

ing is clear and direct; he does not avoid discussing mathematics, but he skillfully traces a path through his argument that avoids technical burdens. The general reader, for whom the book is intended, will find much that is fascinating and enjoyable.

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## Some Other Books of Interest

**Plants in Danger.** What Do We Know? STEPHEN D. DAVIS and eight others. International Union for Conservation of Nature and Natural Resources, Cambridge, U.K., 1986. xlv, 461 pp., illus. Paper, \$21.

It is noted in the preface to this book that, although much has been written about threatened plants, "it is . . . clear that plant conservation . . . is not yet fully accepted as a fundamental part of conservation as a whole." Attributing this in part to ignorance of how much information on plants is available, the compilers have set out to provide a guide to sources of information that will answer the question posed in the subtitle. After an overview chapter, an essay on "conclusions for the future," and other introductory material, entries for some 200 nations and territories (including islands and island groups), listed alphabetically, are presented. Ranging in length from a few lines to several pages, the entries generally give data on area and population and brief summaries of the floristics and character of the vegetation of the locale, followed by bibliographies of checklists, floras, field guides, and other publications and, where possible, names and addresses of voluntary conservation and nature study groups, botanical gardens, and other relevant organizations. Laws protecting plants are also summarized. Appendixes list general and regional references with a geographical index and give the status of various countries with respect to the ratification of conservation conventions.—K.L.

**Science and Technology in Chinese Civilization.** CHENG-YIH CHEN, ROGER CLIFF, and KUEO-MEI CHEN, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xx, 352 pp., illus. \$64. From a workshop, San Diego, CA, and a conference, Berkeley, CA, summer 1985.

This collective volume provides, in the words of the principal editor, a "representative sample of current work in the history of science and technology by Chi-

nese scholars." The volume opens with six papers under the heading Mathematics: a comparison of early Chinese and Greek work on the concept of limit, an account of mathematical formalisms in ancient China, and discussions of the work of Tsu Ch'ung-Chih (429–500) on the value of pi, of Wang Lai (1768–1813) on number systems of variable base, of Bao Qi-Shou (19th century) on combinatorial functions, and of Li Shan-Lan (1811–1822) on summation of series and powers and the volume of curved-surface pyramids. Five papers under the heading Science discuss the use of historical records in modern astronomy, three ancient books on optics, the generation of chromatic scales in 5th-century bells, early meteorological instruments (wind gauge, rain gauge, and evaporator), and earthquake records. The final section of the volume, Technology, contains papers on early metallurgy, sliding bearings and lubrication (tribology), and the development and spread of gunpowder and rocketry, the last of which is also the subject of the most recent installment of Joseph Needham's *Science and Civilisation in China* (volume 5, part 7; Cambridge University Press, 1986). The Chinese characters for names and key terms are inserted in the text, and the reference lists include many items from the Chinese-language literature. The volume also includes an index and a brief chronology of Chinese history.—K.L.

**History of Electron Microscopes.** HIROSHI FUJITA, Ed. Japan Scientific Societies Press, Tokyo, 1986 (U.S. distributor, International Specialized Book Services, Portland, OR). x, 219 pp., illus. Paper, \$38.

The present volume devoted to electron microscopy as it developed in Japan was prompted by the 11th International Congress on Electron Microscopy, which was held in Kyoto in 1986. The volume opens with a group of nine papers by Japanese authors who recount early efforts in Japan, dating mainly from the establishment in 1939 of an electron microscopy subcommittee of the Japan Society for the Promotion of Science and including work during and immediately after World War II. Work at three universities (Tohoku, Tokyo, and Osaka) and four commercial firms (Hitachi, Shimadzu, Toshiba, and JEOL) is described. The commercial development of electron microscopes is the subject of five further papers, which deal with Philips and Zeiss as well as Akashi, Hitachi, and JEOL and include many photographs and lists of features and specifications of the equipment discussed. The text, entirely in English, reads awkwardly in spots and suffers from

lapses in proofreading, but these sections contain much factual information and could be a useful complement to *The Beginnings of Electron Microscopy*, a collection of memoirs by scientists from various countries edited by Peter W. Hawkes (Academic Press, 1985; reviewed in *Science* 231, 63 [1986]). The "catalogues" section that concludes the volume consists of advertisements from a number of manufacturers, Japanese and otherwise, of electron microscopes and related equipment.—K.L.

## Books Received

**Antibiotic Resistance Genes.** Ecology, Transfer, and Expression. Stuart B. Levy and Richard P. Novick, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1986. xviii, 436 pp., illus. \$68. Banbury Report, 24. Based on a meeting, Cold Spring Harbor, NY, 1986.

**Beyond the Mechanical Universe.** From Electricity to Modern Physics. Richard P. Olenick, Tom M. Apostol, and David L. Goodstein, Eds. Cambridge University Press, New York, 1986. xiv, 574 pp., illus. \$24.95.

**Biochemical Modulation of Anticancer Agents.** Experimental and Clinical Approaches. Frederick A. Valeriote and Laurence H. Baker, Eds. Nijhoff, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). xviii, 350 pp., illus. \$69.95. Developments in Oncology. From a symposium, Detroit, MI, June 1986.

**Biochemistry of Virus-Infected Plants.** R. S. S. Fraser. Research Studies Press, Letchworth, Hertfordshire, England, 1987 (U.S. distributor, Wiley, New York). x, 259 pp., illus. \$54.95. Research Studies in Botany and Related Applied Fields, 3.

**The Biological Chemistry of Marine Copepods.** E. D. S. Corner and S. C. M. O'Hara, Eds. Oxford University Press, New York, 1986. x, 349 pp., illus. \$73. Oxford Science Publications.

**Biological Nomenclature Today.** A Review of the Present State and Current Issues of Biological Nomenclature of Animals, Plants, Bacteria and Viruses. W. D. L. Ride and T. Younes, Eds. ICSU Press, Miami, and IRL Press, Oxford, U.K., 1987. vi, 70 pp. Paper, \$20. International Union of Biological Sciences Monograph Series, no. 2. Based on a symposium, Brighton, U.K., July 1985.

**Cancer Biology and Therapeutics.** Joseph G. Cory and Andor Szentivanyi. Plenum, New York, 1987. x, 276 pp., illus. \$49.50. From a symposium, Tampa, FL, Jan. 1986.

**Carcinogenesis and Adducts in Animals and Humans.** M. C. Poirier and F. A. Beland, Eds. Karger, New York, 1987. viii, 116 pp., illus. \$66.25. Progress in Experimental Tumor Research. From a workshop, Cambridge, MA, Feb. 1986.

**Cardiac Electrophysiology and Pharmacology of Adenosine and ATP.** Basic and Clinical Aspects. Amir Pelleg, Eric L. Michelson, and Leonard S. Dreigus, Eds. Liss, New York, 1987. xviii, 395 pp., illus. \$66. Progress in Clinical and Biological Research, vol. 230. From a symposium, Bala Cynwyd, PA, May 1986.

**Direct Methods Macromolecular Crystallography and Crystallographic Statistics.** H. Schenk, A. J. C. Wilson, and S. Parthasarathy, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xiv, 425 pp., illus. \$62. From a school, Madras, India, Dec. 1985.

**Disordered Semiconductors.** Marc A. Kastner, Gordon A. Thomas, and Stanford R. Ovshinsky, Eds. Plenum, New York, 1987. xiv, 778 pp., illus. \$115. Institute for Amorphous Studies Series.

**Diving Birds of North America.** Paul A. Johnsgard. University of Nebraska Press, Lincoln, NE, 1987. xii, 292 pp., illus. \$45.

**Dynamical Systems and Singular Phenomena.** Gikō Ikegami, Ed. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). x, 244 pp., illus. \$39. World Scientific Advanced Series in Dynamical Systems, vol. 2. From a conference, Kyoto, Japan, July 1986.

**Early Detection of Occupational Diseases.** World Health Organization, Geneva, 1986 (available from

WHO Publications Center, Albany, NY). x, 272 pp. Paper, \$26.40.

**18th International Conference on the Physics of Semiconductors** (Stockholm, Aug. 1986). Olof Engstrom, Ed. Two volumes. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). lx, 1891 pp., illus. \$221.

**Follicular Growth and Ovulation Rate in Farm Animals.** J. F. Roche and D. O'Callaghan, Eds. Published for the Commission of the European Communities by Nijhoff, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). viii, 265 pp., illus. \$70.75. Current Topics in Veterinary Medicine and Animal Science. From a seminar, Dublin, Ireland, Oct. 1985.

**Food and Agricultural Research Opportunities to Improve Human Nutrition.** National Planning Committee, Eds. College of Human Resources, Newark, DE, 1986. x, variously paged, illus. Paper, \$5. From three symposia-workshops: Davis, CA, Sept. 1985; Newark, DE, Sept. 1985; and Urbana, IL, Oct. 1985.

**Foraging Theory.** David W. Stephens and John R. Krebs. Princeton University Press, Princeton, NJ, 1987. xiv, 247 pp., illus. \$40; paper, \$14.50. Monographs in Behavior and Ecology.

**Foreland Basins.** P. A. Allen and P. Homewood, Eds. Blackwell Scientific, Palo Alto, CA, 1987. viii, 459 pp., illus. Paper, \$65. International Association of Sedimentologists Special Publication no. 8. From a symposium, Fribourg, Switzerland, 1986.

**A Guide to the World's Languages.** Vol. 1, Classification. Merritt Ruhlen. Stanford University Press, Stanford, CA, 1987. xxviii, 433 pp., illus. \$45.

**Hawley's Condensed Chemical Dictionary.** N. Irving Sax and Richard J. Lewis, Sr. 11th ed. Van Nostrand Reinhold, New York, 1987. xvi, 1288 pp., illus. \$52.95.

**The Healing Nutrients Within.** Facts, Findings and New Research on Amino Acids. Eric R. Braverman with Carl C. Pfeiffer. Keats, New Canaan, CT, 1987. xiv, 478 pp. \$23.95.

**The High Technologies and Reducing the Risk of War.** H. Guyford Stever and Heinz R. Pagels, Eds. New York Academy of Sciences, New York, 1986. X, 167 pp., illus. \$42. Annals of the New York Academy of Sciences, vol. 489. From a conference, New York, May 1986.

**Highway Geology of the Hawaiian Islands.** Hawaii, Maui, Oahu, Kauai and Molokai. Robert Michael Easton and Monica Gaiswinkler Easton. Easton, Brampton, Ontario, 1987. vi, 158 pp. Spiral bound, \$15.

**Hormonal Regulation of Plant Growth and Development.** Vol. 2. S. S. Purohit, Ed. Nijhoff, Dordrecht, 1987 (U.S. distributor, Kluwer, Hingham, MA). xii, 234 pp., illus. \$72. Advances in Agricultural Biotechnology.

**Human and Machine Vision II.** Azriel Rosenfeld, Ed. Academic Press, Orlando, FL, 1986. x, 364 pp., illus. \$35. Perspectives in Computing, vol. 13. Based on a workshop, Montreal, Aug. 1984.

**Human Birth.** An Evolutionary Perspective. Wenda R. Trevathan. Aldine De Gruyter, New York, 1987. xii, 268 pp., illus. \$29.95. Foundations of Human Behavior.

**The Human Impact on the Natural Environment.** Andrew Goudie. 2nd ed. MIT Press, Cambridge, MA, 1987. x, 338 pp., illus. Paper, \$13.95.

**Imagery and Related Mnemonic Processes.** Theories, Individual Differences, and Applications. Mark A. McDaniel and Michael Pressley, Eds. Springer-Verlag, New York, 1987. xii, 470 pp., illus. \$70.

**Immune Regulation by Characterized Polypeptides.** Gideon Goldstein, Jean-Francois Bach, and Hans Wigzell, Eds. Liss, New York, 1987. xxvi, 786 pp., illus. \$120. UCLA Symposia on Molecular and Cellular Biology, New Series, vol. 41. From a symposium, Steamboat Springs, CO, Jan. 1986.

**Immunobiology and Immunopharmacology of Bacterial Endotoxins.** Andor Szentivanyi, Herman Friedman, and Alois Nowotny, Eds. Plenum, New York, 1986. x, 518 pp., illus. \$79.50. University of South Florida International Biomedical Symposia Series. From a symposium, Tampa, FL, Jan. 1985.

**Lake Glubokoe.** N. N. Smirnov, Ed. Junk, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). viii, 164 pp., illus. \$64.50. Reprinted from *Hydrobiologia*, vol. 141. Developments in Hydrobiology, 36.

**Language and Spatial Cognition.** An Interdisciplinary Study of the Prepositions in English. Annette Herskovits. Cambridge University Press, New York, 1987. x, 208 pp., illus. \$34.50. Studies in Natural Language Processing.

**Larousse Astronomy.** Philippe de la Cotardière, Ed. Facts on File, New York, 1987. 330 pp., illus. \$35. Translated from the French edition (Paris, 1981).

**The Last Navigator.** Stephen D. Thomas. Holt, New York, 1987. 308 pp., illus., + plates. \$22.95.

**Nutrition and Aging.** Martha L. Hutchinson and Hamish N. Munro, Eds. Academic Press, Orlando, FL, 1986. xxii, 287 pp., illus. \$32.50. Bristol-Myers Nutrition Symposia, 5. From a symposium, Boston, MA, Oct.-Nov. 1985.

**On Manifolds with an Affine Connection and the Theory of General Relativity.** Elie Cartan. Bibliopolis, Naples, 1986. 199 pp. \$50. Monographs and Textbooks in Physical Science. Translated from the French editions (1922 and 1955) by Anne Magnon and Abhay Ashtekar.

**Organic Chemistry.** K. Peter C. Vollhardt. Freeman, 1987. xxiv, 1275 pp., illus., + answers and index. \$49.95.

**Organic Geo- and Cosmochemistry.** E. Herbst *et al.* Springer-Verlag, New York, 1987. 178 pp., illus. \$65.40. Topics in Current Chemistry, vol. 139.

**Origins of Human Aggression.** Dynamics and Etiology. Gerard G. Neuman, Ed. Human Sciences Press, New York, 1987. 200 pp., illus. \$29.95. From a symposium, New York, Dec. 1984.

**Otherworld Journeys.** Accounts of Near-Death Experience in Medieval and Modern Times. Carol Zaleski. Oxford University Press, New York, 1987. x, 275 pp. \$18.95.

**Palaeobiology of Conodonts.** Richard J. Aldridge, Ed. Ellis Horwood, Chichester, England, 1987 (U.S. distributor, Wiley, New York). 180 pp., illus. \$69.95. British Micropalaeontological Society Series.

**Paradigms of Personality.** Jane Loevinger. Freeman, New York, 1987. xvi, 269 pp., illus. Paper, \$23.95.

**Parallel Processing.** The Cm\* Experience. Edward F. Gehringer, Daniel P. Siewiorek, and Zary Segall. Digital, Bedford, MA, 1987. xiv, 454 pp., illus. \$40.

**Parenting Across the Life Span.** Biosocial Dimensions. Jane B. Lancaster *et al.*, Eds. Aldine de Gruyter, New York, 1987. xiv, 474 pp., illus. \$45.95. Sponsored by the Social Science Research Council.

**Prehistoric Life on the Mississippi Floodplain.** Stone Tool Use, Settlement Organization, and Subsistence Practices at the Labras Lake Site, Illinois. Richard W. Yerkes. University of Chicago Press, Chicago, 1987. xx, 279 pp., illus. \$25; paper, \$20. Prehistoric Archaeology and Ecology.

**Prenatal Screening, Policies, and Values.** The Example of Neural Tube Defects. Elena O. Nightingale and Susan M. Meister, Eds. Harvard University Press, Cambridge, MA, 1987. 93 pp., illus. Paper, \$10.95.

**Preventing Nuclear Terrorism.** The Report and Papers of the International Task Force on Prevention of Nuclear Terrorism. Paul Leventhal and Yonah Alexander, Eds. Lexington (Heath), Lexington, MA, 1987. xviii, 472 pp. Paper, \$22.95. A Nuclear Control Institute Book.

**Proceedings of the International Workshop on Amorphous Semiconductors.** (Beijing, Oct. 1986). Hellmut Fritzsche, Daxing Han, and Chuang Chuang Tsai, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xii, 343 pp., illus. \$53.

**Proceedings of the International Workshop on Few-Body Approaches to Nuclear Reactions in Tandem and Cyclotron Energy Regions.** (Tokyo, Aug. 1986). S. Oryu and T. Sawada, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). x, 290 pp., illus., + plates. \$52.

**Proceedings of the XVII International Symposium on Multiparticle Dynamics** (Seewinkel, Austria, June 1986). M. Markytan, W. Majorotto, and J. MacNaughton, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xiv, 881 pp., illus., + plates. \$101.

**Production System Models of Learning and Development.** David Klahr, Pat Langley, and Robert Neches, Eds. MIT Press, Cambridge, MA, 1987. xiv, 466 pp., illus. \$35. Computational Models of Cognition and Perception.

**The Role of Air-Sea Exchange in Geochemical Cycling.** Patrick Buat-Ménard, Ed. Reidel, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). xvi, 549 pp., illus. \$98. NATO Advanced Science Institutes Series C, vol. 185. From an institute, Bombannes, France, Sept. 1985.

**The Role of Calcium in Drug Action.** M. A. Denborough, Ed. Pergamon Press, New York, 1987. xiv, 183 pp., illus. \$75. International Encyclopedia of Pharmacology and Therapeutics, section 124.

**The Role of Dust in Dense Regions of Interstellar Matter.** Thomas Henning and Bringfried Stecklum, Eds. Reidel, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). x, 265 pp., illus. Reprinted from *Astrophysics and Space Science*, vol. 128, no. 1 (1986). From a workshop, Geogenthal, G.D.R., March 1986.

**School Mathematics in the 1990s.** Geoffrey Howson and Bryan Wilson, Eds. Cambridge University Press,

New York, 1987. viii, 104 pp., illus. \$34.50. Based on a symposium, Kuwait, Feb. 1986. International Commission on Mathematical Instruction Study Series, vol. 2.

**Science in Action.** How to Follow Scientists and Engineers through Society. Bruno Latour. Harvard University Press, Cambridge, MA, 1987. viii, 274 pp., illus. \$25.

**Scientific Ada®** B. Ford, J. Kok, and M. W. Rogers, Eds. Cambridge University Press, New York, 1987. xii, 388 pp. \$39.50. Ada Companion Series.

**Scientific and Technical Libraries.** Nancy Jones Pruett *et al.* Vol. 1, Functions and Management. xvi, 353 pp. \$45. Vol. 2, Special Formats and Subject Areas. xxviii, 215 pp. \$45. Academic Press, Orlando, FL, 1986. Library and Information Science.

**Star Forming Regions.** Manuel Peimbert and Jun Jugaku, Eds. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). xxiv, 745 pp., illus. \$129. International Astronomical Union, symposium no. 115, Tokyo, Nov. 1985.

**Stress Intensity Factors Handbook.** Two volumes. Y. Murakami *et al.*, Eds. Pergamon Press, New York, 1987. xc, 1456 pp., + appendices, illus. \$300.

**Time's Arrow, Time's Cycle.** Myth and Metaphor in the Discovery of Geological Time. Stephen Jay Gould. Harvard University Press, Cambridge, MA, 1987. xvi, 222 pp., illus. \$17.50. The Jerusalem-Harvard Lectures.

**The Tokuwa Batholith, Central Japan.** An Example of Occurrence of Ilmenite-Series and Magnetite-Series Granitoids in a Batholith. Masaaki Shimizu. University of Tokyo Press, Tokyo, 1986 (U.S. distributor, Columbia University Press, New York). vi, 146 pp., illus., + plates. \$49.50.

**Tumor Therapy with Tumor Cells and Neuraminidase.** Cell Physiology, Immunological, and Oncological Aspects. H. H. Sedlacek. Karger, Basel, Switzerland, 1987. viii, 98 pp. \$28. Contributions to Oncology, vol. 27.

**Turbidite-Hosted Gold Deposits.** J. Duncan Kerpie, R. W. Boyle, and S. J. Haynes, Eds. Geological Association of Canada, St. John's, Newfoundland, 1986. vi, 186 pp., illus. \$C42; to GAC members \$C35. Geological Association of Canada Special Paper 32.

**Turbulence Measurements and Flow Modeling.** C. J. Chen, L.-D. Dhen, and F. M. Holly, Jr., Eds. Hemisphere (Harper and Row), New York, 1987. x, 869 pp., illus. \$125. From a symposium, Iowa City, IA, Sept. 1985.

**Undergraduate Algebra.** A First Course. C. W. Norman. Oxford University Press, New York, 1986. xiv, 416 pp., illus. \$39.95.

**Understanding Molecular Properties.** John Avery, Jens Peder Dahl, and Aage E. Hansen, Eds. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). x, 598 pp., illus. \$98. From a symposium, Copenhagen, April 1986.

**United States Pharmacopeia Drug Information for the Consumer.** United States Pharmacopoeial Convention. 1987 edition. Consumers Union, Mount Vernon, NY, 1987. xxii, 1202 pp. Paper, \$25. Consumer Reports Books.

**U.S. Security in the Twenty-First Century.** Barry M. Blechman. Westview, Boulder, CO, 1987. xiv, 173 pp., illus. Paper, \$18.95. Westview Special Studies in National Security and Defense Policy.

**L'Univers Odorant de l'Animal.** Les Stimulations Chimiques dans les Communications et les Comportements des Animaux. Yveline Leroy, II. Boubée, Paris, 1987. 375 pp., illus. Paper, 260F.

**The Useful Plants of India.** S. P. Ambasta *et al.*, Eds. Publications and Information Directorate, Council of Scientific and Industrial Research, New Delhi, 1986. iv, 918 pp. \$32.

**Viral and Mycoplasmal Infections of Laboratory Rodents.** Effects on Biomedical Research. Pravin N. Bhatt *et al.*, Eds. Academic Press, Orlando, FL, 1986. xvi, 844 pp., illus. \$65. From a conference, Bethesda, MD, Oct. 1984.

**Viruses and Human Cancer.** Robert C. Gallo *et al.*, Eds. Liss, New York, 1987. xxviii, 524 pp., illus. \$90. UCLA Symposia on Molecular and Cellular Biology, New Series, vol. 43. From a symposium, Park City, UT, Feb. 1986.

**Water Movement Through Lipid Bilayers, Pores, and Plasma Membranes.** Theory and Reality. Alan Finkelstein. Wiley-Interscience, New York, 1987. xii, 228 pp., illus. \$39.95. Distinguished Lecture Series of the Society of General Physiologists, vol. 4.

**What Game Is That?** Kenneth Watson-Jones. Van-tage, New York, 1987. xvi, 58 pp., illus. \$8.95.

**The Wisdom of Science.** Its Relevance to Culture and Religion. Hansbury Brown. Cambridge University Press, New York, 1986. x, 194 pp., illus. \$32.50; paper, \$13.95.

## Products & Materials

### Computer System Reads 2-D Gels

Visage 2000 is a machine-vision instrument that reads and matches two-dimensional electrophoretograms. It scans an entire gel in 1 second. The monitor has a resolution of 1152 by 900 pixels. The system is powered by a Sun Microsystems central processing unit and stores its data on a 260-megabyte hard disk. The accompanying software automatically compares entire populations of spots between two gels or among many gels and creates a database of comparison information. Bio Image. Circle 586.

### EM with Variable Voltage, Pressure

The Multi-Environment Electron Microscope has an electron optical column that can maintain a high vacuum even when pressure in the specimen chamber is as high as 20 torr. Thus, a sample may be analyzed in its natural state, with no coating or drying required. The user can vary the voltage as well as the pressure without adversely affecting image analysis or instrument performance. Concurrent image processing allows the monitoring of reactions or processes in real time. ElectroScan. Circle 595.

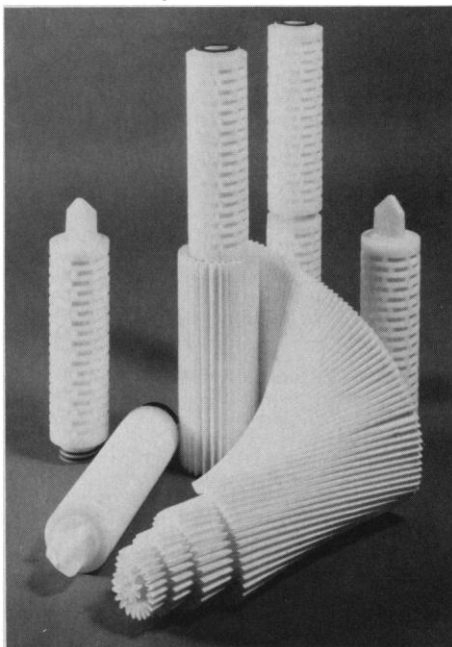
### Chemical-Structure Search Software

TREE is a software program that can search a database of 15,000 chemical structures in 20 seconds. It allows the user to define special atom types for substructure description, such as wild-card atoms, list-defined atoms, macro atoms, and family group atoms; to match the query structure with the search results on side-by-side windows; to construct Markush structures from chemical fragments; to find the most similar structure if a match is not found; to manipulate structures with commands such as

ZOOM, ROTATE, REFLECT, and MOVE; and to limit substructure searches to a subset of the database that shares a particular chemical or biological property. The program generates a single decision tree from the graphs of the molecules; substructure search is simply a tree walk through the relevant branches. TREE operates on the IBM XT, AT, and compatible computers and links to standard database and word processing programs. Technical Database Services. Circle 598.

### Polypropylene Filters for Liquid Clarification

Peplyn is an all-propylene, pleated cartridge filter with a high dirt-holding capacity. The filter contains no additives or binders and exhibits no media migration or particle unloading; all materials comply with Food and Drug Administration guidelines.



Peplyn is available with absolute retention ratings of 0.6 to 100  $\mu\text{m}$ , and a steam-sterilizable grade is also available. Domnick Hunter Filters. Circle 585.

### ELISA Chromophore System

The TMB Microwell Peroxidase Substrate System turns samples in microwells blue if they contain peroxidase-labeled antibodies. A rapid rate of reaction permits quantitative measurements for kinetic enzyme-linked immunosorbent assay (ELISA). The addition of an acid converts the blue chromophore to yellow. The system, based on the noncarcinogenic chromophore 3,3',5,5'-tetramethyl-

benzidine, is as sensitive as *o*-phenylenediamine; thus, low detection limits and use of peroxidase conjugates are possible at high working dilutions. Kirkegaard & Perry Laboratories. Circle 597.

### Color Electrostatic Plotter

The ColorWriter 400 is a single-pass, 400 dot-per-inch four-color electrostatic plotter. It completes a plot 91 by 91 cm in a minute. Plots maintain consistent color despite varying ambient temperature and humidity. Several workstations, each with its own communication protocol and data format, may transmit data simultaneously to the ColorWriter over a network. After downloading, the workstations are free for other tasks. Synergy Computer Graphics. Circle 596.

### Computerized Chemical Templates

STEREOCHEMICA is a clip-art collection of chemical templates. Included are Newman, Fischer, flying wedge, and sawhorse diagrams and rings, chairs, boats, space-filling models, porphyrins, and heterocycles. The user can modify and customize the basic figures. STEREOCHEMICA operates on Macintosh computers with MacPaint; output may be printed on either an Imagewriter or Laserwriter. Atlantic Software. Circle 600.

### MEDLINE on Optical Disk

Colleague Disc is a two-disk CD-ROM (compact disk-read-only memory) set containing the English-language citations listed in the National Library of Medicine's database MEDLINE since January 1986. MEDLINE indexes 3600 journals, including *Science*. The disks also contain software that allows the user to search the database with commands and display formats similar to those of the on-line service Colleague. Also available are optical-disk readers for lease or sale. BRS Information Technologies. Circle 607.

### Literature

COBRA 5010 describes an automatic ten-detector gamma counter for radioimmunoassay. Packard Instrument. Circle 589.

Microfold is a catalog of disposable and reusable systems for immunofiltration techniques. Isolab. Circle 569.

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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1333 H Street, NW  
Washington, DC 20005

## POSITIONS WANTED

**Biologist, Ph.D. (1987).** Research experience in ecology, behavior, bioacoustics, evolutionary biology. Strong modeling skills. Programming experience in five languages. NSF predoctoral fellow. Publications. Seeks modeling/software development position in research/industry. Box 110, SCIENCE.

**D.V.M., Ph.D., Diplomate in Toxicology and Pathology.** Seeking senior position in academia, government, industry, research, or other suitable institution. Interested in investigating pathobiologic, including biochemical, mechanisms; experienced in comparative pathology; published innovative research. Will teach and do administrative work as desired. Box 114, SCIENCE.

**Lipid Biochemist, Ph.D.** Working knowledge of eicosanoid and PAF biochemistry. Extensive experience in RIA, HPLC, GC, and bioassays used for studying synthesis release and action of AA metabolites and PAF. Immunoassay development. In vitro phospholipase assays and synthetic chemistry. Seeks industrial or clinical research position. Box 32, SCIENCE.

## POSITIONS WANTED

**The Best of the Best, AAAS Science and Diplomacy Fellow.** Ph.D. pathogenic microbiology, management of \$7.5M diagnostic research program, evaluation of international healthcare, overseas experience. Extensive international dialogue with policy makers, global application/adaptation of latest biomedical technology, training by State and USAID. Seeking executive-track position with a multinational pharmaceutical/healthcare corporation. Box 106, SCIENCE.

**Microbiologist/Immunologist, Ph.D. 1979.** Four years of pharmaceutical R&D. Expertise in immunological and bacteriological techniques; monoclonal antibodies; infectious disease modeling; PAGE; chromatography. Supervisory experience; publications. Seeks academic/industrial position with growth potential. Box 113, SCIENCE.

**Microbiologist, M.S.** Experience in bacteriology, extensive tissue culture, protein purification and analysis, excellent computer skills, wide variety of analytical techniques. Prefer northern New Jersey. Box 115, SCIENCE.

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

## POSITIONS OPEN

The Department of Pathology at the Wayne State University School of Medicine is seeking an **ANATOMIC PATHOLOGIST** at the level of assistant professor with special interest in obstetrical/gynecological and/or perinatal pathology in a hospital-based Division of Anatomic Pathology. Responsibilities will include teaching and research as well as service. Candidates should be Board-certified or -eligible in anatomic pathology, be eligible for licensure in the state of Michigan, and exhibit scholarship potential. Interested candidates should send their curriculum vitae and three references to: **Joseph Wiener, M.D., Chairman, Department of Pathology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201.**

*An Equal Opportunity/Affirmative Action Employer.*

The Delaware Museum of Natural History invites applications for an **ASSISTANT CURATOR IN MALACOLOGY**. Responsibilities include departmental administration, conduction of collection-oriented research on molluscan systematics, and participation in collection management, and the museum's public programs. Applicants must have a doctorate or equivalent experience. Curatorial experience desired. Position available immediately. Send résumé, names of three references, and reprints by 30 September 1987 to: **Dr. Barbara H. Butler, Director, Delaware Museum of Natural History, P.O. Box 3937, Wilmington, DE 19807.**

**ASSISTANT PROFESSOR.** The Department of Anatomy and Cellular Biology at Harvard Medical School invites applications for junior positions with start dates in 1988 or 1989. Applicants should have active research programs in the general areas of cell, molecular, and/or developmental biology, and be willing to teach in a new course for medical students called "The Body." This 8-week (120-hour) course treats both microscopic and gross anatomy briefly and is the only required teaching commitment. Send curriculum vitae, bibliography, and three or four references to: **Dr. Elizabeth D. Hay, Chairperson, Department of Anatomy and Cellular Biology, Harvard Medical School, 25 Shattuck Street, Boston, MA 02115. Harvard University is an Equal Opportunity/Affirmative Action Employer.**

**ASSISTANT PROFESSOR—GENETICS** (tenure-track). Department of 16 with Ph.D. program seeks biologist, preferably with molecular/microbial expertise, to teach genetics and course in speciality, and to develop a strong research program. Commitment to integrated biology curriculum is essential. Position available after 1 January 1988. Send curriculum vitae, statement of research and teaching interests, and the names, addresses, and telephone numbers of three referees by 15 September 1987 to: **R. Dimock, Chair, Department of Biology, Wake Forest University, Winston-Salem, NC 27109-7325. Equal Opportunity/Affirmative Action.**

## POSITIONS OPEN

### POSITION IN ACADEMIC PATHOLOGY

The Department of Pathology at The University of Michigan Medical School seeks applications from candidates for appointment at the level of **INSTRUCTOR OR ASSISTANT PROFESSOR**. Candidates must have an established record of scholarly productivity with scientific articles in peer-reviewed journals and clear evidence that these articles reflect major contributions of the candidate in the design and conduct of the experiments. There must be evidence of scientific independence and the demonstrated evidence of or strong likelihood of success in acquisition of sponsored research grant support. Highly desirable are individuals with M.D. degrees and a background of training in pathology. Of special interest are candidates with training in the techniques of molecular genetics/biology, especially oncogenes. Selected candidates will be expected to participate in teaching functions in the Department of Pathology. Limited clinical responsibilities are also possible, but would require Board certification and State of Michigan Medical Licensure. Applicants should send their curriculum vitae and names of references to: **Peter A. Ward, M.D., Professor and Chairman, Department of Pathology, The University of Michigan Medical School, Box 0602, M5240 Medical Science I, 1301 Catherine Street, Ann Arbor, MI 48109-0602. The University of Michigan is an Equal Opportunity Employer and specifically encourages applications from women and members of minority groups.**

### ANATOMIC PATHOLOGY POSITION

Applications are being sought for a tenure-track position at the level of **INSTRUCTOR OR ASSISTANT PROFESSOR** in the Surgical Pathology Section of the Department of Pathology, The University of Michigan Medical School. Candidates must have the M.D. degree, Board-certification in anatomic pathology, and must have completed fellowship training in surgical pathology. The position also requires current medical licensure and the attainment of a Michigan State Medical license. Preference will be given to candidates with special skills in histochemistry, immunohistochemistry, and the application of molecular probes in surgical pathology. The individual selected for this position must be able to accept diagnostic responsibility for the wide range of biopsy and surgical specimens generated in a large, tertiary care teaching hospital. Candidates must have a demonstrated record of effective professional interaction with clinical colleagues. The individual in this position will be expected to develop an independent investigative program in subspecialty area of surgical pathology and participate in the teaching programs of the Department. Candidates for the position should have evidence of scholarly productivity as demonstrated by a record of scientific publications. Applicants should send their curriculum vitae and names of references to: **Gerald D. Abrams, M.D., Professor, Department of Pathology, Box 0054, 2G332 University Hospitals, 1500 East Medical Center Drive, Ann Arbor, MI 48109-0054. The University of Michigan is an Equal Opportunity Employer and specifically encourages applications from women and members of minority groups.**

### HARVARD UNIVERSITY CELLULAR AND DEVELOPMENTAL BIOLOGY DEPARTMENT

**ASSISTANT PROFESSOR.** The Department of Cellular and Developmental Biology intends to make one and possibly more appointments at the assistant professor level to be filled during the 1988/1989 academic year. We are particularly interested in candidates in the areas of:

plant molecular and developmental biology  
molecular and developmental neurobiology

but we will consider exceptional applicants in other fields.

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

## POSITIONS OPEN

### ASSISTANT MEDICAL DIRECTOR OF BLOOD BANK

The Department of Pathology of The University of Michigan Medical School invites applications from physicians who are certified by The American Board of Pathology in Clinical Pathology, and are eligible for subspecialty certification in Blood Banking. Candidates should have a strong commitment to clinical aspects of transfusion medicine and immunohematology. The position requires current medical licensure and the attainment of a Michigan State Medical license. This appointment will be in the tenure track at the level of instructor or assistant professor. The candidate will share in teaching, research, and administrative responsibilities for the laboratories, with major responsibility for activities of the therapeutic apheresis and outpatient transfusion programs. Candidates must have demonstrated record of effective professional interactions with clinical colleagues and a record of scholarly productivity as demonstrated by scientific publications. The University of Michigan Hospitals Blood Bank is a full-service laboratory in a tertiary care hospital. The laboratory issues approximately 50,000 units of blood and blood components annually, supports a multi-organ transplant program, and is certified as a Reference Laboratory by the American Association of Blood Banks. Applicants should send their curriculum vitae and names of references to: **Harold A. Oberman, M.D., Professor, Department of Pathology, Box 0054, 2G332 University Hospitals, 1500 East Medical Center Drive, Ann Arbor, MI 48109-0054.** *The University of Michigan is an Equal Opportunity Employer and specifically encourages applications from women and members of minority groups.*

Applications are invited for a tenure-track position at the **ASSISTANT PROFESSOR** level. Applicants should have two or more years of postdoctoral experience and should have the potential for establishing an independent laboratory in a modern area of biochemistry and molecular biology. Interest and excellence in teaching and research are expected. The Medical Center includes the Schools of Dentistry, Medicine, Nursing, and Graduate Studies. The present Department consists of 14 faculty with \$1.5 million in annual research grant support. Interested individuals should send curriculum vitae with bibliography, short (three page) summary of planned research, and the names and addresses of three references to the following: **Robert Roskoski, Jr., Head, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center, 1100 Florida Avenue, New Orleans, LA 70119-2799.** *Equal Opportunity/Affirmative Action Employer.*

Indiana State University Department of Life Sciences offers a tenure-track appointment at the level of **ASSISTANT PROFESSOR**. The candidate is expected to develop an independent research program, consult with students in our ecology program, and teach a course in parasitology and a non-majors course in human anatomy and physiology. Applicants must possess a Ph.D., and postdoctoral experience is desirable. The position is available 1 January 1988. Please send curriculum vitae, description of teaching experience, research plans, and three letters of recommendation to: **Dr. William J. Brett, Chairperson, Department of Life Science, Indiana State University, Terre Haute, IN 47809.**

Applicants must be American citizens or hold permanent resident visas. Applications received after 7 September 1987 cannot be assured of full consideration.

*An Equal Opportunity/Affirmative Action Employer.*

**TEXAS A&M UNIVERSITY.** Applications and nominations are invited for a tenure-track faculty appointment at the **ASSISTANT PROFESSOR** level in any area of organic chemistry, to begin in September, 1988. Candidates must have an earned Ph.D. degree and, preferably, 1 to 2 years of postdoctoral research experience. Appointments at the levels of associate professor or professor will be considered for established investigators. Applicants should submit curriculum vitae and an outline of research plans, and arrange for three letters of recommendation to be sent no later than 15 October 1987 to: **Professor Michael B. Hall, Head, Department of Chemistry, Texas A&M University, College Station, TX 77843.** *Texas A&M University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### UNIVERSITY OF GUELPH

#### COLLEGE OF BIOLOGICAL SCIENCE DEPARTMENT OF NUTRITIONAL SCIENCES

The Department of Nutritional Sciences invites applicants for a tenure-track position at the **ASSISTANT PROFESSOR** level. The successful candidate will focus his or her teaching and research activities on the importance of nutrient metabolism at the cellular level. The responsibilities will involve teaching of the undergraduate and graduate levels and development of an independent research program. A Ph.D. or equivalent degree in nutritional sciences, or biochemistry, or cell biology is required. The incumbent will be expected to develop a research program dealing with nutrition at the molecular or cellular level of organization, for example, the effect of nutrition on gene expression or cellular differentiation. Preference will be given to applicants with postdoctoral research experience. Applications should include curriculum vitae, a list of publications, future research objectives, and the names of three referees. To be sent to:

**Dr. H. S. Bayley, Chairman  
Department of Nutritional Sciences  
University of Guelph  
Guelph, Ontario  
Canada N1G 2W1**

*This vacancy is subject to final budgetary approval. Closing date for applications is 1 December 1987.*

#### ASSISTANT PROFESSOR EUKARYOTIC MOLECULAR GENETICS

Applications are invited for a tenure-track faculty position, available 1 July 1988, from individuals with demonstrated research excellence in an area of plant or fungal gene structure and function. The program will complement existing research programs in molecular biology of host-pathogen interactions and host plant genetics. Teaching responsibilities (10%) will include a graduate level course in the area of expertise. A Ph.D. is required; postdoctoral experience is preferred.

Please send curriculum vitae and a statement of research interests, and have three letters of recommendation sent by 1 October 1987, to:

**Dr. Jan E. Leach, Search Committee Chairman  
Department of Plant Pathology  
Throckmorton Hall  
Kansas State University  
Manhattan, KS 66506  
Telephone: 913-532-6176**

*An Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR OF ANATOMY.** Tenure-track position for a candidate with an established research program in neuroscience, developmental biology, or cell biology. Unique medical center research support includes a National Biomedical Research Technology Resource (IVEM, TEM, SEM) and molecular biology emphasis. Teaching requirements will be in small group instruction in medical gross anatomy in a problem-oriented curriculum. Send curriculum vitae and three letters of reference to: **W. Keith O'Steen, Ph.D., Professor and Chairman, Department of Anatomy, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, NC 27103.** *Affirmative Action/Equal Opportunity Employer.*

#### ASSISTANT/ASSOCIATE PROFESSOR

Applicants for this tenure-track position should have demonstrated potential for developing and sustaining a strong research program in molecular aspects of microbial pathogenesis and/or host resistance mechanisms. Research must be suitable for the training of advanced Ph.D. candidates, a number of whom hold the M.D. degree. Teaching responsibilities include selected lectures to medical and dental students, and alternate year offering of a graduate course in a specialty area. Rank of appointment, and salary level commensurate with qualifications. Please submit curriculum vitae, a brief statement of research interests, and the names of at least three references to: **Dr. J. H. Wallace, Chairman, Department of Microbiology and Immunology, University of Louisville, Health Sciences Center, Louisville, KY 40292.** *The University of Louisville is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR OF NEUROLOGY (NEUROSCIENCE).** Position available for Ph.D. or M.D. with prior experience in developmental neurobiology, to join ongoing research program focusing on the response of the nervous system to injury. Prior experience in electrophysiology, membrane biology, or neural regeneration would be helpful. Send curriculum vitae, names of three references, by 30 September 1987, to: **Stephen G. Waxman, M.D., Ph.D., Chairman, Department of Neurology, Yale School of Medicine, 333 Cedar Street, New Haven, CT 06510.** *Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR, PHYSIOLOGY.** Southeastern College of Osteopathic Medicine invites applications for faculty position in physiology available immediately. Candidates must have a doctoral degree and prior teaching experience is highly desirable. Applicants should submit curriculum vitae, list of references, and statement of teaching experience to: **H. Jay Lyons, Ph.D., Chairman, Department of Physiology, S.E.C.O.M., 1750 NE 168th Street, North Miami Beach, FL 33162.** *Equal Opportunity Employer.*

Division of Nuclear Medicine, Department of Radiology, University of Minnesota has a tenure-track position available at the rank of **ASSISTANT OR ASSOCIATE PROFESSOR** for a radiochemist or radiopharmacist beginning 1 October 1987. Minimum qualifications for assistant professor include a Ph.D. in chemistry or pharmacy, at least 1 year of postdoctoral experience in the preparation of radionuclides for medical use, and a demonstrated record of research, publication, and teaching. Associate professor level requires a minimum of 4 years of experience in the preparation of radionuclides for medical use in addition to the other qualifications listed for assistant professor. Preference will be given to individuals who have additional experience with positron-emitting radiopharmaceuticals. A large, fully-equipped laboratory is available for research. Clinical facilities are housed in a new hospital with approximately 6000 square feet of space. A 40-MeV cyclotron and PET scanner are currently being installed at the affiliated VA hospital. Salary is negotiable and competitive and dependent upon past scholarly productivity and postdoctoral experience. Send résumé by 30 September 1987 to: **R. J. Boudreau, M.D., Ph.D., Director, Division of Nuclear Medicine, Department of Radiology, Box 382 University of Minnesota Hospital, Minneapolis, MN 55455.** *The University of Minnesota is an Equal Opportunity/Affirmative Action Employer and specifically encourages applications from women and minorities.*

**ASSISTANT/ASSOCIATE PROFESSOR, NEPHROLOGY.** The Section of Nephrology at the Yale University School of Medicine seeks an individual with at least 3 years of training and experience in molecular biology to establish a research program on the molecular genetics of inherited disorders of kidney function. Applicants should also have appropriate clinical training in internal medicine and nephrology. The position will include teaching of medical students, graduate students, and postdoctoral fellows. Tentative starting date, 1 January 1988 or 1 July 1988, with initial term appointment at the assistant or associate professor level depending on qualifications. *Women and members of minority groups are particularly encouraged to apply.* Applicants should send curriculum vitae before 1 October 1987 to: **Peter S. Aronson, M.D., Section of Nephrology, Department of Internal Medicine, Yale University School of Medicine, Box 3333, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.*

Applications are invited for the position of **ASSOCIATE RESEARCH BIOLOGIST** in the field of developmental biology. University research experience required in gene regulation, pattern formation and growth control in *Drosophila*. Candidates must have a Ph.D. in molecular biology and a well-established record of at least 10 years of sponsored research in molecular biology, cell biology, and genetics. Experience in DNA cloning, sequencing, and immunological techniques is essential. The candidate will be expected to attract external funds. Salary \$40,800 to \$49,100 per year according to qualifications. Please send a letter of application, curriculum vitae and a summary of previous experience to: **Job #MLU4076, P.O. Box 9560, Sacramento, CA 95823-0560,** not later than 6 September 1987. Job site and interview Orange County, CA.



## POSITIONS OPEN

### ASSISTANT/ASSOCIATE PROFESSOR INDUSTRIAL HYGIENE

Applications are invited for an Industrial Hygiene faculty position at the University of California, Los Angeles (UCLA) School of Public Health. A tenure ladder appointment at the assistant or associate professor level is expected although candidates at higher levels will be considered. The Industrial Hygiene Program at UCLA is a component of the University of California Southern Occupational Health Center and the Southern California NIOSH Educational Resource Center. A doctoral degree in industrial hygiene or a related field is required. Individuals demonstrating high academic achievement and the potential for research in industrial hygiene and related fields are encouraged to apply. Preference will be given to candidates with research interests in exposure characterization, dose modeling, control technology, and industrial hygiene chemistry. Send curriculum vitae and names of three references to: **William C. Hinds, Sc.D., CIH, UCLA School of Public Health, Los Angeles, CA 90024-1772. UCLA is an Equal Opportunity/Affirmative Action Employer and encourages qualified minority and women applicants.**

### BIOCHEMISTRY FACULTY POSITION NUCLEIC ACID BIOCHEMISTRY

The Department of Biochemistry, Albert Einstein College of Medicine is seeking an assistant professor with research interests related to nucleic acid metabolism. Areas of research which involve mechanisms of regulation, structural aspects of nucleic acid metabolism or enzymology of nucleic acids are preferred. The Department will be adding several faculty in areas related to nucleic acid metabolism and structural biochemistry. Candidates should have completed postdoctoral training, and have a strong record of research accomplishments. Substantial resources and laboratory research facilities are available. Applicants should submit curriculum vitae, references, and a description of research plans to: **Dr. Vern L. Schramm, Professor and Chairman of Biochemistry, Albert Einstein College of Medicine of Yeshiva University, 1300 Morris Park Avenue, Bronx, NY 10461. Applications should be received before 30 October 1987. An Equal Opportunity/Affirmative Action Employer.**

### BIOCHEMISTRY FACULTY POSITION X-RAY CRYSTALLOGRAPHY

The Department of Biochemistry, Albert Einstein College of Medicine, is seeking an experienced macromolecule crystallographer to develop facilities for x-ray crystallography and structural analysis. The appointee will be involved in the recruitment of additional faculty who will share the use of the facility. Preferred areas of research include protein-nucleic acid structure and enzyme structure, however other areas will be considered. The faculty rank is open depending on experience and qualifications. Resources are available for development of the facility. Applicants should submit curriculum vitae, references, and a description of research plans to: **Dr. Vern L. Schramm, Professor and Chairman of Biochemistry, Albert Einstein College of Medicine of Yeshiva University, 1300 Morris Park Avenue, Bronx, NY 10461. Applications should be received before 30 October 1987. An Equal Opportunity/Affirmative Action Employer.**

**BIOCHEMISTRY—TWO TENURE-TRACK POSITIONS.** The University of Delaware has two tenure-track positions open in biochemistry. There are now seven faculty members in the biochemistry division. The new positions, one junior and one senior, will build on and diversify our present strengths in protein structure and function. Background and interest in applying recombinant DNA technology to fundamental problems is desirable for at least one position. The successful candidates will be expected to teach an advanced course in their area of expertise and participate in teaching general biochemistry. Send curriculum vitae, description of research plans, and arrange to have three letters of recommendation sent by 1 October 1987 to: **Professor H. B. White, Department of Chemistry and Biochemistry, University of Delaware, Newark, DE 19716. The University of Delaware is an Equal Opportunity Employer.**

## POSITIONS OPEN

The Department of Biological Sciences, Dartmouth College, invites applications for two full-time, tenure-track positions, one in **CELL BIOLOGY** and one in **MOLECULAR GENETICS**, beginning July 1988. Qualifications include a Ph.D. and at least 2 years of relevant postdoctoral experience. One appointment will be made at the level of assistant professor, and one at the assistant, associate, or full professor level, depending on qualifications. The specific areas of interest are:

**CELL BIOLOGIST:** While applications from individuals working in any area of cell biology are welcome, we are particularly interested in those using modern molecular techniques to address problems in cell motility, cell division, or molecular targeting.

**MOLECULAR GENETICIST:** For this position, we seek an individual with a strong background in modern molecular biology. The area of research expertise is open; of greater importance is the ability of the successful individual to interact with and complement current departmental faculty interests in cell, molecular, and developmental biology.

The successful candidates will participate actively in the undergraduate and graduate teaching programs of the department as well as initiate a vigorous, independent research program that will attract outside funding, enlist graduate student participation, and provide research experiences for exceptional undergraduates. To this end, the College offers a generous start-up package of major equipment plus expendable funds, in addition to departmental resources that include facilities for DNA synthesis, molecular graphics, TEM, SEM, video light microscopy, etc. Please send letters of application, curriculum vitae, reprints, a statement of research and teaching interests, and at least three letters of recommendation to: **Search Committee, Department of Biological Sciences, Dartmouth College, Hanover, NH 03755. Application review will begin on 15 October 1987. Dartmouth is an Equal Opportunity/Affirmative Action Employer. Applications from women and members of minority groups are strongly encouraged.**

### CHAIR, DEPARTMENT OF BIOCHEMISTRY

Vanderbilt University School of Medicine is searching for candidates for the Chair of the Department of Biochemistry. A candidate should have an exceptional record in research, a commitment to excellence in the education of medical and graduate students, and strong leadership and administrative ability. *Applications from women and members of minority groups are encouraged.* Those interested in being considered for the Chair should submit curriculum vitae and the names of three references to: **Dr. Joel G. Hardman, Chairman of the Biochemistry Search Committee, Department of Pharmacology, A-5321 Medical Center North, Vanderbilt University School of Medicine, Nashville, TN 37232.**

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

### CHAIRPERSON DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY DARTMOUTH MEDICAL SCHOOL

Applications or nominations are invited for the James C. Chilcott Distinguished Professorship and Chair of the Department of Pharmacology and Toxicology at Dartmouth Medical School. An excellent opportunity exists for growth of this department with positions to be filled and opportunities for interaction with developing programs in neuroscience, molecular genetics, endocrinology, immunology, and cancer.

Candidates should have proven leadership ability and must be nationally recognized for their scientific contributions in pharmacology, toxicology, or a closely allied field. Responsibilities include administration of professional and graduate teaching and of research programs within the department. Active support of interdisciplinary programs is also expected.

Each application should be accompanied by curriculum vitae and the names of four references. Applications and nominations should be addressed to: **Dr. William J. Culp, Department of Biochemistry, Dartmouth Medical School, Hanover, NH 03756. Dartmouth is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### PSYCHOLOGY DEPARTMENT CHAIR UNIVERSITY OF FLORIDA AT GAINESVILLE

The University of Florida at Gainesville is searching for a chairperson for the Department of Psychology. The department has a faculty of approximately 35 members. It includes the specialty areas of behavior analysis, cognition and sensory processes, counseling, developmental, psychobiology, and social/personality. A strong commitment to scholarship and research is necessary. Those wishing to apply should send immediately a curriculum vitae and the names of five people who could provide references. *Women and minority-group applicants are encouraged.* Information should be sent to: **Chairperson Search Committee, Psychology Department, University of Florida, Gainesville, FL 32611. Applicants are urged to apply before 30 October 1987. Anticipated starting date is the fall term of 1988. The University of Florida is an Equal Opportunity/Affirmative Action Employer.**

**CLINICAL NEUROPHYSIOLOGIST:** A faculty position at the University of Miami in operative and ICU electrophysiological monitoring exists to develop evoked potential methodology, especially motor evoked potentials using both electrical and magnetic stimulation. The incumbent will serve as co-investigator—NIH grant, involving the evaluation of prototype magnetic stimulators. Science involves collaboration with a spinal cord injury basic science research team. Experience in clinical monitoring required. Send curriculum vitae and three references to: **Walter J. Levy, M.D., The Miami Project/R-48, 1600 NW 10 Avenue, Miami, FL 33136. Equal Opportunity Employer.**

### CURATORIAL POSITION IN CRUSTACEA

Applications are solicited for a curatorial position in Crustacea at the Natural History Museum of Los Angeles County. Responsibilities include conducting collection-oriented research on the systematics of marine crustaceans, active participation in managing a major collection (including full responsibility for supervising an ongoing NSF collection management grant and the orderly transfer of the Allan Hancock Foundation Crustacea collection), and participation in public programs of the Museum. Doctorate required. Position will be filled at the level of the best-qualified candidate. Starting curatorial salaries: Assistant \$24,759; Associate \$29,196; Full \$36,963. Job will remain open until filled. Applications including names of three references should be sent immediately to: **Dr. Daniel M. Cohen, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007. Telephone: 213-744-3367. An Equal Opportunity Employer.**

### DEAN COLLEGE OF SCIENCE UTAH STATE UNIVERSITY

Nominations and applications are invited for the position of Dean of the College of Science at Utah State University in Logan, Utah. The College includes the Departments of Biology, Chemistry, and Biochemistry, Computer Science, Geology, Mathematics, and Physics, and an internationally recognized Center for Atmospheric and Space Science. The College of Science is one of eight colleges in the University. Qualifications for the position include: an earned doctorate in one of the disciplines above; previous leadership experience with demonstrated administrative effectiveness; demonstrated excellence in and commitment to teaching; recognition as an eminent scientist with a steady record of publications and current activity in research; effective communication skills; knowledge of extramural funding procedures; familiarity with national and international research programs and facilities; understanding of a commitment to the landgrant philosophy and mission of teaching, research, and service; and an ability to interpret modern science and establish priorities for advancement therein. Applications will be revised beginning 15 September 1987; the position is available immediately. Interested persons should submit a letter of application, a detailed résumé, and list of five references to: **Dr. Donald W. Fiesinger, Search Committee Chairman, Utah State University, Logan, UT 84322-0705. Telephone: 801-750-1274.**

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

## QUALITY ASSURANCE TOXICOLOGIST (TWO POSITIONS)

GS-11/12/13

\$27,172-\$50,346

### RESEARCH TRIANGLE PARK, NORTH CAROLINA

The Division of Toxicology Research and Testing (DTRT) of the National Institute of Environmental Health Sciences, National Toxicology Program, Research Triangle Park, North Carolina, is seeking applicants for the position of Quality Assurance Toxicologist within the Quality Assurance Group, DTRT. Primary duties involve developing and managing quality assurance activities related to nonclinical toxicology studies. The incumbent of this position must have a Ph.D., D.V.M., Sc.D. degree or equivalent experience (including research) in toxicology or a directly related field of interest. In addition, this position requires knowledge of quality assurance principles and good laboratory practice regulations, management skill and the ability to assess the progress and adequacy of projects through periodic site visits and review of reports. U.S. citizenship required.

If interested, submit curriculum vitae and the names of three references by September 8, 1987, to:

Johnny L. McLean  
Personnel Office, 8 NV-5  
National Institute of  
Environmental Health Sciences  
P.O. Box 12233  
Research Triangle Park, NC 27709  
(919) 541-7513

AN EQUAL OPPORTUNITY EMPLOYER

## RESEARCH SCIENTIST

\$28,629-\$35,203

### CSIRO, DIVISION OF PLANT INDUSTRY CANBERRA, A.C.T., AUSTRALIA

**General:** The Division conducts research into fundamental and applied problems relevant to agricultural production, and thus is involved in the development of new and improved crop and pasture species through the use of both conventional and molecular breeding techniques.

**The Project:** The Division has developed a genotype of linseed with oil suitable for human consumption. To facilitate the introduction of this new crop into agriculture, CSIRO is expanding its research and development program in the following areas: breeding of agronomically suitable cultivars; evaluation of oil and meal characteristics to confirm suitability for human consumption and demonstrate nutritive value; and development of commercial potential for edible-oil products.

**The Job:** A plant breeder/geneticist is required to continue the breeding of edible-oil linseed cultivars for Australian environments; diversify the germplasm pool by back-crossing the low-linolenic genes into a range of genotypes; and undertake studies to define the genetic relationships between the low-linolenic genes and genes controlling other characters of economic importance.

**The Person:** Applicants should preferably have a Ph.D. degree or equivalent qualifications in genetics/plant breeding. Practical experience in breeding and genetics of linseed (flax) or other oilseeds is highly desirable.

**Tenure:** A two year period of employment is offered initially, with Australian Government Superannuation Benefits available.

**Applications:** Stating relevant personal particulars including details of qualifications and relevant experience, the name of at least two professional referees and quoting reference No. M7800 should be directed to:

The Chief  
Division of Plant Industry  
CSIRO  
G.P.O. Box 1600  
Canberra A.C.T. 2601.

by: 4 September 1987

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

# Senior Scientist Drug Delivery

The Drug Delivery Department of Smith Kline & French Laboratories, located near Valley Forge, PA, has an excellent opportunity available for a Senior Scientist to join a multidisciplinary team interested in the optimization of drug absorption, disposition and the development of novel drug delivery systems.

The successful candidate will:

- operate the Gamma Camera Lab.
- prepare radioisotope labeled dosage forms and delivery systems.
- train and supervise R&D staff in the operation of the gamma camera.
- design and/or consult in the design and interpretation of imaging studies with the gamma camera.

Candidate specifications are as follows:

- M.S. degree in biological or physical sciences and 2-4 years of relevant experience required.
- Extensive experience in gamma scintigraphy required.
- Analytical experience desirable.
- Knowledge of Pharmaceutics desirable.
- Good communication skills required.
- No known allergies to animals.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. For confidential consideration, please forward your C.V. and the names of three references to: Mary Ann McCarry-C0041, Senior Employment Consultant-R&D, 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**  
A SmithKline Beckman Company

## Research Scientists

Triton Biosciences Inc., an entrepreneurial subsidiary of Shell Oil Company, is an emerging biotechnology company engaged in the development of diagnostics and therapeutics for human health care. Our company is built upon a strong base of research expertise, solid support, and responsive management. We currently have several excellent opportunities in our Molecular & Cell Biology Department for innovative scientists with 2-4 years post doctoral work or industry equivalent. A working knowledge of tumor cell biology and animal model system is desirable.

### Immunology

Candidates must have direct experience in the isolation and characterization of cells of the immune system and the characterization of immune system growth factors.

### Cell Biology

Candidates should have excellent experience in the characterization of cell growth factors and in setting up of complex biological assays to isolate and quantitate such growth factors.

Triton is located in the San Francisco Bay Area and offers competitive salaries and benefits including relocation assistance. For prompt consideration, please forward your C. V. along with salary requirements and the names of three references to: Triton Biosciences Inc., Box JJM, 1501 Harbor Bay Parkway, Alameda, CA 94501. U.S. Citizenship or permanent visa required. An Equal Opportunity Employer.



Triton Biosciences Inc.

## COMPUTER SCIENTIST

The Enzymology Department of Merck Sharp and Dohme Research Laboratories is looking for a computer scientist with a background in biology, biochemistry, or chemistry. The primary responsibility of the position is the design and implementation of computer systems in a biochemical research environment.

A qualified applicant will have a B.S., M.S., Ph.D., or equivalent experience in Computer Science. Familiarity with standard biochemical techniques is required. The applicant must be skilled in software development, instrument automation, and system administration. Experience with UNIX is desirable. Strong interpersonal skills are required.

The position is located at the Merck Sharp and Dohme Research Laboratories in Rahway, New Jersey, 25 miles from New York City. Our salary, benefits and growth potential are excellent. Interested applicants should submit a curriculum vitae to: **Ms. Jacqueline A. Eiermann, Merck & Co., Inc., P.O. Box 2000, R80M-TL1, Rahway, New Jersey 07065.**

EQUAL OPPORTUNITY EMPLOYER



Merck & Co., Inc.

## AUSTRALIA

### CSIRO

HYDROLOGIST/PHYSICIST  
RESEARCH SCIENTIST/SENIOR RESEARCH SCIENTIST

A\$28,629-A\$41,861

DIVISION OF WATER RESOURCES RESEARCH  
CANBERRA, AUSTRALIA

**THE DIVISION:** The Division of Water Resources Research conducts research on the definition, use and management of the nation's water resources. The Physical Hydrology Program undertakes theoretical and experimental studies of water, solute and particulate movement in 3-dimensional terrain, directed at developing interpretative and predictive techniques for the hydrologic behaviour of small catchments. Associated programs deal with aspects of regional hydrology, and water information and management systems for catchments. The successful applicant will join a group concerned with developing and testing techniques for integrating hydrological processes into predictive models in order to support the management of catchments and their associated water resources.

**THE JOB:** The appointee will undertake research into the processes which determine the water status of catchments together with the processes of solute and particulate transport and their dependence on soil, vegetation and topographic attributes. The work will be part of a research program to develop an understanding of the role of spatial heterogeneity in soils and landscapes, and to develop catchment modelling techniques that incorporate physically based algorithms of water and solute movement and erosion at the field and small catchment scale. The appointee will collaborate with hydrologists and physicists in CSIRO and Government agencies engaged in laboratory and field studies of runoff production, erosion and dryland salinization.

**THE PERSON:** A Ph.D. or equivalent qualifications in science or engineering, with majors in physics and mathematics. Experience in soil physics and hydrologic investigations of natural landscapes is desirable. Consideration could be given to the appointment of an outstanding applicant at a higher level.

**CONDITIONS:** Appointment will be for an indefinite term with Australian Government Superannuation benefits available.

**MORE INFORMATION:** Prospective applicants are invited to telephone Dr. Emmett O'Loughlin (062) 46 5448 for further information. Dr. O'Loughlin can also provide a copy of the detailed job description and selection criteria.

**APPLICATIONS:** Applications should be submitted by 30 August 1987 and quote reference number A5744. They should be framed against the selection criteria, and should state relevant personal particulars including details of qualifications and experience. Applicants should nominate at least two professional referees, and address their applications to:

The Acting Chief  
CSIRO Division of Water Resources Research  
Private Bag  
P.O. WEMBLEY. W.A. 6014  
AUSTRALIA

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

## Chairperson

### Department of Pharmacology

The **HAHNEMANN UNIVERSITY School of Medicine** is seeking nominations and applications for the position of Professor and Chairperson of the Department of Pharmacology. Candidates should be:

- Recognized leaders in their field
- Actively engaged in pharmacologic research
- Capable of administration of a program of teaching and research
- Able to develop and participate in broad interdisciplinary programs

Please address nominations or applications (letter of interest, curriculum vitae, list of publications, and names, addresses and phone numbers of three references) to:

Stanley Cohen, M.D.  
Chairman, Search Committee  
Mail Stop 435

**HU Hahnemann University**

Broad and Vine, Philadelphia, PA 19102-1192  
An Affirmative Action Employer



## POSTDOCTORAL TRAINING PROGRAM IN THE MOLECULAR AND CELLULAR BIOLOGY OF LIPIDS AND LIPOPROTEINS

Applications are invited for advanced research training in the molecular and cellular biology of lipids and lipoproteins. Candidates will participate in basic and clinical research projects with emphasis on problems relevant to atherosclerosis and heart disease. Seven research areas are available: (1) regulation of lipid synthesis and intracellular trafficking, (2) structure of lipoproteins, (3) lipolytic enzymes and lipid transfer catalysts, (4) the interaction of lipoproteins with cells and with the arterial wall, (5) the genetics of dyslipoproteinemias, (6) bile acid transport, and (7) the molecular biology of lung surfactant. The approach is a multidisciplinary one, drawing from biochemistry, molecular biology, developmental biology, physiology, biostatistics and epidemiology. Preceptors are: Judith A.K. Harmony, James E. Heubi, John J. Hutton, Richard L. Jackson, Kenneth D.R. Setchell, Richard G. Sleight, Dennis L. Sprecher, M.T. Ravi Subbiah and Jeffrey A. Whitsett. Candidates should be U.S. citizens or permanent residents committed to a research career, hold a Ph.D. or M.D. degree, and have experience in biochemistry, molecular genetics, cell biology, medicine, or immunology. APPOINTMENTS, TO BEGIN AS EARLY AS SEPTEMBER 1, 1987, ARE FOR A MAXIMUM OF 3 YEARS WITH ANNUAL SALARY RANGING FROM \$16,000 to \$30,000. Applications should include a CV, a short summary of research experience and background, and two letters of reference. Address to:

**J.A.K. Harmony**  
Department of Pharmacology and Cell Biophysics  
University of Cincinnati College of Medicine  
231 Bethesda Avenue  
Cincinnati, Ohio 45267-0575.

*The University of Cincinnati is an affirmative action/equal opportunity employer.*

## CHIEF, HEPATITIS BRANCH Center for Infectious Diseases Centers for Disease Control (CDC) Atlanta, Georgia

The Centers for Disease Control is seeking a Chief for the Hepatitis Branch, Division of Viral Diseases. The Branch Chief directs and participates in comprehensive epidemiologic and laboratory programs concerning the properties, diagnosis, occurrence and control of human Hepatitis A, B, Non A-, Non B-viruses, and Delta virus, in the United States and abroad.

Qualifications preferred include a doctoral degree (M.D., Ph.D. or equivalent), major scientific accomplishments in one or more areas of relevant research, and the ability to provide administrative and scientific leadership for a multidisciplinary program employing 40-50 scientific and support staff.

Salary range from \$53,000 to about \$70,000 per annum, depending on qualifications and personnel system.

Further information about the position can be obtained from Alan P. Kendal, Ph.D., Chairman Search Committee, Division of Viral Diseases, Centers for Disease Control, 7-111, 1600 Clifton Road, N.E., Atlanta, Georgia 30333.

Interested candidates may send in confidence their curriculum vitae and names of three professional references to:

**Sharlyn L. Wilkinson**  
Personnel Management Office, 1-1058  
Centers for Disease Control  
1600 Clifton Road, N.E.  
Atlanta, Georgia 30333

*CDC is an Equal Opportunity Employer and provides a Smoke-Free Work Environment.*

## CHAIR DEPARTMENT OF HEART AND HYPERTENSION RESEARCH

A Search Committee of The Cleveland Clinic Foundation seeks a Chairman for the Department of Heart and Hypertension Research within the Research Institute of The Cleveland Clinic Foundation. This department consists of established investigators working in areas of hypertension, cardiac function and structure, coronary physiology, cardiovascular biochemistry, and pharmacology. The department has a strong basic science focus. The department is well positioned to interact with several basic research and clinical programs within the Foundation including the Departments of Cardiology, Thoracic and Cardiovascular Surgery, Cardiothoracic Anesthesiology, Nephrology and Hypertension, Endocrinology, and Peripheral Vascular Disease. It is expected that the Chairman will maintain a vigorous research program, administer this department and play an active role in its future development.

Applicants must possess an M.D., Ph.D., or equivalent degree and be a distinguished scientist of national and international reputation with a solid background and demonstrated administrative and leadership skills.

The position is available immediately with a negotiable starting date. Salary is competitive and will be commensurate with qualifications and experience. The number of additional staff positions is negotiable as well.

The Research Institute of The Cleveland Clinic Foundation is a basic biomedical research group. Eight departments comprise in excess of 150 scientists and pre- and post-doctoral trainees.

Applicants should send their curriculum vitae to **Dr. Shattuck W. Hartwell, Jr., Chairman, Search Committee for Heart and Hypertension Research, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44106.**

## THE CLEVELAND CLINIC FOUNDATION



9500 Euclid Avenue, Cleveland, Ohio 44106

*The Cleveland Clinic Foundation is an Equal Opportunity Employer*

## STAFF POSITIONS DEPARTMENT OF CELL AND DEVELOPMENTAL BIOLOGY

### ROCHE INSTITUTE OF MOLECULAR BIOLOGY



As part of a newly expanded program in developmental biology, applications are invited for several positions equivalent in rank to Assistant, Associate, and Full Professor. Candidates are sought who are applying contemporary experimental approaches to basic research in developmental biology, as it is broadly defined. Institute staff enjoy total freedom and independence in their choice and pursuit of research problems, as well as full funding of their research programs, including postdoctoral fellows, by Hoffmann-La Roche. The Institute is located in a suburban setting only 10 miles west of New York City. Send curriculum vitae, names of three references, and summary of research interests to: **Dr. Paul Wassarman, Chairman, Department of Cell and Developmental Biology, Roche Institute of Molecular Biology, Nutley, New Jersey 07110.** We are an equal opportunity employer.



### Roche Institute of Molecular Biology

Hoffmann-La Roche Inc.

## POSITIONS OPEN

### DIRECTOR OF RADIOPHARMACY MAYO CLINIC ROCHESTER, MINNESOTA

Mayo Clinic, a large multi-specialty group practice in Rochester, Minnesota, is currently seeking candidate to be the Director of the Radiopharmacy. Individuals should have a Ph.D. and/or an advanced degree with extensive clinical experience. Applicants should be capable of directing a large radiopharmaceutical lab, with extensive knowledge of drug preparation, quality control and dispensing/transportation of all NDA/IND radiopharmaceuticals used in nuclear medicine. The successful candidate will be part of a team of clinicians and scientists whose main goal is to ensure the highest quality routine clinical studies and the development and investigation of new radiopharmaceuticals.

Mayo Clinic offers a competitive salary and benefits based upon qualifications. Please provide a complete curriculum vitae and names and addresses of references to:

Manuel L. Brown, M.D.  
C-66 Hilton Building  
Mayo Clinic  
200 First Street SW  
Rochester, MN 55905

*Mayo Clinic is an Equal Opportunity Employer*

### DIVISION CHIEF AND FACULTY

The Department of Pediatrics of the University of Florida, College of Medicine, is seeking applications for a senior and one junior faculty position in the Division of Human Genetics. The senior position is that of Chief of the Division and appointment is anticipated at the associate or full professor level. Candidates should have an M.D. and/or Ph.D. degree, and should provide evidence of demonstrated leadership abilities in teaching, research, and clinical activities. A background in molecular genetics and its clinical application is highly desired. Candidates for the other faculty position should have an M.D. degree. Appointment for this position is anticipated at the assistant or associate professor level. Salaries are negotiable. Letters of intention including curriculum vitae should be sent to: Lodewyk H. S. Van Mierop, M.D., Chairman, Search Committee, Department of Pediatrics, Box J-296, University of Florida Health Center, Gainesville, FL 32610. Deadline for applications is 2 November 1987. Anticipated start date is 1 July 1988. *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

### MAGNETOENCEPHALOGRAPHY DIRECTOR

Albuquerque Veterans Administration Medical Center and the University of New Mexico Neurology Department is seeking a clinician, preferably a neurologist, to direct new VA/Los Alamos National Laboratory/UNM clinical MEG Program. A shielded room with seven sensor SQUID will be at both the VA and LANL. Applicant must have demonstrated research productivity in neurophysiology, clinical skills in neurology, and leadership ability. Salary and faculty rank at UNM dependent upon applicant's experience and academic productivity. Send curriculum vitae and names of three references to: Larry E. Davis, M.D., Chief, Neurology Service, Albuquerque VA Medical Center, 2100 Ridgcrest Drive SE, Albuquerque, NM 87108. *An Affirmative Action/Equal Opportunity Employer.*

### HEAD, DEPARTMENT OF HORTICULTURAL SCIENCE

The School of Agriculture and Life Science of North Carolina State University is searching for an outstanding individual to administer the teaching, research and extension programs for the Department of Horticultural Science. Candidates for the position should have a Ph.D. and an excellent professional reputation in horticulture or a related field. Administrative experience or demonstrated leadership potential in academic affairs, research, and extension is preferred. Write for a complete job description or apply by sending a letter of interest, curriculum vitae, and names and addresses of three references by 15 October 1987, to: Dr. W. L. Klarman, Chairman, Search Committee: Box 7616, North Carolina State University, Raleigh, NC 27695-7616. *North Carolina State University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### MICROBIOLOGICAL ASSOCIATES INC.

has the following employment opportunities in our recently organized Division of Molecular Virology.

#### DIVISION DIRECTOR

An individual with demonstrated program management skills and experience in human and simian retroviruses is needed to direct the development of our Division of Molecular Virology.

#### PROGRAM DIRECTOR

Experienced virologists/molecular biologists are needed to direct research and development programs on human and simian retroviruses within the Division.

Our newly constructed 40,000 square foot headquarters and laboratory facility offers a campus-like setting in the Montgomery County Life Sciences Center in the northern suburbs of Washington, D.C. Applicants are invited to send curriculum vitae to:

MICROBIOLOGICAL ASSOCIATES, INC.  
Life Sciences Center  
9900 Blackwell Road  
Rockville, MD 20850

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

### JUNIOR FACULTY POSITION

The Department of Chemistry at the University of California, Santa Cruz invites applications for a position at the assistant professor level, effective fall 1988. We are particularly interested in candidates with research interests in biochemistry and biophysics. The successful candidate will be expected to teach at both the undergraduate and graduate levels, and should have an outstanding record of research accomplishments. Curriculum vitae, a brief summary of research interests, and letters of recommendation from three references should be sent to: David Kliger, Chairperson, Department of Chemistry, University of California, Santa Cruz, CA 95064. Application materials should be received by 30 September 1987. Please refer to Provision 102-878. *The University of California is an Equal Employment Opportunity/Affirmative Action/IRCA Employer.*

### THE UNIVERSITY OF CHICAGO DIVISION OF THE BIOLOGICAL SCIENCES

The Department of Pharmacological and Physiological Sciences is considering FACULTY APPOINTMENTS from qualified candidates for a tenure-track position in the area of cellular physiology. Candidates with research interests in the areas of membrane receptors, signal transduction, and second messenger mechanisms, membrane transport and channel activity, cell growth regulation, or other aspects of cellular regulation will be considered. *From the time of its original charter, the principle of The University of Chicago has been to appoint scholars without regard to race, color, religion, sex, or national origin.* Applicants should provide a brief statement of research interests and plans, curriculum vitae and bibliography, and the names of three individuals who are willing to write letters of recommendation to:

Dr. Harry A. Fozzard, Chairman  
Cell Physiology Search Committee  
Department of Pharmacological and  
Physiological Sciences  
The University of Chicago  
947 East 58th Street  
Chicago, IL 60637

### FACULTY POSITION IN MOLECULAR IMMUNOLOGY UNIVERSITY OF COLORADO HEALTH SCIENCES CENTER

Position available at the level of ASSISTANT PROFESSOR for a person with training in immunology and biochemistry. The successful applicant will be expected to develop his or her own research area, and also to collaborate with colleagues at the Barbara Davis Center for Childhood Diabetes in a program related to the Immunobiology of Type I diabetes. Interested persons should send curriculum vitae, a description of research plans, and names of three referees whom we can contact by 1 September 1987 to: Dr. K. J. Lafferty, Research Director, Barbara Davis Center for Childhood Diabetes, 4200 East 9th Avenue, Box B140, Denver, CO 80262.

*Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**FACULTY POSITION:** The Department of Anatomy at the University of Mississippi Medical Center invites applications for one tenure-track faculty position at the rank of assistant professor. Applications from individuals using multidisciplinary (EM, biochemical, immunological) approaches to contemporary questions in cell biology are encouraged. Areas of interest include cell motility, cell growth, cell-to-cell interaction, and/or developmental biology. Teaching responsibilities will be in histology or gross anatomy. The successful candidate should have (i) teaching experience, (ii) publications, and (iii) a significant potential for, or a proven record of, extramural funding. The department is well-equipped, and there is excellent administrative support for basic sciences. Submit curriculum vitae, a letter of introduction, and have three letters of reference sent to: Dr. D. E. Haines, Professor and Chairman, Department of Anatomy, University of Mississippi Medical Center, 2500 North State Street, Jackson, Mississippi 39216-4505. Application deadline: 15 October 1987. *Equal Opportunity Employer, M/F/H/V.*

### FACULTY POSITION IN PLANT PATHOLOGY

**MOLECULAR AND PHYSIOLOGICAL BASIS OF PLANT HOST-PATHOGEN INTERACTIONS.** A tenure-track position in plant pathology (85% research, 15% teaching) at the rank of assistant professor. Individual will be expected to establish a strong research program in some fundamental aspect of the biochemistry, physiology, or molecular biology and genetics of plant host-pathogen interactions, and to develop a graduate course in plant host-pathogen interactions. Ph.D. degree is required and postdoctoral experience is preferred. Applicants should submit curriculum vitae, statement of research interests, transcripts of all academic records, list of publications, reprints of representative publications, and three letters of recommendation to: Norman I. Bishop, Interim Chairman, Department of Botany and Plant Pathology, Oregon State University, Corvallis, OR 97331. Closing date: 31 October 1987. Position available: 1 January 1988. *Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.*

### FACULTY POSITIONS IN MOLECULAR AND CELLULAR PHYSIOLOGY AND BIOPHYSICS

The Department of Physiology and Molecular Biophysics, Baylor College of Medicine has a multidisciplinary research program on membrane proteins and their role in excitability, transport and signal transduction. Space has been designed to optimize interactions. We are seeking additional faculty with expertise in cellular and molecular biology. Tenure-track positions are available at all levels. M.D. or Ph.D. in appropriate field and postdoctoral training are required. Laboratory space, basic equipment, and initial support are available. Send curriculum vitae, a brief description of past and present research experience, and at least three letters of reference to:

Dr. A. M. Brown, Professor and Chairman  
Physiology and Molecular Biophysics  
Baylor College of Medicine  
One Baylor Plaza  
Houston, TX 77030

*An Equal Opportunity Employer*

### FACULTY POSITIONS AT BAYLOR COLLEGE OF MEDICINE

The Department of Biochemistry has several tenure-track faculty positions in the areas of protein structure and function and/or membrane biochemistry. Preference will be given to applicants at the assistant professor level, but more senior individuals will be considered. The department is seeking outstanding scientists who are committed to establishing productive research programs in a stimulating and diverse academic environment. Please send curriculum vitae, three representative publications, a statement of present and future research interests, and have three letters of recommendation sent directly to:

Chairman, Search Committee  
Department of Biochemistry  
Baylor College of Medicine  
Houston, TX 77030

*An Equal Opportunity Employer*

**DIRECTOR OF  
ACADEMIC COMPUTING SERVICES  
UNIVERSITY OF CALIFORNIA, LOS ANGELES**

UCLA invites applications and nominations for the position of Director, Academic Computing Services. The Director reports to the Administrative Vice Chancellor and is responsible for planning and managing all centrally provided academic computing services, including managing the operations of an IBM Model 3090 with two vectors, a Microcomputer Support Office, and a Network Development Group. Supervise facilities, personnel and operations. Position requires demonstrated working knowledge of an extensively distributed and diversified academic computing facility. Demonstrated managerial skills. This position is subject to the University Conflict of Interest Code required by the Political Reform Act of 1974. The candidate selected will be required to complete financial disclosure statements for public record.

Salary commensurate with experience and qualifications. UCLA offers an excellent benefits package that includes a variety of tax-deferred annuity programs. Please send resume, with cover letter indicating qualifications for the position, by September 18, 1987 to: **Albert A. Barber, Vice Chancellor, University of California, Los Angeles, 3134 Murphy Hall (Job #R-3106), 405 Hilgard Avenue, Los Angeles, CA 90024-1405.** Affirmative Action Employer.

**UCLA**

**SCIENTISTS**

**PHOTEST DIAGNOSTICS, INC.** is a new, fast growing company engaged in the development of novel immunoassays based on exciting proprietary technologies. The company plans to increase the size of its R and D effort by hiring several Ph.D.'s who have specialized in:

**IMMUNOCHEMISTRY  
BIO-ORGANIC CHEMISTRY**

The successful candidates will be working in a group that has been responsible for development of new immunoassay technologies aimed to simplify assay procedures.

A Ph.D. in immunochemistry or bio-organic chemistry is required with 0 to two years of post-doctoral experience. We are looking for individuals with excellent analytical skills and a working knowledge of protein chemistry, protein modification and/or immunochemical techniques. Immunoassay experience would be a plus.

Photest is located in Northern New Jersey. Relocation benefits are paid by the company. Attractive salaries and benefits.

Please send a complete resume with detailed description of experience gained during Ph.D. or after to: **Ms. Pat Jacobus.**

Photest Diagnostics Inc.  
101 East Main Street  
Little Falls, New Jersey 07424  
(201) 890-1258

TM

**PHOTEST**

**JOIN THE MARKET  
LEADER IN APPLIED  
BIOTECHNOLOGY**

A commitment to outstanding scientific R&D lies at the heart of Abbott Laboratories' continued success story. A Fortune 100 company, our sustained growth and product line diversity have enabled us to expand both domestically and internationally. Our Chemical and Agricultural Products Division has played a vital role in our successes. We anticipate continued growth and opportunity in this division which is involved in such areas as the development of manufacturing processes for new pharmaceutical compounds, the production of biorational pesticides, and the manufacture of a variety of compounds for industrial and agricultural use. The following individuals are now needed to join our Chemical and Agricultural Products Division's Scientific team.

**MICROBIAL PHYSIOLOGIST/  
BIOCHEMIST**

We are seeking a Ph.D. in Microbiology or Biochemistry with a minimum of 2 years post-doctoral experience to join a multidisciplinary team in our fermentation development group. This team will study the physiology and biochemistry of insecticidal *Bacillus* species and work to translate their results into new agricultural products. The ideal candidate will be familiar with *Bacillus* genetics and have had some industrial experience. Excellent interpersonal and communication skills are essential. **Reply to Job #1.**

**MS BIOCHEMIST/  
FERMENTATION R & D**

This position requires an MS in Biochemistry with experience in enzyme purification and microbial physiology. Strong HPLC, TLC, radioisotope, and antibody assay skills are all essential. **Reply to Job #2.**

**MS/BS MOLECULAR  
BIOLOGISTS/FERMENTATION R & D**

We are seeking two individuals with either MS degrees in molecular biology or BS degrees with at least 3 years industrial experience in molecular biology. The successful candidates will be familiar with recombinant DNA techniques such as DNA isolation, restriction analysis, southern hybridization, and DNA sequencing. **Reply to Job #3.**

**INDUSTRIAL  
MICROBIOLOGIST/QA LAB  
SUPERVISOR**

The successful candidate will have an MS in microbiology or bacteriology and 3-5 years related industrial experience. A strong analytical background is essential as is some computer familiarity and previous supervisory experience. A knowledge of statistics would be a definite plus. This position will be in charge of day to day operations in our potency testing and environmental control laboratories in our quality assurance group. **Reply to Job #4.**

**BIOCHEMIST/ANALYTICAL CHEMIST**

We require a Ph.D., or MS in Biochemistry or Analytical Chemistry, along with at least 2-4 years experience in biological, analytical or organic analytical testing method development or related QA/QC functions (preferably in the pharmaceutical, chemical or food industry). Familiarity with FDA, CGMP, CFR, or Compendia requirements is necessary, as is knowledge of LC, GC, TLC, IR, UV, AA or EIA techniques. This individual will be involved in a wide range of research activities, including new methods of analysis for bulk drugs, intermediates, chemicals, and biochemicals. **Reply to Job #5.**

In addition to outstanding corporate backing and our recognized scientific environment, we offer an excellent salary and benefits package 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, send resume with salary history, indicating job number interested in, to: **Brian McMenamin/Corporate Placement, Dept. SM/8-7.** Abbott is an Affirmative Action Employer.

**ABBOTT**  
ABBOTT PARK IL 60064

"HEALTH CARE WORLD WIDE"

# RESEARCH SCIENTISTS RESEARCH ASSOCIATES

## DEPARTMENT OF MOLECULAR CELL BIOLOGY

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

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

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

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

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

**Recruitment, Dept. 100**  
**AMGEN**  
1900 Oak Terrace Lane  
Thousand Oaks  
CA 91320

Equal Opportunity Employer



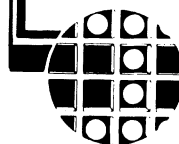
## INVITRON

**Invitron Corporation** a leading Biotechnology Company focused on the production of biopharmaceuticals has the following openings in the Protein Biochemistry Dept. of its Redwood City, CA Research facility.

**Research Associate:** Sr. level technician (BS/MS) with 2-3 years exper. in several of the following areas: protein purification using LC, HPLC, and FPLC; electrophoresis, SDS-PAGE & Western Blotting; analytical HPLC, including peptide mapping and reverse phase techniques. Exp. in amino acid analysis and gas phase sequence analysis a plus.

**Research Assistant:** Entry level technician (BS/MS) with a solid academic background in Biochemistry and some experience in electrophoresis protein purification and immunoassays.

Invitron offers competitive salaries and full benefits with excellent potential for growth according to ability. Please forward resumes to:



N. Kaplan  
**INVITRON CORPORATION**  
515 Galveston Dr.  
Redwood City, CA 94063

We Are An Equal Opportunity Employer, M/F

## MIT POSTDOCTORAL FELLOWSHIPS

Two postdoctoral fellowships in auditory physiology are available at the Massachusetts Institute of Technology (MIT) in an NIH supported program. Specific areas of interest include comparative physiology of the middle ear, mechanoelectric transduction in the inner ear, structure-function relations in normal and pathological ears, coding of acoustic stimuli in the auditory nerve and brain stem nuclei, olivocochlear and middle-ear-muscle systems, neurochemistry of the auditory systems, and the use of evoked potentials in clinical applications.

Inquiries are invited from recent recipients of Ph.D. or M.D. degrees who wish training in the physiology and anatomy of the auditory systems at the Eaton-Peabody Laboratory, a facility operated jointly by MIT, the Massachusetts Eye and Ear Infirmary, and the Harvard Medical School.

**Please submit two copies of curriculum vitae along with letter of interest to: Prof. William T. Peake, MIT/RLE (36-825), 77 Massachusetts Avenue, Cambridge, MA 02139.**

MIT is an affirmative action/  
equal opportunity employer.

# MIT

## 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)

# B I O T E C H N O L O G Y

## Research And Development Opportunities In Biotechnology—Monoclonal Antibodies— Parenteral Biopharmaceuticals

*Centocor, a leading independent biopharmaceutical company located in suburban Philadelphia, has excellent opportunities available for qualified individuals with experience in monoclonal antibody technology to work in an exciting and expanding research and development environment. Positions provide significant potential for professional career growth and management level responsibilities. Excellent opportunities for innovative senior investigators, managers, and biomedical professionals to work as key members of Centocor's multidisciplinary research team exploring the use of murine, human, and genetically engineered monoclonal antibodies as *in vivo* diagnostic and therapeutic agents. We are seeking applicants for the following positions in our Research and Development Division:*

### Research Fellows/Senior Research Scientists:

- Analytical Chemistry and Biochemistry
- Protein Chemistry and Antibody Processing
- Process Development
- Parenteral Formulations
- Molecular Biology/Immunoglobulin Gene Expression
- Cellular Immunology
- Immunotherapy-Infectious Diseases
- Immunoassay Development
- Mammalian Hybridoma Production (Human Antibodies)
- Chemical Engineering/Fermentation

### Research Associates:

- Analytical Chemistry
- Analytical Biochemistry
- Protein Chemistry
- Parenteral Formulation
- Molecular Biology
- Cell Biology/Small Scale Antibody Production (Bioreactor Systems)

### Managers/Supervisors:

- Regulatory Compliance and Quality Assurance
- *In Vivo* Regulatory Affairs
- Clinical Trial Monitoring
- R & D Administration/Program Planning
- Clinical/Scientific Programming
- Scientific Data Center—System Programming/Operators

### Clinical and Regulatory Professionals:

- Research Physicians—Cardiology
- Clinical Research Associates:
  - Infectious Disease
  - Diagnostic Imaging
  - Cardiology
- Senior Regulatory Affairs Associates
- Clinical Data Associates
- Computer Operators
- Senior Biostatisticians

Reply in confidence with curriculum vitae and summary of relevant experience indicating the position desired to: **Harvey J. Berger, M.D.; Senior Vice President, Research and Development; Centocor, Inc.; 244 Great Valley Parkway; Malvern, PA 19355.** No Phone Calls Please.

Excellent salary and benefits program accompany these positions at our modern R & D facility located 20 miles west of Philadelphia. Pharmaceutical industry and/or relevant academic experience required. Senior level University faculty members are encouraged to apply. Appointments may be at the Section Head level for qualified individuals with management experience.



An equal opportunity employer



## POSITIONS OPEN

### FACULTY POSITION IN BIOCHEMISTRY MEDICAL COLLEGE OF OHIO

The Department of Biochemistry, Medical College of Ohio, invites candidates to apply for a tenure-track position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. The Department is expanding its faculty to include those with research interests that extend its present programs, which include regulation of gene expression, mechanisms of hormone action, protein structure-function relationships, antifolates, protein kinases, posttranslational modification of peptides, peptide hormone analogues, neuroendocrine regulation, membrane receptors, growth factors, and oncogene function. Candidates who employ molecular approaches to their research problems are particularly encouraged to apply. Responsibilities will include establishment of an active research program and participation in the teaching of medical and graduate students. Research facilities within the Department include a core laboratory with state-of-the-art equipment for peptide and oligodeoxynucleotide synthesis, and for protein sequence analysis. Send curriculum vitae, brief summary of research goals, and three letters of reference to: **Dr. James H. Freisheim, Professor and Chairman, Department of Biochemistry, Medical College of Ohio, C.S. 10008, Toledo, OH 43699.** *An Equal Opportunity Employer.*

### TWO FACULTY POSITIONS IN ZOOLOGY OREGON STATE UNIVERSITY

**SENIOR FACULTY POSITION IN BEHAVIORAL PHYSIOLOGY**—Available to established scientists with excellent record of scholarship and research accomplishments in endocrinology, neurobiology, or other aspects of behavioral physiology. Successful candidate will participate in the development of a research focus in behavioral biology and coordinate the search for another faculty position in this area in 1989 to 1990. Annual teaching will involve participation in undergraduate/graduate physiology and graduate seminars. Advanced assistant, associate and full professors are encouraged to apply.

**ASSISTANT PROFESSOR IN CELL BIOLOGY**—This tenure-track position will be filled by an individual with a Ph.D. and demonstrated research ability using modern approaches in cell biology. We encourage applications from those with postdoctoral training and research interests that complement our programs in developmental biology, endocrinology, genetics, immunology, or neurobiology. Teaching will include cell biology, a graduate course in area of specialty, and participation in an introductory course.

The Department of Zoology has 16 faculty directing graduate research at the cell, organism, population, and community levels. Collaboration is common with faculty in biochemistry, microbiology, pharmacy, veterinary medicine, fisheries and wildlife, and the Center for Gene Research. Facilities are also available at the Hatfield Marine Sciences Center. Excellent set-up arrangements are available. Oregon State University, with 16,000 students, is a Land Grant and Sea Grant institution located in the heart of the Willamette Valley, equidistant from the Pacific Ocean and the Cascade Mountains.

We will review applications as they arrive for a starting date between spring and fall 1988. Applications should include a statement of career goals, curriculum vitae, representative reprints, and three letters of recommendation. Send to: **The Behavioral Physiology or the Cell Biology Search Committee, Department of Zoology, Oregon State University, Corvallis, OR 97331.** *OSU is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.* Closing date for receipt of application is 31 January 1988.

### MOLECULAR BIOLOGY/GENETICS

The Department of Biology at Loyola University of Chicago invites applications for a 9-month tenure-track academic position at the level of assistant professor. A Ph.D. and postdoctoral experience are required. Individuals should be using modern molecular or biochemical techniques to study problems in molecular biology or genetics, including population studies. The successful candidate will develop an active research program, direct graduate students, and teach genetics and biostatistics. Submit curriculum vitae, a description of research interests, and the names of three references by 15 September 1987 to: **Dr. Jeffrey Doering, Chairman, Search Committee, Department of Biology, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, IL 60626.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

**MEDICAL RESEARCH MANAGEMENT.** The American Institute of Biological Sciences (AIBS) (a non-profit institute) is expanding its role in assisting a major federal malaria vaccine development effort. The following positions are available:

### RESEARCH MANAGER

Manage and coordinate basic and preclinical research activities of a network of malaria investigators. Requirements: earned doctorate, extensive knowledge of immunology, and/or biotechnology, at least 10 years of experience, both bench and management. Malaria experience highly desirable. Familiarity with preclinical vaccine development, animal use issues helpful.

### RESEARCH ASSOCIATE

Assist research manager in coordination of malaria research network activities. Requirements: advanced life science degree (doctorate preferred) with at least 5 years of experience. Bench experience with malaria desirable.

### CLINICAL TRIALS ASSOCIATE

Assist clinical manager in coordination of overseas clinical and field trials of malaria vaccine candidates. Requirements: advanced degree (doctorate preferred) in relevant field, at least 5 years of experience in vaccine trials or malaria field studies.

Reply with curriculum vitae to: **AIBS, Attention: Dr. Winter, 1800 North Kent, #930, Arlington, VA 22209.**

### MOLECULAR PARASITOLOGIST

The Department of Biological Sciences, University of Cincinnati, invites applications for an assistant professor tenure-track position in the area of molecular parasitology, beginning 1 September 1988. The candidate must have completed a doctorate, with postdoctoral experience required. The successful candidate will be expected to develop an externally funded independent research program studying the molecular basis of the biology of parasites and/or host-parasite interactions, with animal systems preferred. In addition, the candidate will participate in graduate and undergraduate education. Applicants must submit curriculum vitae, a one page statement of research goals, and have at least three letters of recommendation submitted to: **Dr. Richard D. Karp, Molecular Parasitologist Search Committee, Department of Biological Sciences, University of Cincinnati, Cincinnati, OH 45221.** The deadline for applications is 15 November 1987. *The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.*

**NEUROANATOMIST:** The Department of Anatomy invites applications for a full-time position with responsibility for teaching neuroanatomy to chiropractic students starting October 1987. Opportunities for graduate student instruction and supervision may be possible. Preferred: demonstrated ability to develop funded research program in the neuro-sciences. Rank commensurate with qualifications. Closing date 31 August 1981. Submit letter of application, curriculum vitae, and three references to: **B. A. McMaster, Ph.D., Chairman, Department of Anatomy, Palmer College of Chiropractic, 1000 Brady Street, Davenport, IA 52803.** *Equal Opportunity Employer.*

### PHYTOBACTERIOLOGIST NORTH CAROLINA STATE UNIVERSITY

The Department of Plant Pathology at North Carolina State University, Raleigh, has available a 12-month, tenure-track position, at the assistant professor level with 90% research and 10% teaching responsibilities. The appointee will be expected to develop a competitive research program in the molecular genetics and biology of phytopathogenic bacteria. Teaching responsibilities will include a graduate course in contemporary phyto-bacteriology. Candidates should have a Ph.D. in plant pathology or closely related area, with research in molecular genetics of phytopathogenic bacteria, and experience beyond the doctorate. Salary is commensurate with qualifications. Applications will be received until 1 September 1987, or until a suitable candidate is identified. Forward a complete résumé, including transcripts, list of publications, a description of future research interests and goals, and three letters of reference to: **Dr. W. L. Karman, Head, Department of Plant Pathology, Box 7616, North Carolina State University (NCSU), Raleigh, NC 27695-7616.** *NCSU is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### NEUROBIOLOGY

The Department of Biology at Loyola University of Chicago invites applications for a 9-month tenure-track academic position at the level of assistant professor. A Ph.D. and postdoctoral experience are required. Individuals with research interests in the areas of neurophysiology, neuropharmacology, neuroendocrinology, or neuromuscular physiology are encouraged to apply. The successful candidate will develop an active research program, direct graduate students, and teach at both the undergraduate and graduate levels. Please submit curriculum vitae, a description of research interests, and the names of three references by 15 September 1987 to: **Dr. A. J. Rotermund, Chairman, Search Committee, Department of Biology, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, IL 60626.** *An Equal Opportunity Employer.*

### NEUROGENETIC DISORDERS RESEARCH CENTER

**TWO RESEARCH ASSOCIATE POSITIONS** are available for persons with a Ph.D. and experience in the following areas:

- Oligosaccharides and glycoproteins. Studies on abnormalities in glycoprotein metabolism in aging and neurological disorders. **Dr. R. K. Pullarkat.**
- Proteoglycans (PG) and glycosaminoglycans (GAG). Studies on PG and GAG metabolism in Lowe Syndrome and related neurogenetic disorders. **Dr. F. J. Kieras.**

Send curriculum vitae and three references to: **Dr. Pullarkat or Dr. Kieras, Institute for Basic Research, 1050 Forest Hill Road, Staten Island, NY 10314.** *An Equal Opportunity/Affirmative Action Employer.*

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

### PHARMACOLOGY FACULTY POSITIONS

The Department of Pharmacology at the University of Minnesota invites applications for tenure-track positions at the **ASSISTANT PROFESSOR** rank. Qualifications include the Ph.D. or M.D. degree in pharmacology or a related field, and two or more years of postdoctoral experience. Successful candidates should have a strong background in molecular and cell biology, show promise of developing independent research programs, and expect to teach and advise graduate and health professional students. Candidates with experience and interest in the molecular biology of the central nervous system and molecular action of CNS drugs are encouraged to apply.

Applicants should send curriculum vitae, significant reprints, a statement of research plans, and three names for reference purposes to: **Dr. J. W. Miller, Professor and Chairperson of Search Committee, Department of Pharmacology, 3-260 Millard Hall, 435 Delaware Street S.E., University of Minnesota, Minneapolis, MN 55455.** Deadline for receipt of applications is 1 October 1987.

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

**POSTDOCTORAL FELLOW:** An immediate opening for a research associate (2-year position) in neurophysiology at the University of Miami. Research focus is developing n/motor evoked potential methodology, using both electrical and magnetic stimulation. The position, NIH supported, will work on determining the optimal evoked potential for prediction of and determination of injury/recovery, plus pathways, safety and motor control. Science involves both animal and clinical models and collaboration with a spinal cord injury research team. A background in motor system neurophysiology would be helpful. Please send curriculum vitae and three recommendations to: **Walter J. Levy, M.D., The Miami Project R48, 1600 NW 10th Avenue, Miami, FL 33136.** *Equal Opportunity Employer.*

## POSITIONS OPEN

### PHYSIOLOGY AND/OR CLINICAL PHARMACOLOGY FACULTY POSITION

The Department of Veterinary Biology, University of Minnesota, College of Veterinary Medicine, invites applications for a full-time, 12-month position beginning January 1988 or later. Responsibilities include establishing a strong independent research program, teaching physiology and/or clinical pharmacology to veterinary students, advising graduate students, and teaching graduate courses. Selection criteria are research potential, ability to secure extramural funding, demonstrated teaching ability, and potential for interaction with other disciplines in the College of Veterinary Medicine. Department research foci are gastrointestinal, neuroscience, muscle function, and membrane biology; there are also opportunities for collaboration with faculty in medicine, agriculture and biological sciences. We offer newly remodeled laboratory facilities, start-up funds and competitive salary. Appointment may range from assistant professor (tenure-track) to professor (tenured), commensurate with experience. Applicants for assistant or associate professor levels must have D.V.M./Ph.D., Ph.D., or equivalent foreign degree before appointment. Applicants for professor must have D.V.M./M.S. or Ph.D. Further guidelines for appointment levels sent on request. Send curriculum vitae, statement of research interests, and names of three references by 15 September 1987 to: **Dr. Esther Gallant, Department of Veterinary Biology (G), 295 AS/VM Building, University of Minnesota, 1988 Fitch Avenue, St. Paul, MN 55108.**

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

### POSTDOCTORAL IMMUNOLOGY

A position is available immediately to study immunoregulatory functions of alveolar macrophages. Recent Ph.D. with experience in cellular immunology and biochemistry required. Send curriculum vitae and names of three references to: **Dr. H. B. Herscovitz, Department of Microbiology, Georgetown University Medical Center, Washington, DC 20007.**

## POSITIONS OPEN

**NEUROBIOLOGY POSTDOCTORAL POSITION** available for recent Ph.D. trained in neuronal cell culture. Areas of investigation include (i) neuroleukin effects on PNS and CNS neurons, (ii) characterization of neuroleukin receptor, (iii) AIDS virus inhibition of neuroleukin. Please send curriculum vitae and names of three references to: **Dr. Mark Gurney, Department of Pharmacological and Physiological Sciences, The University of Chicago, 947 East 58th Street, Chicago, IL 60637. Equal Opportunity/Affirmative Action Employer.**

**POST-PH.D. POSITIONS** immediately available in dynamic research-driven product oriented company. Positions involve: HIV-replication and cloning of envelope proteins, identification of molecules reacting with cell receptors. Identification of HIV by cryoimmunoelectron microscopy. Production of human monoclonal antibodies against HIV. Duration of appointments will be 2 years, with possibility of extension. Salary is funded internally and is very attractive. Please send curriculum vitae to: **Soficorp Scientific, 630 Dorchester West, 25th Floor, Montreal, Canada H3B 1W2. Equal Opportunity/Affirmative Action Employers.**

**POSTDOCTORAL OR JUNIOR STAFF.** Ph.D. to study heat radiosensitization in synchronous mammalian cells. Research involves intracellular distribution and synthesis of heat shock proteins (2D gels), DNA damage (neutral elution and alternating field gradient electrophoresis), and inactivation of repair enzymes. Level and salary depend on experience and research goals. Contact or call: **Dr. William C. Dewey, Radiation Oncology Research Laboratory, University of California, CED-200, San Francisco, CA 94143. Telephone: 415-476-2461. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available August 1987 to participate in studies on the human sleep-wake pattern. Current projects involve the effects of various hypnotics on sleep and performance. Doctorate and established research record required. Send curriculum vitae and letters of reference to: **Karen Wilson, Director of Personnel, Humana Hospital Audubon, 1 Audubon Plaza Drive, Louisville, KY 40217.**

## POSITIONS OPEN

**POSTDOCTORAL FELLOW—YALE UNIVERSITY.** A research position is available immediately for a recent Ph.D. to study the regulation of eukaryotic RNA pol-II transcription. Experience in molecular biology techniques and/or tissue culture methodology is desirable.

Please send curriculum vitae and names of three references to:

**Dr. Gyanendra Kumar  
Department of Human Genetics  
Yale University School of Medicine  
333 Cedar Street  
New Haven, CT 06510**

**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 for 2 years to aid in the development of neuron-based biochemical microsensors. Research is an interdisciplinary effort between neuroscientists (C. D. Barnes and S. J. Fung) and engineers (B. J. Van Wie). Techniques include intra/extracellular recording, immunochemistry, use of voltage sensitive dyes, tissue culture, and mathematical modeling. Send curriculum vitae and names of three references to: **Bernard J. Van Wie, Chemical Engineering Department, Washington State University, Pullman, WA 99164-2710. Annual salary: \$18,000 to \$21,000. Closing date: 1 October 1987. Washington State University is an Equal Opportunity/Affirmative Action Employer.**

## CHAIR

### DEPARTMENT OF IMMUNOLOGY & CANCER Research Institute of the Cleveland Clinic Foundation

A search committee of the Cleveland Clinic Foundation seeks a department head for the Department of Immunology and Cancer within the Research Institute of the Cleveland Clinic Foundation. This department consists of 13 established investigators working in various areas of cancer biology, immunology and autoimmune disease. The department is well positioned to interact with several basic research and clinical programs within the Foundation including the Cleveland Clinic Cancer Center. It is expected that the Chairman will maintain a vigorous research program, administer this department and play an active role in its future development.

Applicants must possess a Ph.D., M.D. or equivalent degree and qualifications appropriate to a tenured appointment at a full professor level. A distinguished scientist of national and international reputation with a solid background and demonstrated administrative and leadership skills is required.

The position is available immediately with a negotiable starting date. Salary is competitive and will be commensurate with qualifications and experience. The number of additional staff positions is negotiable as well.

The Research Institute of the Cleveland Clinic Foundation is comprised of seven Departments, with over 70 staff scientists and more than 80 pre- and post-doctoral trainees, devoted to basic biomedical research.

Applicants should send their curriculum vitae to **Dr. Thomas L. Gavan, Chairman, Search Committee for Chairman, Dept. of Immunology & Cancer, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44106.**

*The Cleveland Clinic Foundation is an Equal Opportunity Employer.*



THE CLEVELAND CLINIC FOUNDATION

Excellent opportunities are now available with a highly respected manufacturer of plasma/pharmaceutical products.

## Assistant Manager Regulatory Affairs

Requires a BS degree in Biological or Physical Sciences; 2-3 years experience in regulatory affairs; and working knowledge of FDA policies and regulations as they apply to drugs, devices and biological products. Experience in actual new product development and familiarity with GMPs, clinical research principles, auditing, etc. also required.

## Regulatory Specialist

Position requires a BS in Chemistry, Biology or Microbiology; basic knowledge of drug and biologic manufacturing and quality control principles. A minimum 2 years experience in a technical discipline in the healthcare industry, such as Quality Control, Regulatory Affairs or R & D; and demonstrated effective writing and communication skills also necessary. Travel required.

## Supervisor of Biostatistics

Requires an MS in Biostatistics or Epidemiology with emphasis in statistical design and data management, strong background in microcomputer software, programming capability in Basic and Fortran plus working knowledge of BMDP and SAS statistical packages. 2-3 years supervisory experience in a medical research environment preferred.

For immediate consideration please send your resume, including salary history and requirements to **Dave Callihan, Alpha Therapeutic Corp., 5555 Valley Blvd., Los Angeles, CA 90032.** We are an equal opportunity employer m/f.



THERAPEUTIC CORPORATION

## POSITIONS OPEN

**POSTDOCTORAL POSITION**—now available to study the aging-associated reduction in tolerance to digitalis in rats. Techniques used may include isolated cardiac preparations and myocytes, radioligand binding, enzyme assays, ion fluxes, and intracellular ion-selective microelectrodes. Experience in isolated tissues, isolated cells and/or electrophysiology desirable. Send curriculum vitae and names of three references to: **Richard Kenney, Ph.D., Department of Pharmacology, Slot 611, University of Arkansas for Medical Sciences, 4301 West Markham, Little Rock, AR 72205.**

**POSTDOCTORAL POSITION** available for recent Ph.D. to study bioenergetics of photoreceptors and the phosphorylation-dephosphorylation process in the visual function. Strong background in enzymology and protein chemistry preferred. Experience in cell culture helpful. Send résumé and references to: **Dr. Chung-Ho Chen, Room 363 Woods Research Building, Wilmer Institute, The Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, MD 21205.**

**POSTDOCTORAL POSITION** immediately available for recent Ph.D. to study early events in the differentiation of B lymphocytes and myeloid cells from hemopoietic precursors and the regulation of that process by bone marrow stromal cells. Experience in molecular biology desirable. Send curriculum vitae and names of three references to: **Dr. Kenneth Dorshkind, Division of Biomedical Sciences, University of California, Riverside, CA 92521.**

**POSTDOCTORAL POSITION IN INHALATION TOXICOLOGY** available immediately. Strong background in biochemistry desirable. The position involves research focusing on causes and mechanisms of environmental lung disease. The awardee will participate in toxicologic studies investigating lung cell function, mucociliary clearance, mucus composition, and mediators of mucus secretion following exposure to selected atmospheric pollutants such as cigarette smoke, ozone, and sulfuric acid. The main area of responsibility will be in measuring the responses to these exposures; however, the awardee will also have the opportunity to learn methods of inhalation exposure and aerosol generation. Send curriculum vitae and names of three references to: **Dr. R. B. Schlesinger, New York University Medical Center, A. J. Lanza Laboratory, Box 817, Tuxedo, NY 10987. Telephone: 914-351-5277. An Affirmative Action/Equal Opportunity Employer M/F.**

**POSTDOCTORAL POSITION** available immediately for biophysical studies of membrane-bound, ion transport proteins. Work will involve the application of fluorescence and kinetic techniques to the investigation of bacterial rhodopsins and the calcium ATPase. Send curriculum vitae and three references to: **Dr. Gregg Dewey, Department of Chemistry, University of Denver, Denver, CO 80208.**

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

## POSTDOCTORAL POSITION

Cardiovascular research laboratory studying the molecular biology of apolipoproteins is seeking applicants with recombinant DNA experience. Research will focus upon mechanisms of gene regulation using mammalian cell transfections, transgenic mice, and retrovirus vectors. Send curriculum vitae and names of three references to: **Personnel, c/o Dr. John Taylor, Gladstone Foundation Laboratories For Cardiovascular Disease, University of California, P.O. Box 40608, San Francisco, CA 94140-0608.**

**POSTDOCTORAL POSITION** in immunology is available immediately to study the role of the major histocompatibility antigens in human cell differentiation and autoreactivity both in human and mouse systems. Background in immunology and/or molecular biology is preferred. Send curriculum vitae and the names of three references to: **Dr. Carlo Russo, Department of Medicine, Cornell University Medical College, 1300 York Avenue, New York, NY 10021.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study the interaction of macrophages, lymphokines, and malaria parasites in rodent systems. Ph.D. and a strong background in cellular immunology preferred. Send curriculum vitae and the names, addresses and telephone numbers of three references to:

**Dr. Hannah L. Shear  
Department of Medical and  
Molecular Parasitology  
New York University Medical Center  
341 East 25th Street  
New York, NY 10010**

**POSTDOCTORAL POSITION—CELL CULTURE.** Work with newly developed primary cell culture system to investigate metabolic and genetic control of adipocyte differentiation; studies will use a variety of established and potential differentiation markers, including recently produced monoclonal antibodies, and will initiate experiments using cDNA probes from adipose tissue to identify sites of gene action in cells from genetically obese animals. Ongoing NIH-funded research projects in well established laboratory. Position available as early as 1 September 1987. Please send letter of application and curriculum vitae to: **Dr. M. R. C. Greenwood or Dr. Patricia Johnson, Department of Biology, Vassar College, Poughkeepsie, NY 12601. Women and minorities are encouraged to apply.**

**POSTDOCTORAL POSITION** available in cell biology of mammalian cardiac muscle. Areas of research include growth and expression of contractile protein isoforms in myocytes. Experience in cell culture and biochemistry preferred. Send curriculum vitae, statement of research interests, and the names, addresses, and telephone numbers of three references by 31 August 1987 to: **Dr. Asish C. Nag, Department of Biological Sciences, Oakland University, Rochester, MI 48309-4401. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available 1 October 1987 for the study of DNA photochemistry and photobiology. Experience with DNA sequencing techniques essential. Appointment initially for 1 year (renewable); salary is negotiable depending on experience. Send résumé, including detailed summary of research experience, and three letters of reference to: **Dr. Francis P. Gasparro, Photobiology Laboratory, Department of Dermatology, Yale University, 333 Cedar Street, New Haven, CT 06510. Equal Opportunity/Affirmative Action Employer.**

## POSTDOCTORAL POSITION JOHNS HOPKINS MEDICAL SCHOOL

A position is available immediately for a postdoctoral fellow or research associate interested in the crystallographic study of DNA-binding proteins. Current projects focus on the crystallographic study of repressor-operator interactions; future work will involve the design of DNA-binding proteins and the structural analysis of eukaryotic regulatory proteins, including the "zinc finger domain" and the tat-III protein from HIV. Excellent facilities are available (area detector, VAX 8500, PS 390). Experience in macromolecular crystallography preferred, but other candidates with strong backgrounds in physics or mathematics will be considered. Please send curriculum vitae and names of three references to:

**Carl O. Pabo  
Department of Molecular and Genetics  
Johns Hopkins University School of Medicine  
Baltimore, MD 21205**

*An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately. The project involves investigation of the molecular mechanism of respiratory irritation and sensitization through identification and purification of *in vivo* targets resulting from inhalation exposure to isocyanates. Methods to be employed include protein isolation and purification, protein sequence and composition analysis, immunochemical, and radioisotopic techniques. Contact: **Dr. William E. Brown, Department of Biological Sciences, Carnegie Mellon University, 4400 Fifth Avenue, Pittsburgh, PA 15213.**

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

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately for neuroendocrine and vascular studies on an animal model for the hot flush. Candidate also will be involved in research involved with adrenergic and temperature alterations in hypertensive and diabetic animal models. Funding available for 2 to 3 years. Send curriculum vitae and three letters of reference to: **Dr. Michael J. Katovich, Department of Pharmacodynamics, Box J-487, JHMC, University of Florida, Gainesville, FL 32610. An Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available immediately for a neuroscientist interested in studying the development and plasticity of local synaptic networks. Specific qualifications are open, but prefer someone with EM experience and a knowledge of synaptogenesis, membrane remodeling, and growth factors. Send curriculum vitae, selected reprints, and the names of three references to: **Charles Greer, Ph.D., Section of Neurosurgery, Department of Surgery, Yale University School of Medicine, PO Box 3333, New Haven, CT 06510. Yale is an Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available immediately to characterize the Ah receptor, a steroid-hormone like receptor. A background in protein purification/characterization, molecular endocrinology, and/or molecular biology is desirable. Send curriculum vitae and names as references to: **Dr. Alan Poland, McArdle Laboratory for Cancer Research, University of Wisconsin, Madison, WI 53706.**

**POSTDOCTORAL POSITION** available immediately to do electrophysiological studies on isolated heart cells. Familiarity with ion channels, voltage clamp, and gigaseal techniques preferred for these NIH-funded studies on basic mechanisms of antiarrhythmic drug action. Deadline: 21 August 1987. Send applications to: **Dr. K. Courtney, Palo Alto Medical Foundation, 860 Bryant Street, Palo Alto, CA 94301.**

**POSTDOCTORAL POSITION** available in molecular neurobiology in neurodegenerative diseases, including Alzheimer's disease, in established multidisciplinary laboratory. Qualifications include a Ph.D. or M.D., and a strong background in biochemistry and molecular biology to explore the molecular basis of these diseases. Submit curriculum vitae and three references to: **Dr. Carol A. Miller, Department of Pathology, USC Medical School, 2011 Zonal Avenue, Los Angeles, CA 90033.**

**POSTDOCTORAL POSITION** in Colorado available immediately to study hormonal regulation of lipoprotein lipase gene expression in adipocytes and CNS. A background in molecular biology and/or protein biochemistry is required. Send curriculum vitae and names of three references to: **Dr. Robert H. Eckel, Division of Endocrinology, University of Colorado Health Sciences Center, Denver, CO 80262. Telephone: 303-394-8443. An Equal Opportunity Employer.**

**POSTDOCTORAL POSITION IN IMMUNOLOGY** available for Ph.D., M.D., or holders of equivalent degree. Areas under study include the role of the eosinophilic leukocyte in hypersensitivity reactions and in host-defense against helminths with particular attention to the biochemistry and molecular genetics of toxic cationic proteins, the mechanisms of hypersensitivity reactions to antigens, and characterization and measurement of allergens. Studies involve the use of monoclonal antibodies and recombinant DNA. Applicants must be U.S. citizens or hold an immigrant's visa. Contact: **Dr. Gerald J. Gleich, Chairman, Department of Immunology, Mayo Foundation, Rochester, MN 55905. Telephone: 507-284-2511. An Equal Opportunity/Affirmative Action Institution.**

## IUPUI PURDUE SCHOOL OF SCIENCE DEAN

Applications and nominations are invited for Dean of the Purdue School of Science at Indiana University-Purdue University at Indianapolis (IUPUI). The Dean will provide leadership for excellence in teaching, research and service with particular attention to enhancing the quality of undergraduate programs and achieving the full potential of graduate programs.

The School offers Purdue degrees at the baccalaureate and master's levels in biology, chemistry, computer science, mathematical science, physics and psychology; Ph.D.'s are offered in most disciplines in collaboration with counterpart departments at West Lafayette. Indiana University degrees are offered at the B.S. and M.S. levels in geology. IUPUI is composed of 16 schools, serves 23,000 students, and is the third largest campus in the state. Funding for a new science and technology complex has recently been approved by the legislature.

Qualified candidates will have a record of research, funding and teaching sufficient to merit appointment at the rank of professor, possess strong communication and interpersonal skills, have successful administrative leadership experience as department chair or higher, and demonstrate an understanding of the requirements of laboratory research.

The review of applications will begin in September, and the position is expected to be filled in July 1988. Contact: **William M. Plater, Chair, Science Dean Search Committee, Administration Building, IUPUI, 355 North Lansing, Indianapolis, IN 46202**, for complete position description and additional information.

*IUPUI is an EEO/AA employer. Candidates with a proven commitment to improving the participation of women and minorities in science professions are especially welcome.*

## POSTDOCTORAL FELLOWSHIPS

St. Jude Children's Research Hospital, a large multidisciplinary research institute, has openings for postdoctoral investigators in the basic biomedical sciences. Fellowships are available in molecular genetics, tumor cell biology, pharmacology, biochemistry, immunology and other related disciplines. Specific areas of investigation include proto-oncogenes and growth factors, genetic control of cellular differentiation, biochemical basis of multiple drug resistance in childhood neoplasms, regulatory properties of viral proteins, macrophage immunobiology, phospholipid metabolism, and cellular messenger systems. Successful applicants train with internationally recognized preceptors in a fully equipped facility and are given the opportunity to develop as independent investigators. Annual salaries begin at \$20,000 and are commensurate with experience.

Application forms and a more detailed description of the training program can be obtained from:

**Ms. Evonne Toland, Director's Office  
St. Jude Children's Research Hospital  
P.O. Box 318  
Memphis, TN 38101**

*An Equal Opportunity Employer*

SJCRH

## TOXICOLOGY

Stauffer Chemical Company has several exciting career opportunities available at its Environmental Health Center located in Farmington, CT.

### Metabolism/ Pharmacokinetics Scientist

You will conduct a variety of animal metabolism, enzyme induction and special studies. Responsibilities include study design, overall study supervision, interpretation of results and report preparation. You will work as part of a team of chemists and biochemists to separate and identify metabolites in biological systems, and collaborate to determine the etiology of toxic effects. The successful candidate will have an M.S. or Ph.D. or equivalent experience in biochemistry, chemistry or related field, and be experienced in modern biochemistry and analytical procedures, including TLC, GLC, HPLC and radioisotope handling.

### Teratologist/Reproductive Toxicologist

You will conduct a variety of teratology, reproduction and special studies. Responsibilities include study design, overall study supervision, interpretation of results and report preparation. You will have excellent opportunities for collaborative work in the pathogenesis of toxic effects with staff pathologists and toxicologists. The successful candidate will have an M.S. or Ph.D. or equivalent experience in reproductive biology or a related field, and have experience in animal reproduction and developmental toxicology.

### Toxicology Quality Assurance Inspector

You will be responsible for monitoring and inspecting a variety of toxicological studies conducted to support registration under FIFRA/TSCA and FDA GLPs. The successful candidate will have a B.S./M.S. in Biology, Chemistry or related field and orientation in medicine or toxicology, and 2 to 3 years laboratory experience with 2 years in Quality Assurance, preferably in a toxicology laboratory with primary emphasis on pesticide registration.

Stauffer offers on-going growth opportunities, excellent salaries, and an attractive package of paid company benefits. To apply, please send your resume, a brief description of your experience, and salary requirements to: Mrs. P. Frutchey, STAUFFER CHEMICAL COMPANY, 400 Farmington Avenue, Farmington, CT 06032. We are an Equal Opportunity Employer M/F.

**Stauffer Chemical Company**

## SUPERVISORY COMPUTER SPECIALIST

GM-334-15

**Salary Range—\$53,830–\$69,976**  
**Research Triangle Park, North Carolina**

National Institute of Environmental Health Sciences (NIEHS),  
National Institute of Health, Public Health Service.

The selectee will serve as Chief, Computer Technology Branch, Division of Biometry and Risk Assessment. Responsibilities will include ADP policy, budget, staffing, procurement, planning and contract management. At least one year of experience equivalent to the GS-14 level of the Federal Service in the performance of studies, report preparation and recommendations is required. Applicants will be rated on 1) State-of-the Art knowledge in computing technology and data communications, 2) Ability to manage a group with diverse backgrounds and goals and 3) Skill in verbal communication. Employment is full-time permanent. Interested applicants can request a copy of the job announcement and application forms by specifying **AR2708** as the announcement number. Applications and necessary forms will be mailed to you by sending a card **postmarked no later than August 14, 1987**, to OPM Job Information Center, P.O. Box 25069, Raleigh, NC 27611. U.S. Citizenship is required.

*"NIEHS is an Equal Opportunity Employer"*

## POSTDOCTORAL RESEARCHERS

THE LIFE SCIENCES DIVISION OF THE LOS ALAMOS NATIONAL LABORATORY is seeking postdoctoral researchers in the Pulmonary Biology-Toxicology Program. Ongoing research conducted under this program includes: isolation and characterization of lung cell subpopulations by multiparameter flow cytometry; cell interactions during the development and progression of pulmonary diseases; lung defense mechanisms; exercise physiology and pathophysiology. Individuals with a strong background in pulmonary and exercise physiology or pulmonary cellular biochemistry are encouraged to apply.

Applicants should have received their doctoral degree within the past three years. Postdoctoral appointments are for one year, renewable for a second year. The salary range is \$31,260–\$32,940 per year.

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

Affirmative Action/Equal Opportunity Employer  
**U.S. CITIZENSHIP REQUIRED**



**Yale UNIVERSITY**

## *Evolutionary Ecologist*

The Department of Biology at Yale University seeks to appoint an outstanding Evolutionary Ecologist to its senior faculty. The appointment will be at the level of tenured associate professor or full professor.

We invite applications from creative investigators who would like to develop their research and teaching programs in an exciting intellectual environment created by a productive and interactive group of colleagues.

The successful applicant should teach effectively at undergraduate and graduate levels, collaborate well, and be committed to a vigorous research effort. Send curriculum vitae, description of research interests and names and addresses of three references by September 15, 1987 to:

Chairman, Department of Biology  
Yale University  
PO Box 6666  
New Haven, CT 06511

Yale University is an equal opportunity/affirmative action employer. We welcome applications from women and members of minority groups.

## DRUG DISCOVERY PHARMACOLOGY

Our client, a distinguished Fortune 100 corporation located in a highly desirable East Coast location, seeks ambitious and visionary scientists to focus, organize and grow a new drug discovery program.

We are searching for scientists who will be intrigued and emboldened by a new venture of exceptional promise with an unusual and enduring financial endowment.

### MANAGER OF PHARMACOLOGY

Will have a minimum of 7 years industrial or academic experience, be trained in pharmacology or physiology with an established research record. We are looking for leadership qualities, for one who will participate in the building of a world class discovery department involving multiple therapeutic categories.

### PHARMACOLOGISTS

PhD, a minimum of 2 years post doctoral experience, ready and eager to develop and expand a singular therapeutic program for drug discovery.

Our client stands ready to reward the highest professional expectations. Please respond in confidence, with assurance of discretion to:

**R. Columbus, PhD**  
Managing Partner,  
Pharmaceuticals



**WETERRINGS & AGNEW**

Professional Placement Consultants

1200 Midtown Tower, Rochester, NY 14604  
716/454-3888





## Leadership Excellence Innovation

The Solar Energy Research Institute (SERI), is the nation's primary federal laboratory for the development of solar energy as a viable energy supply. Based in Golden, Colorado, the Institute houses leading scientists, engineers and other technical personnel involved in state-of-the-art research, development and testing of renewable technologies. We invite you to consider the following opportunity:

### Manager Microalgae Technology

Key responsibilities of this position will be to plan and lead SERI's technical efforts in the collection, characterization and improvement of halophilic microalgae for oil production. The selected individual will also serve as the prime Institute resource on microalgae fuel production. Managerial responsibilities will be augmented by active research in his/her areas of expertise.

Requirements include a PhD in phycology or related fields, plus experience in phycology or algal culture.

Qualified candidates should send curriculum vitae and salary requirements to: Mr. G. M. Serenyi, E232-262, Solar Energy Research Institute, 1617 Cole Boulevard, Golden, Colorado 80401. We are an equal opportunity employer.



# POSTDOCTORAL FELLOW

A Postdoctoral position is available immediately to study auto-anti-idiotypic responses induced by immunization with ligands of physiological receptors. Projects involve T-cell recognition of idiotypic antigen, presentation of classical anti-idiotypic and internal image-type immunoglobulins, quantitative studies of auto-anti-idiotypic responses, and preparation of monoclonal antibodies to physiological receptors. Projects offer opportunity to learn rodent and human hybridoma technology (B-cell and T-cell). Applicants should have a Ph.D. or equivalent. Research experience with T-cell clones or with the application of recombinant DNA technology to immunoglobulin genes is preferred. Send CV. and names of three references to Dr. W.L. Cleveland, Dept. of Microbiology, Columbia University and Dept. of Medicine, St. Luke's/Roosevelt Hospital Center, 428 W. 59th Street, New York, N.Y. 10019. Telephone (212) 554-6929. An Equal Opportunity Employer M/F.

**ST. LUKE'S/ROOSEVELT**  
*Hospital Center*

## Biotechnology Scientists

The Applied Biotechnology group of Travenol Laboratories, Inc., a Fortune-500 company, has several opportunities available at its Cambridge, MA location. This site has research and development responsibilities with current emphasis on the preparation of recombinant-based reagents for immunodiagnostics.

### Molecular Biology

Molecular Biologists (PhD, MS, BS or equivalents) are sought to join an expanding effort in the cloning and expression of viral genes. Experience with recombinant DNA methods including cloning in *E. coli* is required. Experience with primary cloning and with gene expression in bacteria and mammalian cells would be an advantage.

### Downstream Processing

Scientists (PhD, MS, BS or equivalents) are needed for pilot scale downstream processing and process development involving *E. coli* expression systems. Experience in purification of recombinant proteins from *E. coli* is required. The PhD position requires an individual with experience in all aspects of downstream processing to develop and supervise a pilot scale production team.

### Virologist

A supervisory level Virologist/Retrovirologist position is available in a group working on the molecular, biological and immunological aspects of human infectious disease. The successful candidate will have a PhD or equivalent with a minimum of 2 years' experience in human immunodeficiency virus research and a working knowledge of infectious diseases. Previous experience in virology, molecular biology or immunology would be advantageous. The individual will establish, develop and supervise a viral diagnostic production team.

The company offers a competitive salary and an excellent benefits package. Please send your resume to Debi Paris Harmon, Travenol Laboratories, Inc., 600 Memorial Drive, Cambridge, MA 02139.

An equal opportunity employer

**Travenol Laboratories, Inc.**



## POSITIONS OPEN

### POSTDOCTORAL POSITION IN BIOCHEMICAL TOXICOLOGY/ CELL CULTURE

Position available immediately to plan and perform basic research in biochemical toxicology with an emphasis on cellular metabolism and mechanism of action of toxic chemicals using animals and in vitro cell cultures.

Successful candidate will be part of a team investigating the pharmacokinetics and pharmacodynamics of chemicals for the development of mathematical models for risk assessment.

Appointment is for 1 year with renewal for up to 3 years.

Send curriculum vitae and names and addresses of three references to:

**Northrop Services, Inc.**  
101 Woodman Drive, Suite 12  
Dayton, OH 45431

*Northrop Services, Inc. is an Equal Opportunity Employer.*

### POSTDOCTORAL POSITION

Available immediately for junior-level, newly graduated Ph.D. with research experience in electron microscopy and cell culture. Preference will be given to those with experience in tumor cell biology and metastasis. Send curriculum vitae and three letters of reference to: **Dr. John D. Taylor, Department of Biological Sciences, Wayne State University, Detroit, MI 48202. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION—SOLID STATE GEOCHEMISTRY.** Research in high-resolution and analytical transmission electron microscopy of minerals and their analogues. Experience in crystallography, materials sciences, and electron microscopy is desirable. Send résumé, transcripts, reprints, research interests, and names of three references to: **P. R. Buseck, Department of Geology, Arizona State University, Tempe, AZ 85287. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION(S).** To study (a) cell biological aspects of phagocytic leukocytes, including cell stimulation, surface receptors, and endocytosis or (b) the growth regulation and cell-cell interaction of vascular cells. Please send curriculum vitae and names and addresses of three references to: **Morris J. Karnovsky, Department of Pathology, Harvard Medical School, 25 Shattuck Street, Boston, MA 02115. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITIONS** available 1 December 1987 to study the regulation and structure of the activities/levels of chloroplast enzymes and their genes/mRNAs involved in  $\text{NH}_3$  assimilation, respectively. One position requires expertise in DNA sequencing and general molecular biological procedures, and the other in protein chemistry/enzymology. Ph.D. in biochemistry, plant, or microbial molecular biology. Salary: \$19,000 to \$21,000 per year. **Dr. Robert R. Schmidt, Graduate Research Professor, Department of Microbiology and Cell Science, 1059 McCarty Hall, University of Florida, Gainesville, FL 32611. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITIONS**—Two positions available approximately December 1987. One position may be filled at the research assistant professor level depending on qualifications. Research will involve either the investigation of cell wall/membrane function during morphogenesis of *Candida albicans*, or the study of factors related to virulence of the organism utilizing biochemical and molecular approaches. Experience with HPLC, lipid analysis, or recombinant DNA techniques would be helpful. Send curriculum vitae and names of three references to: **Dr. R. L. Cihlar, Department of Microbiology, Georgetown University, Washington, DC 20007.**

*An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITIONS** available to study the structure and function of receptors involved in mediating the adhesive reactions of human cells. A background in protein chemistry is necessary. Send curriculum vitae and the names of three references to: **Edward F. Plow, Ph.D., Department of Immunology (IMM-17), Research Institute of Scripps Clinic, 10666 North Torrey Pines Road, San Diego, CA 92037.**

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS**—Department of Pharmacology, University of Miami School of Medicine. Successful applicants will join research projects investigating the molecular basis of calcium regulation in mammalian heart and vasculature. The fully funded projects employ the latest methodology, including the following: Ion channel purification, monoclonal antibody probes for channel identification, and single channel recording with patch clamp and planar lipid bilayer techniques (under the direction of **Dr. J. Talvenheimo**); intracellular calcium measurement with fluorescent dyes combined with whole cell voltage clamp techniques (under the direction of **Dr. M. Cannell**). A competitive salary, commensurate with experience, is offered. Applicants should send résumé and summary of research interests together with the names and addresses of two referees to: **Dr. Mark Cannell or Dr. Jane Talvenheimo, Department of Pharmacology, University of Miami, P.O. Box 016189, Miami, FL 33101.**

**POSTDOCTORAL POSITIONS** are available immediately to collaborate on studies examining the molecular mechanisms of oxidant-induced alterations in pulmonary endothelial cell membrane structure and function. Work in progress involves isolation and purification of cell plasma membrane proteins, identification and quantitation of membrane lipids, preparation of vesicles and reconstituted membrane systems, and measurements of transmembrane transport, enzyme activity, and receptor function. Background in protein biochemistry, membrane biophysics, or lipid biochemistry is desired. Send curriculum vitae and names and telephone numbers of three references to: **Dr. Edward R. Block, J. Hillis Miller Health Center, Box J-225, University of Florida, Gainesville, FL 32610. Telephone: 904-374-6069.**

**POSTDOCTORAL POSITIONS (TWO)**—Available immediately to study role of extracellular matrix proteins in nervous system development. Background in neural cell culture, hybridoma production, electron microscopy or molecular biology desirable. Send curriculum vitae plus names and addresses of three references to: **Dr. David J. Carey, Weis Center for Research, Geisinger Clinic, Danville, PA 17822. Equal Opportunity Employer M/F/H.**

**POSTDOCTORAL RESEARCH** opportunity to study transport and metabolism of water soluble vitamins (ascorbic acid) in placenta and ocular tissues. Require experience in membrane transport, cell culture, protein purification, or cloning technology. Send curriculum vitae, description of goals/interests, and names of three references to: **Dr. R. C. Rose, Department of Surgery, The Pennsylvania State University College of Medicine, Hershey, PA 17033.**

### POSTDOCTORAL RESEARCH ASSOCIATE

Ecogen Inc., an expanding agricultural biotechnology company located just north of Philadelphia, Pennsylvania and specializing in microbial pesticide development has an immediate opening for a postdoctoral research associate to study digestive physiology of lepidopterous larvae. Candidate should have a strong background in protein isolation and characterization. Experience with proteases is desirable. Send résumé and names and addresses of three references to: **Personnel Director, Ecogen Inc., 2005 Cabot Boulevard West, Langhorne, PA 19047-1810. Ecogen Inc. is an Equal Opportunity Employer.**

**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

Exciting opportunity for Ph.D. with experience in cell biology/protein biochemistry/molecular biology to join in the establishment of a vascular molecular biology laboratory at Yale University Medical School. Investigations in basic growth regulatory mechanisms, biochemistry, and radiobiology of blood vessel cells. Academic appointment and competitive salary. Please send curriculum vitae to: **Dr. Eliot M. Rosen, Department of Therapeutic Radiology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.**

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE**—Molecular biology of gamma ray-induced DNA damage. A position is available after 1 September 1987 to use recombinant DNA shuttle vectors to investigate lesions in DNA in mammalian cells resulting from gamma irradiation. A Ph.D. in biological science is necessary and experience in recombinant DNA, cell culture, and microbiological genetic techniques are desirable. Send curriculum vitae and three letters of recommendation, or names of three references to: **Dr. Alan Lurie, Department of Oral Diagnosis/Oral Radiology or Dr. William B. Upholt, Department of BioStructure and Function, University of Connecticut Health Center, Farmington, CT 06032.**

*An Affirmative Action/Equal Opportunity Employer, M/W/H.*

**POSTDOCTORAL RESEARCH ASSOCIATE** wanted. Investigation of intestinal differentiation and calcium absorption: biochemistry and molecular biology of Ca-pump and basement membrane structures and synthesis. Send curriculum vitae and names and addresses of three references to: **Dr. Milton M. Weiser, State University of New York at Buffalo (SUNY), Division of Gastroenterology, Buffalo General Hospital, Kimberly Building, 100 High Street, Buffalo, NY 14203. SUNY is an Equal Opportunity and Affirmative Action Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE**  
40 hours per week \$20,140 per year

Job focuses on the purification and functional characterization of human B cell growth factor (BCGF) and its putative receptor, via (i) the establishment of BCGF-dependent or responding B cell line, (ii) the development of monoclonal antibodies to BCGF and its receptor, and (iii) the uses of a series of affinity chromatographic column, electrophoresis, and HPLC. Extensive experience in tissue culture and hybridoma techniques. Basic knowledge in biochemistry is also required. Ph.D., major in the field of immunology. Send résumé to: **Ochsner Foundation Hospital, 1516 Jefferson Highway, New Orleans, LA 70121. Brenda B. Chighizola, Employment and Staffing Department.**

**POSTDOCTORAL RESEARCH FELLOW** with knowledge of biochemistry or molecular biology to study cellular and molecular regulation of intestinal Na/H exchange protein. Studies involve the identification, purification, and reconstitution of membrane transport proteins. Strong possibility of faculty appointment. Position available immediately. Send letter and curriculum vitae to: **Mark Donowitz, M.D., Box 217, New England Medical Center, 750 Washington Street, Boston, MA 02111. Telephone: 617-956-6251.**

**POSTDOCTORAL RESEARCH—SEGMENTAL MOTOR CONTROL.** Position available in early 1988 to study organization and characteristics of recurrent inhibition to motoneurons. Research environment includes four motor-control laboratories at the BNI as well as a larger group of scientists in the Phoenix-Tucson area in a formalized motor-control group. Background in motor control and electrophysiological techniques is preferred. Send curriculum vitae and list of three references to: **Dr. Thomas M. Hamm, Division of Neurobiology, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, 350 West Thomas Road, Phoenix, AZ 85013.**

*Affirmative Action/Equal Opportunity Employer.*

**PROTEIN BIOCHEMIST**—Proficient in purification and characterization of connective tissue proteins using ion-exchange, gel exclusion and affinity chromatography, isoelectric focusing, hydroxyapatite chromatography, HPLC, electrophoresis, blot transfer, tissue culture. Knowledge of producing and characterizing monoclonal and polyclonal antibodies. Identify new proteins in bone dentin and tumor tissues. Understand the molecular mechanisms of isolation of receptors for growth factors.

Requirements include a doctorate in biochemistry or biology, and at least 2 years of postdoctoral and one year of practical experience involving protein biochemistry of protein purification. Forty hours per week: Salary negotiable. Position located at University of California, Los Angeles.

Résumé only to: **Susan Wall, 1000 Veteran Avenue, Room A3-34, Los Angeles, CA 90024.**

# Career Opportunities In Pharmaceutical Research

Otsuka Pharmaceutical Co., Ltd., one of Japan's major companies, dedicated to innovative basic and clinical research, currently has three professional openings at its Rockville, MD facilities.

- **PROJECT LEADER**— Maryland Office of Clinical Research. You'll join an outstanding team of international scientists involved in clinical trials in several therapeutic fields and be specifically responsible for clinical trials of cardiovascular agents. Position requires a PhD and relevant experience in the area of cardiovascular pharmacology.

- **CELLULAR IMMUNOLOGIST**— Maryland Research Laboratories. We are currently seeking a PhD level Cellular Immunologist with at least 2 years of postdoctoral training to join an interdisciplinary team studying the role of various growth factors in autoimmune disease.

- **CLINICAL Q.A. SPECIALIST**— Maryland Office of Clinical Research. Will develop, implement and maintain a clinical QA system for evaluating the precision, accuracy and reliability of clinical drug trial procedures,

data and reports. The successful candidate will have a BS/MS in a related discipline and relevant experience to include monitoring clinical trials.

These positions offer exceptional salaries commensurate with your experience, a full range of benefits, and opportunity to advance your career with a dynamic, progressive organization. Qualified applicants should send a resume with salary history/requirements, (clearly stating position desired), to:



**Otsuka  
Pharmaceutical Co., Ltd.**  
P.O. BOX 4165  
Rockville, MD 20850

*"Otsuka, people creating new products  
for better health worldwide."*

An Equal Opportunity Employer M/F

## Assistant Professor in the Department of Biochemistry and Molecular Pathology

Tenure-track position, available on the Basic Medical Sciences campus of the Northeastern Ohio Universities College of Medicine (NEOUCOM). We are seeking a candidate with substantial post-doctoral experience in molecular biology, especially as applied to endocrinology, metabolism, membranes or enzymology, or in analytical biochemistry with a working knowledge in chromatography and mass spectrometry. The candidate is expected to engage in research, independently or in cooperation with basic and clinical scientists and to participate in the teaching and training of medical and graduate students. The Department of Biochemistry is actively engaged in various aspects of cytochrome P-450 research. Excellent research facilities are available on the expanding Basic Medical Sciences campus. NEOUCOM offers a 6-year combined B.S./M.D. degree program in consortium with The University of Akron, Kent State University and Youngstown State University. Applicants should send curriculum vitae, names of three references, and most significant reprints by August 20, 1987 to:

Northeastern Ohio Universities  
College of Medicine  
Office of Human Resources  
Attention: Ferenc Hutterer, M.D.  
P.O. Box 95  
Rootstown, Ohio 44272

*An equal opportunity/affirmative action employer.*

## Ph.D. Project Leader— Neurodiagnostics

Currently the fastest growing segment of the \$4 billion Abbott Laboratories, our world leading Diagnostics Division has a history of success in a variety of testing areas, including Hepatitis B, German Measles, and most recently, AIDS. Now, backed by a management team named one of the nation's five best for 1986 by *Dun's Magazine*, we're seeking a Ph.D. to lead our efforts in developing novel neurodiagnostic tests.

The selected candidate will focus on developing tests for the diagnosis, prognosis and successful treatment of neurological and psychiatric disorders, and for optimizing drug therapy through monitoring plasma levels of drugs. Requirements include a related Ph.D. and at least 2-5 years experience in neuroscience and one of the following: biochemistry, immunochemistry, assay development, protein chemistry, receptor binding and characterization, or analytical techniques. Evidence of productivity and scientific recognition in these fields a must.

Abbott is headquartered in an attractive suburban location just 30 miles north of Chicago on the Lake Michigan shoreline. In addition to a superior scientific environment, we offer an excellent salary, and full benefits package that includes profit sharing and stock retirement plans. For confidential consideration, please send your resume with salary history to: **Peggy Taylor, Corporate Placement, Dept. SM/8-7.** Abbott is an Affirmative Action Employer.

**ABBOTT**  
ABBOTT PARK IL 60064

## POSITIONS OPEN

### PROTEIN CHEMIST

A position is available for a skilled protein-peptide chemist to oversee an instrumentation facility which incorporates peptide sequencing and synthesis. The successful applicant will interact with a small group of investigators working on the structure and function of proteins and peptides involved in chemical transmission in the nervous system. This appointment will be a nonfaculty, career-level appointment. In addition to participating in the purification of peptides, this individual will be the principal operator of a gas-phase sequencer and automated synthesizer. Demonstrated experience in peptide chemistry, and familiarity with the required equipment and techniques are highly preferred. Direct applications, including a description of relevant experience and the names of three references to: **Dr. Jonathan B. Cohen, Department of Anatomy and Neurobiology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110. An Equal Opportunity/Affirmative Action Employer.**

### RADIOLOGICAL SCIENCES RESEARCH DIRECTOR

Applications are invited for a tenure-track full-time faculty position as Radiological Sciences Research Director in the Department of Radiology at the University of Nebraska Medical Center. Candidates must be a Ph.D. and/or M.D. with postdoctoral research experience including thorough knowledge of biostatistical analysis, and knowledge in physiology and anatomy. The Director will be expected to prepare grants and obtain external funding from local, state, and federal agencies, to coordinate developmental research projects, and to be responsible for basic science and clinical experimental design. The Director will be encouraged to pursue independent research projects in areas complementing those of the current faculty. Applications should be received no later than 1 October 1987 by: **Thomas J. Imray, M.D., Professor and Chairman, Department of Radiology, University of Nebraska Medical Center, Omaha, NE 68105. Telephone: 402-559-6396 for further details. An Equal Opportunity/Affirmative Action Employer M/F/H/V.**

Beecham Laboratories, a leading manufacturer of veterinary biologics, has **TWO RESEARCH AND DEVELOPMENT POSITIONS** available: (i) A **VETERINARY VIROLOGIST**, with industrial experience, to conduct research toward the USDA licensing of vaccines; (ii) **PROTEIN CHEMIST** (M.S. or Ph.D.), with a bacteriology and/or virology background to assist in immunogen identification and purification. To apply send résumé to: **Hans Draayer, Manager, Biological Research and Development, Beecham Laboratories, East Lincoln Road, White Hall, IL 62092. An Equal Opportunity/Affirmative Action Employer.**

**RESEARCH ASSOCIATE** to participate in studies of cellular regulation of IgA synthesis in murine and human Peyer's patches. Requires experience in cellular immunology, isolation of lymphoid and accessory cell populations, cell cloning and hybridoma technology, and general immunochemical techniques. Will be expected to initiate studies on effector cell activities at mucosal sites; 10 to 15% of time will be spent in classroom teaching of professional students. Position available now at local university to Ph.D. with 1 to 2 years of postdoctoral experience. Salary is \$22,800 per annum (40 hour week). Send curriculum vitae and three letters of reference to: **Alabama State Employment Service, 1816 8th Avenue, North, Birmingham, AL 35203, Attention: E. R. Robinson, Job Order AL1025152. Please respond within 30 days of this ad.**

### RESEARCH ASSOCIATE SIMON FRASER UNIVERSITY

NMR and other biophysical studies of membrane-protein interactions related to serum lipoproteins. Ph.D. with several years of experience required. Equipment available includes 100-, 250-, and 400-MHz spectrometers. Start date: immediately. Salary: \$22,000 plus, depending upon qualifications. Preference shall be given to applicants who are eligible for employment in Canada at the time of application. Prospective applicants should send a résumé and have letters from two referees sent to: **Dr. R. J. Cushley, Department of Chemistry, Simon Fraser University, Burnaby, B.C., V5A 1S6.**

## POSITIONS OPEN

**RESEARCH ASSOCIATE:** LipoGen Inc. is a young dynamic biotech company engaged in the development of innovative immunodiagnostics. We are presently seeking a research associate who would enjoy a challenging environment that recognizes individual initiative. Significant knowledge of immunochemistry is essential; immunoassay development and/or industrial experience would be a plus. The successful candidate will have an M.S. with 2 years of experience, or a B.S. with 5 years of experience. The company is located in the Oak Ridge corridor of West Knoxville, an area that offers an excellent living environment in close proximity to the Smokey Mountains.

Please reply in confidence to: **Dr. S. McMillan, LipoGen Inc., 10515 Research Drive, Knoxville, TN 37932.**

### RESEARCH ASSOCIATE

The Protein Microchemistry Laboratory of the New Jersey Center for Advanced Biotechnology and Medicine has an advanced temporary position available for 1 year, renewable for a second year. The individual will participate in various research projects related to protein structural analysis, including protein isolation, peptide mapping and microsequencing. At least 2 years of postdoctoral experience in protein chemistry is required. Inquiries should be sent to: **Dr. Stanley Stein, Rutgers University, Waksman Institute, P.O. Box 759, Piscataway, NJ 08854. Equal Opportunity/Affirmative Action Employer.**

### RESEARCH ASSOCIATE/ POSTDOCTORAL FELLOW

Research associate/postdoctoral position available immediately to join multi-disciplinary group engaged in insulin growth factor action. Project involves purification and characterization of growth factor-stimulated P-tyr proteins. Strong background in monoclonal antibodies and experience with protein peptide purification required. Protein microsequencing, oligonucleotide and peptide synthesis available via adjacent core laboratory. Send curriculum vitae and three letters of reference to: **Dr. Joseph Avruch, Chief, Diabetes Unit, Massachusetts General Hospital, Boston, MA 02114 or call: 617-726-6909.**

**RESEARCH ASSOCIATE** in semiconductor physics desired by university. Independently perform basic and applied research in the field of laser spectroscopy. Characterize semiconductors by using far-infrared and dye lasers, high magnetic field methodology and systems, low temperatures and modern electronics instrumentation. Supervise small staff of research assistants. Requires master's degree in semiconductor and/or laser physics. Requires one year of experience in the job offered or one year of experience in laser physics research. Must have knowledge of basic principles of both laser and semiconductor physics. Must have experience working with narrow gap semiconductors such as InSb and Hg<sub>1-x</sub>Cd<sub>x</sub>Te. Salary: \$1200 per month, 40 hour work week. Apply at: **The Texas Employment Commission, Denton, TX**, or send résumé to: **Texas Employment Commission, TEC Building, Austin, TX 78778. Job order #4793201. Ad paid by an Equal Employment Opportunity Employer.**

### RESEARCH BIOLOGIST

Postdoctoral position with USDA, ARS, Fargo, North Dakota 58105, available immediately for molecular biologist/biochemist to join multidisciplinary group studying biochemistry and cell biology of insects. Project includes molecular analyses of cell proliferation, differentiation and nitrogen metabolism, with emphasis on regulation by hormones, polyamines, and xenobiotics. Applicants should have a strong background in cell biology and experience with cell culture and biochemical techniques. Funded for 3 years. Salary range GS-11, \$27,172/GS-12, \$32,567 per annum. Must be U.S. citizen. For information on the research program contact: **Dr. Roger Leopold 701-237-5771, extension 5420.** For information on application procedures/forms, contact: **C. R. Enuton, 301-344-3138, Personnel Division, BARC W, Building 003, Beltsville, MD 20705.** Applications should be marked Code 7W021 and be received by 15 September 1987. *An Equal Opportunity Employer.*

## POSITIONS OPEN

**RESEARCH COORDINATOR,** Center for Fast Kinetics Research. The University of Texas at Austin. Requires Ph.D. in a natural science plus 3 years of related professional research experience after the Ph.D. Experience must include hands-on experience with lasers, pulse radiolysis and/or kinetic spectroscopy; demonstrated management ability to arrange details of the users' group; and demonstrated skills necessary for the development of an independently funded research program. Prefer interest in fast kinetic characterization of biologically important materials. To apply, send curriculum vitae, summary of plans, and names of three professional references by 1 September 1987, to: **Professor M. A. Fox, Department of Chemistry, The University of Texas at Austin, Austin, TX 78712. An Equal Opportunity/Affirmative Action Employer.**

### U.S. ENVIRONMENTAL PROTECTION AGENCY

#### RESEARCH ECOLOGIST PLANTS GM-14, \$45,763 to \$59,488

The position is the Leader of the Plant Toxicology Team at the Corvallis Environmental Research Laboratory, Corvallis, Oregon. Individual must be highly competent and productive at the professional level, as indicated by publications in one of these areas: terrestrial ecosystem processes, soil/plant ecology, plant physiology, plant physiological ecology, or ecological modeling. Individual must be able to demonstrate the ability to conceive and conduct a research program in terrestrial plant ecology. *EPA is an Equal Opportunity Employer.* Applicants must be U.S. citizens. To request application forms call 206-442-4691 or write no later than 4 September 1987 to: **The U.S. Office of Personnel Management, Seattle Area Office, 915 Second Avenue, Seattle, WA 98174.**

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

**RESEARCH MICROBIOLOGIST SCIENTIST.** Isolate, purify, and structurally characterize cell surface glycolipid antigens of mycobacteria; synthesize and conjugate the carbohydrate haptens; analyze and synthesize other carbohydrate products using high resolution, NMR, mass spectrometry, IR, and chromatographic techniques such as GLC, HPLC, and chemical methods; apply these products to diagnosis of mycobacterial diseases such as leprosy and TB; assist in the preparation of grant proposals and reports for publication. Minimum requirements: Ph.D. in carbohydrate chemistry with a strong background in synthetic carbohydrates; 2 years of postdoctoral experience in synthesis and analysis of biologically important carbohydrates; must have training or experience in synthesis of carbohydrates and chemical analytical methods such as GLC, HPLC, NMR, and mass spectrometry. \$25,000 per year; 40 hour week. Apply by résumé to: **Colorado Division of Employment and Training, 600 Grant Street, Suite 900, Denver, CO 80203. Refer to Order No. CO 2734112.**

### SENIOR RESEARCH ASSISTANT/ASSOCIATE CELL BIOLOGY

Immediate opening at The Jackson Laboratory in Bar Harbor, Maine for an individual with experience in tissue culture/monoclonal antibody production and fluorescence microscopy of cells and tissues. The position also requires familiarity with biochemical and molecular approaches involved in the purification and characterization of cell adhesion molecules and their genes from the brain and can include authorship of publications. Applicants for this position, which will have competitive salary and benefits should send curriculum vitae and names of three references to: **Harold Wheeler, Employment Manager, The Jackson Laboratory, 600 Main Street, Bar Harbor, ME 04609. Telephone: 207-288-3371, extension 250. Affirmative Action/Equal Opportunity Employer.**

## Research Biochemist/ Pharmacologist

The Upjohn Company's expanding commitment to Neuroscience Research has created a career opportunity for a research biochemist/pharmacologist. This associate position will be responsible for screening of novel compounds by receptor binding assays and follow-up studies for investigation of receptor-mediated functions using enzymatic assays, radioimmunoassays and HPLC. Qualifications include a BS or MS degree in biochemistry or related discipline and experience in pharmacology and neurochemistry of central cholinergic system. A demonstrated ability to work independently and effectively summarize and communicate results is necessary. Additional training and experience in computer sciences would be helpful.

Kalamazoo is a medium-sized Southwestern Michigan community with access to a rich mix of cultural, educational and recreational pursuits including numerous lakes and a four-season climate. Upjohn offers the opportunity for career growth, a competitive salary commensurate with experience, a comprehensive benefits program and relocation assistance. For confidential consideration, please call from outside of Michigan 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 immediately. Please refer to position number 21721-A when calling.

The Upjohn logo consists of the word "Upjohn" in a bold, white, sans-serif font, centered within a solid black rectangular background.

**Our commitment to scientific excellence continues...**

An Equal Opportunity Employer M/F

## STUDY TOXICOLOGIST

GS-11/12/13

\$27,172-\$50,346

### RESEARCH TRIANGLE PARK, NORTH CAROLINA

The Division of Toxicology Research and Testing (DTRT) of the National Institute of Environmental Health Sciences, National Toxicology Program, Research Triangle Park, North Carolina, is seeking applicants for the position of Study Toxicologist to characterize the toxicological effects from exposure of laboratory animals to chemicals and to evaluate and publish study results. DTRT is responsible for developing, validating and evaluating methods for toxicologic characterization of chemicals and other environmental agents; short-term and long-term toxicology and carcinogenesis studies to establish toxicity of chemicals and other environmental agents; collaboration with other government agencies and dissemination of results to the scientific community and regulatory agencies. Incumbents must possess a Ph.D., D.V.M., Sc.D. degree or equivalent experience (including research) in toxicology or a directly related field of interest. U.S. citizenship required.

If interested, submit curriculum vitae and the names of three references by September 8, 1987, to:

**Johnny L. McLean**  
Personnel Office, 8NV-55  
National Institute of  
Environmental Health Sciences  
P.O. Box 12233  
Research Triangle Park, NC 27709  
(919) 541-7513

AN EQUAL OPPORTUNITY EMPLOYER

## RESEARCH SCIENTISTS

Chevron Chemical Company, Agricultural Chemicals Division, is one of the nation's leading producers of fungicides, herbicides and other agricultural and garden chemicals sold under the Ortho name. Currently, we have several career opportunities for scientists in Research at our Ortho Research Center — a first-rate facility located in the San Francisco Bay Area. All positions require a Ph.D. and working experience in the specialty applied for.

### Evaluation Specialist

#### Plant Physiology/Pathology

This individual will conduct pesticide penetration and transportation studies. Also design and direct laboratory and greenhouse research programs. (Ref. ES-090)

### Metabolism Chemist

#### Chemistry/Related Disciplines

Will work on pesticide metabolisms on animals, plants and soil. (Ref. MC-040)

### Quality Assurance Specialists

#### Chemistry/Related Sciences

Responsibilities include ensuring and certifying GLP for laboratory and field procedures in various locations. (Ref. QA-050)

### Residue Chemists

#### Analytical Chemistry/ Related Disciplines

Responsibilities include methods development and analysis of pesticide residue in crops. (Ref. RC-060)

We offer a competitive salary, an excellent benefits package, and a challenging research environment. For prompt, confidential consideration, candidates should send resumes including the position Reference above to: Chevron Chemical Company, Human Resources, P.O. Box 4010, Richmond, CA 94804-0010. An equal opportunity employer.





## POSITIONS OPEN

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

### SENIOR RESEARCH TOXICOLOGIST

SRI INTERNATIONAL has an opening in its Life Sciences Division in Menlo Park, California for a Ph.D. toxicologist to conduct GLP studies for Investigational New Drug filings of drugs developed at SRI and to market and perform contract research for industrial clients. Experience in the pharmaceutical industry is required, preferably including responsibilities as study director of preclinical studies in support of IND filings. Board certification is desired. Salary commensurate with experience.

Please respond to: **W. A. Skinner, Ph.D., Vice President, Life Sciences Division, SRI INTERNATIONAL, 333 Ravenswood Avenue, Menlo Park, CA 94025. Telephone: 415-859-5080. An Equal Opportunity Employer.**

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

### TECHNICAL RECRUITER

Triton Biosciences Inc., located in the San Francisco Bay Area, is a medical products subsidiary of Shell Oil Company emphasizing biotechnology. Our continued growth has created a career opportunity for an individual to coordinate technical recruiting. Will also maintain college recruitment, affirmative action and career development programs. Requires a B.S. or M.S. degree and 2 plus years of scientific recruiting experience, preferably in the pharmaceutical/biotech industry. We offer competitive salary/benefits and relocation assistance. Please send résumé and salary history to: **Triton Biosciences Incorporated, Box ER, 1501 Harbor Bay Parkway, Alameda, CA 94501. Equal Opportunity Employer.**



Triton Biosciences Inc.

**TECHNICIAN FOR ELECTRONIC DATA COLLECTION FACILITY:** Computer and electronics wizard, working with **Dr. Carl Pabo**, to manage sophisticated electronic detector used for x-ray crystallography. Manager must help maintain x-ray generator, electronic detector, and associated computers, and also help new users of facility. Ideal candidate will be competent to deal with hardware and software problems. B.S. or M.S. required in electrical engineering or related field; experience with maintenance of computers and electronic equipment desired. Position offers excellent benefits. Please send résumé and names of three references to: **Don Horan, Employment Specialist, The Johns Hopkins University, School of Medicine, 624 North Broadway, Baltimore, MD 21205. Equal Opportunity Employer.**

## POSITIONS OPEN

### TOXICOLOGIST

The Life Sciences Department of IIT Research Institute, a not-for-profit research organization, has a position available for a staff toxicologist.

The candidate must have a Ph.D. in toxicology, experience in an industrial or contract toxicology laboratory and, at a minimum, must be eligible for ABT Certification. Knowledge of GLPs and testing guidelines under EPA, FDA, and OECD regulations is desirable. The candidate will serve as study director, and will participate in ongoing toxicologic programs and preparation of proposals seeking external funding. The candidate will also have the opportunity to conduct joint research projects with other staff scientists. U.S. citizenship or permanent U.S. residency is required. Salary commensurate with qualifications and experience. Please submit résumé including salary history to: **Ms. L. Amft, Senior Personnel Representative, Department LFT2, IIT Research Institute, 10 West 35th Street, Chicago, IL 60616. Equal Opportunity/Affirmative Action Employer M/F/V/H.**

### POSITIONS AVAILABLE IMMEDIATELY

**TWO TECHNICIANS** in scanning and/or transmission electron microscopy. **ONE RESEARCH ASSOCIATE** for schistosomiasis project to study miracidial neurobehavior and function. Preference given to applicant with neurophysiology background. Send curriculum vitae and names of three references to: **Dr. Betty Jones, Department of Biology, Morehouse College, Atlanta, GA 30314. Telephone: 404-681-2800.**

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

### UNIVERSITY OF THE VIRGIN ISLANDS

The University of the Virgin Islands, a 4-year public institution with campuses on St. Thomas and St. Croix, U.S. Virgin Islands, serving full-time and part-time students, is seeking candidates for the following faculty position for spring semester 1988, beginning 15 January 1988. **VISITING ASSISTANT OR VISITING ASSOCIATE PROFESSOR OF BIOLOGY (RENEWABLE).** Doctorate and experience teaching physiology and marine invertebrate zoology. Field experience in tropics and research interest in region desirable.

Salary range is \$27,965 to \$39,514 plus benefits. Address letter of application, up-to-date résumé, official college transcripts and three letters of recommendation by 15 September 1987 to: **Dr. William P. MacLean, Vice President for Academic Affairs, University of the Virgin Islands, Charlotte Amalie, St. Thomas, U.S. Virgin Islands 00802.**

*An Equal Opportunity/Affirmative Action Employer and Educator.*

## FELLOWSHIPS

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

## FELLOWSHIPS

University of California, San Diego, Departments of Medicine and Biology. **FELLOWSHIPS IN BIOLOGY AND ENDOCRINOLOGY.** Applications are invited from Ph.D.'s and M.D.'s for a 2- to 3-year training program of research in the biology of calcium and skeletal metabolism beginning January and July, 1988. Applicants must be eligible for NIH training grants. Specific projects include (i) Molecular biology of skeletal-acting hormone receptors, (ii) Biosynthesis, secretion, and molecular biology of calcitonin and related neuroendocrine factors, (iii) Bone matrix proteins and minerals, (iv) Gene expression and skeletal differentiation. Send curriculum vitae and two references to: **L. J. Deftos, M.D., San Diego V.A. Medical Center (V111C), San Diego, CA 92161. An Affirmative Action/Equal Opportunity Employer.**

### TWO POSTDOCTORAL FELLOWSHIPS IN PHYSICAL OCEANOGRAPHY MEMORIAL UNIVERSITY OF NEWFOUNDLAND

Applications are invited for two postdoctoral fellowships in physical oceanography. Appointments will be made to the Newfoundland Institute for Cold Ocean Science for an initial period of 1 year, and can be extended subject to budgetary approval. The successful candidates will work with members of a group of five physical oceanographers in the physics department, and would participate in one of the following projects: experimental studies of large Newfoundland embayments; Labrador Current/Labrador Sea modeling; acoustic remote sensing studies of the bottom boundary layer.

Interested candidates should send their applications, including curriculum vitae and the names of three referees as soon as possible to: **Dr. Alex Hay, Department of Physics, Memorial University of Newfoundland, St. John's, Newfoundland, A1B 3X7. (Telemail: NICOSS; Telephone: 709-737-8888).**

## SYMPOSIUM

### SYMPOSIUM: TOXICOLOGY OF THE MALE AND FEMALE REPRODUCTIVE SYSTEMS

Ninth Conference on Toxicology  
Chemical Industry Institute of  
Toxicology (CIIT)  
Research Triangle Park,  
North Carolina

30 September 1987 to 1 October 1987

Nationally and internationally recognized speakers will discuss aspects of male and female reproductive toxicology. Presentations will begin with a review of male and female reproductive physiology, including aspects of gamete maturation, interaction and fertilization. Subsequent topics will include the use of multigeneration breeding assays in the evaluation of reproductive toxicity, the mechanisms and sites of action of reproductive toxicants, the assessment of mutagenesis and genotoxicity in germ cells, the use of specific functional and cellular endpoints in the male and female, toxic effects on gametes and fertilization, and the use of in vitro systems to assess reproductive toxicity. Presentations on the final day will emphasize the extrapolation of animal studies to humans, and include discussions of the use of biomarkers for detection of physiological and genetic damage to human sperm, reproductive epidemiology and risk assessment.

For further information, contact:

**Dr. Peter K. Working**  
Chemical Industry Institute of Toxicology  
Research Triangle Park, NC 27709  
Telephone: 919-541-2070

## MARKETPLACE

### CYCAD CONFERENCES

Previously unpublished transcripts of Four Conferences (1982-87) on the Toxicity of Cycads and Implications for Motor Neuron Diseases in Humans

Send \$30.00 check to:

Third World Medical Research Foundation  
444 Central Park West  
New York, N.Y. 10025



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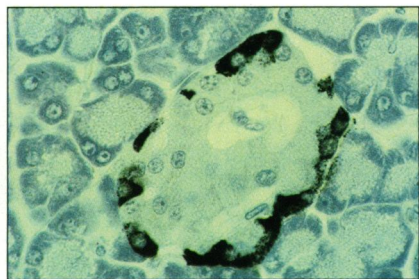
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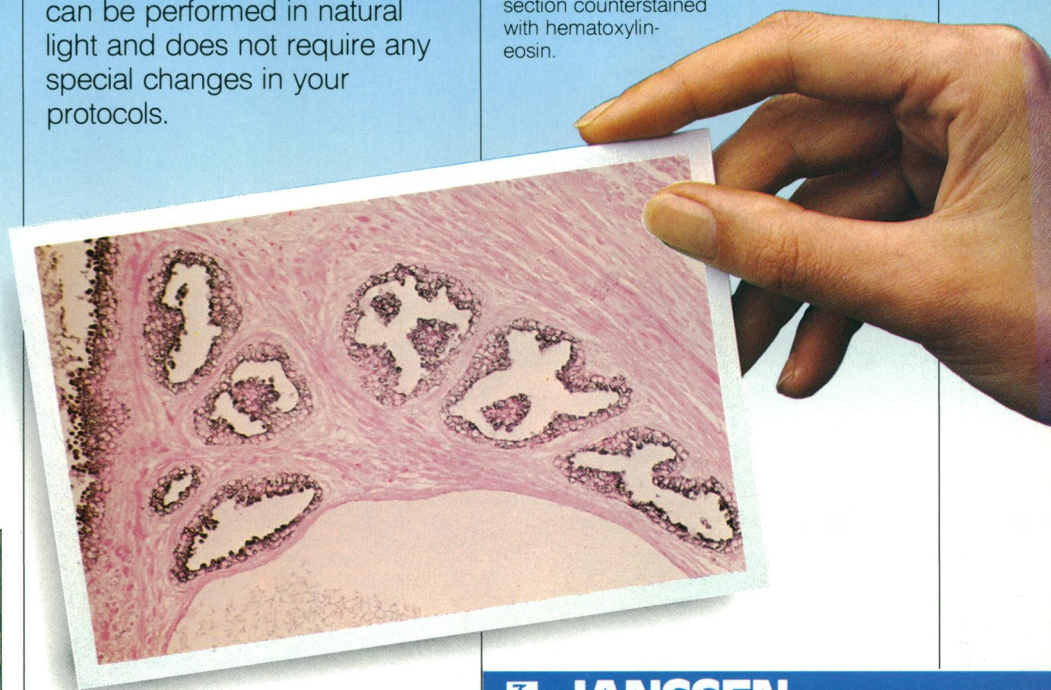
*Human prostate.* Benign hyperplasia stained with **AuroProbe LM** for prostatic acid phosphatase. Paraffin section counterstained with hematoxylin-eosin.



*Rat pancreas.* Islet of Langerhans stained with **AuroProbe LM** for glucagon. Paraffin section counterstained with hematoxylin. (Courtesy of Drs. in't Veld and C.F.M. Van Schravendijk, VUB, Belgium)

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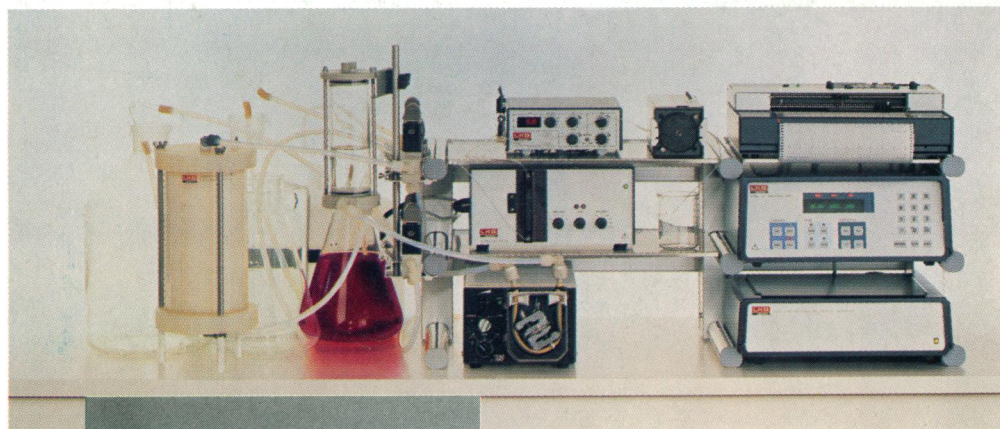
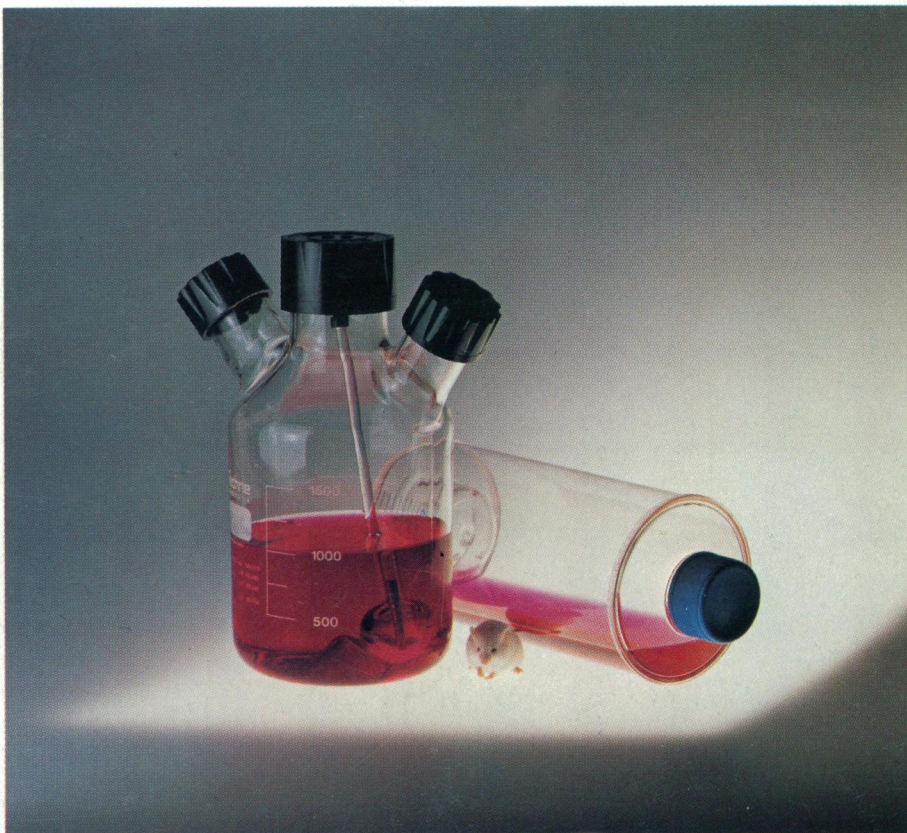
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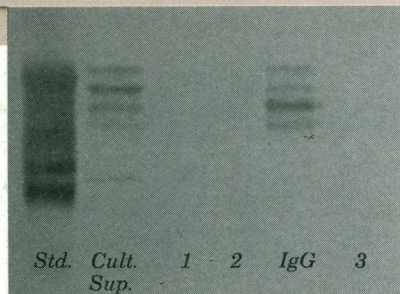
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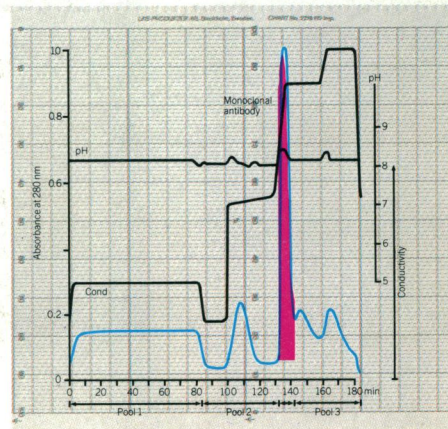
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