projects are being pursued. The candidate will carry out field and laboratory work in ILMR itself and will also be called upon from time to time to assist in the training of young scientists from developing countries and to advise other organizations requesting expertise in the subject area.

A comprehensive knowledge of the geochemical behaviour of radionuclides in the marine environment is required. Such knowledge will come from demonstrated achievements both in publications and the conduct of field and laboratory research.

An initial three-year contract is offered at a salary of US\$ 38 800.-. Additional allowances if married. Travel and removal expenses paid. Six weeks annual leave. Applicants are invited to send a complete C.V. to the **Division of Personnel, I.A.E.A., Box 100, A-1400 Vienna, Austria**, quoting Vacancy Notice No. 87/078.



## FACULTY POSITIONS

**DIVISION OF BIOLOGICAL SCIENCES  
UNIVERSITY OF MISSOURI-COLUMBIA**

### NEUROBIOLOGY/PHYSIOLOGY (3 positions) PLANT SYSTEMATICS

The Division of Biological Sciences is continuing a multi-year effort to enhance research in the biological sciences. Five young faculty have been hired in the past 2 years, and we are pleased to invite applications for 4 more tenure-track faculty appointments, available in August, 1988. The Division has a well-funded faculty, and has established strong programs in Neurobiology/Physiology and in Plant Molecular Biology.

#### Plant Systematics

Preference will be given to those using techniques of molecular systematics, cytogenetics, or analytical biochemistry of plants. Candidates should have an interest in the evolution of a particular group of vascular plants. The candidate will be expected to teach a general, comprehensive course in plant tax and to participate in teaching at the graduate level in an area of modern systematics.

#### Neurobiology/Physiology (3)

Desirable areas of research include, but are not limited to: molecular neurobiology, cellular neurobiology, neurophysiology, developmental neurobiology and neuroethology. The experimental organism(s) used in these investigations is open. Teaching will include an undergraduate course in biology or physiology as well as a graduate course in the area of interest.

These positions are available at the Assistant Professor level, but senior level appointments may be considered. The positions include excellent start-up funds, laboratory space and animal or plant facilities.

Candidates should have a Ph.D., postdoctoral training, a demonstrated record of research accomplishment, and have a commitment to undergraduate and graduate teaching. Complete curriculum vitae, including a brief statement of research interests and the names of four references, should be sent to **Dr. Louis Sherman, Director, Division of Biological Sciences, University of Missouri, Tucker Hall, Columbia, MO 65211**. Applications will be accepted until **November 15, 1987** or until a suitable candidate is identified.

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

## POSITIONS OPEN

**MOLECULAR GENETICIST:** The Meyer Children's Rehabilitation Institute, University of Nebraska Medical Center, is seeking an M.D., Ph.D. molecular geneticist with clinical interest, or an M.D. with strong molecular background for a tenure-track position. Academic rank and salary commensurate with experience and qualifications. Individual will participate in the development of a molecular diagnostic laboratory in the Center for Human Genetics. Research is major component of the position, but clinical commitments can be maintained. Contact: **Bruce A. Buehler, M.D., Director, Meyer Children's Rehabilitation Institute, University of Nebraska Medical Center, 444 South 44th Street, Omaha, NE 68131-3795, telephone: 402-559-5233. An Equal Opportunity/Affirmative Action Employer.**

### UNIVERSITY OF OXFORD DEPARTMENT OF BIOCHEMISTRY OXFORD OLIGOSACCHARIDE RESEARCH GROUP NMR SPECTROSCOPIST Ref: BR/212

A vacancy exists for a research assistant RS1A in the Oxford Oligosaccharide Group under the directorship of Dr. R. A. Dwek and Dr. T. W. Rademacher in the Department of Biochemistry, initially for 5 years with the possibility of renewal. The successful candidates will have completed a Ph.D. in any branch of science but will be interested in studying the structure and function of glycoconjugates applying 2D NMR techniques and using molecular dynamic calculations. The NMR equipment available includes two 500-MHz and a 600-MHz machines. The oligosaccharide program has a dedicated Evans and Sutherland PS 300 backed up with a micro Vax II. It is envisaged that additional computing power will be available.

Salary on the scale: £9,305 to £14,825 per annum depending upon age and experience.

Applications, including the names and addresses of three referees to:

**The Senior Administrator  
Department of Biochemistry  
University of Oxford  
South Parks Road  
Oxford OX1 3QU**

University of California, Los Angeles (UCLA)—**PEDIATRIC ENDOCRINOLOGIST.** Department of Pediatrics/Endocrinology accepting applications for tenure-track professor. Candidates should be certified or eligible for certification in pediatrics and pediatric endocrinology with a strong commitment to basic laboratory research at the tissue, cellular, or molecular level. Additional responsibilities include patient care, education of housestaff and fellows, and development of a competitive research program in pediatric and/or adolescent endocrinology.

Applications including curriculum vitae, summary of research, and names/addresses of two references to: **Barbara Lippe, M.D./Chief, UCLA Pediatrics/Endocrinology, 405 Hilgard Avenue, Los Angeles, CA 90024. UCLA is an Equal Opportunity/Affirmative Action Employer.**

The U.S. Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA) invites applications for four positions on the Program Development and Coordination Staff in the Office of Oceanic and Atmospheric Research (OAR). The office, located in the Washington, D.C. area, provides scientific, programmatic, and policy staff work to the assistant administrator for OAR. We are seeking a senior **PHYSICAL SCIENTIST** (salary range: \$45,700 to \$69,000; Vacancy No. 87-31PJ) to serve as staff expert for marine science efforts. We are also seeking a **METEOROLOGIST** (salary range: \$22,400 to \$42,300; Vacancy No. 87-29PJ). Persons with expertise in climate, air quality, weather, modeling, instrumentation, or monitoring are invited to apply. Two positions are available for **OCEANOGRAPHERS** (salary range: \$22,400 to \$42,300; Vacancy No. 87-30PJ). Biological, chemical, geological, and physical oceanographers are invited to apply. For further information please contact: **Mr. Paul Jordan, NOAA, NCASC Personnel, DC23, 11420 Rockville Pike, Room 324, Rockville, MD 20852; telephone: 301-443-8425. DOC is an Equal Opportunity Employer.**

## POSITIONS OPEN

### FIELD MUSEUM OF NATURAL HISTORY PALEOBIOLOGIST

Applications are invited for a career-track position, assistant curator rank, to complement our programs in paleontology and geology. We seek an energetic and productive paleobiologist with broad interests. Specimen-oriented research is required in invertebrate or vertebrate paleontology, paleobotany, or related fields including paleoecology and taphonomy. Our principal criteria are research excellence and an ability to interact with staff in other areas of paleontology. Responsibilities also include curation of relevant collections, limited participation in exhibition and education programs, and some administrative work.

The Department of Geology has eight curatorial positions (seven in paleobiology) and six supporting positions. The department maintains extensive collections in nearly all areas of paleontology, and actively participates in the programs of universities in the Chicago area. Applicants should have a Ph.D., and should mail curriculum vitae, description of current and future research program, and names of three references (with telephone number, if possible) to: **Dr. L. Grande, Department of Geology, Field Museum of Natural History, Chicago, IL 60605** by 15 November 1987. *An Equal Opportunity Employer M/F.*

### PESTICIDE CHEMIST OR TOXICOLOGIST

The Pesticide Chemistry and Toxicology Laboratory in the Division of Entomology and Parasitology of the University of California at Berkeley invites applications for a professional research chemist or toxicologist position. Applicants must hold a Ph.D. or equivalent degree in chemistry, biochemistry, toxicology, or related fields and must have extensive experience in multidisciplinary research on organic toxicants. Responsibilities of the successful candidate include: conducting cooperative research on the degradation and action of pesticides and other toxicants; developing new instrumental approaches in chemical and biochemical research; coordinating activities of the Pesticide Chemistry and Toxicology Laboratory. Position starts 1 January 1988 at an appointment level (associate or full professional researcher in the non-tenure series on a full-time fiscal year basis) and starting salary dependent upon qualifications. Send curriculum vitae, publication list, college transcripts, and names of three professional references by 15 November 1987 to: **Dr. John E. Casida, Pesticide Chemistry and Toxicology Laboratory, Division of Entomology and Parasitology, 114 Wellman Hall, University of California, Berkeley, CA 94720, telephone: 415-642-5424. The University of California is an Equal Opportunity/Affirmative Action Employer.**

### HARVARD UNIVERSITY CARDIOVASCULAR LABORATORY

**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE** position available immediately in the area of neurobiology, psychophysiology, or psychopharmacology; to study the links between higher nervous system activity and cardiovascular function. The selected individual will join a multidisciplinary group of scientists and clinicians who are investigating the problem of sudden cardiac death. Requirements include a Ph.D. or an M.D. with research experience. Please send curriculum vitae and the names of three references to: **Dr. Bernard Lown, Director, Cardiovascular Laboratory, Harvard School of Public Health, Boston, MA 02115. Harvard University is an Equal Opportunity/Affirmative Action Employer.**

**AGRICULTURAL RESEARCH SERVICE (ARS) POSTDOCTORAL RESEARCH ASSOCIATE.** Position available immediately for molecular biologist. Collaborative project (with **R. E. Denell**) using combined genetic and molecular approaches to study regulation of insect development by a complex of homeotic genes in *Tribolium*. Homeotic sequences will be cloned from *Tribolium* DNA using homologous *Drosophila* probes, and gene structure and function will be correlated using visible mutations and rearrangements in the complex. Ph.D. in genetics, molecular biology, or related field, and experience in recombinant DNA techniques are required. Send résumé to **Dr. Richard W. Beeman, USDA, ARS, U.S. Grain Marketing Research Laboratory, 1515 College Avenue, Manhattan, KS 66502. Equal Opportunity Employer.**

## POSITIONS OPEN

### PLANT CELL BIOLOGIST

The Department of Botany at the University of Wyoming invites applications at the rank of assistant or associate professor in plant cell biology. The position involves teaching at the undergraduate and graduate level, and the development of a vigorous research program. Candidates are sought who use modern approaches to address basic problems in the structure and function of plant cells. Active participation in interdepartmental programs in cellular/molecular biology is desired. A Ph.D. degree is required and postdoctoral experience is preferred. Salary will be commensurate with experience and qualifications. The appointment begins in August 1988. Qualified individuals should send a statement of research interests, curriculum vitae, graduate transcripts, and arrange to have three letters of reference sent by 15 December 1987 to: **Professor Thomas C. Vogelmann, Department of Botany, Box 3165 University Station, The University of Wyoming, Laramie, WY 82071-3165.**

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

### POSTDOCTORAL FELLOW IN PROKARYOTE MOLECULAR BIOLOGY

NIH-funded position available 1 December 1987 to study the regulation of mRNA stability in *B. subtilis* and *E. coli* [Proc. Natl. Acad. Sci. U.S.A. 84, 498-502]. Background in molecular biology desirable. Send curriculum vitae and three letters of recommendation to: **Dr. David Bechhofer, Mount Sinai School of Medicine, Biochemistry Department, Box 1020, New York, NY 10029. Telephone: 212-241-5628.**

### POSTDOCTORAL AND/OR JUNIOR FACULTY POSITIONS to work in one of four major areas:

- 1) Molecular genetic analysis of protein secretory mechanisms (including lipoprotein assembly).
- 2) Tissue-specific expression of post-translational protein processing.
- 3) Translational control of sterol biosynthetic proteins.
- 4) Molecular genetic analysis of chromosomal rearrangement in human malignant and developmental disorders.

Must have experience in molecular and/or cell biology techniques. Available 1 December 1987.

Send curriculum vitae, and indicate areas of interest, to: **Sharon Taylor, Administrative Assistant, Cell and Molecular Biology Unit, Box B-158, University of Colorado Health Sciences Center, 4200 East 9th Avenue, Denver, CO 80262. UCHSC is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITION CANCER RESEARCH INSTITUTE UNIVERSITY OF CALIFORNIA SAN FRANCISCO, CA

An immediate opening for a recent Ph.D. in biochemistry or immunology with expertise in 2-D gel electrophoresis, computer-based analysis of gels, and molecular biological techniques to perform research on the molecular mechanisms of action of biological response modifiers (interferons, interleukins, and tumor necrosis factor) in normal and malignant cells. Appointment for at least 2 years.

Please contact:

**Dr. L. B. Epstein  
Cancer Research Institute  
University of California  
San Francisco, CA 94143  
Telephone: 415-476-8972**

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

**POSTDOCTORAL POSITION** available immediately to study human molecular genetics of nuclear genes encoding mitochondrial multienzyme complexes. Recombinant DNA technology is being used to investigate the synthesis and assembly of the branched-chain ketoacid dehydrogenase complex with emphasis on the inherited human mutations which affect the function of this complex. Send curriculum vitae and letters of recommendation to: **Dean J. Danner, Ph.D., Division of Medical Genetics, Emory University, School of Medicine, 2040 Ridgewood Drive, Atlanta, GA 30322.**

## **ROCKEFELLER FOUNDATION BIOTECHNOLOGY CAREER FELLOWSHIPS**

The Rockefeller Foundation announces a program of career development fellowships designed to enable scientists from developing countries, trained at outstanding centers for advanced research in biotechnology, to continue to work at those or other institutions for three months each year, over a period of at least three years, conducting advanced research and keeping abreast of new developments in their fields. The program will focus upon the development and application of advances in molecular and cellular biology and immunology relevant to agriculture, health, and reproductive biology.

Funding will be shared between the Foundation and the host laboratory, with the Foundation providing travel and per diem support. It is hoped that the fellowships will encourage the establishment of ongoing working relationships between outstanding younger scientists working at third world institutions, and research teams at advanced laboratories.

Applicants to this program should have at least Ph.D.- or M.D.-level training, a proven record of scientific productivity, and a permanent position at a research or teaching institution in their home country. A written project proposal must be developed and submitted jointly by the candidate and the laboratory sponsor.

Information about application procedures can be obtained by writing to **Biotechnology Career Fellowships, Fellowship Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, New York 10036, USA.**

## **Graduate and Postdoctoral Biotechnology Fellowships**

Iowa has committed nearly \$50 million in the last two years to strengthen an effective program of agricultural biotechnology at Iowa State University. Interdisciplinary research teams are addressing opportunities in basic molecular biology and its applications to agricultural development, including plant, animal, and bioprocessing research.

ISU invites applications for graduate and postdoctoral fellowships in its interdisciplinary program of agricultural biotechnology. Graduate stipends are \$15,000 per year. Postdoctoral salaries are \$22,000-\$26,000, plus an additional 21.7% in fringe benefits paid by the university.

Graduate and postdoctoral fellows will be a part of active and stimulating research programs; will use state-of-the-art instrumentation for nucleic acid, protein, cell, and fermentation research; and will interact with international leaders in biotechnology research through seminars, symposia, and workshops.

For research project descriptions and fellowship application forms, contact the **Office of Biotechnology, 1301 Agronomy, Iowa State University, Ames, Iowa 50011.** Closing date: January 1, 1988, or until positions are filled.

Iowa State University is an Equal Opportunity Employer. Women, minorities, and members of other protected groups are strongly encouraged to apply.

**IOWA STATE UNIVERSITY**  
**Ames, Iowa**

## **REVIEWERS OF PHARMACOLOGY/TOXICOLOGY/ PHYSIOLOGY DATA**

### **U.S. GOVERNMENT FOOD AND DRUG ADMINISTRATION**

**POSITION DESCRIPTION:** The reviewer serves as a member of a multidisciplinary scientific/medical team in one of the drug application review divisions in the Center for Drugs and Biologics, Food and Drug Administration, located in Rockville, Maryland. Responsibilities include evaluating non-clinical pharmacology and toxicology data submitted to the FDA to support safety of new drugs proposed for human investigation and marketing. Incumbents review and evaluate scientific data submissions with respect to content, quality, adequacy and projected human risk, and contribute to recommendations regarding further studies and the initiation and progress of clinical trials.

**HIGHLY DESIRABLE:** Ph.D. plus experience and publications in a drug-related aspect such as neuropharmacology, cardiovascular, renal or gastrointestinal pharmacology, anti-inflammatory, anti-cancer, anti-infective or antiviral drug actions, metabolism or endocrinology.

**SALARY:** Ranges

GS-12 \$32,567-\$42,341

GS-13 \$38,727-\$50,346

commission in the U.S. Public Health Service, and commensurate pay scale, may also be possible.

**POSITIONS AVAILABLE:** Numerous positions within the Center for Drugs and Biologics in the Divisions of Neuropharmacological Drug Products, Division of Cardio-Renal Drug Products, Division of Gastrointestinal and Coagulation Drug Products, Division of Anti-Infective Drug Products, Division of Metabolism and Endocrine Drug Products and the Division of Oncology and Radiopharmaceutical Drug Products.

**APPLICATIONS:** Submit current curriculum vitae or U.S. Government application form (SF-171) to:  
Food and Drug Administration  
Division of Human Resources Management,  
Room 4B44  
5600 Fishers lane  
Rockville, Md. 20857  
Attention: Mrs. Sherry Preusch



An Equal Opportunity Employer



## POSITIONS OPEN

**POSTDOCTORAL POSITION** available to study protein structure, dynamics, and protein-drug interactions using solid-state and solution NMR techniques. Experience in protein chemistry is essential. Knowledge of NMR spectroscopy, protein crystallization, computer graphics modeling, or molecular dynamics simulation would be helpful. Send résumé and three names and addresses of references to: **Professor Tai-huang Huang, School of Physics, Georgia Institute of Technology, Atlanta, GA 30332.**

**POSTDOCTORAL POSITION** is available to investigate aspects of enzymic photorepair of DNA damaged by ultraviolet light. Applicants should have an interest and/or expertise in enzymes and photochemistry. Please send curriculum vitae and names of three references to: **Dr. M. Jorns, Department of Biochemistry, Hahnemann University, Broad and Vine, Philadelphia, PA 19102.**

### POSTDOCTORAL POSITION

Ph.D. in molecular biology or microbiology with a competency in recombinant DNA techniques to study gene expression. Research involves cloning of fragments of DNA of mycobacteria in *E. coli* and evaluation of proteins produced. Salary range \$24,000 to \$28,000. Send curriculum vitae and three references to: **Dr. C. O. Thoen, College of Veterinary Medicine, Iowa State University, Ames, IA 50011.**

**POSTDOCTORAL POSITION**—Reproductive Biology Research Training Grant. Available 1 January 1988. Interdisciplinary training with faculty members, NICHD Center for Population Research. Recent Ph.D.'s with liberal arts, medical, agricultural, or veterinary science background and demonstrated performance in reproductive biology or related areas. Send résumé, summary of research interests, and three reference letters to: **Dr. John D. Biggers, Harvard Medical School, LHRB, 45 Shattuck Street, Boston, MA 02115.** *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** to study the structure and expression of yeast cell-surface glycoproteins (agglutinins) involved in cell-cell recognition during mating. Send curriculum vitae and names and addresses of three references to: **Dr. Janet Kurjan, Department of Biological Sciences, Columbia University, New York, NY 10027** (genetic and molecular approaches); or **Dr. Peter Lipke, Department of Biological Sciences, Hunter College, 695 Park Avenue, New York, NY 10021** (biochemical and molecular approaches).

**POSTDOCTORAL POSITION:** Vapor Uptake and Disposition. Immediate opening for recent (36 months) Ph.D. in biochemistry, chemistry, pharmacology, physiology, toxicology, or related field to play key role investigating how chemical and physical properties of inhaled vapors influence their uptake and biological fate in lab animals. Stipend: \$20,000 per year plus relocation allowance and health insurance. U.S. citizen or permanent residency. **Personnel Unit, Lovelace Inhalation Toxicology Research Institute, P.O. Box 5890, Albuquerque, NM 87185. Telephone: 505-844-9431.** *Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately to study the regulation of class II MHC glycoprotein expression by mononuclear phagocytes. Experience in molecular biology or cell biology or immunology desirable. Send curriculum vitae and names of three references to: **Dr. Bruce S. Zwilling, Department of Microbiology, The Ohio State University, 484 West 12th Avenue, Columbus, OH 43210.** *The Ohio State University is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITION

Available immediately to study the cellular immune response to Theiler's virus infection of mouse. This demyelinating disease is a model for multiple sclerosis. Experience in cellular immunology is essential for this position. Send curriculum vitae, names of three references to: **Michel Brahic, Institut Pasteur, 75724 Paris Cedex 15, France.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** is available immediately to study the structure, function, and molecular biology of Arg-Gly-Asp-directed cell adhesion receptors expressed in human cells.

A strong background in molecular biology is required. Send curriculum vitae and names of three references to:

**David A. Cheresh, Ph.D.  
Laboratory of Tumor Cell Biology  
IM-13  
Research Institute of Scripps Clinic  
10666 North Torrey Pines Road  
La Jolla, CA 92037**

**POSTDOCTORAL POSITION** in plant development/molecular biology available 1 January 1988 for a Ph.D. in biology or related discipline. Work focuses on isolation and characterization of floral-specific genes. Preference given to applicant trained in the techniques of molecular biology. Duration: 1 year with possibility of renewal. Salary \$23,000. Send curriculum vitae and three references to: **Elizabeth Lord, Department of Botany and Plant Sciences, University of California, Riverside, CA 92521.**

### POSTDOCTORAL POSITION

Available now, for 2 years; research on opioid receptors in differentiated human neuroblastoma cells; projects include use of biotin-avidin-endorphins to isolate and detect receptors, the study of second messengers, and the molecular mechanisms of tolerance and dependence. Send résumé and names of three references to: **Dr. Wolfgang Sadée, School of Pharmacy, University of California San Francisco, San Francisco, CA 94143-0446.**

**POSTDOCTORAL POSITION** available October 1987 for the study of genetic alterations in human cancer. Experience in **MOLECULAR GENETICS** or **CYTOGENETICS** required. Appointment for up to 3 years. Send curriculum vitae and the names, addresses, and telephone numbers of two references to: **Dr. Joseph R. Testa, Section of Cancer Genetics, University of Maryland Cancer Center, 655 West Baltimore Street, 9-031 BRB, Baltimore, MD 21201; Telephone: 301-328-3908.** *The University of Maryland is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** for recent Ph.D. interested in the biochemical pharmacology of antiviral drugs. Areas of study include (i) the use of ribonucleotide reductase as a target for drug development and (ii) the synergistic antiviral potential of thiosemicarbazones when used with other antiviral compounds. Experience in cell and virus culture, enzymology, ELISA techniques, and HPLC desirable. Send curriculum vitae, graduate transcripts, and names of three evaluators to: **Dr. C. Shipman, Jr., Department of Biologic and Materials Sciences, School of Dentistry, The University of Michigan, Ann Arbor, MI 48109-1078.** *A Nondiscriminatory Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately to study the biochemistry of a gene regulatory protein, the *Ah* receptor. Studies will focus on the interaction of this protein with toxic ligands such as 2,3,7,8-tetrachlorodibenzo-*p*-dioxin, the transformation of the ligand-receptor complex to a DNA binding state, the biochemical properties of the various forms of the receptor, and its interaction with the mammalian genome. Reply with curriculum vitae and three letters of recommendation to: **Dr. T. A. Gasiewicz, Environmental Health Sciences Center, University of Rochester Medical Center, Rochester, NY 14642.** *The University of Rochester is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available to work on one or more of the following projects: (i) action mechanisms of DNA repair enzymes, (ii) cloning of prokaryotic DNA repair genes, (iii) purification of human DNA repair enzymes. The laboratory offers excellent opportunities to learn recombinant DNA techniques, protein engineering, protein chemistry, and enzymology. Send applications to: **Dr. Aziz Sancar, Department of Biochemistry, School of Medicine, University of North Carolina, Chapel Hill, NC 27514.** *Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately for biochemical and molecular studies on the mechanism of insulin action in the regulation of gene expression. Previous experience in cell culture and molecular biology is necessary. Send résumé and names of three references to: **Dr. John Koontz, Department of Biochemistry, WLS M 407, University of Tennessee, Knoxville, TN 37996-0840.**

**POSTDOCTORAL POSITION—CARDIOVASCULAR PHARMACOLOGY**—available January 1988 to study the interactions of various reflexogenic receptor systems for autonomic nervous regulation of cardiac function and/or contractile mechanisms in isolated cardiac cells. Experience in electrophysiologic techniques preferred. Send curriculum vitae and names of references (three) to: **Dr. R. W. Caldwell, Department of Pharmacology and Toxicology, Medical College of Georgia, Augusta, GA 30912.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION:** Ground-water microbiology—available immediately, 2-year position at the Marine Sciences Research Center, SUNY, Stony Brook, New York to participate in study of bacterial activities in shallow, anoxic aquifer systems. The appointee will coordinate field sampling with Suffolk County Department of Health Services and be responsible for studies of nitrate reduction. Expertise in denitrification and <sup>15</sup>N tracer methods required. Salary \$24,000 per year. Send curriculum vitae, names of three references to: **D. G. Capone, Chesapeake Biological Laboratory, Box 38, Solomons, MD 20688** (telephone: 301-326-4281). *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.* AK 218.

### U.S. DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

**POSTDOCTORAL POSITION** is available immediately for research biologist to join group of scientists from the Human Nutrition Research Center and Animal Science Institute investigating the effects of dietary carbohydrate on copper and iron metabolism. The project emphasizes the use of swine as an animal model for humans. Applicants should have experience in large animal nutrition and one or more of the following: cardiovascular physiology, histology, immunology, general biochemistry. Salary is \$27,172 (GS-11). Résumé including the names and telephone numbers of three references should be forwarded to: **Dr. Mark Richards, Nonruminant Nutrition Laboratory, ARS, USDA, Beltsville, MD 20705.** Application must be marked 7E034. *The USDA is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION—ENZYMOLGY.** The research is aimed at identifying, isolating, and characterizing lignin-degrading enzymes in a filamentous fungus. Work will be in well-equipped laboratories at U.S. Forest Products Laboratory/University of Wisconsin. Available immediately for 1 to 2 years. Salary: \$26,000 per year. U.S. citizens only. *An Equal Opportunity Employer.* Reply: **Dr. T. K. Kirk, Forest Products Laboratory, One Gifford Pinchot Drive, Madison, WI 53705-2398.** Telephone: 608-264-5887 or 5866.

**POSTDOCTORAL POSITIONS (two)** in molecular genetics of protozoan parasites. Join ongoing projects examining: (i) the genetics and molecular pathogenesis of the AIDS pathogen, *Pneumocystis carinii*; or, (ii) novel aspects of gene expression and mRNA processing (trans-splicing) in African/American trypanosomes. Experience in molecular genetics or pathogenesis desirable. Send curriculum vitae and three reference letters to: **Dr. Gregory Buck, Box 678 MCV Station, Virginia Commonwealth University, Richmond, VA 23298.**

**POSTDOCTORAL POSITION IN PARASITOLOGY** available 1 December 1987 to study the molecular basis for compatibility between larval *Schistosoma mansoni* and its snail intermediate host. Background in parasitology and a strong interest in parasite-vector interactions required. Experience with immunological, biochemical, or cell culture methodologies is desirable. Send curriculum vitae, summary of research experience, and two letters of reference to: **Dr. T. P. Yoshino, Department of Zoology, University of Oklahoma, 730 Van Vleet Oval, Norman, OK 73019.**

# RESEARCH SCIENTISTS

Fort Dodge Laboratories, a leading animal health company, is developing state-of-the-art veterinary vaccines. We are expanding our R. & D. group and have positions immediately available for skilled and motivated research professionals looking for career growth and new product development opportunities.

## RESEARCH PROJECT LEADER

PhD in Microbiology preferred, with a minimum of 2-5 years of significant industrial experience in Virology. The selected candidate will direct a laboratory group in large and small animal vaccine development including planning research approaches, integrating with other research groups, and bench-level experimentation. Background in Molecular Biology a definite plus.

## DIRECTOR OF PHARMACEUTICAL R. & D.

With responsibilities for product development, clinical trials and government product licensing. We require an advanced degree in Pharmacology and hands-on industrial experience in formulation of animal health care products. Direct participation in the preparation and submission of data to the government for product licensing is a must.

## RESEARCH TECHNICIANS

We require a BS in Microbiology with a background in Virology, Chemistry and Immunology. A working knowledge of tissue culture, laboratory instrumentation, and microcomputers is desirable. *Advance technician positions available for those possessing MS Microbiology degree.*

If you have the qualifications necessary to fill one of these openings, and you are interested in professional growth, a stimulating environment, a competitive salary and benefits package, you should forward your resume and salary requirements to:

Personnel Director  
**FORT DODGE LABORATORIES**



P.O. Box 518  
Fort Dodge, IA 50501

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## PUBLIC HEALTH SERVICE NATIONAL INSTITUTES OF HEALTH

### NATIONAL CANCER INSTITUTE

#### A Senior Executive Service Vacancy

### ASSOCIATE DIRECTOR FOR CENTERS AND COMMUNITY ONCOLOGY PROGRAM

#### DIVISION OF CANCER PREVENTION AND CONTROL

Location: Silver Spring, Maryland

The National Cancer Institute develops the overall national strategy against cancer, coordinates Federal government and non-Federal government cancer programs, and supports international programs of cancer research. The Associate Director for Centers and Community Oncology Program plans, evaluates and coordinates a broad national and international program to provide new leads in cancer care, treatment and rehabilitation. The incumbent will be responsible for management of three extramural branches which administer a \$114 million a year grant and contract program. These activities are supported by a staff of approximately 40 professional and support personnel.

This is a Civil Service position in the Senior Executive Service (SES) with a salary range from \$64,700 to \$73,400 per annum. In addition, M.D. candidates may be eligible for a Physician's Comparability Allowance up to \$10,000 per year. (Candidates alternatively may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) The individual selected, if not presently in SES, must serve a one-year probationary period.

Candidates must meet the minimum requirements for Medical Officer, GS-602. Candidates must further meet established mandatory professional/technical and managerial/executive requirements. Candidates will be further evaluated on the extent to which they exceed the minimum requirements and on additional factors including scientific reputation/peer recognition, training and education and honors and awards. A copy of the requirements may be obtained by contacting Ms. Shirley Villone in the Personnel Management Branch, NCI at (301) 496-1771.

Applications for Federal Employment (SF-171) are to be sent to the above individual at: The National Cancer Institute, 9000 Rockville Pike, Building 31, Room 3A31, Bethesda, Maryland 20892. A current curriculum vitae and bibliography must accompany all applications. Resumes are not acceptable applications for entrance into the Senior Executive Service. Applications from women and/or minority group members are especially solicited. U.S. Citizenship is required.

**THE NATIONAL INSTITUTES OF HEALTH  
IS AN EQUAL OPPORTUNITY EMPLOYER**

**DEAN**  
**COLLEGE OF VETERINARY MEDICINE**  
**TEXAS A & M UNIVERSITY**  
**College Station, TX 77843**

Texas A & M University invites applications and nominations for the position of Dean, College of Veterinary Medicine. The Dean, as the chief administrative officer of the College, is responsible to the Provost and President and has primary responsibility for formulating and implementing balanced teaching, research and service programs, developing and allocating resources, and representing the College on- and off-campus. Key liaison activities involve interaction with the Colleges of Medicine, Agriculture and Engineering, Texas Agricultural Experiment Station, Texas Agricultural Extension Service, Laboratory Animal Resources & Research facility, Texas Veterinary Medical Diagnostic Laboratory, Texas Veterinary Medical Association and the Texas Legislature. The ability to foster ties with veterinary practitioners and the general public in matters vital to the College is essential.

The College of Veterinary Medicine, one of ten colleges at Texas A & M University, consists of 7 departments, a Teaching Hospital, approximately 150 faculty members and 128 professional students per class. In addition the baccalaureate degree is offered in Biomedical Science (740 students currently enrolled) and there are 170 graduate students working for MS and Ph.D. degrees. In FY 86, funded research was \$7.5 million.

An earned Doctorate of Veterinary Medicine is required and graduate degrees, specialty certification, and teaching, research and service accomplishments are desirable. Applicants should have demonstrated leadership in teaching, research, service and administration. Knowledge of state-supported educational institutions, state and federal legislative processes and programs, research funding sources, and familiarity with land grant institutions is desirable.

Nominations and applications, including letter of intent, resume and three references, will be accepted until 4 January 1988. Send to:

**Dr. Melvin Friedman, Dean**  
**College of Geosciences**  
**Chair, Search Advisory Committee**  
**Rm. 204, O & M Bldg.**  
**Texas A & M University**  
**College Station, TX 77843**

*Texas A & M University is an Equal Opportunity, Affirmative Action Employer.*

## Postdoctoral Scientist

The Investigative Toxicology and Immunology and Antiinfectives Departments of Smith Kline & French Laboratories, located in suburban Philadelphia, are seeking a Postdoctoral Scientist to conduct quantitative cytometry on proliferative rodent lesions and to study the molecular mechanisms involved in the formation of these lesions.

The successful candidate will:

- correlate DNA content (ploidy) as measured by adherent cell cytometry and flow cytometry with the proliferative activity of rodent lesions as determined by histologic and morphometric criteria.
- compare oncogene expression of spontaneous and drug-induced proliferative rodent lesions.
- study the intracellular oncoprotein distribution in tissue sections prepared from proliferative rodent lesions.

Candidates should have:

- Ph.D. in Cell Biology or related discipline with 0-3 years postdoctoral experience.
- Knowledge of quantitative cytometry and molecular biology.
- Excellent verbal and written communication skills.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Please forward your C.V. and the names of three references to: Mary Ann McCarray - C0048 - Smith Kline & French Laboratories, Research & Development, P.O. Box 1539, King of Prussia, PA 19406-0939.

We are an Equal Opportunity Employer, M/F/H/V.

**SK&F**  
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## UNDERGRADUATE RESEARCH

The U.S. Department of Energy offers college juniors and seniors the opportunity to do research at five federal laboratories. Qualified students spend one academic term in energy-related research at the frontier of science with state-of-the-art facilities and equipment.

### BENEFITS

- Stipends up to \$175 per week
- Round-trip travel and housing
- Academic credit may be arranged through the home institution
- Research Areas include: computer sciences, engineering, environmental and life sciences, mathematics, and physical sciences

For detailed information and application forms, please write to this address:

**Science and Engineering Research Semester**  
**U.S. Department of Energy**  
**Office of Energy Research, Room 3F-061**  
**1000 Independence Avenue, SW**  
**Washington, D.C. 20585**

Application Deadline: October 30, 1987

## Post-Doctoral Positions

Immunex Corporation, a leader in the field of biotechnology, has immediate openings for assistant staff scientists (post-doctoral fellows) in its Cellular Immunology and Biochemistry groups. Successful candidates will be involved in multiple research projects aimed at characterization of cytokines and their actions in models of hematopoiesis and auto-immunity. Applicants for these positions should possess a Ph.D. in Immunology/Microbiology/Biochemistry or a related field. Experience with *in vivo* models of auto-immune dysfunction or hematopoiesis is advantageous. For consideration, please submit curriculum vitae and names of three references to:

**Human Resources Officer**  
**Immunex Corporation**  
**51 University Street**  
**Seattle, WA 98101**

Immunex Corporation is an equal opportunity employer.

**IMMUNEX**

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS IN PROTEIN ENGINEERING/FOLDING.** Available early to mid-1988. Molecular genetic techniques are used to introduce specific changes in the coding region of the gene for yeast cytochrome *c* resulting in alterations in the protein primary structure. Mutation-induced changes in tertiary structure, internal dynamics, function, and the process of structure formation-protein folding are evaluated with biophysical methods.

Applicants with interest in molecular genetic or biophysical aspects of the project are encouraged to apply. Please submit curriculum vitae including names and addresses of three references to: **Dr. Barry T. Nall, Biochemistry, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284-7760.**

*An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**BAYLOR COLLEGE OF MEDICINE  
AMERICAN HEART ASSOCIATION-  
BUGHER FOUNDATION CENTER  
FOR MOLECULAR BIOLOGY OF  
THE CARDIOVASCULAR SYSTEM**

**POSTDOCTORAL POSITIONS** for Ph.D. or M.D. to study the molecular biology of muscle differentiation. One position concerns the developmental and tissue-specific expression of voltage-gated ion channels. The second position involves creatine kinase gene structure and expression in skeletal and cardiac muscle. Experience in molecular genetics is essential. Please send curriculum vitae with names of three references to: **Robert Roberts, M.D., Director, A.H.A.-Bugher Foundation Center, Baylor College of Medicine, 6535 Fannin, M.S. F905, Houston, TX 77030.**

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS

Postdoctoral fellowships available in neurophysiology/neuropharmacology to study consequences of acute and subacute spinal cord injury in mammalian models. The study utilizes intracellular and extracellular recording techniques from spinal neurons to evaluate the roles of neural modulators in regulating neuronal response patterns. The research program is based in a physiology department active in many areas of neuroscience, providing an excellent training environment. Salary commensurate with experience.

Please send curriculum vitae and names of three references to: **Dr. W. Z. Rymer, Department of Physiology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.**

### POSTDOCTORAL POSITIONS IN DEVELOPMENTAL NEUROSCIENCE

Three positions are immediately available in the Neurobiology Research Center at the State University of New York (SUNY) at Albany. The positions are to study the development of the insect nervous system and the development and regeneration of the retinotectal system of the fish in the laboratories of **R. K. Murphey** (two positions) and **J. T. Schmidt** (one position). Candidates should have a Ph.D. in a related field and demonstrated expertise in one of the following: electrophysiology, monoclonal antibody production, HRP staining and electron microscopy, tissue culture, immunocytochemistry or *Drosophila* genetics. Send curriculum vitae and the names of three referees to: **Dr. Murphey or Dr. Schmidt, Neurobiology Research Center, SUNY Albany, Albany, NY 12222.**

*SUNY Albany is an Equal Opportunity/Affirmative Action Employer. Applications from women, minority persons, handicapped persons, and special disabled or Vietnam era veterans are especially welcome.*

### POSTDOCTORAL POSITIONS

**ANGIOGENESIS:** Areas currently under study include protein biochemistry and cell biology of endothelial and smooth muscle cells. Experience in HPLC and protein sequencing, or Northern blotting and in situ hybridization preferred. Individuals with U.S. citizenship should send curriculum vitae and three letters of reference to: **Dr. Ward Casscells, Section on Experimental Physiology and Pharmacology, Cardiology Branch, National Heart, Lung, and Blood Institute, National Institutes of Health, Public Health Service, DHHS, Building 10, Room 7815, 9000 Rockville Pike, Bethesda, MD 20892.**

*NIH is an Equal Opportunity Employer.*

### POSTDOCTORAL RESEARCH IN CLINICAL NEUROBIOLOGY

Several postdoctoral positions (Ph.D., M.D., or M.D./Ph.D.) have become available through a PEW Foundation grant established to develop a program in clinical psychobiology at the University of California, Irvine. The goal of this program is to provide opportunities for young investigators to develop careers in research that bridge the basic and clinical aspects of neurobiology. Research will focus on the neurobiology of cognition and its restoration after injury in animal models and man, particularly as relating to development, aging, and associated disorders. The program is multidisciplinary, emphasizing the use of olfactory stimuli to study developmental vs. age-related plasticity mechanisms in associated cortical and hippocampal circuitries. Projects include NMDA receptors and synaptic plasticity, electrophysiological studies on cortical and hippocampal circuits, computer simulations of these networks and synaptic mechanisms, behavioral experiments and neuropsychological and clinical studies in man. The clinical psychobiology program is under the direction of **Drs. Carl Cotman, Ira Lott, and Gary Lynch**. The positions are available immediately. Interested applicants should submit their curriculum vitae and the names of three references to:

**Dr. Carl Cotman  
Program in Clinical Psychobiology  
Department of Neurology  
California College of Medicine  
144 Med Surge I  
University of California  
Irvine, CA 92717**

*An Equal Opportunity/Affirmative Action Employer.*

## CONSIDER YOUR OPTIONS, THEN CHOOSE GENZYME

If you're a research professional looking for the excitement and challenge of working on the leading edge of technology, your options have never been so great. Genzyme, a leader in the development of proprietary biopharmaceuticals, is established as a profitable developer, manufacturer, and vendor of products for the health care industry.

Consider the following opportunities now available at Genzyme.

### PROTEIN BIOCHEMISTS

Ph.D.'s in Biochemical Engineering or Protein Biochemistry to work in development and scale up procedures for the purification of natural and recombinant proteins. Industrial experience preferred.

### BIOCHEMICAL ENGINEER

Ph.D. in Biochemical or Chemical Engineering to work in the development and scale-up of therapeutic polysaccharides. Candidates should have experience in polysaccharide production and purification.

### MOLECULAR BIOLOGISTS

Ph.D. in Molecular Biology with several years' postdoctoral experience and demonstrated expertise in heterologous gene expression in eucaryotic cells. Industrial experience helpful.

Genzyme offers excellent salaries and benefits, plus the opportunity to be part of a young, growing, and dynamic company. **For confidential consideration, please forward a letter expressing your area of interest, a resume, and names of three references to: Human Resources, Genzyme Corporation, 75 Kneeland Street, Boston, MA 02111.**

*An Equal Opportunity Employer*



## POSITIONS OPEN

**POSTDOCTORAL RESEARCH APPOINTMENTS** are occasionally available with individual faculty members of the Departments of Chemistry and of Chemical Engineering at the University of California, Berkeley. Appointments are normally made for a year, but with the possibility of renewal for a second. Highly qualified persons are invited to apply for positions to be assumed at the time of, or shortly after, the completion of doctoral studies. A single application should be addressed to the faculty member with whom the applicant prefers to be associated. (In the event that no position is available with that faculty member, the application will be circulated to other faculty members with similar research interests.) Arrangements should be made for one confidential letter of reference to be sent by the person best able to judge the applicant's research achievements and potential. Applications should include a résumé, a brief statement of research experience, interests and goals, and the names and addresses of two additional references. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL/RESEARCH ASSOCIATE** position available in molecular neurobiology of Alzheimer disease. Qualifications include a Ph.D. or M.D. with a strong background in immunocytochemistry, cell biology, and/or protein purification. Experience with eukaryotic in vitro expression systems desirable. The candidate will be part of an effort to study the mechanism of amyloid accumulation in the CNS of the Alzheimer disease and Down syndrome patients using molecular biology and immunochemistry. Please send résumé and the names of three references to:

**Dr. Nikos Robakis**  
Mount Sinai School of Medicine  
Department of Psychiatry and Neurobiology Center  
One Gustave Levy Place  
Annenberg Building, 22nd floor  
New York, NY 10025

## POSTDOCTORAL RESEARCH ASSOCIATES

Postdoctoral associate positions (two) available immediately. Funding available for up to 5 years. Research is on repair of non-distortive (antitumor antibiotics, anthracycline, and Cc-1065) and distortive (BPDE and NAAAF) DNA damage: in vitro using purified UV-RABC proteins and in vivo using *E. coli* and CHO cells. The project involves protein purification and DNA sequencing. Salary starts at \$19,000 depending on experience. Send curriculum vitae and names of references to: **Dr. Moon-Shong Tang, University of Texas System Cancer Center, Science Park, P.O. Box 389, Smithville, TX 78957. An Equal Opportunity/Affirmative Action Employer.** Targeting for a non-smoking workplace.

**POSTDOCTORAL RESEARCH ASSOCIATE** in molecular biology—A position is available for a person interested in using the techniques of molecular biology to study the structure and function of protein toxins that act on the nervous system. The successful applicant will join a multidisciplinary research team with investigators at the State University of New York (Buffalo) and Jefferson Medical College (Philadelphia). The research program will involve studies on the sequencing on genes that code toxins, the use of site-directed mutagenesis to analyze structure-function relationships, the identifications of antigenic domains, and the preparation of synthetic vaccines. Preference will be given to applicants with previous experience in molecular biology and particularly gene sequence determination. Interested persons should submit curriculum vitae, a list of publications, and the names of references to: **Dr. Lance L. Simpson, Jefferson Medical College, Thomas Jefferson University, 1025 Walnut Street, Philadelphia, PA 19107. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL RESEARCH POSITION** available to study effects of HIV peptides on human macrophage and microglia in in vitro cell culture. Ph.D. and experience in cell biology, cell culture, and immunological techniques required. Knowledge of neuroimmunology favored. Send curriculum vitae, bibliography, names of three references to: **Steven D. Douglas, M.D., Professor of Pediatrics and Microbiology, University of Pennsylvania Medical School, c/o Children's Hospital of Philadelphia, Division of Allergy-Immunology, 34th Street and Civic Center Boulevard, Philadelphia PA 19104. An Equal Opportunity Employer.**

## 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.**

**POSTDOCTORAL RESEARCH ASSOCIATE**—Position available immediately for microbial geneticist interested in molecular mechanisms of mutagenesis and DNA repair. Active research group employing multifaceted approaches. Applicant must be able to relocate to Vermont. Send curriculum vitae and names of three references to: **Dr. Susan Wallace, Department of Microbiology, New York Medical College, Valhalla, NY 10595, or telephone: 914-993-4197.**

**POSTDOCTORAL RESEARCH ASSOCIATE.** Available 1 December 1987 at \$30,000 plus per annum to study gene expression during connective tissue development, particularly cartilage and bone induction in cultured cranial neural crest cells. Candidates should have background in cell or molecular biology. Write to: **Dr. M. Solursh, Department of Biology, University of Iowa, Iowa City, IA 52242. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL RESEARCH POSITION** available January 1988 to study post-transcriptional regulation of gene expression in eukaryotes. Current projects include analysis of cloned snRNP proteins and studies of the effect of androgens on protein processing. Experience with recombinant DNA techniques useful but not essential. Send curriculum vitae and names of three references to: **Dr. Eric Weiben, Department of Biochemistry and Molecular Biology, Mayo Graduate School of Medicine, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.**

## PRESIDENT DEFENDERS OF WILDLIFE

A national nonprofit environmental organization seeks a president and chief executive. Headquartered in Washington, D.C. with regional offices throughout the country, Defenders of Wildlife (DOW) has a \$3.5-million budget, a staff of 35 and approximately 80,000 members. DOW seeks a president who can articulate the organization's mission and provide leadership to its staff, the environmental community, and potential donors. Managerial and fundraising skills are essential prerequisites for the position. Salary commensurate with experience. Interested persons should send a letter of application including a vision of the organization and its priorities, a résumé, and list of references to: **Dr. Stephen Kellert, Chairman of Search Committee, Defenders of Wildlife, 1244 19th Street, N.W., Washington, DC 20036. Deadline for application: 19 October 1987.**

## PROFESSOR AND DEPARTMENT HEAD

Department of Poultry Science, Oregon State University. Qualifications: Minimum degree requirements are a Ph.D. degree in poultry science or closely related field. The candidate must have demonstrated competency as an educator, researcher or administrator, and be nationally recognized in poultry science. The following are desirable: experience in the performance and administration of grant-supported research, leadership and administrative abilities, and interest in promoting the diversity of activities including public service for which the department has responsibility. Suggested areas of professional competencies may include management, nutrition, physiology, or products technology.

Salary: Commensurate with applicant's experience and qualifications. Deadline: No later than 1 December 1987.

Contact:

**Dr. H. S. Nakaue**  
Selection and Screening Committee  
Department of Poultry Science  
Oregon State University  
Corvallis, OR 97331-3402  
Telephone: 503-754-2301

## POSITIONS OPEN

**PROFESSOR OF BIOLOGICAL CHEMISTRY**—Harvard Medical School is searching for a professor of biological chemistry who will serve as chief of the Laboratory of Molecular Genetics at the Dana-Farber Cancer Institute. The successful candidate is expected to be an established investigator in the field of general genetic recombination mechanisms of bacteria and/or eukaryotes, genetics, molecular biology, and enzymology into a broadly based research program. Interested individuals should send a letter and curriculum vitae to: **Dr. Charles Stiles, Division of Cell Growth and Regulation, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115. Harvard Medical School and the Dana-Farber Cancer Institute are Equal Opportunity/Affirmative Action Employers.**

## PROTEIN BIOCHEMIST

Position as research associate or instructor available immediately: mammalian enzyme purification and structural studies. Applicant should have experience in protein biochemistry and be familiar with methodology for classical enzyme purification and analytical and preparative peptide studies. Some experience with amino acid sequencing desirable. The position involves participating with two other Ph.D.s in exciting research on well-funded projects relating to the structure of mammalian steroid interconverting enzymes. A letter of application, accompanied by a signed, current curriculum vitae, and the names of three individuals who might serve as references should be sent to: **Dr. Gary Murdock, Department of Obstetrics/Gynecology, Washington University School of Medicine, 4911 Barnes Hospital Place, St. Louis, MO 63110. Applications should be received by 1 November 1987. Washington University is an Equal Opportunity/Affirmative Action Employer.**

Position available immediately for a **RESEARCH ASSOCIATE** appointment in anatomy and cell biology at the University of Virginia Medical School. Research to focus on regulating and optimizing immunoglobulin secretion in hybridomas. Cell biologists with interest in secretion, growth factors, and lymphokines are encouraged to apply. Position involves an interdisciplinary program in bioprocessing and interactions with chemical engineers. Send curriculum vitae and names of three references to: **Dr. John C. Herr, Department of Anatomy and Cell Biology, Box 439, Medical Center, University of Virginia, Charlottesville, VA 22908.**

**RESEARCH ASSOCIATE** with Ph.D. in organic chemistry to conduct research in classical carbohydrate manipulation and in organic synthetic methodologies relating to complex molecules using analytical procedures, such as FT-NMR, H-C-F, UV, IR, MS-FAB, GC, LC, and TLC, for structure determination of complex natural products. Must have proven ability to work independently. Salary: \$17,400, 40 hours. If not a U.S. citizen, indicate visa status. Apply: **Employment Security Commission, 516 North Mangum, Durham, NC 27701, or your local Job Service Office.** Refer to job order number NC 7100720. DOT code 090-227-010. *Affirmative Action/Equal Opportunity Employer.*

**RESEARCH ASSOCIATE AND/OR RESEARCH ASSISTANT PROFESSOR POSITIONS** (SUNY at Stony Brook in association with Howard Hughes Medical Institute). To study in vivo and in vitro electrophysiology and biophysics of thalamic neurons in the cat's lateral geniculate nucleus. Minimum requirement: Ph.D. or equivalent with postdoctoral training preferred plus training in electrophysiology; experience in visual system not necessary. Send curriculum vitae plus three references to: **Dr. P. R. Adams and/or Dr. S. M. Sherman, State University of New York, Stony Brook, NY 11794-5230. SUNY is an Equal Opportunity/Affirmative Action Employer.**

**RESEARCH ASSOCIATE POSITION**—Virology and Molecular Biology Department, Ph.D. required. Research to increase understanding of vital processes in the reproduction of viruses that cause pneumonia and other severe respiratory infection, in children. Equipment used: ultracentrifuge, laminar flow safety cabinet, spectrophotometer, high voltage electrophoresis apparatus, and analytical balance. Relevant experience in reproduction of viruses and respiratory infections, recombinant DNA technology, rapid nucleic acid sequencing, enzymatic synthesis of nucleic acids, and site-directed mutagenesis. Salary, \$30,090. Send résumé to: **Jack Hilzheim, Department of Employment Security, State of Tennessee, 1295 Poplar Avenue, Memphis, TN 38103. Equal Opportunity Employer.**



## **Biotechnology Research and Development**

Pandex, a division of Baxter Healthcare Corporation, is developing state of the art products for medical diagnostics.

We are expanding our R&D group and offer unique opportunities for creative Ph.D. level Scientists interested in positions that offer challenging opportunities for professional career growth.

We are seeking the following key individuals:

**Nucleic Acid Chemist** - Ph.D. with 0-3 years postdoctoral experience in DNA/RNA synthesis.

**Molecular Biologist** - Ph.D. with 2-3 years postdoctoral experience in DNA cloning and synthesis of DNA probes.

**Assay Development Scientists** - Ph.D. with 3-5 years postdoctoral or industrial experience in immunology, virology or microbiology with knowledge of immunoassay techniques.

**Virologist** - Ph.D. with 0-3 years postdoctoral experience or equivalent in retrovirology.

**Microbiologist** - Ph.D. with 0-3 years postdoctoral experience in the area of STD's.

As a division of a multi-billion dollar leader in the healthcare industry with research facilities located 30 miles north of Chicago, we offer a competitive starting salary and an excellent benefits program.

If you would like to be considered, please send your resume in confidence to: Anne McNicholl, Personnel Director, Baxter Healthcare Corporation, Pandex Division, 909 Orchard Street, Mundelein, IL 60060. We are an equal opportunity employer.

Pandex Division

**Baxter**

## **THE GRADUATE SCHOOL OF BIOLOGICAL SCIENCES MOUNT SINAI SCHOOL OF MEDICINE OF THE CITY UNIVERSITY OF NEW YORK**

The Mount Sinai School of Medicine of CUNY offers Ph.D and MD/Ph.D. training in eight major subspecialties that encompass cutting edge areas of the biomedical sciences. The research laboratories are located in twelve participating departments as well as three new centers for molecular biology, neurobiology and immunobiology. Some of the faculty research interests include:

- Human Gene Mapping
- Molecular & Biochemical Genetics of Human Diseases
- Molecular biology of DNA & RNA tumor viruses
- Genetics and biology of influenza viruses
- Molecular mechanism of cellular and viral replication
- Molecular mechanism of viral host interaction
- mRNA transcription, processing and stability in vivo and in vitro
- Gene expression of exocrine gland-specific secretory proteins
- Isolation and characterization of gene-specific regulatory DNA binding proteins
- Transgenic animals and mammalian gene expression
- Macrophage and neutrophil physiology
- Immunological mechanisms of liver diseases
- Molecular basis of generation of antibody diversity
- Development and regulation of mammalian lymphoid system
- Molecular biology of plasma membrane receptor
- Pharmacology and molecular biology of neuropeptide processing enzyme
- CNS regulation of cardiovascular function
- Developmental neurobiology of growth factors and their receptors
- Neuroendocrinology of stress and reproduction
- Molecular basis of neurodegenerative diseases
- Neurotransmitter receptor pharmacology isolation and characterization

- G proteins and receptors involved in signal transduction at the cell surface
- Computerized image analysis of biomedical systems
- Synthesis and cellular sorting of protein hormone precursors
- Membrane biophysics
- Biochemistry of ATP synthesis
- Steroid hormones: transport and mechanism of action
- Growth factor structure and activity
- Physiology of electrolyte transport
- Growth factors and peptide hormones

### **The Mount Sinai Campus**

The Mount Sinai School of Medicine is conveniently located on Central Park at East 98th Street. Students take advantage of the larger scientific community of the New York Metropolitan area and enjoy the cultural and recreational opportunities afforded by a mid-Manhattan setting.

### **Financial Aid**

Mount Sinai supports its Ph.D. students with a stipend and paid tuition and makes housing available in a new facility adjacent to the campus.

For further information and application contact: Mr. Mark Shepard, Box 1022, Graduate School of Biological Sciences, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, New York 10029-6574

**MOUNT SINAI**

## POSITIONS OPEN

**RESEARCH ASSOCIATES**—Cellular immunologist and an immunopathologist with Ph.D. To conduct research on mechanisms of tolerance/suppression induction or immunopathology in lymphatic filariasis. Closing date for applications will be 31 October 1987 or until a suitable candidate is chosen. Send curriculum vitae and names of three references to: **Dr. Susan Tonkonogy, Assistant Professor of Immunology, School of Veterinary Medicine, Department of Microbiology, Pathology and Parasitology, 4700 Hillsborough Street, Raleigh, NC 27606.**

*An Equal Opportunity/Affirmative Action Employer.*

### RESEARCH FACULTY POSITION THE UNIVERSITY OF MICHIGAN CONSORTIUM FOR RESEARCH IN DEVELOPMENTAL AND REPRODUCTIVE BIOLOGY

Applications are invited for a research faculty appointment. Seeking individual with a strong research program bringing approaches of molecular biology to: (i) intercellular communication, (ii) gonadal or neural cellular differentiation, or (iii) cellular biology of clocks, rhythms, and neuroendocrine signaling. Selected individual must be conceptually oriented, and demonstrate ability to interact with graduate and postdoctoral trainees. Send curriculum vitae, two representative reprints, and names of three references to: **Search Committee, Developmental & Reproductive Biology, The University of Michigan, 300 North Ingalls Building, Room 1101, Ann Arbor, MI 48109-0404. The University of Michigan is an Equal Opportunity/Affirmative Action Employer.**

### RESEARCH PERSONNEL

Gensia Pharmaceuticals, Inc. Applications are invited for **RESEARCH SCIENTISTS** and **TECHNICIANS** in the areas of purine metabolism, organic chemistry, cell biology and enzymology. Gensia is developing novel drugs with emphasis on treatment of cardiovascular disorders. We are seeking innovative personnel to join our research and development staff. Applicant should hold appropriate degree in chemistry, biochemistry, or related field. Ideal candidates will have experience working with a goal-oriented scientific team.

The company provides a stimulating scientific environment with growth opportunity for talented individual. Gensia offers competitive salaries dependent on experience and qualifications. Included is a comprehensive fringe benefit package including incentive stock program. Applicants please forward curriculum vitae, selected publications, and a list of references to: **Dr. Paul K. Laikind, Vice President, Gensia Pharmaceuticals, Inc., 11180 Roselle Street, Suite A, San Diego, CA 92121-1207.**

### PRINCETON UNIVERSITY RESEARCH STAFF PROGRAM ON NUCLEAR POLICY ALTERNATIVES

Challenging position now available for recent recipients of the Ph.D. degree or its equivalent, to work on a range of security and arms control problems. Of particular interest are applicants with strong technical and scientific training, and with some experience in policy analysis. Applications also considered from recent college graduates for position at research assistant level.

Research will include: very deep reductions in strategic nuclear arms, including technical analyses of stability and verification, conventional disarmament, and nuclear non-proliferation. The program is jointly under the auspices of the Center for Energy and Environmental Studies and the Center of International Studies.

Applications including a curriculum vitae, three references, and any relevant article by the applicant should be sent to: **Harold A. Feiveson, Center for Energy and Environmental Studies, Princeton University, Princeton, NJ 08544. No deadline. An Equal Opportunity/Affirmative Action Employer.**

Telios Pharmaceuticals is a newly developed pharmaceutical company in the La Jolla area, and is currently recruiting at the **RESEARCH SCIENTIST** level. Research scientist: two positions are currently available. Successful applicants will have a Ph.D. or equivalent and relevant experience with either: (i) peptide chemistry/purification, (ii) small laboratory animal physiology, and/or (iii) synthetic organic chemistry. Send curriculum vitae to: **Personnel Manager, Telios Pharmaceuticals, Inc., 10901 North Torrey Pines Road, La Jolla, CA 92037.**

## POSITIONS OPEN

**RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW:** Opportunity to join laboratory investigating catecholamine neuronal plasticity and catecholamine receptors in vivo using biochemical and anatomical approaches. Preference will be given to applicants with some experience in EM, immunocytochemistry, and/or radioimmunoassay. M.D. or Ph.D. in anatomy, biochemistry, or pharmacology. Position and salary based on experience. Please send curriculum vitae to: **Dr. James N. Davis, Box 2900, Duke University Medical Center, Durham, NC 27710. Affirmative Action/Equal Opportunity Employer.**

**RESEARCH NEUROPSYCHOLOGIST**—The Maryland Psychiatric Research Center (MPRC), Department of Psychiatry, University of Maryland School of Medicine, is seeking a neuropsychologist with interests in the study of schizophrenia and related disorders for appointment to the full-time research faculty. This position requires the development of independent research as well as collaboration with investigators in areas of genetics, brain imaging, clinical drug testing, and clinical neuroscience. Academic level open. Please send a curriculum vitae, three letters of reference, and reprints of your work to: **Neuropsychology Search Committee, MPRC, P.O. Box 21247, Baltimore, MD 21228 by 31 January 1988. The University of Maryland is an Equal Opportunity Employer.**

### RESEARCH SCIENTIST

Available immediately for an individual with Ph.D. and several years of experience in recombinant DNA work. He/she will be responsible for making cytomegalovirus protein expression DNA clone. This is a permanent position. He/she will be working with multidisciplinary team on virology and neurodegenerative diseases.

Qualifications: Expert in recombinant DNA technology. Salary: \$42,963.

Send curriculum vitae to:

**K. S. Kim, Ph.D., c/o Personnel Office  
N.Y.S. Institute for Basic Research  
in Developmental Disabilities  
1050 Forest Hill Road  
Staten Island, NY 10314  
Attention: Personnel, Ref #491  
Telephone: 718-494-5202 or 718-494-5103**

AgriTech Systems, Inc., a leading international biotechnology firm specializing in diagnostics for agricultural, veterinary, and food contaminant applications, has an immediate opening for a highly motivated **SCIENTIST** with a record of achievement.

The ideal candidate will have a Ph.D. degree and industrial experience in immunoassay development, automation, fluorometry, and enzyme kinetics.

Salary is commensurate with experience. Please send resume in confidence to:

**Director, Research & Development  
AgriTech Systems, Inc.  
100 Fore Street  
Portland, ME 04101  
An Equal Opportunity Employer**

### STAFF TOXICOLOGIST

Prepare study proposals, study protocols, and protocol amendments. Interact with sponsor representatives, act as Study Director in departmental studies, and provide scientific support to staff Ph.D. in pharmacology or toxicology required. Three to 5 years of experience desirable.

International Research and Developmental Corporation is an independent contract research laboratory specializing in animal safety evaluation (toxicology) studies for the pharmaceutical, agricultural, chemical and consumer industries as well as governmental agencies. We are located near Kalamazoo, Michigan, midway between Detroit and Chicago, in an area affording a broad range of urban or rural life-styles with excellent cultural and recreational opportunities. *We are an Equal Opportunity Employer with competitive compensation, benefits and relocation package.* Please send résumé to:

**Dr. E. I. Goldenthal  
Director of Research  
International Research and  
Developmental Corporation  
500 North Main Street  
Mattawan, MI 49071**

## POSITIONS OPEN

### SENIOR SCIENTIST

Applications are invited for the position of senior scientist at the La Jolla facility of Lilly Research Laboratories, a division of Eli Lilly and Company. The individual will be expected to establish an independent research program focusing on aspects of lymphocyte activation. The existing staff is composed of an interacting group of molecular and cellular immunologists located in close proximity to the La Jolla scientific community which provides excellent collaborative opportunities. The successful applicant should possess a Ph.D. in either biochemistry or cell biology with a background or strong interest in immunology and have had a minimum of 2 years of postdoctoral experience. Salary commensurate with experience. The position is available immediately. Send curriculum vitae, a brief description of research interests, and names of three references to:

**Dr. Jacques M. Chiller:  
Lilly Research Laboratories  
A Division of Eli Lilly and Company  
3252 Holiday Court, Suite 101  
La Jolla, CA 92037**

### PROGRAM IN MOLECULAR BIOLOGY AND BIOTECHNOLOGY THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

**TENURE-TRACK FACULTY POSITION IN MOLECULAR BIOLOGY:** We are specifically seeking candidates who exploit the potential of in vitro mutagenesis to alter structure and function of proteins, the goals being the elucidation of the mechanisms of enzyme catalysis, protein-protein and protein-nucleic acid recognition and/or allosteric phenomena. The successful candidate will join a vigorous, developing focus of excellence in structure/function studies within the multidisciplinary Program in Molecular Biology and Biotechnology, which brings together a campus-wide array of resources to this effort. The tenure home will be within the Department of Chemistry, and faculty rank will be determined by the candidate's qualifications. Send curriculum vitae, the names of three references, and a research plan to:

**Marshall H. Edgell, Director  
Program in Molecular Biology  
& Biotechnology  
The University of North Carolina  
at Chapel Hill  
402 Swing Building 217H  
Chapel Hill, NC 27514**

*Affirmative Action/Equal Opportunity Employer*

**TOXICOLOGISTS**—The U.S. Environmental Protection Agency (EPA) is seeking experienced applicants (3 years minimum) for two vacancies in Atlanta relating to: (i) toxicology of contaminants in drinking water, and (ii) the pesticides and toxic substances programs. Salary range: \$32,567 to \$50,346. Submit Application for Federal Employment, SF-171, and copy of college transcript to: **U.S. EPA, Personnel Office, 345 Courtland Street, N.E., Atlanta, Georgia 30365. U.S. citizenship required. EPA is an Equal Opportunity Employer.**

### WORCESTER POLYTECHNIC INSTITUTE TWO FACULTY POSITIONS FALL 1988

The Department of Chemistry seeks to fill two tenure-track positions. One of these appointments may be at a senior level. Applications are invited from candidates in the following areas: **Physical Chemistry**—all areas of expertise will be considered, but preference will be given to candidates specializing in laser spectroscopy and photophysical chemistry; **Biochemistry/Chemistry**—preference will be given to candidates in an area at the interface between biochemistry and one of the more traditional areas of chemistry. Applicants for either position should have a Ph.D. degree, a strong experimental program, and a vigorous interest in undergraduate and graduate education. To apply, submit complete résumé, including research plans and teaching interests, and three letters of recommendation to: **Dr. James W. Pavlik, Department of Chemistry, Worcester Polytechnic Institute, Worcester, MA 01609. WPI is an Affirmative Action/Equal Opportunity Employer.**

## ENVIRONMENTAL TOXICOLOGIST

Rhone-Poulenc, Inc., is the rapidly growing subsidiary of the ninth largest chemical company in the world. Our Toxicology Group in the Ag Company at our Research Triangle Park, NC, facility has an opening for an experienced Toxicologist to meet the increasing challenges of our crop protection business.

This position is available immediately. The successful candidate will assist in establishing and maintaining avian and aquatic toxicology programs for U.S. products; provide technical expertise to Marketing groups, assist in the design, monitoring and reporting of all contracted laboratory and field studies and assist in the preparation of regulatory-compliance documentation. A Ph.D. in Environmental Toxicology or a related discipline is required with 2-5 years of related experience. A knowledge of Mammalian is also desirable.

We offer a competitive salary, attractive benefits and a chance to join a growing and dynamic organization in a position with opportunities for career growth. Please send resume, including salary history and requirements, to:



**PO Box 12014**  
**Research Triangle Park, NC 27709**  
*An Equal Opportunity/Affirmative Action Employer*

## It's What Made You Become a Scientist In the First Place

The opportunity to do important research — work that really makes a difference. And at Cetus, you'll have that opportunity, because we're committed to pioneering work in Pharmaceuticals and biotechnology. We offer you the resources to do that work — in a stimulating environment with the support of other dedicated, knowledgeable professionals. We currently seek a specialist in:

### **Tumor Biology/Immunology**

for our growing pre-clinical investigations group.

You will develop in vivo and in vitro models for testing the efficacy and mechanisms of action of our biotherapeutics in the areas of tumor biology/immunology and cellular immunology.

You should possess a Ph.D. plus post-doctoral and several years of relevant work experience for this challenging opportunity.

Please send your resume in confidence to:

**Cetus Corporation**  
**Box JWS**  
**1400 Fifty-Third Street**  
**Emeryville, CA 94608**



*We are an equal opportunity/affirmative action employer.*

## New Therapeutics Assistant to the Director

At Cetus Corporation, we are aggressively pursuing new therapeutic areas beyond our initial focus on cancer. And we seek a highly motivated professional to help optimize our success.

This individual will assist the Director of our New Therapeutics Program in identifying and evaluating potential new therapeutics targets. This will include compiling technical information on new therapeutics/developments from external labs; coordinating preparation of new project evaluations; preparing initial operating plans with staffing, cost, competition and timing estimates; and analyzing competitors and new technologies for impact on our therapeutic product strategy.

The successful candidate should possess an MS/PhD in the biological sciences, immunology or molecular biology. Previous experience in project evaluation or business development/planning is preferred for this challenging opportunity.

Please send resume in confidence to:

**Cetus Corporation**  
**Box DMS**  
**1400 Fifty-Third Street**  
**Emeryville, CA 94608**

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affirmative action employer.*



## POSITIONS OPEN

**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.**

**TWO POSITIONS AVAILABLE FOR Ph.D.'s** with a strong background in molecular biology, biochemistry or protein chemistry.

Research projects under investigation include: gene regulation in teratoma cells, purification of factors binding to DNA control signal, and purification and characterization of liver growth stimulator inhibitor.

Send résumé and a short summary of research experience to: **Dr. Keiichi Itakura, Director, Department of Molecular Genetics, Beckman Research Institute of the City of Hope, 1450 East Duarte Road, Duarte, CA 91010-0269.**

The Marine Sciences Research Center, State University of New York at Stony Brook, is seeking applications for **TWO TENURE-TRACK FACULTY POSITIONS** in the Center's Waste Management Institute. The institute conducts basic and applied research on a broad spectrum of issues involving the management of wastes and waste disposal in coastal environments. One position will be targeted at the full professor level, the other at either the assistant or associate professor level. Applicants for the senior position should have a demonstrated record of research accomplishment in marine chemistry with particular emphasis on marine waste disposal. Applicants for the junior position should be trained in the field of marine biology/ecology and have experience in the impacts of contaminants on coastal marine ecosystems. Summer salary for both positions must be secured through external grants and contracts. These positions are available immediately. Applications and the names of three references should be sent by 15 November 1987 to: **Dr. R. Lawrence Swanson, Director, Waste Management Institute, Marine Sciences Research Center, SUNY Stony Brook, Stony Brook, NY 11794-5000. SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.**

### VERTEBRATE BEHAVIORAL ECOLOGIST

Assistant professor (tenure track) available fall 1988. Should have demonstrated research capabilities; postdoctoral experience is desirable. Establish independent research program focusing on significant questions in behavioral ecology and evolution using theoretical/conceptual and experimental approaches, preferably on birds or mammals. Teaching responsibilities include lower level biology and upper division/graduate courses in area of expertise. Send curriculum vitae, reprints, statement of research interests, and have three letters of recommendation sent by 15 November 1987 to: **Dr. Anthony Joern, School of Biological Sciences, University of Nebraska-Lincoln, Lincoln, Nebraska 68588-0118.**

*Affirmative Action/Equal Opportunity Employer*

### VISITING ASSOCIATE/ SENIOR STAFF FELLOW: PET PROGRAM

NIDA Addiction Research Center seeks a scientist to join a research team using positron emission tomography (PET) to map and quantify responses to abused drugs in human brain. Must possess Ph.D. or M.D. degree, knowledge of issues in PET measurement, and experience in database management and statistical treatment of PET data. Would participate in developing image analysis software, and be responsible for accuracy of data and training fellows. Salary commensurate with experience. Candidate selected will be eligible for federal employee benefits. Relocation expenses may be paid. Send curriculum vitae, statement of experience, and names of three references by 20 October 1987 to: **Edythe D. London, Ph.D., Chief, Neuropharmacology Laboratory, NIDA, P.O. Box 5180, Baltimore, MD 21224.**

## PH.D. TOXICOLOGIST SENIOR RESEARCH SCIENTIST BRISTOL-MYERS

You'll head a team responsible for acute, sub-acute, dose range-finding, and certain chronic toxicity studies, including protocol design, conducting, interpreting and reporting research results. Requires a Ph.D. in Toxicology, Pharmacology, or other Biological Science or DVM plus at least three years of Toxicology experience in a pharmaceutical company or contract laboratory serving the pharmaceutical industry.

We're a worldwide leader in pharmaceutical research and have a strong heritage of innovation and accomplishment. Our operating style encourages personal creativity, contribution, and professionalism. This unit of Bristol-Myers is located in Evansville, Indiana, a community of beautiful residential areas, exceptional recreation, education, and cultural facilities.

We offer excellent salaries, superb benefits, paid relocation, and real growth opportunities.

Send resume, including salary expectation, in confidence to:

## BRISTOL-MYERS

Research Recruitment Box 6L58  
Bristol-Myers  
2404 Pennsylvania Avenue  
Evansville, IN 47721-0001

An Equal Opportunity Employer M/F/H/V

## BIOTECHNOLOGY

### RESEARCH ASSOCIATES & SCIENTIST

Formed in 1984 with headquarters in Seattle, NeoRx Corporation is committed to developing, manufacturing, and marketing monoclonal antibody-based products to detect and treat cancer. As a result of our work to date, the company already is in a position to establish itself as a leader in the field.

As a new company, we have a variety of opportunities available for research and scientific personnel. We offer excellent salary and benefits, including equity participation, plus all the attractions of the Pacific Northwest.

Our need is for individuals with a B.S., M.S. or Ph.D. in Organic Chemistry, Inorganic Chemistry, Biochemistry, Radiochemistry, Immunology, Tumor Biology, Toxicology or Pharmacology.

Please forward your resume and salary history in confidence to:

**B.H. Walters**  
Director Human Resources  
NeoRx Corporation  
410 West Harrison Street  
Seattle, Washington 98119



NEORX

## CELL BIOLOGIST/ BIOCHEMICAL ENGINEER

The Research Division of W. R. Grace & Co., a Fortune 100 company and one of the world's largest specialty chemical companies, has excellent opportunities in its Biotechnology Research Program to conduct research related to new mammalian cell culture methodologies and bioreactor systems for biotech/biomedical applications.

Requires a M.S./Ph.D. in Cell or Molecular Biology, Biochemistry or Biochemical Engineering with 1-3 years post graduate experience including mammalian cell culture.

We can offer you a competitive salary and an excellent benefits program. Our research facility is located in the picturesque, suburban community of Columbia, Maryland, midway between Baltimore and Washington D.C.

If you are interested in a rewarding professional career, please send your confidential resume to:

Manager, Employment  
Dept. CC  
Washington Research Center  
7379 Route 32  
Columbia, Maryland 21044

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## ASSISTANT PROFESSOR OF BIOCHEMISTRY Brandeis University

A tenure track position at the level of Assistant Professor is available in the Graduate Department of Biochemistry. Area of research interest is open. **Curriculum vita, description of research interests and letters of recommendation should be sent to: Dr. Robert Abeles, Chairman, Search Committee, Graduate Department of Biochemistry, Brandeis University, Waltham, MA 02254.**

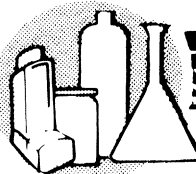
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## POSTDOCTORAL POSITION

A position is available for work on the biochemical characterization and molecular biology of dopaminergic and serotonergic neurotransmitter receptors. Efforts will be focused on receptor purification, characterization of receptor-G protein interactions, biochemical mechanisms of receptor regulation, and molecular cloning of the receptor genes. Applicants should have a strong background in Biochemistry, Pharmacology, or Molecular Biology. Preference will be given to individuals with considerable expertise in either protein purification, membrane biochemistry, or recombinant DNA technology. Salary ranges for the Staff Fellowship Program are \$20,000 pa to \$37,997 pa. Further position information and qualifications requirements may be obtained by calling Ms. Chris Steyer on (301) 496-6334. Please send curriculum vitae and the names of three references to: **Dr. David R. Sibley, Experimental Therapeutics Branch, National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, PHS, Bldg. 10, Rm. 5C108, 9000 Rockville Pike, Bethesda, MD 20892.**

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Glaxo Inc. is one of the Top 10 ethical pharmaceutical firms in America. We are a company with tremendous growth opportunities, state-of-the-art facilities, and a commitment to producing medicines that save lives and eliminate suffering.

In the process, we have expanded considerably our R&D effort, and now have new and exciting career paths in our Analytical Chemistry Department. This well-equipped, highly trained unit will play a key role in problem solving and in providing the Company with in-depth analytical resources.

We currently have BS or MS level Chemist opportunities available within our Pharmaceutical Development Department. Responsibilities will include participation in the development and validation of analytical methods and the routine testing of new drug substances, raw materials, and new drug products under development by Glaxo Inc.

Background should include familiarity with modern instrumental methods of analysis including HPLC and GC. We prefer candidates with experience, especially in the pharmaceutical industry; however, we will accept recent graduates.

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**Dept. CK-1**

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## RENAL PHARMACOLOGIST

The Pharmaceutical Research Division of Warner-Lambert/Parke-Davis has an immediate opening for a senior scientist in cardiovascular research. The successful candidate will lead a group of scientists in the development, evaluation and recommendation of strategies for the assessment of novel agents from our antihypertensive and heart failure programs.

Qualified applicants will possess the following:

- Ph.D. or equivalent in pharmacology, physiology or related discipline.
- 3-5 years postdoctoral research experience in renal function. Desired, though not essential, experience would include familiarity with renal function impairment associated with preclinical models of hypertension or heart failure.
- Excellent oral and written communication skills, including a documented record of scientific achievement as evidenced by publications.

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Interested, qualified candidates should forward curriculum vitae and salary requirements to: **Ms. S. Hultquist, Human Resources, WARNER-LAMBERT/PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, MI 48105.**

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## AWARDS

### ARE YOU INTERESTED IN SPACE BIOLOGY?

The advent of the Shuttle Program has produced a new era for space biology that offers exceptional opportunities for research. NASA is offering several **RESEARCH ASSOCIATE AWARDS** for scientists to work in laboratories capable of providing scientific advice and facilities relevant to space biology. The awards vary from \$18,000 to \$22,000 based on experience. They are for a 12-month period with the possibility of renewal. Proposals are due 1 February 1988. The funding will begin anytime from 1 June to 1 October 1988. Eligible are postdoctoral U.S. citizens. For information contact: **Dr. X. J. Musacchia, Chairman, NASA Award Committee, Graduate Programs and Research, University of Louisville, Louisville, KY 40292** or **Dr. Thora W. Halstead, Research Associates Program, Life Sciences Division, NASA Headquarters, Washington, DC 20546**. For application forms contact **Dr. Musacchia** at the address above.

## CONFERENCES

### 1987 ANNUAL CONFERENCE SOCIETY FOR RISK ANALYSIS 1 to 4 November 1987

Wyndham Hotel, Houston, Texas

Meeting theme, **RISK ASSESSMENT IN SETTING NATIONAL PRIORITIES**, will include sessions on:

AIDS  
Humans in Space  
Biotechnology  
Cancer  
Nuclear Safety  
FDA, EPA  
Insurance Crisis  
Natural Disasters  
Policy Considerations  
Risk Communications  
Right-to-Know

For more information, registration forms, contact:  
**Society for Risk Analysis**  
8000 Westpark Drive, Suite 400  
McLean, VA 22102  
Telephone: 703-790-1745

## PROGRAM

**RESEARCH OPPORTUNITIES AT THE NATIONAL CENTER FOR TOXICOLOGICAL RESEARCH**—Opportunities for faculty and postgraduates to conduct collaborative research at NCTR, a Food and Drug Administration laboratory in central Arkansas. Research efforts focus on testing the assumption used in assessing risks posed by toxic chemicals emphasizing studies in biomarkers, modulators of toxicity, and extrapolation/risk assessment. U.S. citizenship or PRA status required. For more information contact: **ORAU Research Program at NCTR, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117**. Telephone: 615-576-3190. Please indicate if interested in faculty and/or postgraduate program.

## FELLOWSHIPS

### MOUNT DESERT ISLAND BIOLOGICAL LABORATORY 1988 MARKEY SUMMER FELLOWSHIPS

The MDI Biological Laboratory, an internationally renowned research institute for comparative physiology and marine biology, offers summer research fellowships sponsored by the Lucille P. Markey Trust. Applications are invited from postdoctoral investigators in the biological/biomedical sciences who are in the early phase of their careers and have a record of productive independent research. Fellowships include laboratory space, housing and supply allowances, depending on individual needs. The MDIBL emphasizes the use of marine organisms as tools for basic and applied biological research, including pharmacology and toxicology. Applications may be obtained by contacting the **office or Associate Director, Dr. Donald A. McCrimmon, at P.O. Box 35, Salsbury Cove, ME 04672** or telephone: 207-288-3605. Deadline for completed applications is 1 December 1987.

## FELLOWSHIPS

**ECOSYSTEM ECOLOGIST/MODELER**—Available immediately is a postdoctoral position involving modeling of dynamics of several different ecosystems. Position involves collaboration with a research team working on NSF-supported Long-Term Ecological Research Site (The Virginia Coast Reserve) and related NSF-funded activities. Applicants should have background in ecosystem studies, ecological modeling, and ecosystem processes. Send résumé, transcripts, and the names of three references by 1 November 1987 to: **Herman H. Shugart, W. W. Corcoran Professor, Department of Environmental Sciences, Clark Hall, The University of Virginia, Charlottesville, VA 22903**. *The University of Virginia is an Equal Opportunity Employer/Affirmative Action Employer.*

### POSTDOCTORAL FELLOWSHIP

Postdoctoral fellowship funded opening in molecular and cellular biology of human proteinase inhibitors and hepatic acute phase genes. Send curriculum vitae, including references to: **Dr. David Perlmutter, Departments of Pediatrics and Cell Biology, Washington University Medical School, 660 South Euclid, Box 8116, St. Louis, MO 63110**.

**POSTDOCTORAL FELLOWSHIP** in Molecular Biology of genes expressed in connective tissues with special emphasis on mutations that produce genetic diseases. Opportunities will be provided to learn current recombinant DNA technologies and to develop new ones. Applicants must have Ph.D. in biochemistry or related areas. Salary competitive. Please submit curriculum vitae and letters of recommendation to: **D. J. Prockop, Jefferson Institute of Molecular Medicine, Department of Biochemistry, Thomas Jefferson University, 1020 Locust Street, Philadelphia, PA 19107**. *Equal Opportunity Employer.*

### FELLOWSHIPS IN REPRODUCTIVE BIOLOGY NORTHWESTERN UNIVERSITY

Postdoctoral and predoctoral fellowships are available in reproductive biology for outstanding students. A diverse but cohesive program offers research in the biochemical, cellular, physiological, and behavioral aspects of reproduction. Participating faculty include: **Erwin Goldberg** (immunochemistry and reproductive biochemistry), **Mary Hunzicker-Dunn** (ovarian protein kinase: adenylyl cyclase), **William Klein** (receptors; CNS differentiation), **Andrew LaBarbera** (mechanism of gonadotropin action), **Jon Levine** (neuroendocrinology), **Neena Schwartz** (gonadal-pituitary endocrinology), **Joseph Takahashi** (circadian rhythms and photoreception), and **Fred Turek** (photoperiodism and biological rhythms). Send curriculum vitae and names of three references to: **Dr. Neena Schwartz, Department of Neurobiology and Physiology, Northwestern University, Evanston, IL 60201**.

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### IMMUNOLOGY POSTDOCTORAL FELLOWSHIPS MEMORIAL SLOAN-KETTERING CANCER CENTER (MSKCC)

Research training fellowships, supported by an NCI National Research Service Award, are available within the Immunology Program at MSKCC. The research areas of the 17 member faculty cover the biological, biochemical, and molecular aspects of immunogenetics, cellular immunology, and tumor immunology. The development of an independent research project under the guidance of a faculty member is the main training objective. Curriculum vitae, statement of research experience and future goals, and names of three references should be sent to:

**Osiar Stutman, M.D., Chairman  
Immunology Program  
Memorial Sloan-Kettering Cancer Center  
1275 York Avenue, New York, NY 10021**

Only U.S. citizens and permanent residents are eligible for consideration.

*MSKCC is committed to Equal Opportunity through Affirmative Action and therefore, members of minority groups are encouraged to apply.*

## FELLOWSHIPS

### BRAIN RESEARCH FUND FELLOWSHIP

The Brain Research Fund is pleased to announce a fellowship program for 1988. The purpose of the fellowship is to encourage research into the causes and treatment of cerebral tumors. The fellowship is open to candidates with M.D. or Ph.D. degrees and may be held for 1 or 2 years. Applicants with a background in molecular biology are encouraged to apply. The successful candidate will join the research team in the Brain Research Laboratory, Department of Clinical Neurological Sciences, University of Western Ontario, London, Ontario, Canada. Research projects focus on the control of angiogenesis in experimental and human cerebral tumours. Please send curriculum vitae and three references to: **Dr. R. F. Del Maestro, Brain Research Fund Foundation, P.O. Box 1179, Station B, London, Ontario, Canada N6A 5K2**.

**POSTDOCTORAL FELLOWSHIP** in the molecular genetics of human color vision. Project involves determination of organization of visual pigment genes and molecular basis for human color vision defects. Requires Ph.D. in biochemistry/molecular biology or equivalent. Recruiting deadline 1 December 1987, to start as soon as possible thereafter. Send curriculum vitae and names of three references to: **Paul Hargrave, Ph.D., Department of Ophthalmology, Box J-284 JHMH, or Harry Ostrer, M.D., Department of Pediatrics, Box J-296 JHMH, University of Florida, Gainesville, FL 32610**. *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL FELLOWSHIP**. Neuroendocrine peptide mechanism of action; send curriculum vitae, names of three references to: **P. Michael Conn, Professor and Chairman of Pharmacology, University of Iowa College of Medicine, Iowa City, IA 52242**. *University of Iowa is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL FELLOWSHIP

Postdoctoral fellowship available immediately for an individual to undertake research within a project investigating the structure and regulation of human glutamate dehydrogenase and its involvement in neurodegenerative disorders. Potential candidates require a strong background in the field of protein purification and biochemistry and/or gene cloning. Salary on the scale of \$18,000 to \$24,000 per annum plus benefits commensurate with qualifications. Location: New York City. Applications, including curriculum vitae, should be sent to: **Dr. Andreas Plaitakis, Neurology Department, Box 1137, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574**. Telephone: 212-241-7310. *An Equal Opportunity Employer.*

**REPRODUCTIVE BIOLOGY POSTDOCTORAL FELLOWSHIP**, fall 1987. Entry level postdoctoral fellowship available in an NIH-funded training grant at the University of California, Davis. Faculty research areas include: cell biology and biochemistry of fertilization; cell biology of implantation, placenta and early development; cellular endocrinology. Fellowship for 1.5 years starting fall 1987. Applicants must be U.S. citizens or permanent residents. Send curriculum vitae to: **Dr. Stanley Meizel, Department of Human Anatomy, School of Medicine, University of California, Davis, CA 95616** or telephone: 916-752-7108. *An Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL FELLOWSHIP IN IMMUNOLOGY

An opportunity for postdoctoral training in mechanisms of inflammation, with emphasis upon the biology and chemistry of the acute phase proteins in inflammatory disease and diseases of the nervous system. Research in clinical immunology and participation in the teaching programs of the Medical and Graduate Colleges of Rush University are available. Position available by 1 January 1988. Send inquiries and curriculum vitae to:

**Henry Gewurz, M.D.  
Chairman  
Department of Immunology/Microbiology  
Rush Medical College  
1653 West Congress Parkway  
Chicago, IL 60612**

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**for**

## **Research on the Resistance of Human Tumors to Chemotherapeutic Agents**

Bristol-Myers Company is pleased to announce a \$16,000,000 drug resistance research funding program. The goal of this research program is to identify the mechanisms by which human tumors become resistant to chemotherapy and to develop and test methods of overcoming such resistance. Grants will be awarded in two categories. Laboratory grants will be \$100,000 per year for five years. Five year grants of \$200,000 per year will be awarded for research which directly tests laboratory findings in human trials.

Applications are invited from qualified investigators worldwide. Applicants may be associated with academic institutions, research institutes, government laboratories or other facilities capable of conducting these types of investigations. Applications will not be accepted from individuals affiliated with or employed in the pharmaceutical industry or engaged in for-profit research.

Applications will be accepted until January 1, 1988 and will then be reviewed by a panel of experts, independent of Bristol-Myers. Awards will be announced on or about April 1, with funding commencing July 1, 1988. Additional information about this program can be obtained by writing:

Mr. Gary Doyle  
Program Coordinator  
Bristol-Myers Company  
5 Research Parkway  
P.O. Box 5100  
Wallingford, CT 06492-7660  
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