

Some Other Books of Interest

The Cayo Santiago Macaques. History, Behavior and Biology. RICHARD G. RAWLINS and MATT J. KESSLER, Eds. State University of New York Press, Albany, 1986. xiv, 306 pp., illus., + plates. \$39.50; paper, \$14.95. SUNY Series in Primatology. Based on a symposium, East Lansing, MI, 1983.

Cayo Santiago, a 15.2-hectare island off the coast of Puerto Rico, is the site of a colony of free-ranging rhesus macaques established in the 1930s at the instigation of the late C. R. Carpenter, who, as Peter Marler writes in the foreword to the present volume, "realized the necessity for placing studies of primate behavior in an ethological perspective much broader than was typical of the [Robert] Yerkes era" and "was able . . . to convince the younger generation that research on the natural behavior of primates was a practical, realistic undertaking capable of yielding rigorous and reproducible data, and not just anecdotes." The year 1983 marked the 45th anniversary of the founding of the colony, and this book derives from a symposium held to mark the occasion. In their introduction the editors note that some of the contributions are "reviews, intended to give . . . a synopsis of complex longitudinal studies" whereas others "document the results of opportunistic studies . . . or surveys." The editors contribute the two opening chapters, on the history of the colony and on the demography of the macaques from 1976 to 1983. The 12 ensuing chapters, by a total of 21 authors, cover subjects ranging from social ramifications of maternal lineages, social development in a blind infant, vocal communication, male emigration, spatial relations, and reproductive affiliations to hair mineral content as a nutritional indicator, aspects of the musculo-skeletal system, the golden-coat phenotype, and blood-group genetics. The volume concludes with a chronologically arranged bibliography of publications and motion pictures stemming from Cayo Santiago, a poem by Kessler, and an index.—K.L.

Psychophysiology. Systems, Processes, and Applications. MICHAEL G. H. COLES, EMANUEL DONCHIN, and STEPHEN W. PORGES, Eds. Guilford, New York, 1986. xvi, 761 pp., illus. \$100.

Starting from the assumptions that "psychophysiological measures are best interpreted within the framework of a detailed knowledge of the systems they manifest" and that "the functional significance of the activities we monitor can only be understood within the framework of a detailed analysis of the physiological context within which the recordings are made," Coles,

Donchin, and Porges have enlisted the aid of some 40 contributors to provide this "tutorial review" of the field of psychophysiology. Part 1, Physiological Systems and Their Assessment, consists of three sections, on the central nervous system (two chapters, including one on the "new and exciting" technique of magnetoencephalography), the peripheral nervous system (seven chapters, ranging from the pupillary system to the reproductive and adrenal systems), and signal acquisition and analysis (one chapter). Part 2, Processes, contains 14 chapters grouped into sections on attention, information processing, and learning; stress, emotion, sleep, and sexuality; and individual differences and social processes. Part 3, Applications, consists of two chapters, on lie detection and on event-related brain potentials as applied to engineering psychology. The text is printed, encyclopedia-fashion, in two columns with a page size of 8½ by 11 inches. Each chapter has its own reference list, and author and subject indexes totaling 42 (triple-columned) pages are included.

—K.L.

Books Received

Computer Organization. Michael Andrews. Computer Science Press, Rockville, MD, 1986. xviii, 556 pp., illus. \$37.95. Principles of Computer Science Series.

Computer Software Applications in Chemistry. Peter C. Jurs. Wiley-Interscience, New York, 1986. xvi, 253 pp., illus. \$34.95.

Conformal Description of Spinning Particles. Ivan T. Todorov. Springer-Verlag, New York, 1986. viii, 74 pp., Paper, \$19.50. Trieste Notes in Physics.

Developmental Biology. A Comprehensive Synthesis. Vol. 3, The Cell Surface in Development and Cancer. Malcolm S. Steinberg, Ed. Plenum, New York, 1986. xvi, 364 pp., illus. \$52.50. Based on a symposium.

Le Développement du Langage chez l'Enfant Trisomique 21. Manuel Pratique d'Aide et d'Intervention. Jean A. Rondal. Mardaga, Brussels, 1986. 188 pp., illus. Paper, F140. Psychologie et Sciences Humaines.

Diet and Prevention of Coronary Heart Disease and Cancer. Bo Hallgren *et al.*, Eds. Raven, New York, 1986. xviii, 213 pp., illus. \$61. From a symposium, Stockholm, Oct. 1984.

Dirt. John Anthony Adams. Illustrations by Jean Adams. Texas A&M University Press, College Station, 1986. xiv, 160 pp., \$19.94; paper, \$11.95.

Discourse and Behavior. Jack Bilmes. Plenum, New York, 1986. x, 225 pp., illus. \$29.50.

Doctors, Patients, and Placebos. Howard M. Spiro. Yale University Press, New Haven, CT, 1986. x, 261 pp. \$27.50.

Empty Promise. The Growing Case against Star Wars. The Union of Concerned Scientists. John Tirman, Ed. Beacon, Boston, 1986. xiv, 238 pp., illus. \$19.95; paper, \$7.95.

Energy Terminology. A Multi-lingual Glossary. The World Energy Conference. 2nd ed. Pergamon, New York, 1986. xxiv, 539 pp. \$112.50; paper, \$45. Text in English, French, German, and Spanish.

Energy 2000. An Overview of the World's Energy Resources in the Decades to Come. Heinz Knoepfel. Gordon and Breach, New York, 1986. viii, 181 pp., illus. \$42.

Energy-Transducing ATPases. Structure and Kinetics. Yuji Tonomura. Cambridge University Press, New York, 1986. viii, 296 pp., illus. \$59.50.

Engines of Change. The American Industrial Revolution, 1790–1860. Brooke Hindle and Steven Lubar. Smithsonian Institution Press, Washington, DC, 1986. 309 pp., illus. \$29.95; paper, \$14.95.

Epidemiology of Occupational Health. M. Kar-

vonon and M. I. Mikheev, Eds. World Health Organization Regional Office for Europe, Copenhagen, 1986 (U.S. distributor, WHO Publications Center, Albany, NY). x, 392 pp., illus. Paper, \$28.80. WHO Regional Publications, European Series, no. 20.

Erosion and Growth of Solids Stimulated by Atom and Ion Beams. G. Kiriakidis, G. Carter, and J. L. Whitton, Eds. Nijhoff, Dordrecht, 1986 (U.S. distributor, Kluwer Norwell, MA). xii, 465 pp., illus. \$107.50. NATO Advanced Science Institutes Series E, no. 112. From an institute, Heraklion, Crete, Greece, Sept. 1985.

Essays on the History of Organic Chemistry in the United States, 1875–1955. Dean Stanley Tarbell and Ann Tracy Tarbell. Folio, Nashville, TN, 1986. x, 434 pp., illus. \$19.95.

Essentials of Crystallography. Duncan McKie and Christine McKie. Blackwell Scientific, Palo Alto, CA, 1986. viii, 437 pp., illus. \$45. Crystalline Solids, vol. 1.

Ethics and Social Responsibility in Science Education. M. J. Frazer and A. Kornhauser, Eds. Published for the ICSU Press by Pergamon, New York, 1986. x, 264 pp., illus. \$25; paper, \$12.50. Science and Technology Education and Future Human Needs, vol. 2. From a conference, Bangalore, India, 1985.

Forbidden Partners. The Incest Taboo in Modern Culture. James B. Twitchell. Columbia University Press, New York, 1987. xvi, 311 pp., illus. \$24.95.

Fraser Darling's Islands. J. Morton Boyd. Edinburgh University Press, Edinburgh, 1986 (U.S. distributor, Columbia University Press, New York). xiv, 252 pp., illus. \$25. Edinburgh Island Biology Series.

The Friction and Lubrication of Solids. F. P. Bowden and D. Tabor. Clarendon (Oxford University Press), New York, 1986. xliii, 374 pp., illus. Paper, \$32.50. International Series of Monographs on Physics. Reprint, 1958 ed.

Fundamentals of Electronic Imaging Systems. Some Aspects of Image Processing. William F. Schreiber. Springer-Verlag, New York, 1986. xii, 187 pp., illus. \$55. Springer Series in Information Sciences, 15.

Fuzzy Logic in Knowledge Engineering. Henri Prade and Constantin V. Negoita, Eds. Verlag TÜV Rheinland, Cologne, F.R.G., 1986. x, 358 pp., illus. Paper, DM 98. Interdisciplinary Systems Research, 86.

Geochemical Processes at Mineral Surfaces. James A. Davis and Kim F. Hayes, Eds. American Chemical Society, Washington, DC, 1986. xii, 683 pp., illus. \$99.95. ACS Symposium Series, 323. Based on a symposium, Chicago, Sept. 1985.

Geometric Perturbation Theory in Physics. Stephen M. Omohundro. World Scientific, Philadelphia, 1986. xxvi, 560 pp., illus. \$53.

The Heart and Cardiovascular System. Scientific Foundations. Harry A. Fozzard *et al.*, Eds. Raven, New York, 1986. 2 vols. xlii, 1694 pp., illus., + index. \$225.

Heaven Born Merida and Its Destiny. The Book of Chilam Balam of Chumayel. Translated and Annotated by Munro S. Edmonson. University of Texas Press, Austin, 1986. x, 309 pp., illus. \$37.50. Texas Pan American Series. Text in English and Mayan.

Honeybees and Wax. An Experimental Natural History. H. R. Hepburn. Springer-Verlag, New York, 1986. xii, 205 pp., illus. \$54.50.

Human Apolipoprotein Mutants. Impact on Atherosclerosis and Longevity. C. R. Sirtori, A. V. Nichols, and G. Franceschini, Eds. Plenum, New York, 1986. xii, 233 pp., illus. \$45. NATO Advanced Science Institutes Series A, vol. 112. From a workshop, Limone sul Garda, Italy, March 1985.

Human Ecology. A Theoretical Essay. Amos H. Hawley. University of Chicago Press, Chicago, 1986. viii, 168 pp., illus. \$26; paper, \$9.95.

The Human Edge. Information Technology and Helping People. Gunther R. Geiss and Narayan Viswanathan, Eds. Haworth, New York, 1986. xxxiv, 428 pp., illus. \$29.95; paper, \$19.95. Based on a conference, Queenstown, MD, June 1984.

Human Genetics. Problems and Approaches. F. Vogel and A. G. Motulsky. 2nd ed. Springer-Verlag, New York, 1986. xxiv, 807 pp., illus. \$72. A revision of an "advanced" textbook reviewed in *Science* 209, 798 [1980], including added material from molecular genetics and on clinical aspects.

Immunology in Plant Science. Trevor L. Wang, Ed. Cambridge University Press, New York, 1986. xiv, 228 pp., illus. \$49.50; paper, \$19.95. Society for Experimental Biology Seminar Series, 29. From a meeting, Leeds, U.K., Jan. 1985.

In the Company of Educated Women. A History of Women and Higher Education in America. Barbara Miller Solomon. Yale University Press, New Haven, CT, 1986. xxii, 298 pp., + plates. \$30; paper, \$10.95.

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Products & Materials

Bibliographic Software

REFLIST is a shareware computer program for compiling, formatting, and numbering citations and references. References may be entered from the keyboard or downloaded from the BRS Colleague online system. Menus and prompts guide the user in entering references for journal articles, books, book chapters, and edited books. More than 1000 references may be filed on a double-sided floppy disk, and reference lists may contain as many as 500 references. Each reference may have as many as 15 authors, and paper titles may have as many as 500 characters. References may be reformatted to fit style requirements. REFLIST operates on IBM PC and compatible computers. E. J. Shillitoe. Circle 543.

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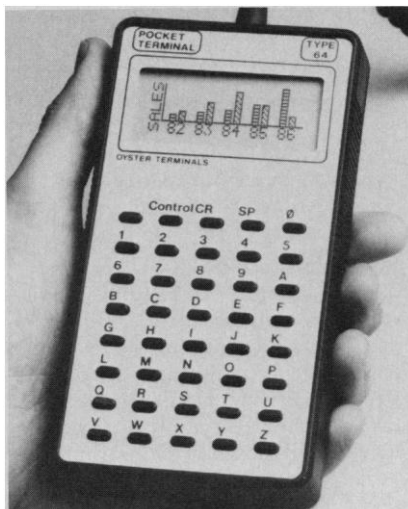
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Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics,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

Hand-Held Terminal

The Type 64 is a computer terminal small enough to fit in one hand. A dot-matrix, liquid-crystal display 100 by 32 pixels shows both graphics and text (four lines of 16 characters each). The keyboard has 40 keys, most of which perform more than one func-



tion, and several shift levels. The viewing angle may be electronically adjusted, and data transmission rates may be as high as 9600 baud. Baud rate, data word format, line- or block-send mode, memory partition, display flash, and key repeat may all be set from the keyboard. G.R. Electronics. Circle 542.

Modules for Cross-Flow Separations

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Image Analysis Computer System

μ Magiscan is a versatile but compact hardware-software system for image analysis. The system comprises an altered IBM PC with color graphics adaptor board, a 10-megabyte Winchester disk, a mouse, a vidicon camera, two monitors (one for software, the other for image display), a dot-matrix printer, and software for image pro-

cessing and statistical analysis. The menu-driven software allows the user to establish working conditions, prepare images for analysis through such operations as edge sharpening, and detect, select, and measure objects. The measurements may be subjected to standard statistical analyses, or the user may define new arithmetical expressions. Histograms may be produced. Joyce-Loebl. Circle 538.

Infrared Spectroscopy Software

SpectIR is a software package for reducing spectral data with advanced numerical methods and artificial intelligence techniques. High-level algorithms are included for spectral quantitation, deconvolution of complex spectra, and automatic, intelligent baseline conditioning. The software includes an interface to DEC LIMS. SpectIR operates on VAX, Sun, and MASSCOMP computers. New Methods Research and Bio-Rad, Digilab Division. Circle 549.

Literature

A Guide to Colloidal Gold Labelled Reagents is a poster providing references for and describing the advantages of labeling cells with gold. E-Y Laboratories. Circle 553.

Custom Synthetic Oligonucleotides and Peptides is a catalog describing services for peptide synthesis, hydrophathy analysis, amino acid analysis, sequencing, amino-terminus determination, carrier conjugation, antiserum production, and consultation services. OCS Laboratories. Circle 554.

The Protein A Sepharose CL-4B Reference List is a bibliography to uses of an antibody purification gel. Pharmacia, Laboratory Separations Division. Circle 555.

Transfer and Immobilization of Nucleic Acids to S&S Solid Supports is a spiral-bound chart of techniques for Southern and Northern transfers, dot blots, slot blots, and colony-plaque lifts. Schleicher & Schuell. Circle 650.

Stereoscan 120 is a bulletin about a scanning electron microscope with high-resolution and video-processing capabilities. Cambridge Instruments. Circle 557.

Reagents and Chemicals for Biotechnology features electrophoresis chemicals, reagents for ultracentrifugation and nucleic acid isolation, organic and inorganic buffers, amino acids, and nucleotides. Fisher Scientific. Circle 558.

The Scientific Source is a brochure detailing a line of microscopes and microscope accessories. Nikon. Circle 559.

(Continued from page 101)

The Indian Ocean. Exploitable Mineral and Petroleum Resources. G. S. Roonwal. Springer-Verlag, New York, 1986. xvi, 198 pp., illus. \$61.

Infant Depression. Paradigms and Paradoxes. Paul V. Trad. Springer-Verlag, New York, 1986. xii, 340 pp. \$45.

Inflationary Cosmology. L. F. Abbott and So-Young Pi. World Scientific, Philadelphia, 1986. xii, 697 pp., illus. \$90; paper, \$37.

Insect-Plant Interactions. James R. Miller and Thomas A. Miller, Eds. Springer-Verlag, New York, 1986. xii, 342 pp., illus. \$67. Springer Series in Experimental Entomology.

An Insider's Guide for Medical Authors and Editors. Peter Morgan. ISI Press, Philadelphia, 1986. viii, 111 pp. \$23.95; paper, \$14.95. Professional Editing and Publishing Series.

Instabilities in Space and Laboratory Plasmas. D. B. Melrose. Cambridge University Press, New York, 1986. xii, 280 pp., illus. \$49.50.

Intensive Grazing Management. Forage, Animals, Men, Profits. Burt Smith, PingSun Leung, and George Love. Graziers Hui, Kamuela, HI, 1986 (distributor, Kingsberry Communications, San Antonio, TX). xxvi, 350 pp., illus. \$29.95.

Mechanics of Materials. An Introduction to the Mechanics of Elastic and Plastic Deformation of Solids and Structural Components. E. J. Hearn. 2nd ed. Pergamon, New York, 1985. 2 Vols. xxvii, 905 pp., illus. Paper. Vol. 1, \$24. Vol. 2, \$19.75.

Mechanisms in B-Cell Neoplasia. F. Melchers and M. Potter, Eds. Springer-Verlag, New York, 1986. xii, 374 pp., illus. \$70. Current Topics in Microbiology and Immunology, 132. From a workshop, Bethesda, MD, March 1986.

Mechanisms in Tobacco Carcinogenesis. Dietrich Hoffmann and Curtis C. Harris, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1986. xvi, 428 pp., illus. \$80. Banbury Report 23. From a conference, Cold Spring Harbor, NY, Sept. 1985.

Mechanisms of Secondary Brain Damage. A. Baethmann, K. G. Go, and A. Unterberg, Eds. Plenum, New York, 1986. x, 406 pp., illus. \$69.50. NATO Advanced Science Institutes Series A, vol. 115. From a workshop, Mauls/Sterzing, Italy, Feb. 1984.

Medical Thinking. The Psychology of Medical Judgment and Decision Making. Steven Schwartz and Timothy Griffin. Springer-Verlag, New York, 1986. x, 277 pp., illus. \$39. Contributions to Psychology and Medicine.

Mental Health in the Elderly. A Review of the Present State of Research. H. Häfner, G. Moschel, and N. Sartorius, Eds. Springer-Verlag, New York, 1986. xii, 273 pp., illus. \$30. Based on a symposium, Mannheim, F.R.G., Sept. 1984.

Nuclear War. The Moral Dimension. James W. Child. Social Philosophy and Policy Center, Bowling Green, OH, and Transaction Books, New Brunswick, NJ, 1986. x, 197 pp. \$16.95; paper, \$8.95.

Nutritional and Toxicological Significance of Enzyme Inhibitors in Foods. Mendel Friedman, Ed. Plenum, New York, 1986. xii, 572 pp., illus. \$85. Advances in Experimental Medicine and Biology, vol. 199. From a symposium, Anaheim, CA, April 1985.

An Odd Bestiary. Or, a Compendium of Instructive and Entertaining Descriptions of Animals, Culled from Five Centuries of Travelers' Accounts, Natural Histories, Zoologies, & c. by Authors Famous and Obscure, Arranged as an Abecedar. Designed and illustrated by Alan James Robinson. Text compiled and annotated by Laurie Block. University of Illinois Press, Urbana, 1986. Unpagged. \$29.95. A Cheloniidae Press Book. Reprint, 1982 edition.

Optical Systems for Soft X Rays. Alan G. Michette. Plenum, New York, 1986. x, 334 pp., illus. \$55.

Our Radiant World. David W. Lillie. Iowa State University Press, Ames, 1986. xii, 226 pp. \$19.95.

Oxygen and Sulfur Radicals in Chemistry and Medicine. A. Breccia, M. A. J. Rodgers, and G. Semerano. Edizioni Scientifiche "Lo Scarabeo," Bologna, Italy, 1986. 337 pp., illus. Paper, Lit 60,000. From a workshop, Fermo, Italy, Aug. 1984.

Oxygen Transport to Tissue VIII. Ian S. Longmuir, Ed. Plenum, New York, 1986. xvi, 652 pp., illus. \$95. Advances in Experimental Medicine and Biology, vol. 200. From a symposium, Raleigh, NC, July 1985.

Palaeoecology and Biostratigraphy of Graptolites. C. P. Hughes, R. B. Rickards, and A. J. Chapman, Eds. Blackwell Scientific, Palo Alto, CA, 1986. x, 277 pp., illus. \$75. Geological Society Special Publication, no. 20. From a conference, Cambridge, U.K., Sept. 1981.

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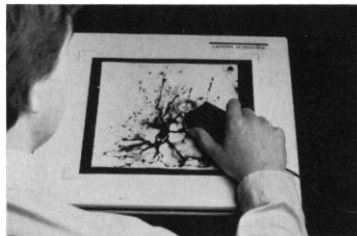


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The Papovaviridae. Vol. 1, The Polyomaviruses, Norman P. Salzman, Ed. Plenum, New York, 1986. xiv, 459 pp., illus. \$65. The Viruses.

Partners against Hunger. The Consultative Group on International Agricultural Research. Warren C. Baum with the collaboration of Michael L. Lejeune. Published for the CGIAR by the World Bank, Washington, DC, 1986. xvi, 337 pp., illus. \$29.95; paper, \$10.95.

Peptides as Immunogens. H. Koprowski and F. Melchers, Eds. Springer-Verlag, New York, 1986. x, 85 pp., illus. \$36.50. Current Topics in Microbiology and Immunology, 130.

Pests, Diseases and Ailments of Australian Plants. With Suggestions for Their Control. David L. Jones and W. Rodger Elliot. Line drawings by Trevor L. Blake and David L. Jones. Lothian, Melbourne, Australia, 1986 (U.S. distributor, ISBS, Portland, OR). xii, 333 pp., illus., + plates. Paper, \$25.

The Physical Sciences Since Antiquity. Rom Harré, Ed. St. Martin's, New York, 1986. viii, 140 pp., illus. \$29.95.

The Pittdown Inquest. Charles Blinderman. Prometheus, Buffalo, NY, 1986. x, 261 pp., illus. \$22.95.

Schizoaffective Psychoses. A. Marmaros and M. T. Tsuang, Eds. Springer-Verlag, New York, 1986. x, 325 pp., illus. \$88. Based on a conference.

The Sea Turtle. So Excellent a Fish. Archie Carr. University of Texas Press, Austin, 1986. xii, 280 pp., illus., + plates. Paper, \$8.95. Reprint of *So Excellent a Fish*, 1984.

The Search for Extraterrestrial Intelligence. Listening for Life in the Cosmos. Thomas R. McDonough. Wiley, New York, 1986. xii, 244 pp., illus., + plates. \$19.95. Wiley Science Editions.

Seismic Traveltime Inversion. S. V. Goldin. P. Hubral, Ed. Society of Exploration Geophysicists, Tulsa, OK, 1986. xvi, 363 pp., illus. \$110. Investigations in Geophysics, no. 1. Translated from the Russian edition (Moscow, 1979) by A. J. Hermont.

Selforganization by Nonlinear Irreversible Processes. W. Ebeling and H. Ulbricht, Eds. Springer-Verlag, New York, 1986. x, 221 pp., illus. \$63.30. Springer Series in Synergetics, 33. From a conference, Kühlungsborn, G.D.R., March 1985.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

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Microbiologist, Ph.D. (U.K.). Ten years of teaching and research experience in a University seeks job in University/industry. Extremely experienced in anaerobic techniques, industrial application of anaerobic and aerobic microorganisms, 2-D protein gels, bacterial systematics, well versed with recombinant DNA techniques, supervisory experience, highly referred, eighteen publications, same number to come soon, also consider postdoctoral appointments. Available immediately. Box 44, SCIENCE. X

Renal physiologist/toxicologist. Ph.D. 1977. Eighteen years of experience in research in membrane physiology and cell metabolism. Three years of experience in teaching biological sciences. Broad biology background. Seeks challenging research/teaching/consulting position in university/hospital/industry. Box 45, SCIENCE. 4/3, 10, 17

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Applicants should send curriculum vitae and the names of at least three references to: **Dr. Roy G. Smith, Department of Urology, Room 440E, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030.** *An Equal Opportunity Employer.*

ASSISTANT PROFESSOR—Microbial biotechnology, applied microbiology, or microbial physiology. The Department of Microbiology invites applications for a tenure-track position commencing 1 July 1987. Qualifications include a Ph.D. and two or more years of postdoctoral training. The individual will develop a strong, funded research program and will participate in teaching undergraduate courses. Applicants will arrange to have curriculum vitae, three letters of reference, recent reprints, and a brief description of prospective research forwarded by 30 April 1987 to: **Dr. P. Loewen, Head, Department of Microbiology, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2.** *The University encourages both women and men to apply. In accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents.*

The Department of Veterinary Pathobiology, College of Veterinary Medicine, University of Minnesota, invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level. Qualifications include a D.V.M. (or equivalent veterinary degree) and a Ph.D. (or equivalent research doctorate); both degrees must be conferred by the date of appointment. Postdoctoral research experience and ACVP Board certification or eligibility are desired. The responsibilities of the position are to develop a funded research program in an area of contemporary pathology, and to participate in the instruction of veterinary and graduate students. Advising of graduate students is expected. Opportunities exist for interaction and collaboration with faculty in the basic and clinical disciplines in the Colleges of Veterinary Medicine, Agriculture, Biological Sciences, and Health Sciences. Applicants should submit a current curriculum vitae, description of academic and research interests, and the names and addresses of three references by 30 June 1987 to: **Dr. Mary M. Walser, Chair, Pathology Search Committee, Department of Veterinary Pathobiology (G), 1971 Commonwealth 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.*

POSITIONS OPEN

The University of Minnesota Department of Radiology has a full-time probationary tenure-track position in biochemistry available at the rank of **ASSISTANT PROFESSOR** beginning 1 June 1987. Minimum requirements include a Ph.D. in chemistry or physics with a minimum of 1 year postdoctoral experience in spatially localized, multinuclear MRI spectroscopy and applications to intact animals. Responsibilities will include conducting research in the above-mentioned area as well as teaching graduate and undergraduate medical students in MRI. A secondary without salary, temporary appointment in the Department of Biochemistry will be provided. Salary is negotiable and competitive and is dependent on past scholarly productivity and postdoctoral experience. Applicants should submit a letter detailing their scientific background, curriculum vitae and three letters of recommendation by 10 May 1987 to: **Dr. William M. Thompson, Chairman, Department of Radiology, Box 292 UMHC, University of Minnesota Medical School, Minneapolis, MN 55455.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

ASSISTANT PROFESSOR—APPLIED IMMUNOLOGY

An opening is available immediately for a tenure-track appointment at the assistant professor level in the newly formed graduate program in applied immunology at the **University of Southern Maine (USM).** The candidate should have a relevant Ph.D., at least 2 years of postdoctoral experience, and a strong interest in teaching at the graduate level. Participation in research is required and can be fulfilled in association with ongoing projects in reproductive immunology, autoimmunity, and automated cytology, or through the development of a vigorous independent program. The Applied Immunology Program brings together the educational expertise of the University of Southern Maine with the clinical and research facilities of the Maine Medical Center and the private Foundation for Blood Research. Collateral appointments with these affiliated organizations may be available. Send curriculum vitae, a description of teaching and research interests, and names, addresses, and telephone numbers of two references by 24 April 1987 to:

**Professor Neal S. Rote, Director
Applied Immunology Program
106 Science
University of Southern Maine
96 Falmouth Street
Portland, ME 04103**

USM is an Equal Employment Opportunity/Affirmative Action Employer.

ASTRONOMER

The American Museum—Hayden Planetarium is seeking a highly qualified professional with in-depth knowledge of astronomy and space science for a tenure-track position. Responsibilities will include program development; presentation of live shows; teaching of astronomical and space science courses; fostering contacts between the Planetarium and the astronomical academic and research communities; serving as a spokesperson on astronomical matters to the media, and participation in planetarium administration.

Qualifications include a Ph.D. in astronomy or related field and experience in some combination of astronomy and space science along with one or more of the following: science education; planetarium operations/productions/exhibitions or program writing. Demonstrated ability to communicate space science subjects to a broad age spectrum preferred.

Starting date for the position is spring 1987 or soon thereafter. Salary and rank will be determined by the candidate's qualifications. Salary requirement should be submitted along with curriculum vitae, samples of publications/writing/scripts or program tapes and the contact information for three individuals familiar with your work. Please submit to:

**Mr. Lee Vilensky
Personnel Department (S)
American Museum of Natural History
Central Park West at 79th Street
New York, NY 10024**
An Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR—LEVEL IN PHYSIOLOGY. New York College of Osteopathic Medicine invites applications from qualified Ph.D.s for a full-time assistant professor position in the Department of Physiology (yearly renewable contract/multiple year contracts available, salary commensurate with experience). The position chiefly involves research (80% time allocation) with minimal teaching duties (no more than 20%). The research interest of applicants should be in the area of cardiac cellular electrophysiology. Modern laboratory space and start-up funds will be provided to the successful candidate. Applications, including curriculum vitae, statement of research plan and track record, and the names and addresses of three references should be mailed to: **Dr. Kenneth L. Rossner, Acting Chairman, Department of Physiology, New York College of Osteopathic Medicine, Old Westbury, NY 11568.**

Morris College, a private 4-year liberal arts college in Sumter, South Carolina, is seeking applicants to fill the following positions.

ASSISTANT/ASSOCIATE PROFESSOR OF BIOLOGY, to teach introductory and advanced biology courses including botany, genetics, and ecology. Ph.D. in chemistry preferred, master's degree acceptable.

ASSISTANT/ASSOCIATE PROFESSOR OF CHEMISTRY, to teach general chemistry and physical sciences. Ph.D. in chemistry preferred, master's degree acceptable.

ASSISTANT/ASSOCIATE PROFESSOR OF MATHEMATICS, to teach introductory and advanced mathematics courses, methods in the teaching of mathematics. Master's degree in mathematics required.

Submit letter of application, three letters of recommendation and official academic transcripts to: **Personnel Officer, Morris College, Sumter, SC 29150.** Deadline for accepting application is 17 April 1987. *An Equal Opportunity/Affirmative Action Employer.*

ASSOCIATE DEAN, College of Natural Sciences and Mathematics. Applications and nominations are invited for the position of Associate Dean of the College of Natural Sciences and Mathematics, Indiana University of Pennsylvania (IUP). The College of Natural Sciences and Mathematics has approximately 170 faculty members and is organized into the departments of biology, chemistry, computer science, geoscience, mathematics, physics, and psychology. The Associate Dean is responsible to the Dean and administers the College's academic policies, assists in curriculum development, and provides leadership and student advisement. **Minimum Qualifications:** Earned doctorate in one of the disciplines offered by the College; 3 to 5 years of experience as a faculty member; ability to work with students, faculty, administrators, and staff. **Starting date:** 1 July 1987. **Application deadline:** 20 April 1987. Salary is competitive; excellent fringe benefits. Nominations, applications with résumé and letter, with a list of three references with addresses and telephone numbers, should be sent to: **Search Committee, Associate Dean, College of Natural Sciences and Mathematics, 305 Weyandt Hall, IUP, Indiana, PA 15705. Telephone: 412-357-2609.** *IUP is an Affirmative Action/Equal Opportunity Employer.*

CELL BIOLOGY AND PHYSIOLOGY WASHINGTON UNIVERSITY SCHOOL OF MEDICINE ST. LOUIS, MISSOURI

The Department of Cell Biology and Physiology, Washington University School of Medicine, St. Louis, Missouri, is expanding its commitment to research in the following areas: (i) membrane protein function and biogenesis; (ii) assembly, function, and movement of intracellular organelles; (iii) cell motility and contractility; and (iv) cell-cell and cell-matrix interactions. Individuals who employ novel biophysical and recombinant DNA methodologies are especially encouraged to apply. Tenure-track positions are available for successful candidates who will be expected to develop an independent research program and to participate in the training of medical and graduate students. Please submit curriculum vitae and the names of three references to: **Dr. Philip Stahl, Department of Cell Biology and Physiology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

BIOCHEMIST/PHYSICAL CHEMIST/ INORGANIC CHEMIST

Research position is immediately available to assist in studies of the factors which contribute to mineral deposition and hard tissue formation. Attempts will be made to use the principles and matrix molecules which govern biological mineral deposition in bones, teeth, and shells to fabricate new complex composite ceramic materials at relatively low temperatures. Individuals with Ph.D.'s in areas of protein chemistry, biological mineralization, inorganic chemistry, ceramic science, or polymer science should forward their curriculum vitae, a description of the current and future research experience and interests, and have three letters of recommendation forwarded to: **Arnold I. Caplan, Biology Department, Case Western Reserve University, Cleveland, OH 44106.**

An Equal Opportunity Employer.

BIOLOGY FACULTY

Applications are invited from exceptional candidates whose research interests lie in the cellular, developmental and/or molecular biology of the immune system. Interested persons should send curriculum vitae, statement of research interests, and the names and addresses of three referees to:

Chairman, MCD Biology Search Committee
Division of Biology, 156-29
California Institute of Technology
Pasadena, CA 91125

Equal Opportunity/Affirmative Action Employer.

BIOLOGY—TENURE TRACK. Ph.D. is required. Experience in a liberal arts college preferred. Candidates must have an interest in the design and supervision of general biology programs and a background in one of the following areas of vertebrate biology: anatomy and physiology, developmental biology, behavior, and systematics. Interests in the instructional use of microcomputers and in undergraduate research are desirable.

Qualified applicants will also be considered for an appointment as Director of the Division of Mathematics and Sciences. Salary and rank dependent upon qualifications.

To apply, send letter of application, curriculum vitae, copies of transcripts, and names of three professional references by 30 April 1987 to: **Vice President for Academic Services, Catawba College, Salisbury, NC 28144.** *Equal Opportunity Employer.*

BIOLOGY, TENURE-TRACK ASSISTANT PROFESSOR ROCKY MOUNTAIN COLLEGE

The applicant should be prepared to teach biochemistry (junior level); plant biology (sophomore level); general biology (freshman level); and microbiology (sophomore-junior level). Teaching competency in evolution and ecology course, and interest in teaching in freshman integrated liberal studies program, are desirable. RMC is a small, undergraduate liberal arts college with an emphasis on teaching excellence. Teaching load 12 hours per semester; starting date 21 August 1987. Ph.D. required. Send application letter, curriculum vitae, and three letters of reference to: **Richard D. Fulton, Academic Vice President, Rocky Mountain College, 1511 Poly Drive, Billings, MT 59102.** Application deadline 20 April 1987. *RMC is an Equal Opportunity/Affirmative Action Employer.*

CHANCELLOR: The Chancellor is the principal administrative officer of the College and is responsible to the President and Board of Visitors of the University of Virginia. Candidates who will be creative academic and administrative leaders and have an earned Ph.D. in the arts and sciences, credentials in research or creative activity, undergraduate teaching and administrative experience, and commitment to undergraduate liberal arts education. Applications should include a résumé, a brief statement of general philosophy of education specifically related to a small public liberal arts college, and names and addresses of three references. Highly competitive salary and benefits. Application deadline is 1 June 1987. Address applications and requests for information to: **Chairman, Chancellor Search Committee, Clinch Valley College, College Avenue, Wise, Virginia 24293.** *The College is an Equal Employment Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CARDIOVASCULAR ELECTROPHYSIOLOGIST AND MOLECULAR BIOLOGIST

The Department of Physiology, University of Manitoba, invites applications for two positions from investigators in the field of experimental cardiology to be appointed at the level of **ASSISTANT PROFESSOR** (contingent appointment) in the Division of Cardiovascular Sciences. The applicant must have a M.D. or Ph.D. degree; and have 2 years of experience. Applicants with backgrounds in electrophysiology and molecular biology are encouraged to apply. The successful candidates will be expected to compete for local and national scholarship awards (for example, MRC) and develop their independent research programs as well as collaborate with other members of the department. Teaching in a graduate program will be a requirement. Please submit a copy of your curriculum vitae including an outline of your research interests and arrange for three letters of reference to be sent to: **Dr. Henry G. Friesen, Professor and Head, Department of Physiology, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, R3E 0W3 Canada.** Deadline for application is 30 June 1987. *Both men and women are encouraged to apply. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.*

UNIVERSITY OF CALIFORNIA—RIVERSIDE TEMPORARY FACULTY POSITION

CELL BIOLOGIST/MICROBIOLOGIST: Applications are invited for a two-quarter (fall/winter) temporary appointment to teach an upper division course in microbiology beginning in September 1987 and/or cell biology beginning in January 1988. Salary is approximately \$20,000. Collaborative research opportunities exist. Applicant should have a Ph.D. and teaching experience. Send curriculum vitae and three letters of recommendation to: **Dr. Prudence Talbot, Chair of Search Committee, Department of Biology, UC-Riverside, Riverside, CA 92521** by 15 May 1987. *We are an Equal Opportunity/Affirmative Action Employer.*

CELL BIOLOGY: CHAIRPERSON/PROFESSOR—Should be an established investigator in molecular/cell biology and should demonstrate an ability to lead faculty interested in molecular, structural, and immunobiology with a focus on applying basic research to clinical treatment of cancer. Should be committed to education and interdisciplinary research in a community which includes two national laboratories. Submit applications by 18 May 1987, to: **Dr. Robert O. Kelley, Department of Anatomy, University of New Mexico, Albuquerque, NM 87131.** *Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON, Department of Anatomy, West Virginia University, seeks a chairperson for its department of anatomy. The successful candidate must have M.D. and/or Ph.D. degree, should have a record of scholarly academic and research achievements, and proven leadership ability. We are searching for an individual to administer the rigorous teaching and research missions in the department and to plan and implement programs in cell and molecular biology that will interface with a newly established Regional Cancer Center. Applicants should send curriculum vitae and names and addresses of three references to: **Nathaniel F. Rodman, M.D., Department of Pathology, West Virginia University, School of Medicine, Morgantown, WV 26506,** not later than 18 May 1987. *West Virginia University is an Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON, DEPARTMENT OF CHEMISTRY, Cleveland State University. Applications and nominations are invited for the position of Chairperson and Professor. Responsibilities include the administration of a department of 16 faculty and six support staff offering doctoral, master's, and undergraduate degrees. The application deadline is 31 May 1987, and persons applying should be available by 31 August 1987, or sooner. The area of research interest is open. Applications, including curriculum vitae and a list of references should be addressed to: **Professor Frank Bockhoff, Chair Search Committee, Department of Chemistry, Cleveland State University, East 24 and Euclid, Cleveland, OH 44115.** *Cleveland State University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF BEHAVIORAL SCIENCE UNIVERSITY OF KENTUCKY

The University of Kentucky, College of Medicine, invites applications and nominations for the position of Chairman of the Department of Behavioral Science. *The University of Kentucky recognizes a specific responsibility to ensure that the search does not overlook qualified candidates who are women or members of ethnic minority groups.* Salary is negotiable based on qualifications and experience.

The successful candidate will merit academic appointment at the professor or associate professor level, will have demonstrated excellence in teaching and research in behavioral sciences, will be committed to maintaining excellence in teaching and research, and will have demonstrated academic and administrative leadership skills.

Nominations or letters of application along with curriculum vitae and names of four references should be submitted to: **Dr. Arnold M. Ludwig, Chairman, Behavioral Science Chairman Search Committee, Department of Psychiatry, College of Medicine, University of Kentucky, 800 Rose Street, Lexington, KY 40536.**

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

CHAIRPERSON, DEPARTMENT OF VETERINARY ANATOMY COLLEGE OF VETERINARY MEDICINE THE OHIO STATE UNIVERSITY

The Ohio State University College of Veterinary Medicine invites nominations or applications for the position of Chairperson of the Department of Veterinary Anatomy. An excellent opportunity exists for growth in this department with young faculty, positions to be filled, and new office, teaching, and research facilities.

The candidate must possess a doctoral degree, demonstrated excellence in research and teaching, enthusiasm, and leadership ability. The responsibilities include administration of the professional and graduate teaching and research programs in veterinary anatomy. Active participation in teaching and research is also expected.

Applications should be accompanied by curriculum vitae and the names of three references. Contact: **Dr. Philip W. Murdick, Chair, Search Committee, College of Veterinary Medicine, 1900 Coffey Road, Columbus, OH 43210.** It is suggested that applications be submitted as soon as possible. Applications will be accepted until the position is filled.

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

DIRECTOR OF MOLECULAR BIOLOGY PROGRAM

The Bowman Gray School of Medicine announces the formation of a multidisciplinary program in molecular biology. Applications are sought by the school for the directorship of this program. The director will be responsible for the development of new faculty and organization of laboratories in space constructed for this program. The departmental affiliation of the director will be based on the disciplinary background of the director.

Applicants should apply to: **Dr. Moseley Waite, Chairman, Department of Biochemistry, Bowman Gray School of Medicine, Winston-Salem, NC 27103.**

An Affirmative Action/Equal Opportunity Employer.

DIABETES AND CARDIOVASCULAR DISEASE—The Lankenau Medical Research Center, jointly with the Department of Biochemistry and Biophysics and the Diabetes Center of the School of Medicine of the University of Pennsylvania, seeks a **research scientist** with an M.D. or a Ph.D. degree to conduct research in cellular metabolism with emphasis in diabetes and cardiovascular disease. The candidate should have an independent funded research program and must be willing to interact with staff scientists of both institutions. Modern laboratory facilities and supplemental funds for equipment, supplies, and salaries would be provided by the Lankenau Medical Research Center. Participation in graduate and postgraduate education programs is possible. Applicants should submit their curriculum vitae and the names of three references to: **Michael S. Connor, Assistant Vice President—Personnel, The Lankenau Medical Research Center, Lancaster Avenue West of City Line, Philadelphia, PA 19151.** *Equal Opportunity Employer.*

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The Agricultural Research Service as the principal scientific research agency of USDA, conducts research to produce more and better food and fiber; to control insect pests and weeds safely; to get food to consumers in better condition; to improve human nutrition; to help protect soil, water, and air, and to find new uses for agricultural commodities. Much of the work is on the cutting edge of each discipline—biotechnology (including molecular biology, genetic engineering, and membrane research), application of theories of artificial intelligence to computer technology, and innovative approaches to pest control through insect neurochemistry and the use of pheromones.

ARS is currently recruiting for 100 postdoctoral positions throughout the country. Opportunities exist in the following research areas:

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- Plant Physiology
- Plant Pathology
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Successful candidates will be hired under excepted appointments up to 2 years in duration. Salary for these GS-11/12 positions (\$27,172 to \$32,567) will be based on qualifications and experience. Candidates must be U.S. citizens.

For information on positions available and application procedures, write to:

N. L. BAKES
Personnel Division (S)
USDA/ARS/BARC-W
Bldg. 003, Room 101
Beltsville, MD 20705

ARS is an Equal Opportunity Employer. Women and Minorities are Encouraged to Apply.

POSITIONS OPEN

CHAIRPERSON NUTRITION AND FOOD SCIENCE UNIVERSITY OF KENTUCKY

A 12-month, tenure-track administrative position to lead a diverse department with teaching, research and extension within a College of Home Economics. B.S. and M.S. programs in dietetics, food science, and restaurant management, Ph.D. in nutritional sciences pending final approval. Applicants should have established track record in leadership, administrative ability, and achievement in teaching, research, and/or extension. Nominations invited. Send letter of application, curriculum vitae, and names of three references by 17 April 1987 to: **NFS Search Chairman, 107 Erikson Hall, Lexington, KY 40506; telephone: 606-257-2878.**

An Equal Opportunity/Affirmative Action Employer.

ENDOWED CHAIR. Department of Psychiatry and Biobehavioral Sciences, University of California, Los Angeles (UCLA) School of Medicine, seeks appropriate candidates for **Della Martin Chair in Psychiatry**, endowed professorship for distinguished academic psychiatrist (English-speaking, eligible California licensure) committed to research especially on major mental illnesses of adolescents and young adults (for example, schizophrenia). Send curriculum vitae and letter discussing career goals to:

Arnold B. Scheibel, M.D., Chairman
Della Martin Search Committee
UCLA Neuropsychiatric Institute, B8-262
760 Westwood Plaza
Los Angeles, CA 90024

EVOLUTIONARY BIOLOGIST

Redpath Museum, McGill University, seeks to sponsor a qualified applicant (Ph.D.) for an **NSERC University Research Fellowship**. (Eligibility is limited to Canadian Citizens and Landed Immigrants.) These 5-year awards (renewable) carry an appointment and salary of assistant professor as well as grant support for research. The museum is looking for a systematic or evolutionary biologist or paleobiologist who will establish a vigorous research program. The museum has important collections in the areas of invertebrate paleontology, paleobotany, malacology, and vertebrate zoology and laboratory facilities for morphological and biochemical studies. The museum is affiliated with McGill's large and active department of Biology and the successful applicant may be expected to teach in his or her field of expertise. Send curriculum vitae, representative reprints, and three letters of reference by 1 August 1987 to: **Dr. R. L. Carroll, Redpath Museum, McGill University, Montreal, Canada, H3A 2K6.**

FACULTY POSITION, ASSISTANT PROFESSOR OF PHYSIOLOGY, The Department of Physiology and Pharmacology, College of Veterinary Medicine, The University of Georgia, Athens, GA 30602 invites applications for a position available 1 July 1987. The candidate must have the Ph.D. degree and be capable of developing a viable research program in her/his area of expertise. She/he also must be capable of teaching physiology to veterinary medical students and graduate students. Send curriculum vitae, letter of intent, and names of four references to the **Search Committee** at the above address.

FACULTY POSITION IN NEUROSCIENCES

The Department of Veterinary Biosciences has a tenure-track faculty position opening in the area of neurobiology. All candidates with research expertise in a modern neuroscience area will be considered, but preference will be given to those studying problems at the cellular and molecular levels. The candidate will be expected to develop an independent active research program as well as teach in the College's professional and graduate programs. Applicants should have a Ph.D. degree together with postdoctoral experience. Deadline for applications is 30 May 1987 or until position is filled. Submit curriculum vitae, description of research interests, and the names and addresses of three references to: **Dr. Hara Misra, Head, Department of Veterinary Biosciences, Virginia-Maryland College of Veterinary Medicine, Virginia Tech, Blacksburg, VA 24061.**

Virginia Tech is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN



HARVARD UNIVERSITY SCHOOL OF PUBLIC HEALTH FACULTY POSITIONS

The Department of Environmental Science and Physiology is recruiting two new faculty members. Appointments will be made at Associate/Assistant Professor level in Aerosol Sciences and Technology and in Industrial Hygiene Engineering. An advanced degree in one of the relevant fields (physics, chemistry, engineering, industrial hygiene) is required as is demonstrated applied research in the environmental/occupational health areas. Responsibilities:

Aerosol Science Technology Position: Research and teaching in aerosol properties and behavior, measurement, characterization, as applied to environmental health, occupational health, respiratory biology, atmospheric chemistry.

Industrial Hygiene (Engineering or Chemistry) Position: Research and teaching fundamentals of industrial hygiene, ventilation, exposure/dose assessment, controls.

Please send letter of interest and curriculum vitae to: **Chair, Search Committee, Department of Environmental Science and Physiology, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115.** *Harvard University is an Equal Opportunity Employer. Applications from women and minorities are particularly encouraged.*

IMMUNOLOGIST

The Clinical Transplant Program at the Medical College of Virginia/Virginia Commonwealth University is seeking an individual with a Ph.D., M.D., or D.V.M. and postdoctoral experience in transplantation immunology/immunogenetics. Rank for the position will depend upon qualifications. Responsibilities include developing independent research in transplant immunology and assisting in various transplant-related activities as well as directing a well-established tissue typing laboratory for an active kidney, heart, and liver (bone marrow and pancreas) program. The position will provide excellent research opportunities for conducting basic biomedical research both in the Department of Surgery as well as in collaboration with other faculty members within a larger medical complex.

Applicants should submit curriculum vitae and a letter stating research goals and names and addresses of three references to: **Dr. H. M. Lee, Division of Transplant and Vascular Surgery, Department of Surgery, Medical College of Virginia/Virginia Commonwealth University, Box 57 MCV Station, Richmond, VA 23298-00001.**

The Medical College of Virginia/Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

INSECT NEUROBIOLOGIST. Assistant Professor, 9-month tenure-track research/teaching, available 1 August 1987. Conduct research on neurobiology of insects. Teach simple system portions of core course in neuroscience and insect neurophysiology portion of insect physiology course, and a course in specialty area. Advise and train graduate students. Minimum qualifications: Ph.D. in a biological science by time of appointment, dissertation research or postdoctoral work and publications in neurobiology of arthropods. Statement of professional goals, curriculum vitae, graduate transcripts with list of pertinent college courses and grades, three letters of recommendation, and reprints of one to three pertinent publications should be sent by 15 June 1987 to: **Dr. R. L. Jones, Department of Entomology, University of Minnesota, St. Paul, MN 55108.** A full position description is available upon request. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

POSITIONS OPEN

FACULTY POSITION Department of Engineering and Policy School of Engineering and Applied Science Washington University, St. Louis

The Department of Engineering and Policy at Washington University in St. Louis invites applications for a tenure-track faculty position at the **ASSOCIATE PROFESSOR OR FULL PROFESSOR** level, starting in August 1987 or January 1988. A doctoral degree in engineering or physical science and a demonstrated record of external research support are required. Responsibilities include teaching graduate and undergraduate courses, supervising graduate student research, and developing a strong, externally supported, research program. Specialization areas in the department include energy, environment, international development, medicine, and science, and technology policy at the domestic and international levels. Emerging areas include strategic management of technology and technological innovation, research and development management, and manufacturing engineering. Persons with recent industrial experience or government service are encouraged to apply. Applications and nominations, including curriculum vitae and the names, addresses, and telephone numbers of three references should be sent before 22 May 1987 to: **Dr. William P. Darby, Chairman, Department of Engineering and Policy, Campus Box 1106, Washington University, One Brookings Drive, St. Louis, MO 63130.** *Washington University is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION: MEMBRANE BIOLOGY TENURE-TRACK

A tenure-track position is available in the **Multiple Sclerosis Research Center and Department of Physiology, Rush Medical College.** We seek a scientist interested in neural membrane processes, who will enjoy interaction with his basic science colleagues while developing an independent basic research program. The Multiple Sclerosis Center's basic research focuses on excitation: the mechanisms that underly and regulate the action potential, and the biology and biophysics of ionic channels. Needed resources are available, with rank and salary being determined by the experience of the successful applicant. New research space is immediately adjacent to the Department of Physiology.

Please send curriculum vitae and the names of two colleagues familiar with your research work to: **Dr. Robert Eisenberg or Dr. Floyd Davis, Rush Medical College, 1750 West Harrison Street, Chicago, IL 60612.** *Rush Medical College is an Affirmative Action Employer.*

HEMATOLOGIST—ONCOLOGIST: Board certified/Board eligible staff physician in hematology/oncology at Durham VA Medical Center with faculty appointment at Duke University. This full-time position requires skills in clinical oncology, teaching, and basic research. Reply to: **Personnel Service (O5B), VA Medical Center, 508 Fulton Street, Durham, NC 27705.** *Equal Opportunity Employer.*

UNIVERSITY OF READING DEPARTMENT OF MICROBIOLOGY LECTURESHIP IN MICROBIAL GENETICS

Applications are invited for the above post. Candidates should hold a Ph.D. in an appropriate subject area and have some postdoctoral experience. There is considerable scope for collaboration with staff working on a broad range of research topics in microbiology and molecular biology both in the university and in neighboring research institutes. Good research facilities, including animal facilities, are available. Salary scale: Grade A £8735 to £13675 per annum; Grade B £14245 to £18210 per annum plus USS/USDPs benefits. Further particulars and application forms (two copies) are available from: **the Personnel Officer, University of Reading, Whiteknights, P.O. Box 217, Reading, RG6 2AH, Berkshire, England, telephone: (0734) 875123 extension 220.** Candidates from overseas need only send curriculum vitae and the names of three academic referees to: **the Personnel Officer.** More information about the post may be obtained from: **Professor J. W. Almond, Department of Microbiology, telephone (0734) 875234.** Please quote reference AC. 8702. Closing date: 30 April 1987.

PSYCHOLOGY

The Los Alamos National Laboratory has postdoctoral positions available to augment studies of the physiological basis of cognitive processes in human and non-human primates. Research methodologies include recording of magnetoencephalograph (MEG) event-related fields using sensory evoked paradigms. Current emphasis is on the neural mechanisms mediating selective attention, learning, and memory. The Laboratory is interested in broadening our basic neuroscience program to encompass problems such as personnel selection and performance enhancement.

Candidates must have a background in either cognitive science, physiological psychology, neuroscience or applied/experimental psychology. Experience with test assessment procedures, computer data acquisition and computer programming desired. The salary range is from \$31,260 to \$34,620 per year. Candidates no more than three years past their Ph.D. are eligible to apply.

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-G, Los Alamos National Laboratory, Los Alamos, New Mexico 87545.

Affirmative Action/Equal Opportunity Employer



CLINICAL VETERINARIAN

The Bristol-Myers Company, a worldwide science leader in the research and development of pharmaceutical products, has a challenging career opportunity for an individual to join our Veterinary Sciences Department at our new state-of-the-art research center.

We currently seek a Clinical Veterinarian who will coordinate the daily clinical veterinary laboratory animal activities and diagnostic/monitoring functions. Responsibilities will include the management of Veterinary Sciences microbiology and clinical pathology laboratories as well as supplying necessary radiological and surgical support for the therapeutic research areas.

The position reports to the Director of Veterinary Sciences Department. Frequent interaction with all therapeutic area scientists required to effectively support the laboratory animal care and use programs.

The successful candidate should have a DVM/VMD and have completed specialty training or have several years of experience in the field of laboratory animal medicine. Board eligibility in the American College of Laboratory Animal Medicine is preferred.

For confidential consideration forward your resume, including salary history, in confidence to: Dept. TZ-SC14, BRISTOL-MYERS COMPANY, Pharmaceutical Research & Development Division, P.O. Box 5100, 5 Research Parkway, Wallingford, Connecticut 06492. (Principals Only) An Equal Opportunity Employer.

Bristol-Myers

Clinical Training & Education Manager

Becton Dickinson Immunocytometry Systems, a leading biotechnology company developing monoclonal antibodies and sophisticated cell analysis instruments used in medical research and future clinical applications, has an immediate opening for a Manager of Training and Education Services.

Reporting to the National Service Manager, this position will have complete responsibility for developing and implementing comprehensive education and training programs to support the worldwide marketing efforts of this growing business unit. These programs will be aimed at customers in this specialized medical field, ranging from MT's to MD's, in-house personnel, and the general public. This is a key management position and the person who fills it will be instrumental in shaping the growth and success of the business.

The position requires a comprehensive background in flow cytometry, hematology, and clinical laboratory operations, plus significant experience in training and education program development in the medical industry as well as superior people management skills. PhD or MD required. You will be providing intensive classroom instruction as well as directing the efforts of a highly motivated training staff.

Becton Dickinson offers competitive salaries and an excellent benefits package. To apply send your resume and salary history to **Manager of Human Resources, Becton Dickinson Immunocytometry Systems, 2375 Garcia Avenue, Mountain View, CA 94043.** As equal opportunity employer.

COME GROW WITH US!

Caring for people is our business

**BECTON
DICKINSON**

POSITIONS OPEN

INSTRUCTOR/ASSISTANT PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR UNIVERSITY OF FLORIDA DEPARTMENT OF ORTHOPAEDICS

The University of Florida Department of Orthopaedic Tissue Bank is now accepting applications for a position as instructor/assistant professor/associate professor/professor in Orthopaedic Research. This position requires a Ph.D. in pharmacology or related field with a minimum of 2 years of experience. The initial 2 years of this position will be directed toward developing delivery systems/transport mechanisms for orthopaedic pharmaceuticals (antibiotics). Also, this position will involve some administrative management duties relative to the general directing of the Tissue Bank. This is a faculty position, which is a 12-month appointment beginning 18 May 1987. Recruiting deadline is 1 May 1987. Please send résumé to: **Frank P. Glowczewski, Jr., University of Florida, Department of Orthopaedics, Box J-246 JHM Health Center, Gainesville, FL 32610.**

*Equal Employment Opportunity/
Affirmative Action Employer.*

Princeton University—The Department of Biology has an opening for 1 year at the level of **LECTURER** beginning in September 1987. The successful applicant will teach a fall laboratory course in experimental vertebrate biology, which is complementary to an existing lecture course, emphasizing neuroendocrine mechanisms of vertebrate reproductive biology. During the spring semester, the lecturer will teach half of a lecture course in animal behavior emphasizing mechanism of behavior. Opportunity will be available to carry out some research in the area of animal behavior including vertebrate reproductive biology. Ph.D. degree or equivalent required. Submit letter of application, curriculum vitae, and have three letters of recommendation sent to: **Mrs. E. Lechner, Secretary to the Search Committee, Department of Biology, Princeton University, Princeton, NJ 08544.**

Deadline for receipt of application material is 13 April 1987.

Princeton University is an Equal Opportunity/Affirmative Action Employer.

The Smithsonian Oceanographic Sorting Center, National Museum of Natural History, seeks candidates for **MARINE BIOLOGIST, GS-11** (starting at \$27,172 per annum), to perform curatorial functions (75% of work time) and collections-oriented research (25% of work time) in the field of marine benthic invertebrates. The position requires an excellent knowledge of marine benthic invertebrates and the ability to supervise a technical staff in the sorting and identification of marine benthic invertebrates. Candidates will be evaluated according to museum curatorial and field experience; the quality, breadth, progressiveness, and recency of research accomplishments (publications) and academic study; and the potential for interaction with other NMNH staff and outside colleagues.

Submit by 15 May 1987, SF 171 (Personnel Qualifications Statement), curriculum vitae, and copies of publications to: **Smithsonian Institution, Office of Personnel Administration, 900 Jefferson Drive SW, Room 1410, Washington, DC 20560. Attention: 87-155-P(SM).**

An Equal Opportunity Employer.

MARINE BOTANIST—The University of Texas Marine Science Institute has an opening for a state-funded (currently 75%) **RESEARCH SCIENTIST**. Candidates should be competent in modern field and laboratory techniques to study the ecology and/or physiology of vascular plants and macroalgae in marine and estuarine environments. The successful applicant is expected to obtain extramural funding to develop an independent research program, and to cooperate in development of field-oriented multidisciplinary projects on the Gulf Coast. Candidates must have a Ph.D. and a record of research accomplishments. Postdoctoral experience is preferred.

Send letters of application, statement of research interests, curriculum vitae, and names of three references before 1 May 1987 to: **Dr. Robert S. Jones, Director, Marine Science Institute, The University of Texas at Austin, Port Aransas, TX 78373.**

The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

LIPOPROTEIN AND NUTRITIONAL BIO-CHEMIST: Junior Faculty Position for research in hepatocyte lipoprotein cholesterol metabolism and to direct nutrition core laboratory including amino acid and trace element analyses. Experience in tissue culture, lipoprotein, and bile acid separation preferred. Please send curriculum vitae and four references to: **Frank Franklin, M.D., Department of Pediatrics, LSU Medical Center, 1542 Tulane Avenue, New Orleans, LA 70112. LSU is an Affirmative Action/Equal Opportunity Employer.**

MEDICAL-VETERINARY ENTOMOLOGIST Tenure-track position, all academic levels. Candidate must develop contemporary research program in medical-veterinary entomology combining studies of arthropod vectors of human and animal pathogens, and provide ad hoc extension services as needed. Teaching responsibilities include a graduate level course in medical-veterinary entomology and participation in pest management instruction. Applicant must possess Ph.D. in entomology or biology with postdoctoral experience, high quality publications, and demonstrated ability to secure extramural research funds. Submit curriculum vitae, five publications, transcripts, five references and a brief outline of research goals and graduate level course by 1 June 1987 to: **Professor W. S. Bowers, Chair, Search Committee, Department of Entomology, The University of Arizona, Tucson, AZ 85721.**

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

MICROBIOLOGIST—The Department of Pediatric Dentistry at The University of Texas Health Science Center at San Antonio invites applications for a full-time faculty, tenure-track position. Academic rank and salary will be commensurate with experience. Individuals actively engaged in research on problems in oral biology relevant to caries and periodontal disease are encouraged to apply; preference will be given to applicants with expertise in molecular genetics. Applicants will be judged on the potential to independently attract extramural funds. An ability to act with individuals in both the Dental School and the School of Biomedical Sciences will be important and credentials indicating eligibility for cross-appointment in a basic science department are required. Candidates should have a Ph.D. or D.D.S./Ph.D. and a strong background in research coupled with a keen interest in graduate education. This position offers the opportunity to join a rapidly expanding research group at the dental school which is aggressively developing its potential as a national center for basic and applied research. Curriculum vitae, brief statement of present and future research interests, and three letters of recommendation should be sent to: **Dr. Frank A. Catalanotto, D.M.D., Chairman, Department of Pediatric Dentistry, University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7888. An Equal Opportunity/Affirmative Action Employer.**

MOLECULAR/CELL BIOLOGY RESEARCH FACULTY UNIVERSITY OF VIRGINIA CANCER CENTER

Applications are invited for four tenure-track research positions at the assistant or associate professor level in the University Cancer Center with joint appointment in a relevant academic department. Candidates will be expected to initiate and maintain an independent research program in molecular cell biology. The Cancer Center offers a stimulating interdisciplinary environment, well-equipped laboratories and state-of-the-art support facilities. The four programmatic research areas are:

1. Oncogenes, mitogens, receptors in regulating cell growth and gene expression.
2. Structure and function of cell membranes and nucleus.
3. Hematopoietic cell differentiation and proliferation.
4. Endocrine cell growth and differentiation.

Applicants should submit curriculum vitae, a statement of current research activities, and future plans, and the names/addresses of three people from whom letters of recommendation can be requested to: **Dr. Robert R. Wagner, Director of Cancer Center, University of Virginia School of Medicine, Box 334, Charlottesville, VA 22908**

POSITIONS OPEN

MOLECULAR BIOLOGIST—HARVARD

POSTDOCTORAL POSITION available in a multidisciplinary, basic research environment at the **Massachusetts General Hospital in the Department of Medicine, Harvard Medical School** to investigate mechanisms of growth regulation in cultured renal mesangial cells. Applicant should have a Ph.D. and experience with recombinant DNA and techniques of nucleic acid analysis. Submit curriculum vitae and names of references to: **Joseph V. Bonventure, M.D., Ph.D., Renal Unit, Massachusetts General Hospital, Fruit Street, Boston, MA 02114.**

MOLECULAR GENETICS

The Coriell Institute for Medical Research would like to fill a position for an experienced molecular geneticist who will develop a successful program in the area of human genetics. The candidate should have demonstrated an excellence for research in the above discipline and have the ability to develop a vigorous externally funded research program. The Institute will support part of the research. The applicant will also interact with the NIGMS Human Genetic Mutant Cell Repository. A résumé, letter of interest including research interests and accomplishments and references should be forwarded to: **Dr. A. E. Greene at the Coriell Institute for Medical Research, Copewood Street, Camden, NJ 08103. Equal Opportunity Employer.**

NEUROBIOLOGIST

The recently created **Division of Neuroscience at the Oregon Regional Primate Research Center** has a position (assistant or associate rank) for a highly motivated scientist with research interests in the development and differentiation of brain cells, emphasizing the role of growth factors. Candidates should have expertise in tissue culture of brain cells, immunocytochemistry and relevant cell biology and biochemical techniques. The candidate selected will be expected to develop independent research and to participate as a team member in studying the development of hypothalamic function using physiological, cellular, and molecular biology approaches. The appointee should be willing to include nonhuman primates in his/her research. Salary and rank will be commensurate with experience. Excellent opportunities exist for interaction with the new Institute for Biomedical Research and basic science departments of the Oregon Health Sciences University. Submit letter of application, curriculum vitae, statement of research experience and future research plans and names of three references to: **Head, Division of Neuroscience, Oregon Regional Primate Research Center, 505 NW 185th Avenue, Beaverton, OR 97006. The Oregon Regional Primate Research Center is an Equal Opportunity/Affirmative Action Employer.**

Ph.D.—Roger Williams General Hospital seeks a researcher with a Ph.D. in physiology, biochemistry, molecular biology, or biophysics with 2 to 4 years of postgraduate training. Preferred candidates will have research experience and interest in one of the following areas: mechanism of hormone action, regulation of calcium metabolism or hyperparathyroidism. Candidates must qualify for a faculty position at Brown University as **Assistant Professor** (research) in the Department of Medicine. The successful candidate will have skills in recombinant DNA, HPLC, tissue culture, ligand binding, and RIA. It is expected that 100% of the successful candidate's time will be devoted to research. *Roger Williams General Hospital is an Equal Employment Opportunity/Affirmative Action Employer.* Please send curriculum vitae by 15 May 1987 to: **Charles Eil, M.D., Ph.D., Chairman, Search Committee, Roger Williams General Hospital, 825 Chalkstone Avenue, Providence, RI 02908.**

Unexpected immediate opening for **Ph.D. LEVEL SCIENTIST** with tumor immunology or immunoglobulin genetics background. Laboratory is active in developing and characterizing monoclonal antibodies for purposes of radioimmunoassay and therapy of human cancers. Opportunities to work in several tumor systems. Send résumé and names of three references to: **Richard L. Wahl, M.D., Department of Internal Medicine, Division of Nuclear Medicine, University of Michigan Medical Center, Ann Arbor, MI 48109-0028. A non-discriminatory, Affirmative Action Employer.**

PROTEIN ANALYSIS LABORATORY

The NY Blood Center

Applications are invited for the position of Head, Protein Analysis Laboratory. This laboratory serves as a central facility for protein/peptide analysis. In the very near future, this laboratory will also be asked to provide investigators with synthetic peptides and oligonucleotides. Applicants for this position must hold Ph.D. or equivalent degree and also have a very strong background in protein/peptide structure analysis. The appointee will supervise and be responsible for all activities in this laboratory. Applicants should submit curriculum vitae, a list of publications, as well as three letters of recommendations to:

Gerd Grieninger, Ph.D.
Vice-President for Research
The New York Blood Center
310 East 67th Street
New York, New York 10021
-equal opportunity employer-

DEPUTY DIRECTOR ENERGY, ENVIRONMENT, AND RESOURCES CENTER THE UNIVERSITY OF TENNESSEE, KNOXVILLE

The University of Tennessee invites nominations and applications for the position of deputy director of its Energy, Environment, and Resources Center. The center, which began operation in 1972, maintains an annual research volume of approximately two million dollars. Approximately 30 full-time staff members and 40 part-time faculty and students, coming from a number of disciplines, work at the center on research projects spanning all aspects of energy, environmental, resource, waste management, arms control, and technology policy issues.

The primary duty of the deputy director is to aid the director in initiating and administering research projects and managing the center. Candidates should possess management and technical abilities to obtain external funding for research, and the managerial and supervisory skills to help the director in administering a large staff and budget. Candidates must also be able to work effectively with the director, university administrators, and faculty to promote interdepartmental and intercollegiate cooperative ventures. An earned Ph.D. in social science, science, or engineering is preferred, and the deputy director should be qualified to hold a faculty appointment at the associate professor or professor level. Other desirable qualifications include five to ten year's experience directing research projects in areas related to the center's scope and the ability to relate effectively with the private and governmental sectors.

Salary and rank will depend upon qualifications. The target date for filling this appointment is May 15, 1987. Nominations and applications (vita and names of three references) should be received no later than April 20, 1987. All correspondence should be addressed to: Dr. William Colglazier, Director, Energy, Environment, and Resources Center, The University of Tennessee, 327 South Stadium Hall, Knoxville, TN 37996-0710. The University of Tennessee is an equal opportunity/affirmative action employer.

CHAIR, DEPARTMENT OF ANATOMICAL SCIENCES

City University of New York Medical School

Applications and nominations are invited for the Chair of a new Department of Anatomical Sciences at CUNY Medical School. The School has a special obligation to emphasize the significant emerging role of primary care as well as to increase the number of physicians in underrepresented minorities in the nation's physician pool and to enhance the availability of medical services to underserved areas.

Candidates should be recognized as outstanding in research, have strong teaching credentials and have administrative strengths. Salary competitive and commensurate with experience. Please send letters of application or nomination, curriculum vitae and the names, telephone numbers and addresses of three references by May 1, 1987 to: Dr. Meir Lev, Chair, Search Committee for Anatomical Sciences, City University of New York Medical School



CITY COLLEGE OF CUNY
Convent Av & 138 St
New York, NY 10031

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Novel Drug Delivery

CIBA-GEIGY Corporation is a world leader in advanced drug delivery systems. We've made a long term commitment to research and development in this area, and our facilities are the best in the scientific community. Help us write the next chapter in our continuing search for quality drug delivery systems, working with your colleagues in leading universities and research institutes. We currently seek Ph.D. Scientists in key project areas:

Drug Delivery Systems

You will be responsible for directing the Transdermal Delivery System Design Group, supervising 3-4 Scientists, and working with other research production and clinical groups. The ideal candidate will need a Ph.D. in Chemical Engineering, Physical or Polymer Chemistry, Materials Science, Pharmaceuticals, or the equivalent. Prior experience with polymer processing and diffusive mass transfer and system fabrication are required.

Pharmacokinetics

You will establish and direct a pharmacokinetics/pharmacodynamics

fundamental research program and recommend delivery profiles for clinical protocols involving selected drugs administered by controlled release. Supervising 1-2 Jr. Scientists, you will work extensively with our research and clinical groups. The ideal candidate will need a Ph.D. in Pharmacokinetics, Pharmacology, Pharmaceuticals, or the equivalent.

GI Absorption

Directing a research program for in vivo and in vitro absorption in the GI tract and other biological membranes, you will supervise 1-2 Jr. Scientists. The ideal candidate will need a Ph.D. in Physiology, Pharmacology, Biochemistry, Pharmaceuticals, or the equivalent, including extensive work in GI transport and physiology.

We offer excellent salaries and comprehensive benefits including an attractive relocation package. Send resume, including salary history and requirements, to: Gwen Walker, CIBA-GEIGY Corporation, 444 Saw Mill River Road, Ardsley, NY 10502. An equal opportunity employer m/f.

Science Serving Mankind

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RESEARCH SCIENTISTS

Central Nervous System Research

The Bristol-Myers Pharmaceutical Research and Development Division is seeking exceptional scientists to join its Central Nervous System Pre-Clinical Research Department at its new research facility in Wallingford, Connecticut.

The successful candidates will join a team dedicated to applying the most modern techniques to developing new methodologies and tests for drug discovery. These key positions are:

NEURONAL CELL BIOLOGIST

Candidates should have a Ph.D. in Molecular Biology, Cell Biology, Psychobiology or Neuroscience with strong Post-Doctoral experience. Demonstrated ability to employ cellular and molecular techniques is essential. The successful candidate will develop a research program dedicated to applying the most modern cellular and molecular techniques to the discovery of psychotherapeutic and neurologic agents.

ASSOCIATE SCIENTIST/ BEHAVIORAL RESEARCH

M.S. in Psychobiology or B.S. with equivalent experience. Must have experience using drug discrimination and operant behavioral techniques in laboratory models (pigeons and primate). Computer experience (SAS, SKED) and a strong statistics background are important assets.

Bristol-Myers offers competitive salary compensation and a comprehensive benefit package including relocation assistance.

For confidential consideration forward your resume, including salary history, in confidence to: **Bristol-Myers Company, Pharmaceutical Research & Development Division, Dept. PD-SC14, P.O. Box 5100, 5 Research Parkway, Wallingford, Connecticut 06492. (Principals Only)** An Equal Opportunity Employer.

Bristol-Myers

SCIENTIFIC STAFF POSITIONS

Chemistry Department Brookhaven National Laboratory

We seek candidates who have postdoctoral experience and a demonstrated ability to perform original and independent research. One position open is to plan and oversee the development of a laser-synchrotron facility for the study of the dynamics of gas phase chemical processes at the National Synchrotron Light Source; and to be responsible for the direction of the experimental program in collaboration with Chemistry Department staff who are interested in photoionization and fragmentation processes, chemical kinetics and high resolution spectroscopy. Experience in modern visible/UV laser design and operation and/or synchrotron radiation is desirable, as is a background in gas phase chemical physics.

The other position is to join a small research group studying molecular energy transfer processes in the gas phase, using laser and synchrotron radiation; and to develop one's own research program within this framework. Experience in the use of lasers and a background in chemical kinetics or reaction dynamics are desirable.

Candidates for either position should send a curriculum vitae and names of three references to: **Dr. Ralph E. Weston, Chemistry Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., NY 11973.** Equal Opportunity Employer m/f.

**BROOKHAVEN
NATIONAL LABORATORY**
ASSOCIATED UNIVERSITIES INC

POSITIONS OPEN

NEUROCHEMISTRY FACULTY POSITION

The University of Arizona anticipates an imminent search jointly by the University Department of Biochemistry and the Department of Neurology for a new, tenure-track faculty appointment in **neurochemistry**. Although all excellent candidates will be considered, those whose research lies in the areas of chemical communication in the nervous system (neurotransmitters, neuropeptides, receptors, neurohormones, second-messenger systems, etc.) and molecular neurobiology (membrane macromolecules, molecular genetics of the nervous system, and so forth) will receive particular attention. The rank and salary of this position will be open, and it will be effective in the summer of 1987 or as soon as possible thereafter. Inquiries are welcome from potential candidates who hold the M.D. and/or Ph.D. degree and have had at least 3 years of postdoctoral research experience. *Women and members of minority groups are especially encouraged to consider this anticipated opportunity.*

Please send inquiries to:

Professor Alan Rubens, M.D.
Head, Department of Neurology
College of Medicine
University of Arizona
Tucson, AZ 85724

Closing date is 30 May 1987. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

NMR SCIENTIST

The NMR Facility in the Chemistry Department of Emory University is undergoing expansion and has an immediate vacancy for someone to be responsible for overseeing day-to-day operations. Duties would involve training of users, maintaining instrumentation, involvement in spectrometer modification, and computer interfacing to microcomputers. A knowledge of modern 2-dimensional NMR techniques is a requisite, and some knowledge of NMR-related electronics is desirable. There will be ample opportunity for involvement in publishable research using new NMR techniques to solve chemical and structural problems. The facility has NT-360 and WP-200 multinuclear spectrometers and a H-1/C-13 QE-300. A new 600-MHz multinuclear spectrometer will be ordered shortly. Ph.D. degree would be preferred, but is not required. Interested candidates should supply a résumé and three letters of recommendation to: **Dr. David Live, Department of Chemistry, Emory University, Atlanta, GA 30322.** Applications should be received by 15 May 1987. *Emory University is an Affirmative Action/Equal Opportunity Employer.*

GENETIC TOXICOLOGY

Microbiological Associates Inc. (MBA) is seeking a Ph.D. with experience in in vitro mammalian mutagenicity systems. The available position is in MBA's internationally recognized Division of Genetic Toxicology whose staff of 7 Ph.D.'s and 30 technical support personnel conduct research and testing for government and private sector sponsors from around the world. The successful candidate should possess excellent verbal and written communication skills, have peer reviewed publications in in vitro mammalian mutagenesis, and have demonstrated managerial experience.

Microbiological Associates Inc. offers a comprehensive company-paid benefits package. For immediate consideration, please send your résumé to: **Microbiological Associates, Inc., 5221 River Road, Bethesda, MD 20816.** Attention: Personnel Department.

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL ASSOCIATE

Postdoctoral position available to study the short-term and long-term action of alcohols on gated channels in *Aplysia* neurons and neuroblastoma cells. Laboratory approaches include electrophysiological and fluorescence techniques. Background in electrophysiology is essential, and experience with patch clamping and single-channel analysis is desirable. The Worcester Foundation provides a supportive and highly interactive environment. Send complete curriculum vitae, the names and telephone numbers of three references, and a brief statement of research interests to: **Dr. S. N. Treistman, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

*An Equal Opportunity/Affirmative Action Employer
M/F/H.*

POSITIONS OPEN

POSITION AVAILABLE: A Ph.D. BIOCHEMIST, PHYSIOLOGICAL CHEMIST, PHYSIOLOGIST, or related area of specialization to conduct biochemical and physiological studies on methods to improve preservation of organs for transplantation. Area of interest is membrane structure and function, energy metabolism, lipid chemistry, and organ physiology. Salary commensurate with experience. Send curriculum vitae and references (three) to: Dr. James H. Southard, Department of Surgery, 600 Highland Avenue, Madison, WI 53792. The University of Wisconsin is an Affirmative Action/Equal Opportunity Employer.

PHYSICISTS/ENGINEERS (SEARCH REOPENED)

The Environmental Research Center of the University of Nevada-Las Vegas is seeking two physicists or engineers with experience in lidar development and applications. The Center conducts a multidisciplinary program with a staff of over 80 technical staff members.

The first position (Ph.D. level) is intended for the team leader of a multiyear research and development project; for example, developing an airborne UV Differential Absorption Lidar (DIAL) system for making range-resolved measurements of tropospheric O₃, SO₂, and particulates. The task is a joint project of the EPA, NASA, and the University of Nevada-Las Vegas. Background in the areas of atmospheric physics, pulsed lasers, spectroscopy, visible and UV optics/electro-optics, numerical analytical methods, and both digital and analog electronics is desirable.

The second position (M.Sc. or Ph.D. level) is intended for a team member supporting the development of a new generation laser fluorosensor system for use in making water quality and acid deposition-related measurements in lake and river systems. The applicants should have experience in optical design and pulsed laser technology.

The University has excellent benefits, and the salary will be commensurate with experience. Appointments will be made on a 12-month basis with renewal subject to performance and program continuation. Interested candidates please write and send résumé and salary history to: Dr. David N. McNelis, Director, Environmental Research Center, University of Nevada-Las Vegas, Las Vegas, NV 89154, by 24 April 1987. *Affirmative Action/Equal Opportunity Employer.*

PHYSICS (SUPERVISE 2/4) GROUP THEORETICAL RESEARCH IN CRYSTALLINE MATTER BASED ON LANDAU THEORY; Computer generate frequencies N dimensions, to calculate structure constants for the generators of SU(N) Lie Algebras. Apply studies to elucidating nature of surface reactivity and catalysts with industrial applications. Computer familiarity with Fortran/Ratfor, PL/I, C-Language, Assembly-Language (PDP-DECIO), MACSYMA. Ph.D. Theoretical Solid State Physics; 4 years of experience (40 hours), \$25,000 per year. Mail résumé to: NYS Job Service, JO #8007502, 485 Fifth Avenue, New York, NY 10017.

POSITION IN MICROCHEMICAL FACILITY CANCER RESEARCH LABORATORY UNIVERSITY OF CALIFORNIA, BERKELEY

Applications are invited, pending final budgetary approval, for an opening at the level of **ASSISTANT RESEARCH BIOCHEMIST**, 100% time, to supervise a Microchemical Facility serving the entire Berkeley Campus and dealing with peptide synthesis, purification and sequencing; partial protein sequencing; and oligonucleotide synthesis. Salary commensurate with experience, beginning \$34,600 per year. Requires a Ph.D. with postdoctoral background as well as experience in many or all of the following techniques: preparative and analytical high performance liquid chromatography, micro protein sequencing, peptide fractionation, and peptide and oligonucleotide synthesis. Previous experience with the current generation of automated instruments in this area is an advantage. Starting date, 1 June 1987. Send curriculum vitae, bibliography with reprints, summary of research experience, and names of three references to: **Director, Cancer Research Laboratory, 3510 Life Sciences Building, University of California, Berkeley, CA 94720.** Closing date for applications is 24 April 1987. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

The International Laboratory for Research on Animal Diseases POSITIONS AVAILABLE

The International Laboratory for Research on Animal Diseases (ILRAD), Nairobi Kenya is an internationally funded institution with the mandate of developing improved methods of control for important diseases of livestock. At present the diseases under study are trypanosomiasis and theileriosis. The multidisciplinary research program includes biochemistry, molecular biology, immunology, cell biology, pathology, parasitology, electron microscopy and entomology with appropriate supporting units. Applications are invited for the following positions:

SCIENTIST—Research Liaison (Ref SC/87/1)

A position to strengthen the training and outreach program through collaborative research between scientists at ILRAD and those in countries affected by trypanosomiasis and theileriosis. Applicants should be fluent in both French and English. They should preferably have a degree in veterinary medicine, teaching experience and post graduate research qualifications relevant to livestock diseases, especially trypanosomiasis and theileriosis. Familiarity with livestock disease research programs in African universities, government research institutions and field laboratories, and work experience with an international agency in developing countries would be additional advantages.

SCIENTIST—Parasitologist/Pharmacologist (Ref SC/87/2)

A position to work on development of improved techniques for the use of chemical compounds for treatment and prevention of tsetse transmitted trypanosomiasis in livestock. Applicants should have a degree in veterinary medicine or an honours degree in science and post graduate qualifications in an appropriate area of biological research. Research experience in the management and use of therapeutic drugs in farm animals, aspects of drug metabolism, and estimations of drug and metabolite levels in blood and tissue fluids will be advantageous.

SCIENTIST—Tick Research (Ref SC/87/3)

A position to manage the Tick Vector Unit which provides an essential service to the *Theileria* research program. The work entails maintenance and supervision of tick colonies, production of infected ticks, sporozoites and theilerial stabilates, supervision and screening of infected cattle and research activities related to immunization of cattle against East Coast fever. Candidates must have had experience with ticks and tick-borne diseases. Preference will be given to applicants with a first degree in veterinary medicine and a doctorate in a relevant area of parasitology.

These positions are international staff positions and the salaries will be paid in US Dollars. The appointments may be made at postdoctoral or scientist grade depending on experience and qualifications of successful applicants. Successful candidates are expected to participate in the ILRAD training program. Moving, housing, commutation, and education allowances are paid, and there are medical and retirement benefits. Applications should include a current *curriculum vitae* and the names and addresses of three referees. Applications, citing the position reference number should be sent by April 30th, 1987 to:

**Chief Personnel Officer
ILRAD
P.O. Box 30709
NAIROBI**

BIOTECHNOLOGY SCIENTISTS

Applications are invited for positions available within the Biotechnology Research Group of Phillips Petroleum Company.

Individuals with a PhD and post-doctoral experience in the following disciplines should apply.

PROTEIN CHEMIST OR ENZYMOLOGIST

Applicants will have a broad range of responsibilities, including product purification, characterization, process development, scale-up and the establishment of validation procedures. Hands-on familiarity with the techniques and methodologies used to characterize proteins and enzymes is essential.

MOLECULAR BIOLOGIST

Applicants will be involved in gene expression and genetic manipulation in yeasts.

MAMMALIAN MOLECULAR BIOLOGIST

Applicants will be involved in cloning human genes. Experience in mammalian molecular biology and making cDNA libraries is preferred.

Phillips Petroleum Company offers competitive salary, excellent benefits and research facilities with a high quality of living in Bartlesville, Oklahoma.

Please send resume with references to: **Mr. Mike J. Catt
Phillips Research Center
Bartlesville, OK 74004**



An Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL FELLOW to work with steroid receptors/receptor interactions with chromatin/steroid gene (oncogene) regulation. Research involves protein purification, antibody detection of receptors and chromatin protein, and some molecular biology (cloning and gene transcription analyses). Will train individuals not experienced in specific areas. Contact: **Thomas C. Spelsberg, Ph.D., Department of Biochemistry and Molecular Biology, Mayo Clinic, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.**

POSTDOCTORAL FELLOW

Position available to study structure of collagen fibrils and basement membranes using x-ray diffraction and biochemical techniques. Salary \$17,000 to \$22,000, depending on qualifications. Send curriculum vitae, summary of research experience and names of three referees to: **Barbara Brodsky, Department of Biochemistry, UMDNJ-Robert Wood Johnson Medical School (formerly Rutgers Medical School), 675 Hoes Lane, Piscataway, NJ 08854-5635. An Equal Opportunity/Affirmative Action Employer M/F/H/V.**

GLYCOPROTEIN/CARBOHYDRATE BIOCHEMIST

POSTDOCTORAL POSITION available for person trained in glycoprotein and/or carbohydrate biochemistry (particularly chromatographic methods for sugars, oligosaccharides, and glycopeptides) to participate in ongoing research concerning the role of protein glycosylation in photoreceptor membrane morphogenesis and retinal degenerations. Send curriculum vitae, recent reprints, and names of three references to: **Dr. Steven J. Fliesler, Bascom Palmer Eye Institute, University of Miami School of Medicine, P.O. Box 016880, Miami, FL 33101.**

POSTDOCTORAL POSITION—Available immediately to investigate the pharmacologic sensitivity of calcium channels present in sarcoplasmic reticulum membranes. Ph.D. in biological science and experience with biochemical and/or electrophysiological techniques is necessary. Send curriculum vitae and three letters of reference to: **John L. Sutko, Ph.D., Department of Pharmacology, University of Nevada School of Medicine, Reno, NV 89557. Affirmative Action/Equal Opportunity Employer.**

MEMBRANE TRANSPORT

A **POSTDOCTORAL POSITION** is available immediately for an individual interested in pursuing studies on the structure and mechanism of ion-translocating ATPases. The ATPase in the plasma membrane of *Neurospora* is an electrogenic proton pump that operates via a phosphoryl-enzyme intermediate identical to those of the animal cell transport ATPases. Research will involve investigation of the biochemistry of this ATPase with the goal of elucidating its molecular mechanism. Send curriculum vitae to: **Dr. Gene A. Scarborough, Department of Pharmacology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC 27514. Equal Opportunity Employer.**

POSTDOCTORAL POSITION now available for person experienced in recombinant DNA technology or biochemistry. Opportunity to participate in study of transmembrane signal transduction involving phosphoinositides. Send curriculum vitae and names of three references to: **Dr. O. Hayes Griffith, Institute of Molecular Biology, University of Oregon, Eugene, OR 97403. University of Oregon is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL/RESEARCH ASSOCIATE to work on the immunogenetics of the acute leukemias in rapidly expanding Medical Center. Project involves some knowledge of Clg and Raji cell assays, agarose block electrophoresis, SDS-polyacrylamide gel electrophoresis, and electroblotting (Western blot). Experience with monoclonal antibodies desired. Work would involve close collaboration with molecular biologist and hematologist. Send curriculum vitae, and three letters of reference to: **Dr. Harold R. Schumacher, Department of Pathology, 2160 South First Avenue, Loyola University Medical Center, Maywood, IL 60153. Loyola University is an Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION (Biochemist). Research fellowship available immediately to join a biochemical/biophysical group to study human cholesterol, lipid, and lipoprotein metabolism. Send curriculum vitae, statement of research interests, and names of three references to: **Dr. Richard J. Deckelbaum, Department of Pediatrics, Columbia University, 630 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately for program combining cytogenetics and molecular biology to define roles played by chromosome abnormalities and gene changes in cancer development. Send curriculum vitae, bibliography, research interests, and names of three references to: **Dr. Fred Gilbert, Division of Medical Genetics, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION available beginning immediately with new assured support for 3 years to study mechanisms of pulmonary injury (adult respiratory distress syndrome) and strategies for prevention. In vitro endothelial permeability studies along with rodent models will be used to evaluate antitumor necrosis factor and anti-C5a antibodies along with newer reagents. Send curriculum vitae and three letters to: **Thomas A. Raffin, M.D., Division of Respiratory Medicine, Stanford University School of Medicine, Stanford, CA 94305. Telephone: 415-723-6381.**

POSTDOCTORAL POSITIONS—Three positions available immediately to study immunological, histological, and molecular aspects of Alzheimer's disease. Ph.D. or M.D. with experience in one of the following areas: immunology; protein chemistry; molecular biology or cell biology. Send curriculum vitae and names of three references to: **Dr. Peter Davies, Department of Pathology (F-538), Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN BIOPHYSICS

A 2-year position to continue work on the novel technique of **differential polarization microscopy** in the areas of (i) long-range organization of mammalian chromosomes, (ii) linear and circular dichroism and birefringence imaging studies in cytoskeleton is available.

The candidate will need a Ph.D. degree in biology and some training in optical biophysical chemistry and microscopy. Preference will be given to the applicant who has demonstrated ability in **subcellular isolation techniques, specific staining methods** (including immunofluorescence), and has a practical knowledge in **computer instrument interfacing**.

Please send curriculum vitae, a letter of intent and one letter of recommendation to: **Professor Carlos Bustamante, Chemistry Department, The University of New Mexico, Albuquerque, NM 87131.**

POSTDOCTORAL POSITIONS IN MOLECULAR GENETICS

Postdoctoral positions are available in each of three areas: (i) regulation of human and mouse globin gene expression with emphasis on *trans*-acting factors; (ii) an investigation of Na⁺K⁺-ATPase gene expression and structure/ function studies of this enzyme using genetics tools; and (iii) the study of acute phase protein gene regulation. Send curriculum vitae to: **Jerry Lingrel, Department of Microbiology and Molecular Genetics M.L. 524, University of Cincinnati, College of Medicine, 231 Bethesda Avenue, Cincinnati, OH 45267. The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE, two positions. (i) **MOLECULAR BIOLOGIST** to work on immunoliposome-mediated delivery of foreign genes in vivo. Require molecular cloning skills but not liposome experience. (ii) **BIOPHYSICIST** or immunologist to work on diagnostic technology of immunoliposome assay. Liposome experience desirable. Competitive salary and benefits. Please send inquiries to: **Dr. Leaf Huang, Department of Biochemistry, University of Tennessee, Knoxville, TN 37996. Equal Opportunity Employer.**

POSITIONS OPEN

LABORATORY/HEMATOLOGY FELLOWSHIP. Loyola University Medical Center of Chicago is establishing a new program in laboratory hematology for pathologists Board-certified in AP and CP. Internists and pediatricians with comparable Boards interested in more in-depth training in hematology will be considered. The program will be broad based and directed toward subspecialty Board certification with training in coagulation, peripheral blood analysis, and bone marrow pathology during the first year. The second year will be devoted primarily to research. Interested candidates should send a curriculum vitae and names of references to: **Dr. Harold Schumacher, Professor and Chief of Hematology, Department of Pathology, Loyola University Medical Center, 2160 South First Avenue, Maywood, IL 60153. Loyola University is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION—Available immediately for recent Ph.D. with experience in immunology, biochemistry, or molecular biology. Projects include (i) characterization of lymphokines regulating T and B cell response, (ii) identification of lymphokine receptors, (iii) study of the role of T cell accessory molecules, and (iv) regulation of B cell response by antigen and T helper cells. Salary range: \$15,996 to \$21,948. Send curriculum vitae and name of two references by 17 April 1987 to: **Dr. Susan L. Swain, Department of Biology, Q-063, University of California, La Jolla, CA 92093.**

POSTDOCTORAL POSITION available immediately to study peptide delivery through the blood-brain barrier using novel chimeric peptide drug delivery systems. Biochemistry, pharmacology, or physiology experience required. Send curriculum vitae and letters of reference to: **Dr. William M. Pardridge, Department of Medicine, University of California, Los Angeles (UCLA) School of Medicine, Los Angeles, CA 90024.**

POSTDOCTORAL POSITION—For physical biochemist, biophysicist, or membrane biochemist to study cell-cell recognition in the immune system. Experience with fluorescence is particularly desired. Send curriculum vitae, including summary of research experience and names of references to: **Dr. Adrienne Brian, Department of Chemistry/Cancer Center, Q-063, University of California at San Diego, La Jolla, CA 92093.**

POSTDOCTORAL POSITION available summer 1987 for well-established studies of cellular morphology and function in the hippocampal formation following long-term ethanol exposure. Laboratory utilizes an interdisciplinary approach involving morphological, physiological and biochemical techniques. Preference will be accorded applicants with a Ph.D. in neurosciences and a strong background in neuroanatomy or neurophysiology. Curriculum vitae and names of three references should be sent to: **Drs. Don W. Walker/Bruce E. Hunter, Department of Neuroscience, JHMH Box J-244, University of Florida, Gainesville, FL 32610. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL—RESEARCH ASSOCIATES. Several positions are available with negotiable starting dates to join an integrated and ongoing research program on growth factors and their mechanism of actions. We are seeking candidates with training in one of the following areas: (i) Pharmacology experience in experimental designs for effector and inhibitor for receptor binding. (ii) Immunology experience in RIA/ELISA and methods to purify mono-polyclonal antibodies. (iii) Peptide and protein chemistry. Please send curriculum vitae and inquiry to: **James Tam, Rockefeller University, Box 294, 1230 York Avenue, New York, NY 10021. An Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH POSITION

Ph.D. in biochemistry or biophysics to study lipid dynamics, protein-lipid interactions and lipid composition of intestinal plasma membranes. Successful candidate will be involved in experiments utilizing steady-state fluorescence polarization, differential scanning calorimetry, HPLC, TLC, GLC, and protein purification techniques. Send curriculum vitae and two letters of recommendation to: **Chris Smith, Department of Human Resources, Michael Reese Hospital and Medical Center, Lake Shore Drive and 31st Street, Chicago, IL 60616.**

GENE-TRAK Systems, a joint venture formed between Integrated Genetics, Inc. and Amoco Corporation, is developing and marketing nucleic acid probe-based diagnostic products for food and clinical laboratories. The venture combines the entrepreneurial spirit of Integrated Genetics with the financial strength of Amoco.

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Currently recruiting additional doctoral research scientists with industrial experience.

PROJECT LEADERS

Will be responsible to adapt assays for the detection of gastrointestinal pathogens in food and clinical specimens. Previous product development experience required.

ASSAY DEVELOPMENT SCIENTIST

Will optimize non-isotopic nucleic acid probe assays. Previous experience in immunoassay or hybridization assay development necessary.

NUCLEIC ACID BIOCHEMIST

Responsible for developing systems for *in vitro* production of RNA and DNA for use in hybridization assays. Previous supervisory experience required.

GENE-TRAK Systems, located in the western suburbs of Boston, offers an attractive compensation and benefits package that includes equity participation. For immediate consideration, send your resume to:

Brian Mazar, Human Resources
Dept. S-3
GENE-TRAK Systems
31 New York Avenue
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The HINDUSTAN CIBA-GEIGY Research Centre in Goregaon, on the outskirts of Bombay, is one of the largest and best-equipped establishments of its kind in India, and is principally engaged in the discovery and development of drugs for the treatment of tropical diseases.

Applications are invited from Ph.D.'s of Indian nationality for a position in the Centre's

PARASITIC BIOCHEMISTRY GROUP

Preference will be given to candidates of about 35 years of age who have had at least five years' experience in postdoctoral research in parasitic biochemistry.

Good housing accommodation is available on the campus. Emoluments will be commensurate with training and experience. Several company benefits, such as provident fund, pension scheme, etc. are part of the usual employment contract.

Applications, accompanied with curriculum vitae, should be addressed to the **Director of the Research Centre**, Dr. R. Singh Grewal.

RESEARCH OPPORTUNITIES IN BIOCHEMICAL SCIENCES AT MERRELL DOW RESEARCH INSTITUTE

MEMBRANE PROTEIN BIOCHEMIST

We seek a Ph.D. membrane biochemist to join our molecular structure group. Candidates should have 3-5 years experience in the purification and characterization of membrane receptors using immunochemical and micropurification techniques. Areas of interest include, but are not limited to, cell-substrata, cell-cell and/or cell-growth factor receptor interactions related to tumor cell biology, neovascularization or lymphokine action.

CELL BIOLOGIST

We have a challenging career opportunity for a cell biologist to join our expanding research efforts in Biochemical Sciences. The successful candidate will join a multidisciplinary team of neurobiologists, molecular biologists and receptor pharmacologists. Applicants should have a Ph.D. with 3-5 years experience with cell culture models of trophic and growth factors involved in either neuron/glia or smooth muscle endothelial cell function.

SENIOR SCIENTIST Atherosclerosis Research

We have an immediate opening for an experienced scientist in the area of lipoprotein metabolism and atherosclerosis. The successful candidate will join a multidisciplinary group of biochemists and medicinal chemists to pursue new approaches to the prevention of the atherosclerotic disease process. The individual should have a Ph.D. with a documented record of research and 3-5 years experience in the area of enzymology of lipid and lipoprotein metabolism, cell biology of atherogenesis or molecular biology of growth factors.

PEPTIDE CHEMIST

We are looking for a highly motivated individual at the B.S./M.S. level for performing the synthesis, purification and characterization of peptides. The applicant should have a strong organic background and be familiar with modern instrumentation and chromatographic techniques. Experience in solid-phase peptide synthesis and HPLC would be desirable.

Merrell Dow Research Institute is headquartered in suburban Cincinnati. We offer excellent compensation, comprehensive benefits and relocation assistance. If you are interested in basic discovery research and would like to work for a rapidly growing research institute, send your curriculum vitae with names of three references to:

Personnel Services Manager (Refer to Job Code RLJ)

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POSITIONS OPEN

POSTDOCTORAL POSITIONS—MICROBIOLOGY. Two positions available by 1 June 1987, to study molecular genetics and biochemistry of microbial pathogenesis. Projects use DNA cloning, monoclonal antibodies, and other molecular methods to study toxins of *E. coli* and *C. diphtheriae* as virulence factors and immunogens. Background in microbial genetics, molecular biology, or biochemistry preferred; knowledge of bacterial pathogenesis helpful. Submit curriculum vitae and names of three references to: **Dr. Randall K. Holmes, Chairman, Department of Microbiology, c/o Civilian Personnel Office, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATES

Positions for NCI postdoctoral training program in molecular and cellular mechanisms of carcinogenesis are available at **The University of Texas System Cancer Center (UTSCC)—Science Park.** Research programs focus on the following areas: somatic cell genetics, DNA repair and mutagenesis, carcinogen metabolism and adduct formation, tumor promotion, mechanisms of lymphomagenesis, normal and tumor cell differentiation, biochemical genetics, growth factors. Current approaches in whole animal and in vitro culture systems include: flow cytometry (BD FACS 440), HPLC, monoclonal antibody production, Southern blot analysis and DNA sequencing, isoenzyme analyses and electron microscopy. Applicants must be U.S. citizens or permanent residents and have a Ph.D., M.D., or D.V.M. degree. For application forms contact: **Dr. Thomas J. Slaga, Director, UTSCC, Science Park—Research Division, P.O. Box 389, Smithville, TX 78957. Telephone: 512-237-2403. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL OR RESEARCH POSITION AVAILABLE IN MOLECULAR-CELLULAR IMMUNOLOGY FOR Ph.D. OR M.D.

Studies deal with human lymphokine regulation and cell and gene cloning as part of a major program on the induction of transplant tolerance. Salary range from \$24,000 to \$34,000, depending on prior experience.

Send curriculum vitae together with names of three references to: **Marvin R. Garovoy, M.D., Director, Immunogenetics and Transplantation Laboratory, HSE-520, University of California, San Francisco, Third and Parnassus Avenues, San Francisco, CA 94143.**

The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL TRAINING IN TOXICOLOGY DUKE UNIVERSITY

We have several training opportunities for postdoctoral fellows. Toxicology training at Duke University encompasses over 50 faculty members in 11 departments and the School of Forestry and Environmental Studies. Research stresses mechanistic approaches to problems in contemporary toxicology. Areas of strength include carcinogenesis, ecotoxicology, immunotoxicology, marine biotechnology, organ/system toxicology, oxygen radical toxicology. Competitive salaries are offered. Applicants may have a Ph.D., M.D., or D.V.M. degree. Those who are interested should send curriculum vitae, description of current research, reprints of recent publications, and the names and addresses of two references to: **Doyle G. Graham, M.D., Ph.D., Director, Integrated Toxicology Program; Box 3712; Duke University Medical Center; Durham, NC 27705. Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE—An individual is sought at Ph.D. or equivalent level to fill the position of research associate in the Division of Critical Care Medicine, Department of Anesthesia. The present activities of the Division are largely clinical and teaching; therefore, the candidate must have established credentials in the field of clinical medical research. He/she should have an adequate statistical background and be a "self-starter." Salary and fringe benefits negotiable based on qualifications and experience. **Box 44, SCIENCE.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE. Positions are now available to join a multidisciplinary group studying the structure and regulation of the genes for the catecholamine neurotransmitter biosynthetic enzymes. Applicants should have a strong background in either recombinant DNA technology or neurochemistry/neuropharmacology. Send curriculum vitae, statement of research interest, and the names of three references to: **Dr. Barry B. Kaplan, Molecular Neurobiology Program, Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine, Pittsburgh, PA 15213.**

RESEARCH ASSOCIATE: Performs research in high energy and condensed matter physics involving computer simulation of disordered solids to study their physical properties and calculate the conductivity of various materials using LMTO and KKR-CPA atomic computer codes. Will perform modeling of semiconductor devices and study their associated transport properties. Requires Ph.D. degree in physics. Education to include 2 years of research in computer simulation and the study of properties of disordered solids and the use of LMTO and KKR-CPA computer codes. Hours: 9:00 a.m. to 5:00 p.m., 40 hours per week, at \$20,000 per year salary. This is a university position. Please send résumé to: **Illinois Department of Employment Security, 401 South State Street-3 South, Chicago, IL 60605. Attention: Robert S. Felton, Reference #V-IL 6910 F, an employer-paid ad.**

RESEARCH ASSOCIATE

Collaborate in NIH-funded studies of oxygen-induced lung injury and free radical related in vivo and in vitro research. Applicant should have Ph.D. in biochemistry or pharmacology with interest in toxicology, nutrition, free radical related injury. Experience with animals and in vitro biochemical techniques including enzyme assays, HPLC, spectrophotometry and GC are necessary. Beginning salary \$25,000 to \$30,000. Send curriculum vitae to: **R. J. Roberts, M.D., Ph.D., Department of Pediatrics, University of Virginia, Charlottesville, VA 22908. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE HOWARD HUGHES MEDICAL INSTITUTE HARVARD MEDICAL SCHOOL

The Laboratory of Molecular Genetics is seeking a research associate to study the hormonal regulation of gene expression. In particular, we are exploring the molecular mechanisms by which thyroid and other hormones control thyrotropin gene expression. Such studies include structure-function analyses of cis- and trans-[thyroid hormone receptor] elements involved in this regulation utilizing in vitro mutagenesis and gene transfer techniques. A Ph.D. or M.D. and prior experience in molecular biology and/or protein biochemistry are essential. Please send curriculum vitae and the names of three references to: **Dr. William W. Chin, Thrombosis Research Building, Room 917, Brigham and Women's Hospital, 20 Shattuck Street, Boston, MA 02115.**

RESEARCH ASSOCIATE/VISITING PROFESSOR—The Department of Veterinary Biosciences is seeking application for a 2-year tenure-track research associate position. Applicants must have a Ph.D. in either biochemistry, pharmacology/toxicology, teratology, or physiology with research experience in cellular/molecular biology. Ability to communicate and interact with other members of the research team is essential. Consideration will also be given to established investigators who wish to undertake a sabbatical project or a visiting professorship. The successful applicant will assist with the coordination of a Departmental Research Project investigating various biochemical and physiological actions of aldicarb. This individual will also be expected to develop a research project on aldicarb that utilizes his/her expertise. Salary commensurate with experience. Closing date is 30 May 1987 or until a successful candidate is selected. Send curriculum vitae and names of three references to: **Dr. Hara P. Misra, Head, Department of Veterinary Biosciences, Virginia-Maryland College of Veterinary Medicine, Virginia Tech, Blacksburg, VA 24061.**

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for a strong future

Hoechst-Roussel Pharmaceuticals Inc., fast-growing subsidiary of Hoechst Celanese Corporation, a \$4.6 billion division of one of the world's leading producers of chemicals and pharmaceuticals, has several newly created opportunities for published Pharmacologists or Physiologists. Primary responsibilities will entail developing contacts within medical institutions, universities, teaching hospitals and government research groups. In addition, you will prepare auxiliary technical materials and develop training programs for field sales personnel.

Ideal candidates will possess a BS in Pharmacy, a PhD in Physiology or Pharmacology, and 2-3 years teaching experience at the university level.

These highly visible positions will provide direct contact with prominent figures in the medical and pharmaceutical industry.

We offer a superb compensation package, including an excellent salary plus expense account, a company car and outstanding company benefits. Positions are available in Washington, D.C., Houston, TX and Central Florida.

Send curriculum vitae with current earnings requirements to Mr. Gary Kowalski, Hoechst-Roussel Pharmaceuticals Inc., Route 202-206 North, Somerville, New Jersey 08876. An affirmative action employer M/F/H.

Hoechst



Research Scientist EXPLORATORY RESEARCH

Amgen, an acknowledged leader in biotechnology research and product development, currently has an opportunity for a Research Scientist in our Exploratory Research Group.

The successful candidate will possess a Ph. D. in Molecular Biology or a related discipline as well as 2-4 years of postdoctoral experience in cDNA cloning. The candidate should be experienced in the cloning and expression of cDNA's using mammalian host systems.

Located in an attractive community about an hour northwest of Los Angeles, **Amgen** offers a stimulating and challenging scientific environment as well as a competitive compensation and benefits package. Please send resume, in confidence, to:

Recruitment, Dept. #111

AMGEN

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Thousand Oaks, CA 91320

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HEAD PEPTIDE SYNTHESIS GROUP

We are a young, dynamic, research-driven, result-oriented company, recognized as a leader in the field of peptide synthesis. We are looking for an experienced solid-phase peptide chemist to lead our peptide synthesis group at our East coast location.

You have experience and in-depth familiarity with solid-phase peptide synthesis as well as with peptide purification. You will lead and direct a group of chemists and be responsible for development and production of new peptides.

Qualifications must include a Ph.D. and several years of working experience.

For fully confidential consideration, please send your resume to: **BOX 35, SCIENCE.**

The Universities Space Research Association and The University of Maryland seek a DIRECTOR for a CENTER OF EXCELLENCE IN SPACE DATA AND INFORMATION SCIENCES at the NASA/Goddard Space Flight Center

Applications are invited for a Director to head a new research consortium of university, industry, and government computer scientists being established as a Center of Excellence in Space Data and Information Sciences at NASA's Goddard Space Flight Center in Greenbelt, Maryland. The Center of Excellence will be operated by the Universities Space Research Association, and the Director will hold a fully tenured faculty position in the Computer Science Department of the University of Maryland, College Park. The Center of Excellence will involve term-member researchers from leading university and industry computer science departments across the country through the use of high-bandwidth networks, in addition to supporting a resident and visiting research staff. The charter of the Center of Excellence will be to carry out state-of-the-art research on space data and information sciences in areas of potential long-term application to NASA programs in the space station era. Among the proposed thrusts for the Center of Excellence are the study of massive data base systems and architectures, image data compression, high speed on-line distributed data access systems, parallel processing applications, dynamic pattern recognition, expert data systems and natural querying languages, and automation and tele-robotics. The staff, including the university and industry members, will have access to NASA supercomputers, networks, parallel processors, data archives, image analysis systems, robots, etc.

Qualifications: The Center of Excellence will be the first research institution in the computer and information sciences to make extensive use of high band-width communication technology to link together its member faculty. We seek a dynamic and visionary scientist to lead this unique "telecenter". Applicants must be qualified for a tenured position in the Computer Science Department of the University of Maryland; must be knowledgeable in advanced data management and computational methods; and must have a demonstrated ability to lead collaborative research projects involving industry, university, and government. Salary and benefits are competitive and attractive and will depend on the individual's qualifications.

Apply no later than 15 May 1987 with complete resume on academic, professional, and personal data, including three references, to Dr. Robert Dorfman, Acting Dean, College of Computer, Mathematical, and Physical Sciences, Room 2300, Mathematics Building, University of Maryland, College Park, Maryland, 20742, (301) 454-4906.

*The University of Maryland and the
Universities Space Research Association are
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MOLECULAR BIOLOGIST GROUP LEADER

Merck Sharp & Dohme Research Laboratories is seeking a Molecular Biologist for a position as Group Leader. The individual selected will be involved in scientific management as well as research programs for the cloning and expression of genes of clinical importance for drug and vaccine development in several product areas.

The successful candidate will have five to seven years of postdoctoral experience and possess a demonstrated record of accomplishments and publications. Preference will be given to an individual who has extensive knowledge of control mechanisms in mammalian gene expression. Research experience should include design of new vectors, cell culture, intact mRNA isolation, full-length cDNA library construction, DNA sequencing, oligonucleotide synthesis, site-specific mutagenesis, subtraction cDNA library screening, high-level expression of cDNA in bacteria, yeast and mammalian cells and protein purification. The desire to be involved in multidisciplinary research and drug discovery efforts, excellent communication skills, and demonstrated leadership abilities are essential qualifications for the position.

Merck Sharp & Dohme Research Laboratories are located in West Point, Pennsylvania approximately 20 miles north of Philadelphia. Our salaries, benefits, and growth potential are excellent.

Interested candidates should submit their curriculum vitae and salary requirements to: **Jacques P. Kueny, Research Personnel**

Merck Sharp & Dohme Research Laboratories

West Point, PA 19486

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Provides executive direction and technical leadership for broad research programs involving physical and mechanical metallurgy, ceramics and composites, corrosion and environmental effects, mechanics of materials, thermostructural materials, structural integrity, non-destructive evaluation, fractography, and failure analysis. Formulates operating policies for approximately 134 scientists, technicians, and support personnel. Represents the Laboratory to other organizations.

Contact Ms. Freeland or Ms. Johnson at (202) 767-3030 (call collect) to obtain further information. Applications must be submitted by 15 May 1987 to:

**Naval Research Laboratory
Civilian Personnel Division
Code 63-006-13.1:TF (S)
4555 Overlook Avenue, S.W.
Washington, D.C. 20375-5000**

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Section Head Theoretical Chemistry

The Sandoz Research Institute, a world leader in pharmaceutical research and development, has an immediate new opening within its recently created Theoretical Chemistry program. We currently seek an individual who would head this new research effort both scientifically and administratively. The duties of this senior position involve the recruitment, organization and supervision of a team of molecular modelling, QSAR, programming, and ancillary personnel. Once established, this individual would be responsible for the development, application, and guidance in the use of state-of-the-art computational techniques for the rational design of pharmaceutical agents within our established disease areas. These responsibilities will be performed within the interactive, collaborative and multi-disciplinary atmosphere fostered within the Institute.

The Sandoz Research Institute has made a long-term commitment to the utilization of computational techniques in drug design with excellent computer and graphics facilities dedicated for the support of the program.

The successful candidate should have a PhD and an understanding of the drug design/development process, preferably with experience within the pharmaceutical research environment. The individual will also possess a broad-based background in the area of molecular modelling and its dependent molecular and quantum mechanical aspects. The candidate should have experience with, or an appreciation for, QSAR, pattern recognition and classical medicinal chemistry techniques. The person we seek must have a high degree of creativity, initiative and the leadership ability to establish, develop and scientifically inspire a dynamic new program.

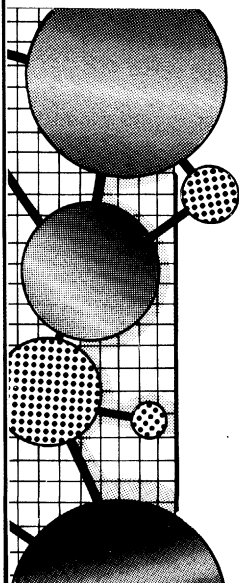
Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and an excellent benefits package. Our campus-like facilities are conveniently located in Northern New Jersey.

For prompt consideration, please forward your resume and salary requirements in confidence to:

Joseph P. Castellano
Director, Human Resources (403/1)

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SANDOZ PHARMACEUTICALS CORPORATION**
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RESEARCH SCIENTIST

This is a part time (75%) position. Working in conjunction with the Photochemical Conversion Group, conducts research on the biochemical pathways of electron transport in cyanobacteria. The research will cover the identification of electron carriers involved in hydrogen production and measurement of bioenergetic parameters using electrode and ESR methodology. Research responsibilities include publication in referred archival literature and presentation of research at seminars and conferences.

Ph.D. in biochemistry, physiology, anatomy, or other related science preferred. Research experience in the bioenergetics of photosynthesis and, in particular, cyanobacteria. Knowledge of pathways of electron transport and energy, nitrogen and hydrogen metabolism and research methodology of pathways of electron transport utilizing spectrophotometric and electron paramagnetic resonance techniques is essential. Demonstrated ability to do independent research. Prior training in the above and a record of publications. Excellent writing skills and superior analytic capabilities. Must work effectively with others.

Send resume and publication list to:

Jacquelyn Schilling
Lawrence Berkeley Laboratory
Employment Office, 90-1042
#1 Cyclotron Road
Berkeley, CA 94720

Please refer to Job #B/4100.
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Visiting Scientist Immunology

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

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



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Albany, NY Continuing Recruitment

The Virogenetics Corporation has been formed as a joint venture between the Institut Merieux and Health Research Incorporated (the non-profit research subsidiary of the NYS Department of Health). Virogenetics is involved in the development of therapeutic and diagnostic products for the human health care and veterinary markets.

Product development is currently under way within the context of strong basic research initiatives in cell biology, virology, immunology, and protein chemistry. Immediate openings are available at the PhD level in all of these disciplines. A major focus is research and

development of human animal vaccines utilizing viral vectors, with an emphasis on genetically engineered pox virus.

Compensation will be commensurate with qualifications. A comprehensive benefit package is included.

Due to expansion, resumes are accepted on a continual basis. Please send a resume and references, along with salary history to:

**Director of Research
Virogenetics Corporation
Room 1315, Corning Tower,
Empire State Plaza
Albany, NY 12237**

An affirmative action/equal opportunity employer.

POSITIONS OPEN

RESEARCH ASSOCIATE IN NEUROSCIENCE

Ph.D. with postdoctoral research experience in chronic and acute in situ intracellular recording from mammalian spinal cord neurons is required. The applicant should also be experienced with fluorescence, immuno-histochemical and neuronal pathway tracing techniques. A strong publication record is essential and demonstrated ability to attract research funding is preferred. Duties include teaching. This is a permanent, full-time research (non-tenure-track) position. Send curriculum vitae and three letters of reference by 1 May 1987 to: **Dr. V. K. Reddy, Department of VCAPP, College of Veterinary Medicine, Washington State University, Pullman, WA 99164-6520.**

Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE POSTDOCTORAL FELLOW

Research associate/postdoctoral position available immediately to join multidisciplinary 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: **J. Avruch, Chief, Diabetes Unit, Massachusetts General Hospital, Boston, MA 02114 or telephone: 617-726-6909.**

RESEARCH FELLOW. Position available immediately in chemical carcinogenesis research involving development of methods for detection of DNA adducts by tobacco-specific nitrosamines using ³²P-postlabeling techniques. This method is to be used for human dosimetry study. A multidisciplinary cancer research institute located in the northern suburbs of New York City offering an excellent research environment and sophisticated instrumentation. Send résumé to: **Dr. Fung Lung Chung, American Health Foundation, 1 Dana Road, Valhalla, NY 10595. An Equal Opportunity Employer M/F/H/V.**

SENIOR RESEARCH POSITION

Permanent position, section head at University Hospital. Experienced cell biologist with a strong immunochemical or biochemical background to participate in research on pathogenetic aspects of human carcinoma glycoconjugates. Doctorate and active benchwork experience essential. Excellent salary and benefits. Send curriculum vitae, details of expertise, and bibliography to: **G. F. Springer, M.D., Director, Immunochemistry Research, Evanston Hospital, 2650 Ridge Avenue, Evanston, IL 60201.**

Equal Opportunity Employer, M/F.

SENIOR RESEARCH SPECIALIST—Full-time. Ph.D. or near in psychology, sociology, nursing, neuroscience, or related field for funded long-term research project in narcolepsy. Must have familiarity with main-frame computer and major statistical packages. Send curriculum vitae to: **Dr. Felissa Cohen, University of Illinois at Chicago, College of Nursing, Department of Medicine-Surgery Nursing, 845 South Damen Avenue, Chicago, IL 60612.** For further information telephone: 312-996-7900. *The University of Illinois at Chicago is an Equal Opportunity/Affirmative Action Employer and encourages applications from members of minority groups and men.*

SENIOR RESEARCH SCIENTIST, GLYCO-PROTEIN BIOCHEMIST, full-time research position available for scientist (Ph.D. or M.D.) with expertise in the biosynthesis of extracellular matrices with emphasis on basement membranes. Experience in cell biology techniques would be valuable. The successful candidate will join a renal research group, with interests in renal metabolism and biochemical alterations in diabetes. Applicants must have a publication track record, grantsmanship abilities, and be capable of independent research. Salary (\$35,000 to \$50,000 per year) is assured for a 2- to 3-year period and will be commensurate with credentials. Please send curriculum vitae, publications list, past and present grant support information, and other supportive material to: **Mr. David Shepherd, Division of Nephrology and Hypertension, Clara Ford Pavilion 5, Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, MI 48202. Telephone: 313-876-2709.**

POSITIONS OPEN

RESEARCH ENGINEER (Medical Physics)—Ph.D. in Medical Physics plus 2 years of experience in research/teaching. Extensive theoretical and practical experience in medical physics, including digital cardiac imaging, radiological engineering, radiation protection or health physics, digital image processing and computer programming techniques. Research, develop, and design state-of-the-art medical x-ray/imaging systems. Test and improve digital x-ray imaging systems as applied to diagnostic radiology. Work closely with radiologists/cardiologists in clinical practice to identify ways to enhance the company's products. Perform experimental and theoretical studies of x-ray systems performance as related to image quality. \$43,000 per year. Permanent resident or U.S. citizenship required. Qualified applicants submit résumé and copy of ad to: **Department of Employment and Training, 1123 North Eutaw Street, Room 200, Baltimore, MD 21201.** Job location: Columbia, MD. Refer to J.O. #6018078.

NSERC—UNIVERSITY RESEARCH FELLOWS

The University of Saskatchewan, Department of Biology invites applications for research professorships from candidates who are either plant community ecologists or plant population biologists with interests in boreal or northern ecosystems. Candidates who succeed in the NSERC open competition will be appointed at the assistant professor level.

Applicants must hold the Ph.D. degree and have at least 2 years of postdoctoral experience. Only those who have a demonstrated ability to carry out productive and independent research of a high calibre will be considered. NSERC Fellowships are open only to Canadian citizens or permanent residents of Canada.

Qualified individuals should send their curriculum vitae, a brief description of their research objectives, and the names of three referees before 31 May 1987 to:

Dr. John King, Head, Department of Biology, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0, Canada.

SLOVER CHAIRS IN PHYSICAL OCEANOGRAPHY

In the coming year the Department of Oceanography at Old Dominion University will recruit two additional Slover Chairs in physical oceanography. These Chairs will be the second and third of five that will be filled over the next 4 years. For these two Chairs we will be seeking scientists interested in general physical oceanographic problems and the applications of remote sensing to physical oceanographic problems. We expect to be able to provide considerable resources for establishing the new laboratories. The appointments will be at the professor level. Applications will be received until the positions are filled.

The Department has been selected by the University for special emphasis and physical oceanography in particular has been singled out for enhancement. During this period of growth we will hire physical oceanographers with interests ranging from descriptive to theoretical. At the end of the growth phase we will have ten funded positions in physical oceanography.

Applications, including résumé and statement of research interest, or questions should be addressed to:

**Dr. William M. Dunstan, Chairman
Department of Oceanography
Old Dominion University
Norfolk, VA 23508
Telephone: 804-440-4285**

Old Dominion University is an Affirmative Action/Equal Opportunity Institution.

STAFF ASSOCIATE SENIOR STAFF ASSOCIATE

Opening for Research Staff appointment in the Department of Medicine, Columbia University. Candidate will be primarily involved with the preparation and analysis of arachidonic acid metabolites using GC/MS (HP 5987A). Maintenance and supervision of MS facility, interaction with several research groups required. GC/MS experience necessary, LC/MS experience helpful. M.Sc. or B.Sc. and suitable training minimum. Send curriculum vitae and two letters of reference to: **Dr. Steven J. Feinmark, Department of Medicine, College of Physicians and Surgeons of Columbia University, 630 West 168 Street, New York, NY 10032.**

POSITIONS OPEN

RESEARCH SCIENTISTS BIOGROWTH, INC.

BioGrowth, a new biotechnology company, has openings for the following scientists:

PROTEIN CHEMIST, Ph.D., with 3 to 5 years of experience in protein purification and characterization, preferably from recombinant organisms. Particular expertise in immunochemistry, affinity and HPLC chromatography, Western blotting, and protein function analysis is required.

MOLECULAR BIOLOGIST, Ph.D., with 2 years of additional experience in developing mammalian expression systems including retroviral and dhfr-amplifiable vectors.

BioGrowth, located in new facilities in the San Francisco Bay area, offers competitive salaries, benefits, and the opportunity to make a major contribution at a newly developing company. Please send your résumé, salary history, and list of three references to: **BioGrowth, Inc., PC-1, 3065 Atlas Road, Suite 117, Richmond, CA 94806.**

TERRESTRIAL PLANT ECOPHYSIOLOGY MOLECULAR EVOLUTION SMITHSONIAN TROPICAL RESEARCH INSTITUTE

Two permanent research positions are anticipated contingent on appropriation of funds at the Smithsonian Tropical Research Institute, a bureau of the Smithsonian Institution located in the Republic of Panama.

TERRESTRIAL PLANT ECOPHYSIOLOGIST. Including but not limited to plant-soil interactions, carbon and water balance, and photobiology.

MOLECULAR EVOLUTION. Including use of molecular techniques in the study of evolutionary biology (including population genetics). We are particularly interested in candidates who wish to develop research programs to take advantage of Panama's unique geographical position as a land bridge between continents and a barrier between oceans.

Successful candidates will be expected to establish independent research programs, and to interact with a large, active group of field-oriented ecologists, behaviorists, and evolutionists. STRI operated the biological reserve on Barro Colorado Island and a variety of marine facilities along the Pacific and Caribbean Coasts of Panama. Annual salary from \$27,000 to \$53,800 depending on experience plus housing allowance. Substantial set-up funds and research support. Position can begin between 1 January and 1 July 1988. Screening will begin 15 May 1987 and continue until positions are filled. Applications including curriculum vitae, reprints, names, addresses, and telephone numbers of five references; and statement of research interests should be sent to: **Molecular Evolution Search Committee, or Plant Ecophysiology Search Committee, Smithsonian Tropical Research Institute, APO, Miami, FL 34002-0011.** *The Smithsonian Institution is an Equal Opportunity/Affirmative Action Employer, and appointment can be made without regard to nationality.*

WASSERMAN PROFESSOR OF OPHTHALMOLOGY

The Department of Ophthalmology and the Jules Stein Eye Institute, University of California, Los Angeles (UCLA), School of Medicine, are seeking applicants for the Wasserman Professorship of Ophthalmology. Individuals dedicated to a career in vision research, teaching, and ophthalmic patient care are encouraged to apply. The Search Committee is seeking a clinically qualified ophthalmologist with special interest in cornea-external ocular disease and uveitis. Candidates need strong background in clinical and laboratory research, particularly related to immunologic, inflammatory, and infectious diseases of the eye.

Applications including curriculum vitae, bibliography, and a letter discussing career goals should be sent to:

**Robert S. Hepler, M.D., Chair
Wasserman Search Committee
Jules Stein Eye Institute
UCLA School of Medicine
Los Angeles, CA 90024**

All applications and inquiries will be treated in strict confidence. Candidates are encouraged to apply regardless of gender or ethnic origin. UCLA is an Equal Opportunity/Affirmative Action Employer.

RESEARCH TUMOR BIOLOGIST Immunohistology

CYTOGEN Corporation is seeking an Immunohistologist to join a rapidly growing R & D team. Expanding efforts in anti-cancer diagnostic and therapeutic applications of monoclonal antibodies have created a need for a highly-motivated, experienced individual to direct a new area of cancer research with emphasis and expertise in Immunohistology.

The individual selected will be expected to establish an Immunohistology lab and will interact with other scientists in the areas of antibody-mediated drug delivery, radioimmunotherapy, and evaluation of novel tumor models. The successful candidate must have a Ph.D. or M.D. and 3 to 7 years of postdoctoral research with expertise in Immunohistology.

We provide a competitive salary, plus a generous program of employee benefits in an invigorating and supportive scientific atmosphere. Qualified candidates are invited to submit a resume including salary history to: **Department IM, CYTOGEN Corporation, 201 College Road East, Princeton, NJ 08540.** Equal opportunity employer m/f.

CYTOGEN

CORPORATION

B R I S T O L - M Y E R S

ASSOCIATE RESEARCH SCIENTIST Virology

The Bristol-Myers Pharmaceutical Research and Development Division, at its new research facility in Wallingford, Connecticut, is seeking an exceptional Scientist for its Virology Research Department.

The successful candidate will have comprehensive expertise in antiviral chemotherapy coupled with a good understanding of research methodologies in in-vitro and in-vivo evaluation of potential antiviral agents. Tissue culture technique, handling of viral agents including retroviruses is required. This key position requires:

- M.S. Virology, Microbiology or related field
- 3 or more years relevant experience
- Must have ability to work independently
- Previous supervisory skills
- Computer Programming a plus

Bristol-Myers offers competitive salary compensation and a comprehensive benefit package including relocation assistance. For confidential consideration forward your resume, including salary history, in confidence to: **Department PD-12SC, BRISTOL-MYERS COMPANY, Pharmaceutical Research & Development Division, P.O. Box 5100, 5 Research Parkway, Wallingford, Connecticut 06492 (Principals Only)** An Equal Opportunity Employer.

Bristol-Myers

Pharmaceutical Research & Development Division

MICROBIOLOGICAL RESEARCH

Microbial Pathogenesis
Bacterial Attachment Mechanisms
Bacterial Toxins/Exoproductions
Microbial Invasion
Host/Parasite Interactions
Microbial Immunity

The Food and Drug Administration is seeking Staff Fellow applicants to conduct research on the effects of foodborne pathogens, their exoproductions and other acute pathogenicity factors, clarifying role(s) of various factors in human disease and elucidating host/parasite interactions which may result in other than acute disease.

Candidates must have, or have been certified by a university as meeting all requirements leading to, a doctorate in one of the following disciplines: Microbiology, Molecular Biology, Biochemistry, Genetics or closely related disciplines with emphasis on food microbiology and food safety. Candidates must not have more than seven years of research at the professional level and must be United States citizens or eligible for naturalization within four years.

The Staff Fellowship is an excepted appointment in the Federal Service. Initial appointments will be for a minimum 2 years. Salary (\$27,172 to \$41,309) is based on qualifications. A current curriculum vitae and bibliography are to be sent to Robert M. Twedt, Ph.D., Division of Microbiology (HFF-230), 200 C Street, SW, Washington, DC 20204.

* * * * *

FOOD SCIENCE RESEARCH

The Food and Drug Administration is seeking Staff Fellow applicants with a strong chemistry or food science background capable of leading research in one or more of the following areas: the chemical, physical and/or structural composition of foods, the effects of processing that are of public health importance, and the safety and interrelationships of packaging materials/processing practices.

Candidates must have, or have been certified by a university as meeting all requirements leading to, a doctorate in one of the following disciplines: Chemistry, Food Science, Chemical Engineering or closely related disciplines with emphasis on properties and composition of food. Candidates must not have more than seven years of research at the professional level and must be United States citizens or eligible for naturalization within four years.

The Staff Fellowship is an excepted appointment in the Federal Service. Initial appointments will be for a minimum 2 years. Salary (\$27,172 to \$41,309) is based on qualifications. A current curriculum vitae and bibliography are to be sent to Patricia Schwartz, Ph.D., Deputy Director, Division of Food Chemistry and Technology (HFF-211), 200 C Street, SW, Washington DC 20204.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
FOOD AND DRUG ADMINISTRATION
CENTER FOR FOOD SAFETY AND APPLIED NUTRITION

THE FOOD AND DRUG ADMINISTRATION IS AN EQUAL
OPPORTUNITY EMPLOYER

POSITIONS OPEN

TENURE-TRACK FACULTY POSITION UNIVERSITY OF CALIFORNIA, IRVINE

The Department of Microbiology and Molecular Genetics, College of Medicine, University of California, Irvine, has an opening for an ASSISTANT PROFESSOR in the tenure-track series for individuals with interests and experience in research on the control of gene expression. We especially invite applications from individuals conducting research in human molecular genetics; however, those investigating gene expression in other eukaryotic or prokaryotic systems, including bacterial pathogens, will also be considered. Candidates must have demonstrated excellence in independent research. The successful candidate would join a faculty active in molecular genetic research. Teaching duties would include courses to graduate and medical students. Send curriculum vitae and three letters of reference to: **Chairman, Faculty Search Committee, Department of Microbiology and Molecular Genetics, University of California, Irvine, CA 92717.** *An Affirmative Action/Equal Opportunity Employer.*

TOXICOLOGIST—ENVIRONMENTAL CONSULTING

Ph.D. toxicologist with more than 5 years of experience for a national practice in hazardous waste, resource recovery, and other areas of environmental health risk assessment. Expert testimony and business development experience are desirable. Attractive compensation package and opportunity to participate in the growth of a rapidly expanding company. **Gradient Corporation, 44 Brattle Street (Harvard Square), Cambridge, MA 02138.**

COURSES

THE MIND BROADENING ADVENTURE CONTINUES

with
**THE BIOTECHNOLOGY DIVISION OF
FISHER SCIENTIFIC**
sponsoring

14 April 1987: "A VIEW OF BIOTECHNOLOGY FROM THE SIDE LINES: Restriction enzymes gene juggling, AIDS virus and related topics" to be held at the Hyatt Cambridge in Boston, Massachusetts, and

21 April 1987: "MOLECULAR SELF-DEFENSE: A look at contemporary immunology in research and medicine" to be held at the Pooks Hill Marriott in Bethesda, Maryland. For further details write to: **S. Daniel Makover, Ph.D., Fisher Scientific, 711 Forbes Avenue, Pittsburgh, PA 15219 or telephone: 412-562-1702.**

PROGRAM

M.S. IN BIOTECHNOLOGY. A graduate program in biotechnology is offered at the **University of Tennessee, Knoxville.** It includes extensive training in cell biology and recombinant DNA methodologies, as well as process engineering, plant and animal tissue culture, and monoclonal antibodies. It also includes either co-op experience with industry, or a traditional thesis in an area of specialization. Seminar on sociological, bioethical, and regulatory aspects of biotechnology is part of the program. Financial assistance is available. Please apply to:

**Program Director, Biotechnology
M303 WLS Building
The University of Tennessee
Knoxville, TN 37996-0830**

TRAINING PROGRAM

POSTDOCTORAL AND PREDOCTORAL TRAINING IN ALCOHOL RESEARCH. Individuals interested in biomedical research on alcoholism, especially neurochemistry and endocrinological aspects, may send curriculum vitae and references to:

**Dr. Grace Y. Sun, Sinclair Research Farm
University of Missouri, Route 3
Columbia, MO 65203**

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MEETING

AMERICAN MALACOLOGICAL UNION ANNUAL MEETING, KEY WEST, FLORIDA 19-23 July 1987

The AMU will hold its annual meeting at Marriott's Casa Marina Resort in Key West, Florida, 19-23 July 1987. The meeting will feature two symposia: **Biology of the Polyplacophora, and Cenozoic Molluscan Communities of the Americas.** There will also be contributed papers sessions addressing marine, freshwater, and terrestrial mollusks. Participation by all molluscan workers is welcome. For information, contact: **William G. Lyons, Florida Department of Natural Resources, 100 Eighth Avenue SE, St. Petersburg, FL 33701. Telephone: 813-896-8626.**

SYMPOSIUM

XIXTH ANNUAL SCIENTIFIC SYMPOSIUM OF THE AMERICAN RED CROSS RECEPTOR MECHANISMS IN PLATELET FUNCTION

The XIXth Annual Scientific Symposium of the American Red Cross will be held in Washington, DC, 20 to 22 October 1987. The subject of the Symposium will be **Receptor Mechanisms in Platelet Function.** Topics to be covered include membrane glycoproteins and antigens, interaction of platelets with specific ligands (vWF, thrombin, adhesive proteins, collagen, ADP, and PAF), adrenergic receptors, transport and transmission mechanisms, and platelet contribution in metastasis, inflammation and atherosclerosis. A limited number of poster presentations can be accommodated.

For further information contact:

**Dr. G. A. Jamieson
American Red Cross
The Jerome H. Holland Laboratory
15601 Crabbs Branch Way
Rockville, MD 20855
Telephone: 301-738-0734**

FELLOWSHIPS

NEW ZEALAND SENIOR AND POSTDOCTORAL RESEARCH FELLOWSHIPS

Up to 14 fellowships are available to be taken up in 1987 for research in government departments in fields of importance to New Zealand.

SENIOR RESEARCH FELLOWSHIPS. Applicants should hold a Ph.D. or equivalent and have a distinguished record of scientific research and/or administration in a relevant field.

POSTDOCTORAL RESEARCH FELLOWSHIPS. Applicants should hold a doctorate or equivalent degree and have relevant postdoctoral research experience. Preference will be given to applicants with sound research proposals of significant national importance. Prior contact with the institution of choice is advisable. Applicants must have a good working knowledge of English, and meet New Zealand immigration requirements. Salaries, which are taxable, range from \$NZ41,711 to \$NZ67,000. Return travel to New Zealand is provided.

Application forms and information booklets may be obtained from: **Any New Zealand Diplomatic Posts or Box 12240, Wellington, New Zealand.** Applications close on 1 August 1987.

POSTDOCTORAL RESEARCH TRAINING FELLOWSHIPS

Fellowships available to residents of North America with Ph.D., M.D., or comparable degree and less than 1 year of postdoctoral laboratory experience by application date for beginning training in basic biomedical research. The 3-year award consists of a stipend of \$18,000 for the first year, with increments of \$1,000 for each of the next 2 years; \$1,000 per annum research allowance; travel to fellowship location; annual meeting. Application deadline 15 August 1987; fellowships activate following July. For application forms, write or phone: **The Helen Hay Whitney Foundation, 450 East 63 Street, New York, NY 10021; telephone: 212-751-8228.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP. A vacancy exists for a postdoctoral fellow interested in studying the **regulation of immunity** to tumor transplantation antigens and tumor histocompatibility antigens. Applicants should have basic training in **immunobiology.** Starting salary will be \$18,500 plus liberal fringe benefits. Subsidized Institute housing is available.

The Trudeau Institute is a private, not-for-profit, basic medical research institution located on the shore of Saranac Lake and near Lake Placid, NY.

Send curriculum vitae and names of three references to:

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

POSTDOCTORAL FELLOWSHIP POSITION: Available March 1987 for Ph.D. level chemist with radio, protein and/or metallic chemistry background. Opportunity to investigate innovative radiolabeling methods of monoclonal antibodies in a laboratory with extensive in vitro and in vivo evaluative capabilities. Please send résumé with names of three references to: **Richard L. Wahl, M.D., Department of Internal Medicine, Division of Nuclear Medicine, University of Michigan Medical Center, Ann Arbor, MI 48109-0028.** *A non-discriminatory, Affirmative Action Employer.*

The Irvington House Institute for Medical Research will award **TEN POSTDOCTORAL FELLOWSHIPS** in basic immunologic research for 2 years of study in the United States beginning 1 July, 1988. Applicants holding M.D.s, Ph.D.s, and M.D./Ph.D.s are encouraged to apply. Those having no more than 3 years of laboratory experience following the awarding of their degrees will receive priority. Successful candidates receive a stipend of \$20,000 and \$21,000 for years 1 and 2. Applications are available from: **Irvington House Institute for Medical Research, 120 East 56 Street, Room 330, New York, NY 10022** and are due on or before 17 August 1987.

SHANNON POINT MARINE CENTER (SPMC) WESTERN WASHINGTON UNIVERSITY

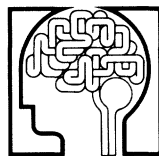
UNDERGRADUATE RESEARCH PROGRAM. SPMC invites applications from undergraduates interested in independent research experiences in the summer of 1987. Sundquist Research Fellowships will pay a \$2000 stipend for the 8-week session from 28 June to 22 August 1987. Additional program support from NSF is possible (proposal pending). Research projects include coastal terrestrial ecology, as well as a variety of marine biology topics. Housing available on-site. *Applications from women and members of minority groups encouraged.* Applications should include letter describing background and research interests, undergraduate transcript, and one letter of reference submitted by 1 May 1987. Applications and requests for further information should be addressed to: **Dr. Stephen D. Sulkin, Professor and Director, Shannon Point Marine Center, 1900 Shannon Point Road, Anacortes, WA 98221.**



Wayne State University

VISUAL SCIENCE RESEARCH FELLOWSHIPS. Predoctoral and postdoctoral fellowships are available on a competitive basis in the **Departments of Immunology/Microbiology, Anatomy/Cell Biology, or Ophthalmology** at Wayne State University, School of Medicine. General research areas include: anatomy, biochemistry, cell and molecular biology, clinical vision research, immunology, microbiology, neurobiology, virology, and visual psychophysics. This multidisciplinary program is supported by an NIH Training Grant, and requires U.S. citizenship or permanent residency status. Postdoctoral applicants having completed an ophthalmology residency program may qualify for additional supplementation and are encouraged to apply. Program information can be obtained by writing: **Dr. Paul C. Montgomery, Department of Immunology and Microbiology, Wayne State University Medical School, 540 East Canfield Avenue, Detroit, MI 48201.**

An Equal Opportunity/Affirmative Action Employer.



FIDIA RESEARCH FOUNDATION

PRESENTS

THE SECOND VITTORIO ERSPAMER AWARD LECTURE

"MOLECULAR GENETICS: APPLICATIONS TO CLINICAL NEUROLOGY"

Honoree and Speaker
Joseph B. Martin, M.D., Ph.D.
Julieanne Dorn Professor of Neurology
Harvard University
and

Chief, Neurology Service
Massachusetts General Hospital
on May 1, 1987 at 4:00
Georgetown University Medical Center
3900 Reservoir Road, N.W.
Washington, D.C.

For further information contact:

Fidia Research Foundation

3247 Que Street, N.W., Suite 200, Washington, D.C. 20007, Telephone: (202) 857-4277

SYMPOSIUM

MAY 2, 1987—9:00-6:00

MODULATORY PEPTIDES AND SYNAPTIC FUNCTION

Morning Session

MODULATORS OF SYNAPTIC FUNCTION

Chairman: R. Miledi, Irvine, California

Speakers: F.E. Bloom, La Jolla, California

E. Costa, Washington, D.C.

J.W. Daly, Bethesda, Maryland

V. Erspamer, Rome, Italy

A. Goldstein, Palo Alto, California

H. Kosterlitz, Aberdeen, Scotland

Afternoon Session

ROUNDTABLE ON EMERGING RESEARCH TRENDS IN NEUROSCIENCE

Moderator: R. Levi Montalcini, Rome, Italy

Speakers: F. Belardetti, New York, New York

P. De Camilli, Milan, Italy

J. Krause, St. Louis, Missouri

J. Morrison, La Jolla California

B. Wise, Washington, D.C.

This symposium will be held at:

National Academy of Sciences Auditorium

2100 C Street, N.W., Washington, D.C.

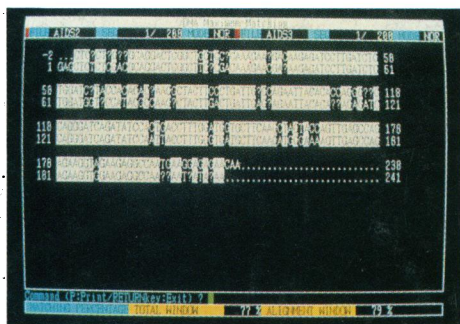
Pre-registration requested

For further information contact:

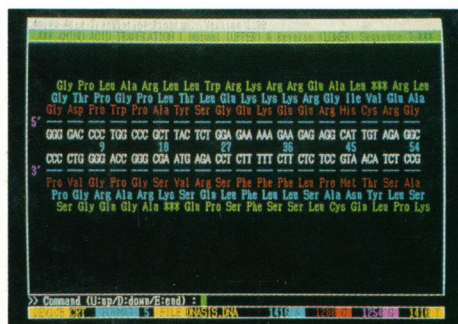
Fidia Research Foundation

2345 Que Street, N.W., Washington, D.C. 20007, Telephone: (202) 857-4277

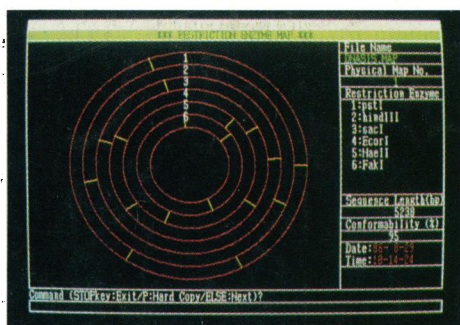
DNASIS™ sequencing software packs mainframe power into your PC.



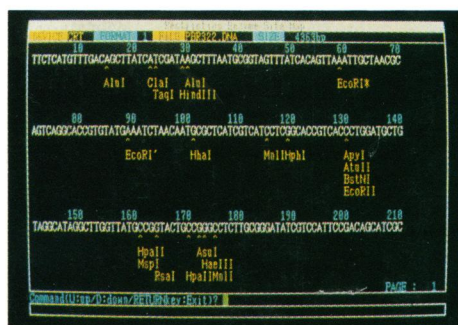
DNA Sequence Comparison



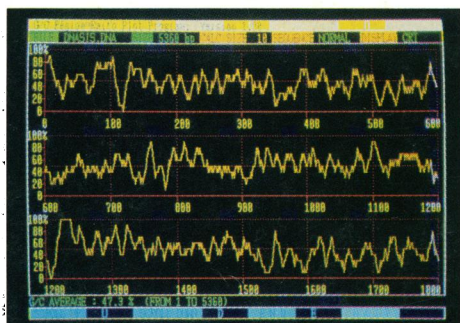
Amino Acid Translation



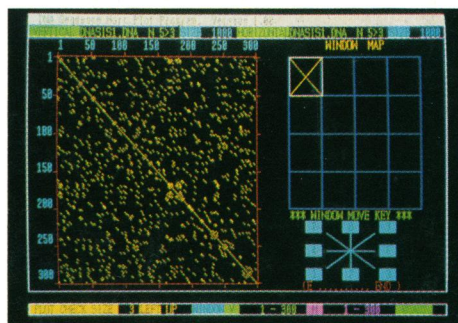
Restriction Enzyme Physical Map



Restriction Enzyme Site Map II



G/C-Rich Region Ratio of a sequence



Harr Plot Display

If you're on the leading edge of science, why let mainframe time-sharing or outmoded PC software slow you down? With new high-speed DNASIS software for DNA and protein sequence analysis, you can work the way you want to, where you want to and when you want to—without wasting time on unfriendly software and communication problems, or longing for functions your present software doesn't have.

Made by Hitachi and distributed worldwide by LKB, the DNASIS software package combines today's most advanced microcomputer technology with outstanding on-screen graphic capabilities and a unique laser CD reference disk.

DNASIS is designed to pack mainframe power into any IBM XT, AT, or other IBM-compatible personal computer and offers every function necessary for extensive DNA and protein manipulation and analysis. For example:

DNASIS lets you enter sequences very easily via the keyboard, a digitizer, or from data files, with optional voice synthesizer feedback to eliminate entry errors.

DNASIS will store your data, display it instantly, or print it. There are several formats to choose from.

DNASIS will analyze open reading frames, determine codon frequencies, and provide homology plot displays.

DNASIS will also create restriction maps automatically from gel data via digitizer and display G/C-rich regions, palindromes and controlling elements.

In shotgun sequencing, DNASIS will automatically connect all fragments to form a single sequence.

The crowning touch is the unique DNASIS compact reference disk. Used with Hitachi's exclusive CD-ROM Disk Drive system, it provides instant access to the complete GenBank® and NBRF databases. An invaluable reference source, the DNASIS disk has more data storage capacity than 1,500 floppies and will be regularly updated.

Why wait, when DNASIS can offer you so much? Contact your local LKB dealer. Ask for a demonstration disk and a fact-filled DNASIS brochure today.

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Electrophoresis Division

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London (01)657 88 22 • Lucerne (041)57 44 57 • Madras (044)45 28 74 • Moscow (095)255-6984 • Munich (089)85 830 • Paris (01)64 46 36 36
Rome (06)39 90 33 • Sao Paulo (011)578 41 38 • Stockholm (08)764 75 50 • Tokyo (03)293-5141 • Turku (021)678 111 • Vienna + 43 (222)92 16 07
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