

excitable, and so the subject matter is well chosen.

The stated intention of this book's source symposium was to introduce workers in different parts of the excitable membrane field to each other, and the book remains true to this purpose. This is not, therefore, a place for the novice to learn about the subject. (Try Hille's *Ionic Channels of Excitable Membranes* [Sinauer, 1984] for that.) The chapters are pitched well to the intended audience; each provides an overview of a problem in a specific domain of the field to workers in the other domains. Thus, by reading G. Inesi's excellent chapter on rapid quench-flow studies in sarcoplasmic reticulum, electrophysiologists will see why biochemists need to measure fast ion fluxes into membrane vesicles. Likewise, J. H. Steinbach and S. H. Sine's contribution on the interpretation of single-channel kinetics can be read by biochemists who want to comprehend the flavor of this subject, which is arcane but essential for understanding what ion channels actually do. Numerous other chapters will similarly facilitate the transfer of information within this multidisciplinary field, chapters on cloning of genes for very large membrane proteins, physical structures of channels and pumps, labeling of functional sites on channels, and the cell biology of multi-subunit membrane protein assembly, to list a few examples.

There is a price to be paid for covering a broad area in a rather thin, multi-author volume: most chapters are quite short, and some tend toward superficiality. So while this is not a book to use to find out the latest in your own area of excitable membranes, it is an excellent place to be reminded of recent advances in those areas of the subject that you should know about, but don't. My only scolding is directed at a few authors whose papers are blatantly perfunctory. The editors should have resisted the forces of collegial *politesse* (which are indeed strong in this traditionally friendly field) and refused to include these few chapters.

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Books Received

Afro-Caribbean Folk Medicine. Michel Laguerre. Bergin and Garvey, South Hadley, MA, 1987. viii, 120 pp., illus. \$29.95.

America the Vulnerable. The Threat of Chemical and Biological Warfare. Joseph D. Douglass, Jr., and Neil C. Livingstone. Lexington (Heath), Lexington, MA 1987. xviii, 205 pp. + plates. \$19.95.

Amyloidosis. Jan Marrink and Martin H. van Rijswijk. Eds. Nijhoff, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). xvi, 378 pp., illus. \$92. From a course, Groningen, The Netherlands, Oct. 1986.

Approximation Theory V. C. K. Chui, L. L. Schumaker, and J. D. Ward, Eds. Academic Press, Orlando, FL, 1986. xviii, 654 pp., \$65. From a symposium, College Station, TX, Jan. 1986.

Arenaviruses. Genes, Proteins, and Expression. M. B. A. Oldstone, Ed. Springer-Verlag, New York, 1987. viii, 116 pp., illus. Current Topics in Microbiology and Immunology 133.

The Art of Problem Solving in Organic Chemistry. Miguel E. Alonso. Wiley-Interscience, New York, 1987. xii, 324 pp., illus. \$29.95.

Asymmetric Synthesis. Construction of Chiral Molecules Using Amino Acids. Gary M. Coppola and Herbert F. Schuster. Wiley-Interscience, New York, 1987.

The Atom-Atom Potential Method. Applications to Organic Molecular Solids. A. J. Pertsin and A. I. Kitagorodsky. Springer-Verlag, New York, 1987. x, 397 pp., illus. \$79. Springer Series in Chemical Physics, vol. 43.

Atomic Processes in Electron-Ion and Ion-Ion Collisions. F. Brouillard, Ed. Plenum, New York, 1986. viii, 494 pp., illus. \$69.50. NATO ASI Series, vol. 145. From a symposium, Han/Lesse, Belgium, Sept.-Oct. 1985.

The Biology and Evolution of Language. Philip Lieberman. Harvard University Press, Cambridge, MA, 1987. xii, 379 pp., illus. Paper, \$10.95. Reprint, 1984 edition.

Biology for Living. Bruce Wallace and George M. Simmons, Jr. Johns Hopkins University Press, Baltimore, MD, 1987. x, 444 pp., illus. \$32.95.

The Biology of Symbiosis. D. C. Smith and A. E. Douglas. Arnold, Baltimore, MD, 1987. xii, 302 pp., illus. Paper, \$29.95. Contemporary Biology.

Clay Minerals and the Origin of Life. A. G. Cairns-Smith and H. Hartman, Eds. Cambridge University Press, New York, 1987. xiv, 193 pp. \$34.50. From a workshop, Glasgow, July 1983.

Cluster Models and Other Topics. Y. Akaishi et al. World Scientific, Singapore, 1986 (U.S. distributor, Taylor and Francis, Philadelphia). x, 510 pp. \$79. International Review of Nuclear Physics, vol. 4.

Cocaine. Clinical and Biobehavioral Aspects. Seymour Fisher, Allen Raskin, and E. H. Uhlenhuth, Eds. Oxford University Press, New York, 1987. xiv, 256 pp., illus. \$24.95.

Decision-Making in the Soviet Energy Industry. Selected Papers with Analysis. Katherine E. Young, Ed. Delphic Associates, Falls Church, VA, 1986. x, 166 pp. Paper, \$27.50. Translated from the Russian by Vladimir Talmay and Peter Sargent.

Decompositions of Manifolds. Robert J. Daverman. Academic Press, Orlando, FL, 1986. x, 317 pp., illus. \$55. Pure and Applied Mathematics.

Defects in Solids. Modern Techniques. A. V. Chadwick and M. Terenzi, Eds. Plenum, New York, 1986. xii, 473 pp., illus. \$79.50. NATO ASI Series, vol. 147. From a symposium, Cetraro, Calabria, Italy, Sept. 1985.

Experimental Fluvial Geomorphology. Stanley A. Schumm, M. Paul Mosley, and William E. Weaver. Wiley-Interscience, New York, 1987. xiv, 413 pp., illus. \$49.95.

Exploratorium Cookbook III. A Construction Manual for Exploratorium Exhibits. Ron Hipschman. Exploratorium, San Francisco, 1987. Various pagings, illus. Paper, \$70.

Families and the Prospect of Nuclear Attack/Holocaust. Teresa D. Marciano and Marvin B. Sussman, Eds. Haworth, New York, 1987. viii, 139 pp. \$22.95. Published also as *Marriage and Family Review*, vol. 10, no. 2, 1986.

Farming and Birds. Raymond J. O'Connor and Michael Shrubbs. Cambridge University Press, New York, 1987. xii, 290 pp. illus. \$34.50.

Fearful Symmetry. The Search for Beauty in Modern Physics. A. Zee. Macmillan, New York, 1986. xiv, 322 pp., illus. \$25.

Fields and Geometry. Arkadiusz Jadczyk, Ed. World Scientific, Singapore, 1986 (U.S. distributor, Taylor and Francis, Philadelphia). x, 675 pp. \$63. From a workshop, Karpacz, Poland, Feb. 1986.

The Fisherman's Problem. Ecology and Law in the California Fisheries, 1850-1980. Arthur F. McEvoy. Cambridge University Press, New York, 1986. xviii, 368 pp., illus. \$39.50. Studies in Environment and History.

Fluctuations and Stochastic Phenomena in Condensed Matter. L. Garrido, Ed. Springer-Verlag, New York, 1987. viii, 413 pp., illus. \$40.60. Lecture Notes in Physics, 268. From a conference, Barcelona, May 1986.

A Folio of Distributions. A Collection of Theoretical Quantile-Quantile Plots. Edward B. Fowlkes. Dekker, New York, 1987. xii, 540 pp., illus. \$99.75. Statistics, vol. 78.

The Lipid Handbook. Frank D. Gunstone, John L. Harwood, and Fred B. Padley, Eds. Chapman and Hall (Methuen), New York, 1986. xii, 571 pp., illus. + dictionary. \$195.

Metallic Magnetism. H. Capellmann, Ed. Springer-Verlag, New York, 1987. xii, 232 pp., illus. \$49.50. Topics in Current Physics, vol. 42.

Methods of Biochemical Analysis. Vol. 32. David Glick, Ed. Wiley-Interscience, New York, 1987. x, 450 pp., illus. \$49.95.

Microbiological Decomposition of Chlorinated Aromatic Compounds. Melissa L. Rocking-Dubinsky, Gary S. Sayler, and James W. Blackburn. Dekker, New York, 1987. xiv, 315 pp., illus. \$69.75. Microbiology Series, vol. 18.

Microcirculatory Technology. Carleton H. Baker and William L. Nastuk, Eds. Academic Press, New York, 1986. xvi, 534 pp., illus. \$80. Physical Techniques in Biology and Medicine.

Modelling and Application of Stochastic Processes. Uday B. Desai, Ed. Kluwer, Boston, 1986. xiv, 288 pp. \$54.95.

Modelling under Uncertainty 1986. S. B. Jones and D. G. S. Davies, Eds. Institute of Physics, Boston, MA, 1986 (distributor, Taylor and Francis, Philadelphia). xii, 329 pp., illus. \$66. From a conference, Stoke Poges, Slough, U.K., April 1986.

Modern Methods in the Analysis and Structural Elucidation of Mycotoxins. Richard J. Cole, Ed. Academic Press, Orlando, FL, 1986. xiv, 471 pp., illus. \$75.

The Molecular and Cellular Biology of Fertilization. Jerry L. Hedrick, Ed. Plenum, New York, 1986. xviii, 454 pp., illus. \$75. Advances in Experimental Medicine and Biology, vol. 207. From a symposium, Davis, CA, June 1984.

Molecular Biology of the Gene. Vol. 1. James D. Watson et al., Eds. 4th ed. Benjamin/Cummings, Menlo Park, CA, 1987. xxxii, 744 pp. + index, illus. \$39.95.

Monsoons. Jay S. Fein and Pamela L. Stephens, Eds. Wiley-Interscience, New York, 1987. xxii, 632 pp., illus. \$74.95.

Perspectives in Ethology. Vol. 7, Alternatives. P. P. G. Bateson and Peter H. Klopfer, Eds. Plenum, New York, 1987. xvi, 281 pp., illus. \$42.50.

Perspectives in Hydrogen Metals. Collected Papers on the Effect of Hydrogen on the Properties of Metals and Alloys. M. F. Ashby and J. P. Hirth, Eds. Pergamon, New York, 1986. xiv, 758 pp., illus. \$81.

Perspectives on Receptor Classification. J. W. Black, D. H. Jenkinson, and V. P. Gerskowitch, Eds. Liss, New York, 1987. xii, 295 pp., illus. \$69.50. Receptor Biochemistry and Methodology, vol. 6. From a symposium, London, Dec. 1985.

Primate Evolution and Human Origins. Russell L. Ciochon and John G. Fleagle, Aldine de Gruyter, New York, 1987. viii, 398 pp., illus. Paper, \$18.95. Reprint, 1985 edition.

Principles of Thermodynamics and Statistical Mechanics. D. F. Lawden. Wiley, New York, 1987. xiv, 154 pp., illus. \$34.95.

Probability in Branch Spaces. Stable and Infinitely Divisible Distributions. Werner Linde. Wiley-Interscience, New York, 1986. 195 pp. \$29.95.

Probability, Statistical Mechanics, and Number Theory. A Volume Dedicated to Mark Kac. Gian-Carlo Rota, Ed. Academic Press, New York, 1986. xii, 194 pp. \$59.50. Advances in Mathematics Supplementary Studies.

Russian-English Dictionary of Scientific and Technical Usage. B. V. Kuznetsov. Pergamon, New York, 1986. 656 pp. \$83.

Sampling Problems for the Chemical Analysis of Sludge, Soils and Plants. A. Gomez, R. Leschber, and P. L'Hermite, Eds. Published for the Commission of the European Communities by Elsevier, New York, 1986. vi, 94 pp., illus. \$29.75. From a seminar, Bordeaux, France, Nov. 1985.

Search for the Universal Ancestors. The Origins of Life. H. Hartman, J. G. Lawless, and P. Morrison, Eds. Blackwell Scientific, Palo Alto, CA, 1987. xvi, 142 pp., illus. Paper, \$14.95. Reprint, 1985 edition.

Sedimentation in the African Rifts. L. E. Frostick et al., Eds. Blackwell Scientific, Palo Alto, CA, 1986. xiv, 382 pp., illus. \$88. Geological Society Special Publication no. 25. From a meeting, London, Sept. 1984.

Soil Resource Surveys for Forestry. Soil, Terrain, and Site Mapping in Boreal and Temperate Forests. K. W. G. Valentine. Oxford University Press, New York, 1986. x, 147 pp., illus. \$45. Oxford Science Publications. Monographs on Soil and Resources Survey, no. 10.

Solar Wind-Magnetosphere Coupling. Y. Kamide
(Continued on page 446)

Products & Materials

Pascal Subroutine Library

Mathpac, Statpac, Graphpac, Utilities, and Spectrapac are the five volumes of a Pascal subroutine library that supplies the subroutines as source code. Mathpac contains procedures and functions for matrix and vector operations, polynomial root evaluation, systems of linear equations, and differentiation and integration. Statpac provides routines for statistical analysis, such as random number generators, linear programming, data fitting, and nonparametric statistics. Graphpac's routines create screen graphics that include world coordinates, line plots, autoscaling and autoplotted, and interactive cursor control. Utilities contain subroutines that make MS DOS functions available within programs. Spectrapac contains routines for spectrometry and chromatography data analysis. Scientific Logics. Circle 578.

Variable-Speed Shaker

The Shaker Table is a shaker with a 1-inch (2.5-cm) circular orbit. Both very mild shaking and vigorous agitation and aeration are possible. The shaker distributes rotary agitation uniformly over the platform's surface. Coated electronics permit the Shaker Table to be used in very humid environments. The shaker has three trays lined with rubber to prevent flasks from slipping. Wheaton Instruments. Circle 577.

Database of Hazardous Chemicals

Saf-T-Manager is a computer software and database program for organizing and accessing material safety data sheets, emergency response measures, employee training histories, chemical inventories, and records of laboratory inspections. The program comes with more than 1500 safety data sheets; the user may create additional data sheets for other hazardous substances. Users

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.

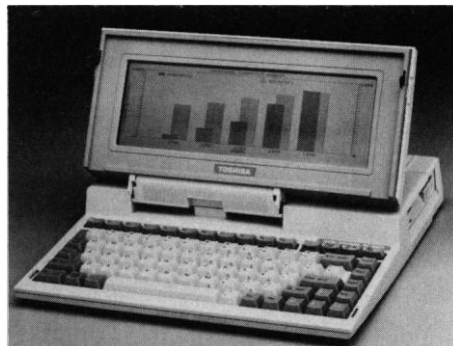
may customize the existing data sheets with site-specific information, such as procedures for handling chemicals. Saf-T-Manager is available on standard 5.25-inch disks, on high-density 5.25-inch disks, or on a 20-megabyte hard disk card. J. T. Baker Chemical. Circle 581.

Bulk Growth Factors

Epidermal and nerve growth factors are available in bulk in quantities of 0.5 mg to 10.0 g. The growth factors are supplied in a lyophilized form. Both have a purity of greater than 95% and are low in endotoxin. Bioproducts for Science. Circle 580.

Portable Personal Computer

The T1000 is a portable personal computer that weighs less than 3 kg. It has a built-in handle and a rechargeable battery that lasts for 5 hours. The computer also has a 110-V power adapter and an optional automobile power adapter. The 82-key keyboard contains a numeric keypad, cursor control keys, and a function key. MS DOS 2.11 resides in



read-only memory, freeing the 3.5-inch, 720-kilobyte disk drive for application disks. The liquid-crystal display shows 25 lines of 80 characters each. Six ports allow the computer to interface with a printer, an external disk drive, a second numeric keypad, or other hardware. Toshiba America, Information Systems Division. Circle 576.

Blue-White Screening Kit

Alter-Gene is a vector kit for positive blue-white identification of deletions and insertions in a cloned DNA fragment. The researcher modifies the 5' or 3' end of a cloned fragment with one oligonucleotide in a 2-hour reaction. After transformation into the supplied host bacteria, the positive colony turns blue. No radioactive probes are

necessary. The kit contains three plasmids, a helper phage, host bacteria, control DNA, control oligonucleotide, and instructions. Gold BioTechnology. Circle 584.

Protein-Free Growth Medium

ABC is a protein-free tissue-culture medium that supports the growth of hybridomas and other transformed lymphocytes. It is supplied as a sterile, filtered concentrate. When added to sterile water, the resulting complete medium can support the growth of hybridomas at cell densities of 1,000 to 700,000 cells per milliliter. Monoclonal antibody purity of the conditioned medium is greater than 85%. Cell Enterprises. Circle 583.

Fully Automated Peptide Synthesis System

Model 9600 synthesizes peptides by means of fluorenylmethyloxycarbonyl chemistry. It is controlled by an IBM AT computer with expert-system software. The computer can be linked to as many as eight independent synthesizers at once. Model 9600 features 20 amino acid reservoirs, filtered reagent lines, a flow-path map, and adjustable resin agitation. Biosearch. Circle 582.

Literature

Laboratory Washers, Dryers and Accessories is a 12-page catalog of glassware washers and dryers and accessories such as baskets and detergents. Hotpack. Circle 587.

The *Partners in Progress* catalog lists more than 100 biochemicals along with their features and uses. Miles Diagnostics, Pentex Products. Circle 588.

SPECTRONIC 301 and 401 is a data sheet on two microprocessor-controlled spectrophotometers. Milton Roy, Analytical Products Division. Circle 590.

MICRO SYRINGES is a catalog featuring microsyringes, liquid chromatography syringes, needles, and liquid- and gas-handling devices. Kloehn. Circle 591.

Model L7-65 is a brochure about an ultracentrifuge for nucleic acids with a speed of 65,000 rev/min. Beckman Instruments, Spinco Division. Circle 592.

Fluorochromes and Suggested Filter Sets for Fluorescence is a chart that indicates the best filter-reflector combinations for incident-light fluorescence microscopy. Carl Zeiss. Circle 593.

(Continued from page 444)

and J. A. Slavin. Reidel, Dordrecht, 1986. xvi, 807 pp., illus. \$154. Astrophysics and Space Science Library, Proceedings, vol. 126. From a conference, Pasadena, CA, Feb. 1985.

The Soviet Cosmonaut Team. A Comprehensive Guide to the Men and Women of the Soviet Manned Space Programme. Gordon R. Hooper. Univelt, San Diego, CA, 1986. x, 320 pp., illus. \$25.

Spectroscopy with Polarized Light. Solute Alignment by Photosynthesis, in Liquid Crystals, Polymers, and Membranes. Josef Michl and Erik W. Thulstrup. VCH, New York, 1987. xvi, 873 pp., illus. \$120.

Stars, Nebulae and the Interstellar Medium. Observational Physics and Astrophysics. C. R. Kitchin. Hilger, Boston, 1987 (distributor, Taylor and Francis, Philadelphia). xiv, 359 pp., illus. \$77; paper, \$33.

Statistical Physics. Yu. L. Klimontovich. Harwood Academic (Gordon and Breach), New York, 1986. xxvi, 734 pp., illus. \$175. Translated from the Russian edition (1982) by G. Pontecorvo.

Stereochemistry of Organic and Bioorganic Transformations. Wilhelm Bartmann and K. Barry Sharpless, Eds., VCH, New York, 1987. xii, 330 pp., illus. \$54. From a conference, Schloss Reisensburg, F. R. G., Oct. 1986.

Structural Fabrics in Deep Sea Drilling Project Cores from Forearcs. J. Casey Moore, Ed. Geological Society of America, Boulder, CO, 1986. viii, 160 pp., illus., + chart in pocket. \$18. Geological Society of America Memoir 166.

The Structure of Written Communication. Studies in Reciprocity between Writers and Readers. Martin Nystrand. Academic Press, New York, 1986. xiv, 234 pp. \$29.95.

Structure/Reactivity and Thermochemistry of Ions. Pierre Ausloos and Sharon G. Lias, Eds. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). viii, 493 pp., illus. \$98.50. NATO Advanced Study Institute Series C, vol. 193. From an institute, Les Arcs, France, June-July 1986.

The Study of Variable Stars Using Small Telescopes. John R. Percy, Ed. Cambridge University Press, New York, 1987. vi, 265 pp., illus. \$34.50. From a symposium, Toronto, July 1985.

Submarine Warfare. Today and Tomorrow. John E. Moore and Richard Compton-Hall. Adler and Adler, Bethesda, MD, 1987 (distributor, Harper and Row, New York). xii, 308 pp. + plates. \$22.95.

The Superdeep Well of the Kola Peninsula. Ye. A. Kozlovsky, Ed. Springer-Verlag, New York, 1987. xii, 558 pp., illus. \$118. Exploration of the Deep Continental Crust. Translated from the Russian edition (Moscow, 1984).

The Surface Scientist's Guide to Organometallic Chemistry. Mark R. Albert and John T. Yates, Jr. American Chemical Society, Washington, DC, 1987. xiv, 214 pp., illus. \$49.95.

Synonymy and Semantic Classification. K. Sparck Jones. Edinburgh University Press, Edinburgh, Scotland, 1987 (U.S. distributor, Columbia University Press, New York). viii, 286 pp., illus. \$35. Edinburgh Information Technology Series, 1.

Systolic Arrays. Will Moore, Andrew McCabe, and Roddy Urquhart, Eds. Hilger, Boston, MA, 1987 (distributor, Taylor and Francis, Philadelphia). xvi, 334 pp., illus. \$50. From a workshop, Oxford, U.K., July 1986.

Techniques for the Analysis of Membrane Proteins. C. Ian Ragan and Richard J. Cherry, Eds. Chapman and Hall, New York, 1987. xii, 441 pp., illus. \$99.

Techniques in Cell Cycle Analysis. Joe W. Gray and Zbigniew Darzynkiewicz, Eds. Humana, Clifton, NJ, 1987. xviii, 407 pp., illus. \$69.50. Biological Methods.

Thiopene and Its Derivatives. Salo Gronowitz, Ed. Part 2, xiv, 906 pp., illus. \$195. Part 3, xiv, 1272 pp., illus. \$260. Wiley-Interscience, New York, 1986. The Chemistry of Heterocyclic Compounds, vol. 44.

Tunable Solid-State Lasers II. A. B. Budgor, L. Esterowitz, and L. G. DeShazer, Eds. Springer-Verlag, New York, 1986. xii, 368 pp., illus. \$50. Springer Series in Optical Sciences, vol. 52. From a meeting, Zigzag, OR, June 1986.

Ultrasound. Medical Applications, Biological Effects, and Hazard Potential. M. H. Repacholi, M. Grandolfo, and A. Rindi, Eds. Plenum, New York, 1987. xii, 374 pp., illus. \$75. From a congress, Erice, Italy, Sept. 1985.

Under the Ether Dome. A Physician's Apprenticeship at the Massachusetts General Hospital. Stephen A. Hoffman. Scribners, New York, 1987. xvi, 300 pp. \$18.95.

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Excellent opportunities exist for innovative interdisciplinary research in our new and superbly equipped Research and Development Center in suburban Philadelphia near Valley Forge, Pennsylvania.

The Department of Molecular Genetics is seeking outstanding scientists with Ph.D.'s in Microbiology, Biochemistry, Molecular Biology or equivalent and expertise in the following areas: monokines, lymphokines, cell surface receptors, antivirals, vaccine development, antifungals and heterologous gene expression in bacteria, yeast, or mammalian cells.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential review, please forward your C.V. and names of three references to: Robert F. Obst, R&D Senior Employment Consultant, R0078, Smith Kline & French Laboratories, Research and Development Division, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

SR. SCIENTISTS

Salsbury Laboratories, a world-wide leader in the development and marketing of Animal Health vaccines, has the following opportunities available for experienced, doctorate-level scientists who have a hands-on approach to their discipline:

MICROBIOLOGIST

Potential candidates for this position should have a Ph.D. in Microbiology, a minimum of five years experience in vaccine development, and extensive knowledge of poultry diseases, along with a proven record of success in the development of vaccines for their prevention.

CELL BIOLOGIST

The candidate we select will have a doctorate's degree in Cell Biology or related field, a minimum of five years experience in cell line development and tissue culture research. Additional experience in the field of Virology is a plus.

We offer an outstanding work environment, plus a competitive salary and benefits program. For confidential consideration, send your resume and salary history to:



Director, Human Resources
Salsbury Laboratories, Inc.
2000 Rockford Road
Charles City, IA 50616

An Equal Opportunity Employer

TOXICOLOGISTS

The growing \$3.8 billion success of Abbott Laboratories is due in part not only to outstanding research but to our exceptional award-winning management. This strength extends to our Pharmaceutical Products Division, where on-going new product developments have created a need for individuals to support our preclinical safety studies.

Specific responsibilities will include preparing toxicology/teratology protocols, report writing, monitoring and interpreting data, coordinating work with Pathology, and acting as project/division liaison as well as instructing technicians. We require a Ph.D. in Biosciences or a DVM, preferably combined with related experience attained in an industrial setting or related research facility. Post-doctoral training at a recognized institution also preferred.

In addition to an outstanding professional environment, Abbott provides an excellent salary and full benefits including profit sharing and stock retirement plan. We are headquartered in an attractive suburban area just 30 miles north of Chicago. For confidential consideration, please send your resume with salary history to: **Patricia Handy/Corporate Placement, Dept. S/7-24**. Abbott is an Affirmative Action Employer.

ABBOTT
ABBOTT PARK IL 60064

"Health Care Worldwide"

POSITIONS OPEN

ASSISTANT RESEARCH PROFESSOR/ RESEARCH SCIENTIST WASHINGTON, D.C.

Molecular biologist/cell biologist with exceptional skills in tissue culture/gene regulation. Good salary, promotion, and independent research opportunities. Send résumé to: **Professor J. M. Bailey, Biochemistry, George Washington University School of Medicine, Washington, D.C. 20037.** *The George Washington University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT SOIL CHEMIST. The individual will investigate processes that determine the fate of environmental pollutants in a full-time research position supported by station funds. Suitable areas of research include identification and reactions of toxic organics in composted municipal and industrial wastes, effects of surfaces on the persistence of low molecular weight hydrocarbons, and effects of agricultural practices on yields of nutrients and pesticides to waterways. The individual will be expected to initiate and conduct meaningful investigations in both laboratory and field, and to conclude them with cogent written and oral reports. Ph.D. in physical organic or soil chemistry, strong academic background, and demonstrated competence required. Send letter of application with description of research goals, résumé, undergraduate and graduate transcripts, and the names, addresses and telephone numbers of three references to: **Dr. Charles R. Frink, Chief, Department of Soil and Water, The Connecticut Agricultural Experiment Station, P.O. Box 1106, New Haven, CT 06504.** *An Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE I (ANTICIPATED). Chemical analyst with B.S. degree in science related field and experience in biological sample preparation and extraction. Experience in TLC and microanalytical techniques preferred. Duties relate to detection of drugs. Submit résumé by 20 July 1987 to: **Dr. Steven Barker, Department of Veterinary Physiology, Pharmacology and Toxicology, Louisiana State University School of Veterinary Medicine, Baton Rouge, LA 70803.** *L.S.U. is an Equal Opportunity Employer.*

Boston University's Department of Biomedical Engineering is inviting applications for a position at the level of **ASSOCIATE OR FULL PROFESSOR.** We are looking for outstanding engineers with active, well-recognized research programs related to patient monitoring, or the cardiovascular system. A joint appointment with the Boston University Medical School can be arranged. This is an exceptional opportunity to join an expanding department committed to excellence in research and teaching. Candidates should submit curriculum vitae, a summary of research interests, and names and addresses of at least three references to: **Dr. D. C. Mountain, Chairman, Biomedical Engineering Search Committee, Boston University, 110 Cummings Street, Boston, MA 02215.** *An Affirmative Action/Equal Opportunity Employer.*

PITTSBURGH SUPERCOMPUTING CENTER BIOMEDICAL SCIENTIFIC SPECIALISTS

The Pittsburgh Supercomputing Center, an NSF-funded National Center featuring a Cray XMP/48, is looking for personnel to assist the biomedical research community in applying supercomputers to problems of biomedical interest. Candidates should have advanced degree in biological sciences (Ph.D. preferred), with extensive experience in the use of computers to solve biological problems. Proficiency in FORTRAN required, and familiarity with DEC or CRAY computers helpful. Experience in one or more of the following areas especially desirable: analysis of protein and nucleic acid structure, molecular modeling, protein and nucleic acid sequence comparison, 2D image analysis, 3D image reconstruction, and multivariate statistics on large data sets. Excellent communication skills required. Enthusiastic, energetic, interested individuals should send letter of application, complete résumé, and names, addresses and telephone numbers of three references to: **Beverly Clayton, Executive Director, Pittsburgh Supercomputing Center, 4400 Fifth Avenue, Pittsburgh, PA 15213.** *Equal Opportunity Employer.*

POSITIONS OPEN

CHAIRMAN OR PROFESSOR RESEARCH EXPERTISE IN MOLECULAR GENETICS

The Department of Physiology, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, will fill a position as full professor with an individual qualified for the dual role of chairman/research scientist and willing to assume administrative duties or who is a uniquely qualified research scientist. Applications are invited from individuals (Ph.D., D.V.M. or M.D.) with a substantial research program emphasizing molecular genetic approaches to physiology, with the desire to interact with existing strong departmental programs in reproductive biology/endocrinology and neurobiology, and with appropriate teaching skills. Highest priority will be given to individuals having both research and administrative skills, but individuals interested only in research also are urged to apply. The department consists of 21 faculty and has major roles in all aspects of biomedical education and research within the university as well as education of veterinarians. Applications, including curriculum vitae, and the name, address, and telephone number of at least three references, should be sent to:

**Dr. Eldon Savage, Chairman
Physiology Search Committee
Environmental Health Department
Colorado State University
Fort Collins, CO 80523**

Applications will be accepted until 1 September 1987, or until a suitable candidate is identified. *Applications from women and minority candidates are encouraged. Colorado State University is an Equal Employment Opportunity/Affirmative Action Employer. Equal Opportunity Office: 314 Student Service Building.*

CHEMICAL ENGINEER. B.S. in chemical engineering with a minimum of 1 year of research experience; or M.S. in chemical engineering. Must have experience with FORTRAN and BASIC computer programming languages and experience with commercial spreadsheet and database management software for microcomputers. Will develop mass and energy balances for industrial and environmental control processes using mass transfer principles to estimate the transport rate of pollutants through solid, liquid, and gaseous phases. Will develop engineering cost estimates for processes used to reduce pollutant emissions and prepare technical reports describing the work performed for the above purposes. Will evaluate effectiveness and costs of water and wastewater treatment processes. Will write computer programs to solve repetitive, applied engineering problems and prepare descriptive technical reports and use spreadsheet and database management such as LOTUS and DBASE III to manipulate and analyze test data. Starting salary will be \$2,350 per month for a 40 hour work week. To apply contact: **Job Service, 516 North Mangum Street, Durham, NC 27701** or your nearest Job Service office. Refer to Job Order Number NC6100432, DOT Code 008.061-018. *An Equal Opportunity/Affirmative Action Employer.*

DIRECTOR DIABETES RESEARCH PROGRAM

Virginia Mason Research Center (VMRC) seeks an individual with outstanding scientific credentials for the development and leadership of a diabetes research program. This individual will be expected to develop an active research laboratory and also to integrate laboratory and clinical research with an existing Diabetes Center providing comprehensive medical care to the largest population of diabetic patients in the Pacific Northwest.

Must possess credentials equivalent to an associate professor level academic appointment in a major medical school. Prefer candidates with M.D. and Ph.D. degrees, Board certification in endocrinology and current active involvement in laboratory research.

Institutional funding available to initiate program and provide stable base of internal support from which to launch grant applications. *VMRC is an Equal Opportunity/Affirmative Action Employer. Minorities and women are especially encouraged to apply.*

Send curriculum vitae to: **John E. Rasmussen, Ph.D., Director, VMRC, 1000 Seneca Street, Seattle, WA 98101.**

POSITIONS OPEN

CYTOGENETICS LABORATORY SUPERVISOR—Required: A bachelor's degree in biology or related area (master's degree preferred); a minimum of 4 to 5 years of work in an active diagnostic cytogenetics laboratory with resulted knowledge of all the basic techniques of modern cytogenetics; certification by the American Cytogenetic Technologists (ACT) Group; certification as a Laboratory Supervisor in Cytogenetics. Please send résumés in confidence to: **Dr. Arthur D. Bloom, M.D., Director, Environmental Health Institute, Berkshire Health Systems, 725 North Street, Pittsfield, MA 01201.** *An Equal Opportunity Employer.*

DIRECTOR OF BIOMEDICAL ENGINEERING CENTER

The University of Minnesota seeks a Director for the newly established Biomedical Engineering Center. The Center is a collaboration by the State of Minnesota, the University, and the unique concentration of private firms engaged in biomedical technology located in Minnesota.

The Director will hold the Earl E. Bakken Chair in Biomedical Engineering, and will be responsible for establishing the scientific, educational, and industrial programs of the Center, for recruiting an Associate Director for Industry Liaison, for recruiting research faculty and staff, and for developing Center facilities and resources. The Director will work to create a center of nationally and internationally recognized excellence in research in areas related to biomedical engineering.

The Director will hold a tenured faculty appointment at the rank of either professor or associate professor in an appropriate academic department of the University; joint appointments in additional departments will be considered.

Qualifications: Candidates should hold a Ph.D., an M.D., or a combined M.D./Ph.D. degree. Candidates must have outstanding academic credentials, evidence of major contributions to an area of biomedical engineering research, administrative experience, experience in working with industry, and demonstrated effectiveness in teaching.

This is a full-time position with appointment to begin as soon as possible, after the close of the search. Nominations and applications should be submitted no later than 30 September 1987, to:

**Dr. Jack L. Lewis, Chair
Search Committee
Department of Orthopaedic Surgery
420 Delaware Street SE, Box 289 UMHC
Minneapolis, MN 55455**

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

DIRECTOR OF FINANCE

Oversees the fiscal affairs in the Headquarters Office of Sigma Xi, The Scientific Research Society. Reports directly to the Executive Director. At least 5 years of financial management experience, preferably in a not-for-profit organization, with a familiarity with computerized accounting systems. Consideration will be given to individuals with a B.A. degree plus experience. Supervisory experience essential.

Send résumé along with salary history and requirements to: **The Executive Director, Sigma Xi, The Scientific Research Society, 345 Whitney Avenue, New Haven, CT 06511.**

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE SOUTHERN FOREST EXPERIMENT STATION

ECOLOGIST/BIOLOGIST/RESEARCH ENTOMOLOGIST. USDA-FS, Southern Forest Experimental Station, is seeking an ecologist/biologist/research entomologist to establish research program on population dynamics of bark beetles. Applicant will work as part of a research team to develop models that describe and predict bark beetle population changes. Knowledge of population ecology and skill in population dynamics modeling are required. Salary range is GS/GM-12/13 (\$32,567 to \$38,727). Information concerning the position may be obtained from: **Personnel Management, Room T-10210, USPSB, 701 Loyola Avenue, New Orleans, LA 70113.** Telephone: 504-589-3921. *The USDA is an Equal Opportunity Employer.*

POSITIONS OPEN

ELECTRON MICROSCOPY RESEARCH ASSISTANT—We are seeking an individual with 3 to 5 years of experience in tissue preparation, ultrathin sectioning and skilled use of the electron microscope. The successful applicant will be responsible for EM support for an active research group in molecular cell biology. The individual will participate in studies on intracellular protein transport and nuclear protein localization. The applicant must work independently and be willing to learn and apply state-of-the-art techniques. A working knowledge of all aspects of immunoelectron microscopy is necessary. Experience in rotary shadowing, freeze fracture/deep etch, negative staining, frozen thin sectioning, and autoradiography is desirable. Please send résumés to: **Rockefeller University, Box 292, 1230 York Avenue, New York, NY 10021. An Equal Opportunity Employer.**

UNIVERSITY OF CALIFORNIA—IRVINE DEPARTMENT OF RADIOLOGICAL SCIENCES FACULTY POSITION IN MEDICAL IMAGING

The University of California—Irvine, Department of Radiological Sciences, has an opening for a faculty position in medical imaging. The candidate must have a Ph.D. in physics or engineering with proven research experience and, preferably, administrative experience. Individuals with broad interdisciplinary research interests are encouraged to apply. Experience in nuclear imaging, single photon emission tomography, and related algorithms is desirable. Applicants should have a distinguished academic and research reputation which includes a successful record in obtaining contract and grant support. The level of appointment and salary is dependent upon the candidate's experience and academic achievements. Candidates should send their curriculum vitae, statement of research interests, and the names of five references to:

Professor Z. H. Cho
Department of Radiological Sciences
University of California, Irvine
Irvine, CA 92717

Applications should be received by 15 October 1987. *The University of California is an Equal Opportunity and an Affirmative Action Employer.*

FACULTY POSITION—MOLECULAR NEUROBIOLOGY. Faculty position available July 1988 in molecular neurobiology at either assistant or associate professor level. The Neuroscience Research Unit of the Department of Psychiatry invites applications from qualified Ph.D.s with strong research credentials in molecular biology and biochemistry (in particular, recombinant DNA and gene regulation techniques, protein purification/characterization, tissue culture). Successful candidates will complement existing research efforts which include receptor regulation and transmembrane signaling mechanisms in brain and in neuronal cells in primary culture. Rank and salary commensurate with experience. Send curriculum vitae, representative reprints, statement of future research directions, and names and addresses of three references to: **R. H. Lenox, M.D., Director, Neuroscience Research Unit, University of Vermont College of Medicine, Burlington, VT 05405.** Deadline for applications is 1 November 1987. *The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

INSTITUTE FOR CIRCADIAN PHYSIOLOGY

FACULTY POSITIONS (assistant or associate scientist) available in a new multidisciplinary institute with specially equipped facilities for research in mammalian and human circadian physiology. Applicants should be scientifically productive investigators who would be interested in pursuing an independent research program in an intellectually stimulating environment. Positions are available in the following subspecialties of circadian physiology: neurophysiology, pharmacology, gastrointestinal, cardiovascular/renal, sleep/wake, human performance and ergonomics, epidemiology, and occupational health. Send curriculum vitae, statement of research objectives, and three references to: **Dr. Martin Moore-Ede, Director, Institute for Circadian Physiology, 25 Shattuck Street, Boston, MA 02115. Affirmative Action/Equal Opportunity Employer.**

24 JULY 1987

IMMUNOPHARMACOLOGIST Ph.D. LEVEL PHARMACEUTICAL RESEARCH

The Pharmaceutical Research Division of Warner-Lambert/Parke-Davis has an opening for a scientist to join the Immunopharmacology Section within our Pharmacology Department.

Qualifications:

- Ph.D. with 1-2 years post doctorate experience
- Experience in inflammation research with an emphasis on in vitro and in vivo models of connective tissue metabolism
- Background in arachidonic acid or cytokine assay techniques desirable
- Strong oral, written and interpersonal skills

Responsibilities:

- Senior level contribution to an ongoing drug discovery effort
- Supervision of an ongoing screens and development of new in vitro and in vivo screens to assess the effects of compounds on connective tissue metabolism

Potential Benefit:

- The position will offer significant opportunity for creativity and professional development

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Qualified applicants should send curriculum vitae in confidence to: **Ms. S. Hultquist, Human Resources, Warner-Lambert/Parke-Davis, 2800 Plymouth Rd., Ann Arbor, Michigan 48105.**

WARNER LAMBERT

"EQUAL OPPORTUNITY IN ACTION"

RESEARCH SCIENTISTS MAMMALIAN CELL VECTOR DEVELOPMENT

Amgen, a recognized leader in advanced biotechnology, has immediate openings for Mammalian Cell Molecular Biologists. Our leadership in the development of Erythropoietin and Granulocyte Colony Stimulating Factor has placed us firmly at the forefront of the industry. Rapid growth combined with our continued commitment to research and development has created opportunities for entry level and senior Research Scientists in our Mammalian Vector Development Group.

Responsibilities for these positions will include the development of eukaryotic expression vectors and mammalian cell culture methodology.

Qualified applicants should possess a Ph.D. in Molecular Biology, Cell Biology, or a related discipline, and be experienced in eukaryotic molecular genetics particularly in the design and development of mammalian expression vectors. Senior Research Scientists will have extensive experience beyond the post-doctoral level, and have demonstrated ability in the establishment of a competitive research program.

Amgen offers a competitive compensation and benefits package as well as a challenging and stimulating research environment. Our location in the scenic Conejo Valley offers the best in Southern California living. Qualified applicants should address a resume and a list of 3 references in confidence to:

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

Equal Opportunity Employer



VISITING SCIENTISTS LIPID METABOLISM/ ATHEROSCLEROSIS

Several postdoctoral Visiting Scientist positions are open within the Medical Products Department at Du Pont's Experimental Station in Wilmington, Delaware. The successful candidates will conduct innovative basic research in the areas of cholesterol biosynthesis and metabolism, and/or atherosclerosis. Areas of interest include: enzymatic regulation of cholesterol biosynthesis, purification and cloning of cholesterolgenic and metabolizing enzymes, macrophage function in the progression and regression of atherosclerotic lesions, arterial wall biochemistry and cell biology. Candidates should possess a Ph.D. with related experience in one of the areas of interest. 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 to: Dr. Stephen T. Toy, Employee Relations Department, Room X50806, Du Pont Company, Wilmington, DE 19898.



U.S. Citizenship or Permanent VISA Required.
An Equal Opportunity Employer M/F/H/V

RESEARCH IMMUNOLOGIST

An Immunologist with expertise in immune responses to viral infections to play a key role in the development and testing of genetically engineered viral vaccines. Candidates should have a Ph.D. with strong post-doctoral experience, and skill in *in vivo* animal models.

You will enjoy working in our modern, well-equipped facilities in Philadelphia's prestigious Main Line suburban area. Besides an environment which fosters discovery, we offer a competitive salary, excellent benefits, and superior career opportunities.

Respond immediately by forwarding your CV and salary requirements, in confidence, to: **Recruitment Manager, Wyeth Laboratories, Inc., P.O. Box 8299, Philadelphia, PA 19101.** Equal Opportunity Employer, M/F/H/V responses encouraged.

Wyeth Laboratories



ENVIRONMENTAL ANALYST

THE AFRICAN DEVELOPMENT BANK, a multilateral development finance institution based in Abidjan, Cote D'Ivoire, seeks an Environmental Analyst for a 2-year personal services contract to assist in policy formulation on natural resources and environmental issues. Incumbent will participate in planning, design and evaluation of bank projects and in compilation and dissemination of environmental data.

EDUCATION/EXPERIENCE: Graduate Degree in Applied Ecology, Natural Resource Economics, Physical Geography or related field with preference given to candidates with specialized course work in Soil Science, Land/Water Resource Planning, Forestry, Rangeland Management, Aquatic-Terrestrial-Human Ecology, Fisheries, Remote Sensing, International Development, Statistics, Computer Science or other fields directly applicable to Natural Resources/Environmental Analysis. Minimum 5 years in applied, multidisciplinary project-related Natural Resources Analysis required. Minimum 2 years experience in developing countries and familiarity with planning, development and implementation of large, donor-funded projects in the tropics. Basic knowledge of data storage/retrieval systems desirable. Broad familiarity with technical characteristics of African terrestrial, aquatic, coastal and montane systems essential. Fluency in either English or French, with strong working knowledge of the other is required.

Candidate must be U.S. citizen or permanent U.S. resident. Financed under a USAID grant, contract offers competitive salary paid in U.S. dollars. Excellent fringe benefits. Interested persons should forward detailed CV, salary history and references by August 7, 1987 to:

WINFIELD S. COLLINS, USAID - REDSO/WCA, ABIDJAN, DEPARTMENT OF STATE, WASHINGTON, D.C. 20520

FACULTY POSITION IN MOLECULAR PLANT SYSTEMATICS/EVOLUTION

The Department of Biology of Texas A&M University invites applications for a tenure-track faculty position, available immediately. Although intended as an Assistant Professor appointment, the level will depend on the experience and qualifications of the candidate. Individuals studying the systematics or evolution of higher plants using modern methods of molecular biology are encouraged to apply. Excellent facilities and active programs in plant molecular biology already exist in the department, and interaction with these programs and others on campus is strongly encouraged. The successful candidate will be expected to maintain a vigorous, independent research program, and to contribute to graduate and undergraduate teaching activities of the department. Applications, including curriculum vitae, a statement of research interests, and the names, addresses, and telephone numbers of three references should be sent to: Dr. Hugh D. Wilson, Chairman, Plant Systematics Search Committee, Department of Biology, Texas A&M University, College Station, Texas 77843-3258. We request that applications be received by 15 September 1987, but the position will remain open until filled. *Texas A&M is an Equal Opportunity/Affirmative Action Employer.*



EMBL HEIDELBERG

Laboratoire Européen de Biologie Moléculaire
European Molecular Biology Laboratory
Europäisches Laboratorium für Molekularbiologie

The European molecular Biology Laboratory, an international research organization situated in Heidelberg, West Germany, invites applications for the following position.

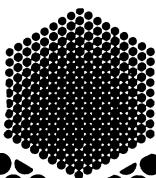
GROUP LEADER IN CELL BIOLOGY

Candidates are expected to develop an independent research project in an area that fits with the interests of the Programme. Existing groups are engaged in research on membrane traffic and cellular organization in eucaryotic cells. EMBL provides a budget which covers consumables, equipment and salaries for some positions (technicians and PhD students).

An above-average salary will be offered. Certain allowances are payable in addition, depending on personal circumstances. An initial contract of five years' duration, which can be renewed, will be offered.

Applications, including a CV, list of publications, a brief description of research interests and the names of at least three referees, should be sent by 1st September to :

Kai Simons, Programme Coordinator, Cell Biology Programme,
c/o EMBL, Personnel
Section, Postfach
10.2209, D - 6900
Heidelberg quoting
reference n° 87/24.



EMBL



Computer Resources Associate

The Computer Resources Department of the Merck Sharp & Dohme Research Laboratories in West Point, PA is seeking a talented individual with a blend of scientific and computer expertise. The incumbent will assume the leadership role in the development and implementation of a strategic plan for computer and information resources at this location. This role will require development of a thorough knowledge of the West Point Laboratories and an excellent rapport with both the scientific and corporate computing staff and management. The incumbent will be responsible for coordination and facilitation of corporate computer resources projects being developed in support of the West Point Laboratories. Another responsibility will be coordination of MSDRL interests in advanced scientific computing technologies.

To qualify for this position, the applicant must have a Ph.D. or equivalent in a biological or physical science. Strong scientific laboratory experience combined with extensive computer applications in a scientific environment are essential. Excellent computer hardware and software expertise, outstanding oral and written communication skills, and demonstrated leadership in planning activities (for projects as well as strategic directions) are required. Interest and experience in advanced technologies in scientific computing is needed.

Merck Sharp & Dohme Research Laboratories offer a stimulating and challenging scientific environment. The West Point, PA facilities are located 25 miles northwest of Philadelphia. Our salaries, benefits, and growth potential are excellent.

Interested candidates should submit their curriculum vitae with a publication list, salary requirements, and the names of three references to: **S.R. Jenkins, R80M-TL1, Merck & Co., Inc., P.O. Box 2000, Rahway, NJ 07065.**

EEO/AA/VH Employer



Merck & Co., Inc.

RESEARCH ASSOCIATE

Kaiser Permanente in Los Angeles has an excellent career opportunity available in our Research Laboratory.

Qualified candidates will have experience in cellular immunology/immunochimistry including cell culture techniques, immunofluorescence, leukocyte function and RIA. Good verbal and written communication skills, the ability to work with minimal supervision and an advanced degree in a related area are also required. Previous research publication record is preferred.

As part of one of the nation's oldest, largest and leading HMOs, we offer competitive salaries and a comprehensive benefits package.

Qualified candidates should submit resumes to: Lee Millerov, Kaiser Permanente, Personnel Department, 4733 Sunset Blvd., Los Angeles, CA 90027. (213) 667-6932. Equal Opportunity Employer.



KAISER PERMANENTE
Southern California Region

Molecular Genetics

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking additional senior scientific staff to expand its current research programs employing recombinant DNA technology and other genetic approaches to develop novel therapeutic agents.

Excellent opportunities exist for innovative interdisciplinary research in our new and superbly equipped Research and Development Center in suburban Philadelphia near Valley Forge, Pennsylvania.

The Department of Molecular Genetics is seeking two outstanding Scientists with a Ph.D. in Microbiology, Biochemistry, Molecular Biology or equivalent and 2 to 3 years of postdoctoral experience in the area of retroviral research or mammalian gene expression.

One of the candidates that we are seeking should have a strong research background in studying the biology and gene expression of retroviruses in mammalian cells using recombinant DNA techniques. This person will interact with a strong research group currently studying the in vitro activities of viral proteins expressed in several different recombinant host cell systems.

The other candidate should have a strong research background in mammalian gene expression and also familiarity with modification of protein structure and function by genetic engineering. This person will interact primarily with a strong research group currently studying the in vivo activities of genetically modified fibrinolytics.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential review, please send your C.V. and names of three references to: Robert F. Obst, R&D Senior Employment Consultant, R0046, Smith Kline & French Laboratories, Research and Development Division, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F

A SmithKline Beckman Company

POSITIONS OPEN

THE UNIVERSITY OF CALGARY FACULTY POSITIONS IN ARTHRITIS RESEARCH

The Joint Injury and Diseases Research Group of The University of Calgary invites applications for faculty positions at the assistant/associate professor level. Well qualified candidates will be eligible to apply for salary and establishment support by competitive application to the Alberta Heritage Foundation for Medical Research. Establishment support will cover the cost of setting up a new laboratory, with major/minor equipment and operating funds for an initial 2-year period. Successful candidates will be expected to develop an independent research program. Preference will be given to candidates with experience in molecular genetics, mediators of inflammation, collagen or proteoglycan biochemistry. Applicants require an M.D. and/or Ph.D. and a minimum of 2 years of research training at the postdoctoral level. Remuneration will be based on appropriate rank salary at The University of Calgary for experience and training. Successful applicants will be protected to devote at least 75% of their time to their research program. Remaining activities include opportunities for teaching and clinical activities. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. However, all qualified interested individuals are encouraged to apply.* Interested candidates should submit their curriculum vitae, names of three referees and a letter stating their aims and research interests by 1 October 1987 to:

Dr. Marvin Fritzler, Chairman, Joint Injury and Diseases Research Group, Department of Medicine, The University of Calgary, 3330 Hospital Drive NW, Calgary, Alberta T2N 4N1, Canada.

FACULTY POSITIONS IN BIOCHEMISTRY

The Department of Biochemistry at the Uniformed Services University, Bethesda, Maryland, is recruiting candidates for tenure-track positions in biochemistry. Our program requires participation in teaching of medical and graduate students and development of individual research programs. Ph.D. or M.D. training in biochemistry and postdoctoral experience is required.

We would like to receive applications from individuals with the appropriate training and interest in an academic career. Individuals with research interests in membrane biochemistry, molecular biology, nucleic acids, molecular genetics, and neurochemistry would strengthen our current activities in these areas, but we invite applications from other special areas as well.

Send curriculum vitae, a brief description of current and past research activity, and the names of three references to:

**Dr. Troy J. Beeler
c/o Civilian Personnel
4301 Jones Bridge Road
Bethesda, MD 20814**

Uniformed Services University is an Equal Opportunity Employer.

IMMUNODIAGNOSTICS

The Gull Foundation for Medical Research has post-doctoral fellowships available for scientists interested in the development of test systems for the clinical diagnosis of infectious diseases. Applicants must possess a doctoral degree in virology, microbiology, immunology, or biochemistry. The awards are \$20,000 annually for a maximum of 2 years. Send application letter, curriculum vitae, and references to: **Dan Wiedbrauk, Ph.D., The Gull Foundation for Medical Research, 1015 East 4800 South, Salt Lake City, UT 84117. Telephone: 801-263-3595.**

MOLECULAR BIOLOGIST

The Department of Pathology and Laboratory Medicine at Emory University is seeking a molecular biologist (M.D. or Ph.D.) to work in the division of hematopathology. The individual is expected to develop diagnostic molecular pathology and an independent research program in collaboration with the existing hematopathology faculty members. The rank (instructor/assistant professor) and salary will be commensurate with the experience of the individual. Send curriculum vitae and names of three references to: **Dr. Kenneth W. Sell, Chairman, Department of Pathology and Laboratory Medicine, Emory University School of Medicine, Atlanta, GA 30322.** Closing date is 31 August 1987. *Emory University is an Equal Opportunity Employer.*

POSITIONS OPEN

PLANT MOLECULAR BIOLOGIST MCGILL UNIVERSITY

The Department of Biology invites applications from plant molecular biologists with significant research accomplishments for a faculty position that may be filled at the assistant, associate, or full professor level. The Department has considerable research strength in both plant and molecular biology, and has recently established a Centre for Plant Molecular Biology to promote research in this area. The successful candidate will be provided with substantial laboratory space and equipment and will have access to excellent plant growth and tissue culture facilities in the recently constructed McGill Phytotron. The position will be available from September 1987, and starting date is flexible.

Applications are invited from all, although, in accordance with Canadian immigration regulations, applications from Canadian citizens and landed immigrants will be considered first.

Send curriculum vitae, statement of research interests, representative reprints, and the names and addresses of three referees to: **Dr. Barid Mukherjee, Chairman, Department of Biology, McGill University, 1205 Avenue Docteur Penfield, Montréal, Québec, Canada, H3A 1B1.** Deadline for receipt of applications is 15 September 1987.

MOLECULAR BIOSCIENCE. Lehigh University announces four tenure-track faculty positions in molecular bioscience. Appointments will be made in the departments of biology or chemistry. Applications will be accepted at all levels, although a minimum of 2 years of postdoctoral experience is expected. We are looking for specialties in immunology, molecular biology, protein chemistry, cellular biology, and tissue culture. Faculty are expected to participate actively in either the biology or biochemistry teaching programs, and to maintain an active involvement in research through the Center for Molecular Bioscience and Biotechnology.

Positions are available for any starting date from the present to January of 1988. Applicants should apply before 30 September 1987 to: **Dr. Arthur Humphrey, Chair, Interdisciplinary Search Committee for Faculty in Molecular Bioscience, 570a Whitaker Laboratory #5, Lehigh University, Bethlehem, PA 18015.** *Lehigh University is an Affirmative Action/Equal Opportunity Employer.*

Penn State MOLECULAR EVOLUTIONISTS. The Department of Biology, Pennsylvania State University, seeks to fill two tenure-track positions in evolutionary genetics, at the assistant or associate professor level. Research areas of interest are the population genetics of molecular variation, the evolution of genes and genetic systems, and the application of molecular techniques to the study of breeding systems, gene flow, recombination, and other factors affecting the genetic structure and evolution of populations. Significant research accomplishments and evidence of outstanding potential to develop a strong, independent research program will be key considerations. Applicants should have postdoctoral training. Send curriculum vitae, statement of research interests, and three letters of reference to: **Dr. Robert K. Selander, Department of Biology, Pennsylvania State University, University Park, PA 16802.** Closing date for applications is 30 September 1987. *An Equal Opportunity/Affirmative Action Employer.*

NEUROBIOLOGISTS. Department of anatomy and neurobiology has two tenure-track positions at the assistant professor level. Candidates with experience in current cellular and molecular approaches to problems in neurobiology of development, reproduction, regeneration, aging, and in neuroendocrinology (especially control of secretory processes of pituitary cells), are preferred. Excellent opportunities exist for research collaboration with endowed Centers for Research in Aging and Cancer, and a Magnetic Resonance Imaging facility. Ph.D. degree and 2 years of postdoctoral research training required, as well as a strong commitment to research. Contribution to team-taught neuroanatomy or gross anatomy teaching and participation in department's graduate program is expected. Good start-up funding, space and competitive salaries are available. Send curriculum vitae, description of research accomplishments, summary of research plan, and names and addresses of four references to: **Dr. M. B. Nikitovitch-Winer, Chair, Department of Anatomy, University of Kentucky Medical Center, Lexington, KY 40536-0084, by 15 October 1987.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

NEUROBIOLOGY POSTDOCTORAL POSITION available to study the transmembrane topology, assembly, and gating mechanism of the GABA/benzodiazepine receptor coupled anion channel. Experience or willingness to learn whole-cell voltage clamp, patch-clamp, computer analysis, and neuronal cell culture. Modulation of channel activity by barbiturates, alcohols, and methylxanthines investigated. A second aspect of the project uses monoclonal antibodies, radioligand binding, photoaffinity labeling, and protein chemistry. Salary \$20,000 to \$26,000. Send curriculum vitae to: **Dr. David H. Farb, Department of Anatomy and Cell Biology, State University of New York, Downstate Medical Center, Brooklyn, NY 11203.**

PHARMACOLOGY FACULTY POSITIONS

The Department of Pharmacology at the University of Minnesota invites applications for tenure-track positions at the assistant professor rank. Qualifications include the Ph.D. or M.D. degree in pharmacology or a related field and 2 or more years of postdoctoral experience. Successful candidates should have a strong background in molecular and cell biology, show promise of developing independent research programs, and expect to teach and advise graduate and health professional students. Candidates with experience and interest in the molecular biology of the central nervous system and molecular action of CNS drugs are encouraged to apply.

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

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

PHYSICAL OCEANOGRAPHER/NUMERICAL MODELER—The University of Delaware College of Marine Studies invites applications for a 12-month, tenure-track faculty position in physical oceanography. Applicants should have a Ph.D. in physical oceanography or related field, with experience in computer modeling of oceanic or atmospheric processes. The successful applicant will be encouraged to develop an independent research program, which may include collaboration with other physical oceanographers in the College. The College has an active group of physical oceanographers involved with field and model studies, laboratory experimental work, and historical data analysis. Facilities available include an IBM 3081D computer with terminal access on both campuses, and high-speed access from both Lewes and Newark campuses to national computer networks. Teaching at the graduate level will be required and the successful candidate will be expected to develop a funded research program involving graduate students. It is anticipated that the appointment will be at the assistant professor level, but applications from more senior persons are welcome. Applicants should send curriculum vitae, pertinent reprints, and the names of three references by 31 August 1987 to the chairman of the search committee: **Dr. Charles Epifanio, College of Marine Studies, University of Delaware, Lewes, DE 19958.** Telephone: 302-645-4267. *The University of Delaware is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available 1 September 1987 to study the development of peripheral and central sensory innervation patterns in the chick. Experience with electrophysiological, anatomical, immunohistochemical, or tissue culture techniques preferred. Send curriculum vitae and references to: **Dr. Sheryl A. Scott, Department of Neurobiology and Behavior, SUNY at Stony Brook, Stony Brook, NY 11794.**

POSTDOCTORAL POSITION

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

DIRECTOR OF REPRODUCTIVE ENDOCRINOLOGY AND INFERTILITY

College of Medicine, University of
Tennessee, Memphis
University Physicians Foundation, Inc.
Memphis, Tennessee

Faculty position in Division of Reproductive Endocrinology and Infertility, in the Department of Obstetrics and Gynecology, College of Medicine, University of Tennessee, Memphis. An experienced scientist and clinician is sought to be Director of the Division. Successful candidates should be board certified in Obstetrics and Gynecology, and in Reproductive Endocrinology. They should have distinguished record of research, including extensive experience in gamete research. They should also have a distinguished record in directing a fellowship program in Reproductive Endocrinology, in developing faculty in Reproductive Endocrinology, and in directing a research and clinical program that will include *in-vitro* fertilization and other new technologies. Experience in consulting and working with national organizations is desirable. Interested candidates please send curriculum vitae to **Joe Leigh Simpson, M.D., Faculty Professor and Chairman, Department of Obstetrics and Gynecology, College of Medicine, University of Tennessee, Memphis/University Physicians Foundation, Inc., 853 Jefferson Avenue, Memphis, Tennessee 38103.** *The University of Tennessee is committed to an aggressive program in Affirmative Action, and encourages applications from minority individuals for this position.*

SR. RESEARCH PHARMACOLOGIST

Make a noticeable
contribution in
applied research
in molecular biology



Hoechst-Roussel Pharmaceuticals Inc., a subsidiary of Fortune 100 Hoechst Celanese Corporation, has an exceptional opportunity in its expanding research division.

To set and keep the pace in related research, we're looking for a Ph.D. level scientist with post-doctoral training in the neurosciences and knowledgeable in molecular biological techniques. We prefer previous experience and a strong interest in research dealing with the brain and behavior. Research activities will involve applying the techniques of drug development for the central nervous system.

Excellent salary and full ranging company-paid benefits will be offered including 401K savings plan.

Send resume with salary history and requirements, to:
James Hamilton, Human Resources Department, Section 50SF,
Hoechst Celanese Corporation, Route 202-206 North, Somerville,
New Jersey 08876. An affirmative action employer M/F/H.

Hoechst 

Director, Process Purification

A Ph.D. level pharmaceutical biochemist with several years process development/manufacturing experience in the biotechnology industry. Specific experience with the research and development, scale-up and implementation of purification processes for the production of proteins for clinical application is required.

Essential skills include a demonstrated expertise in applying large volume concentration and purification technologies, including the use of high pressure fast flow chromatography, and engineering on-line processing steps, to develop large-scale pharmaceutical manufacturing processes.

Knowledge of FDA guidelines and experience in FDA compliance necessary. Analytical training in protein characterization and bioassays is a must.

Experience in developing formulation buffers for achieving product stability in vials is highly desirable.

This position will involve directing a staff of trained professional biochemists and engineers in our process purification department.

40 hour week; \$60,000

Send resume to:

**Missouri Job Service
505 Washington Avenue
St. Louis, MO 63101
Attn: K. Gooch;
Refer to Job Order Number 081189**

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AUSTRALIA

CSIRO

RESEARCH SCIENTIST/ENGINEER

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

SPACE RESEARCH

DIVISION OF ATMOSPHERIC RESEARCH

BACKGROUND: Space Research is a priority area within CSIRO and the Division is currently strengthening the resources devoted to the area.

The Division is performing feasibility studies for new satellite instruments which are potential candidates for future space platforms (eg. an imager/sounder for a geostationary satellite, an instrument for remotely sensing surface pressure from a polar-orbiter, and an on-board data compression device for studies of cloud distribution). In addition it is also involved in collaboration with laboratories in the United Kingdom in the development and scientific applications of the ATSR instrument to be flown on the ERS 1 satellite in 1989. These specifically 'space-hardware' oriented activities are part of a much broader programme which includes remote sensing research in general and the further development of systems for the reception and analysis of data from operational meteorological satellites.

DUTIES: In association with other Divisional Scientists, to undertake feasibility studies for new space instrumentation. In particular, to take a leading role in the engineering design and development of prototype satellite hardware, and in the logistic planning of subsequent phases of development of that hardware. The appointee would need to interact with local and overseas aerospace companies to achieve the maximum possible technology transfer to Australia.

QUALIFICATIONS: A PhD degree or equivalent qualifications in Physics or Engineering and experience in the overall process of satellite instrument development, particularly in the requirements for space qualification. Demonstrated ability to interact successfully with industry.

TENURE: Indefinite with Australian Government superannuation benefits. However, applicants interested in a term appointment of three to five years will be considered.

APPLICATIONS: Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees and quoting the reference number A1825 should be directed to:

**The Chief
CSIRO Division of Atmospheric Research
Private Bag No. 1
Mordialloc Victoria
Australia 3195**

By August 21, 1987.

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

Director, Acquired Immunodeficiency Syndrome Program

The National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), is currently recruiting for the Senior Executive Service (SES) position of Director, Acquired Immunodeficiency Syndrome Program (AIDSP), at a salary range between \$63,200 and \$73,400 PA. (If filled by a Medical Officer, selected candidate may be eligible for a Physician's Comparability Allowance up to \$10,000, in addition to base salary.) The Director, AIDSP is one of four extramural program directors in the Institute with responsibility for providing leadership and direction in the planning and administration of a program of research grants and contracts in Acquired Immunodeficiency Syndrome, and the related science disciplines of immunology, microbiology, virology, and parasitology. Eligible candidates must meet the qualifications requirements for Medical Officer, GS-602, or Health Scientist Administrator, GS-601 (a Ph.D. in the biomedical sciences, or an appropriate combination of comparable technical and professional knowledge). Candidates must have knowledge of the scientific and administrative aspects of basic biomedical research programs funded through grants and/or contracts where the scientific emphasis is on both clinical and laboratory aspects of infectious diseases. Candidates must also have demonstrated competencies to assume leadership responsibilities, and skills as a manager.

Closing Date: September 15, 1987

Interested candidates should submit an Application for Federal Employment, SF-171 (available at all Federal Job Information Centers and Federal Personnel Offices), C.V. and bibliography to the address below. *Resumes alone are not acceptable applications for the Senior Executive Service.*

**Mrs. Janie R. Lacy
Personnel Officer, NIAID
Building 31, Room 7A27
National Institutes of Health
9000 Rockville Pike
Bethesda, Maryland 20892**

The names of nominees may be phoned in to Mrs. Lacy on Area Code 301-496-9686.

U.S. Citizenship required.

NIH is an Equal Opportunity Employer

Visiting Research Scientist—PhD

DuPont's Central Research and Development Department seeks an individual with research experience/interest in herpesvirus virion assembly, with emphasis on glycoprotein involvement in viral envelopment. This one to two year research position requires demonstrated abilities in gene fusion, eukaryotic expression and virology techniques. Experience in prokaryotic membrane protein biology or eukaryotic protein targeting is desirable.

The position offers a stimulating scientific environment in a modern research facility located near Wilmington, DE. DuPont provides competitive compensation. Our Mid-Atlantic location offers a wide range of academic, cultural and recreational activities. Interested candidates should send their curriculum vitae and references to: Dr. Lynn W. Enquist c/o K.L. Mays, Employee Relations Department, Room X50881, Du Pont Company, Wilmington, DE 19898.



*U.S. Citizenship or Permanent VISA Required.
An Equal Opportunity Employer M/F/H/V*

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

RESEARCH SCIENTIST VIROLOGY

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

The successful candidate will participate in an ongoing antiviral screening program and will provide scientific and supervisory support in the in-vitro and in-vivo assessment of potential antiviral agents.

This key position requires a doctoral degree with two years post-doctoral experience in Virology. Experience in antiviral assay techniques, tissue culture, molecular biology and viral immunology desirable.

Bristol-Myers offers competitive salary compensation and a comprehensive benefits package including relocation assistance. For confidential consideration, forward your curriculum vitae, including salary history, in confidence to: **Department PD-30SC, BRISTOL-MYERS COMPANY, Pharmaceutical/Research & Development Division, P.O. Box 5100, 5 Research Parkway, Wallingford, Connecticut 06492.** An equal opportunity employer.

Bristol-Myers

Pharmaceutical Research & Development Division

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1515 BROADWAY
NEW YORK, N.Y. 10036**



BOSTON UNIVERSITY COLLEGE OF ENGINEERING

Associate Dean for Graduate Programs, Research and Development

The College of Engineering of Boston University seeks an Associate Dean for Graduate Programs, Research and Development. The Associate Dean will:

- Develop funding linkages with receptive high-technology industries and alumni
- Administer the College's Sponsored Research and Development Planning
- Expand the scope of funded research
- Plan and Manage our growing master's and doctoral programs

The candidate should possess PhD or equivalent and provide evidence of background in research and success in attracting funding. Demonstrated administrative expertise, leadership ability and strong interpersonal skills will be important review criteria.

Excellent compensation package. Send letters of nomination or application, including curriculum vitae and references to:

Associate Dean Willis S. Rich
College of Engineering
Boston University
110 Cummington Street
Boston, Massachusetts 02215

Abbott Laboratories' breakthroughs in research and development have won us the undisputed world leadership position in medical diagnostics. The potential of this field is tremendous, a trend which industry experts predict will continue to grow. As the fastest growing division of our \$3.8 billion corporation, our Diagnostics Division is aggressively forging ahead, creating positions for Ph.D. level professionals.

Ph.D. Biochemists — Immunochemistry

These individuals will be involved in protein purification and immunoassay development in HTLV III, Hepatitis B and bacterial antigen research areas. You will need a Ph.D. in Biochemistry or Immunology, plus at least 2 years related postdoctoral experience. We would prefer a strong immunological background with some supervisory experience.

Ph.D. Clinical Chemist/ Biochemist

Functioning in a section head/staff scientist role, this position requires an individual with a Ph.D. in Clinical Chemistry or Biochemistry, product development experience to include 2-3 years in an industrial environment, and familiarity with dipstick technology or biosensors. A supervisory background is desired.

Voted one of the five best managed companies in 1986 by Dun's Magazine, Abbott provides excellent salaries and comprehensive benefits including profit sharing and stock retirement plan. We are located in an attractive suburban area, just 30 miles north of Chicago. For confidential consideration, send your resume with salary history to: **Peggy Taylor, Dept. S/7-24**. Abbott is an affirmative action employer.



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One of the biggest pharmaceutical companies of the world based in Germany offers an excellent opportunity for a

Ph. D.-Level Protein Biochemist

We expect experience in pilot plant scale separation and purification of recombinant proteins, preferably in industry.

We offer an attractive income and benefits as provided by a major international company. Confidentiality is assured by our consultant. Please address your application (C. V., notice period, income expected) to Personal und Management Beratung Wolfram Hatesaul GmbH, Poppelsdorfer Allee 45, 5300 Bonn 1, West Germany, attn. Mr. Friederichs, quoting Ref. I/30 291.

**Personal & Management Beratung
Wolfram Hatesaul GmbH**

POSITIONS OPEN

POSTDOCTORAL POSITION BIOPSYCHOLOGY

Available immediately at Brooks Air Force Base, San Antonio, Texas. Studies of the effects of psychopharmacological and nutritional interventions on human performance and physiology will be conducted. Experience in psychopharmacology, electrophysiology, and use of laboratory computers desirable. Send résumé to: **Administrator, Clinical Research Center E17-445, Massachusetts Institute of Technology, Cambridge, MA 02139.**

A POSTDOCTORAL POSITION available immediately for an individual with Ph.D. in human genetics or related area. Experience in tissue culture, cytogenetics, and recombinant DNA technology desirable, to investigate the genetics of gynecological tumors. The position is funded for 5 years. Send curriculum vitae and names of three references to: **Urvashi Surti, Ph.D., Department of Pathology, Magee-Womens Hospital, University of Pittsburgh, PA 15213. Telephone: 412-647-4267.**

POSTDOCTORAL POSITION available immediately to work on the mechanism of action of anti-viral agents on viral polymerases. Applicants should have experience in molecular virology and/or biochemistry. This position will have an appointment at Harvard Medical School. Send curriculum vitae, and list of references to: **Dr. Jean L. Patterson, Assistant Professor of Microbiology and Molecular Genetics, Division of Infectious Disease, Children's Hospital, 300 Longwood Avenue, Boston, MA 02115. Salary commensurate with experience. Children's Hospital is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION available immediately to study genetic differentiation in *Aedes* mosquitoes using population and molecular genetic techniques involving nuclear and mitochondrial DNA, cloning of repetitive DNA sequences, and/or vector competence to dengue virus. Experience in electrophoresis and molecular genetics preferred. Salary commensurate with experience. Send résumé and three letters of reference to: **Dr. K. S. Rai, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556.**

POSTDOCTORAL POSITION now available for a 2-year study of cell pH/calcium and signal transduction in the control of epithelial acid/base transport and smooth muscle cell function, using fluorescence spectroscopy or microscopy, with image analysis, and transport techniques. Contact: **Dr. Mark Graber, Division of Nephrology, HSC 15-020, SUNY at Stony Brook, Stony Brook, NY 11794. Telephone: 516-261-4400 Ext. 2837.**

POSTDOCTORAL POSITION available immediately for studies on the metabolism of plasma lipoproteins. Applicants should have experience in protein chemistry and tissue culture techniques. Salary commensurate with NIH guidelines. Send curriculum vitae and names and addresses of references to: **Dr. J. Borenszajn, Department of Pathology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.**

Northwestern University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION

Recent graduate with Ph.D. in pharmacological or medical sciences is preferred. The full-time researcher should be well acquainted with scientific literature in autonomic nervous system pharmacology. Enthusiastic, innovative and skilled laboratory investigator is required. Familiarity with the standard pharmacological methods and data analysis is essential. The collaborative research involves steric aspects of pharmacology of imidazolines. The investigation will be focused on the molecular aspects of α -adrenoreceptors and related mechanisms. The first year's stipend will be \$19,005. The position is funded through July 1990. Send your résumé and letters of recommendations to: **P. N. Patil, The Ohio State University, College of Pharmacy, L. M. Parks Hall, 500 West 12th Avenue, Columbus, OH 43210.**

POSITIONS OPEN

POSTDOCTORAL POSITION: Available 1 September 1987, to study the molecular biology of lipoteichoic acid in bacterial cell surface assembly [*J. Bact.* 169, 1702 (1987)]. Recent Ph.D. in either microbiology or biochemistry. Experience in molecular biology desired. Send résumé and names of three references to: **F. C. Neuhaus, Ph.D., Department of Biochemistry, Molecular Biology and Cell Biology, Northwestern University, 2153 Sheridan Road, Evanston, IL 60201. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION: MECHANISM OF ACTION OF AN ANTICANCER NUCLEOSIDE ANALOGUE. Applications are invited for a postdoctoral position currently available with a laboratory group studying the biochemical mechanism by which a nucleoside analogue, that is currently in clinical trials, kills cells. The project involves cell culture techniques, enzymology, and studies of effects on DNA synthesis and repair and transcription. Applicants should have a strong background in biochemistry or cell biology: experience with the relevant techniques is an advantage. Salary: \$22,000 to \$26,000 depending on prior postdoctoral experience. Position renewable up to 3 years. Send curriculum vitae and three letters of recommendation to: **Dr. Raymond L. Blakley, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101.**

POSTDOCTORAL POSITION IN PARASITE BIOCHEMISTRY

NIH-funded position available immediately for studies of helminth parasite biochemistry. Research involves characterization/purification of mitochondrial membrane-associated enzymatic components critical to the anaerobic energetics of the helminths. Strong background in biochemistry required but previous experience with parasite systems not essential. Send résumé and three letters of reference to: **Dr. Carmen F. Fioravanti, Department of Biological Sciences, Bowling Green State University, Bowling Green, OH 43403. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN PARATHYROID HORMONE RESEARCH

Postdoctoral research position available in the Endocrine Unit, Massachusetts General Hospital (MGH), Harvard Medical School, to study the design, molecular biological expression, and biological activity of parathyroid hormone analogs. Please reply with curriculum vitae and three letters of recommendation to: **Samuel Nussbaum, M.D., Endocrine Unit, Wellman 5, Massachusetts General Hospital, Boston, MA 02114. MGH is an Equal Opportunity/Affirmative Action Employer.**

A POSTDOCTORAL POSITION is available beginning in January 1988 at the University of Virginia Medical Center, Department of Anatomy and Cell Biology, to study mechanisms of cell secretion. Studies will focus within the area of molecular biology and structural analysis of integral membrane and associated proteins. Previous experience in cell biology, biochemistry, molecular biology, or related fields is desirable. Please send curriculum vitae and three letters of reference before 15 October 1987 to:

**Dr. J. David Castle
Yale University School of Medicine
Department of Cell Biology
333 Cedar Street, P.O. Box 3333
New Haven, Connecticut 06510**

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

POSTDOCTORAL POSITION: COLUMBIA UNIVERSITY, available immediately, to study the regulation of *abl* and *bcrl* oncogene expression in chronic myelogenous leukemia. Prior experience in recombinant DNA techniques, analysis of transcriptional factors, or protein isolation is desirable. Initial appointment for 2 years, on a yearly basis, with potential for a third year, salary competitive. Send curriculum vitae and the names of three references to: **Dr. David Leibowitz, Columbia University, HHSC 1602; 701 West 168th Street; New York, NY 10032.**

POSITIONS OPEN

POSTDOCTORAL POSITION SOIL SCIENTIST PENDLETON, OREGON

Individual to study the belowground ecosystem of dryland cereals including root development and interactions with soil physical properties, water and nutrient uptake. Project seeks to develop a computer simulation of the seasonal location and function of the cereal root system. Background or training in soil physical properties and dryland agronomy desired; formal computer training and experience required. Must be a U.S. citizen. Salary commensurate with experience (\$27,172 to \$32,567 per year). Send SF-171 (Application for Federal Employment), transcripts, and three letters of reference (sent directly from person referring applicant) by 15 August 1987 to:

**Dr. R. W. Rickman
U.S. Department of Agriculture
Agricultural Research Service
P.O. Box 370
Pendleton, OR 97801**

For application procedures/forms, contact: **Patricia Roberts at 301-344-3138. An Equal Opportunity Employer.**

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

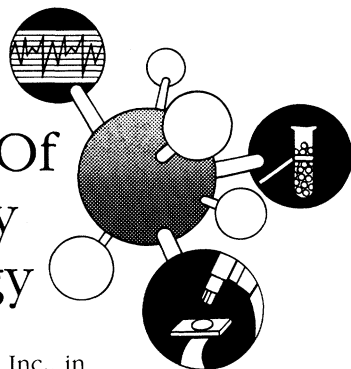
POSTDOCTORAL POSITIONS: Available for studies in various aspects of cancer research and toxicology in the Center in Molecular Toxicology through the departments of biochemistry, chemistry, pharmacology, and pathology. Areas of investigation include synthetic chemistry related to toxic chemicals, mechanistic bioorganic chemistry, chemistry of heavy metal antidotes, DNA-carcinogen physical interactions, enzymology and regulation of animal and human cytochromes P-450, cloning of genes coding for DNA repair enzymes, cytochromes P-450, and chromatin proteins, the basis of metal carcinogenesis, chromatin function, hepatocarcinogenesis, eicosanoids, regulation of glutathione metabolism, and developmental mass spectrometry. Salaries negotiable. Applicants should submit curriculum vitae and three letters of recommendation to: **Dr. F. P. Guengerich, Center in Molecular Toxicology, Vanderbilt University School of Medicine, Nashville, TN 37232. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS available immediately in two laboratories studying the roles of glycosyltransferases as immunoglobulin receptors. Applicants should be experienced in, or want to learn, immunology, enzymology, and carbohydrate biochemistry. Send curriculum vitae, and names, addresses, and telephone numbers of references to: **Professors John Cebra or Stephen Roth, Department of Biology, University of Pennsylvania, Philadelphia, PA 19104. The University of Pennsylvania is an Equal Opportunity Employer. We encourage applications from women and minorities.**

POSTDOCTORAL POSITIONS AVAILABLE immediately for biochemists, biophysicists, and molecular biologist to study (i) the mechanism and regulation of gene expression in both prokaryotic and eukaryotic systems, and (ii) the nucleic acid-protein interactions. Send résumé and three letters of recommendation to: **Professor Cheng-Wen Wu, Department of Pharmacological Sciences, HSC, SUNY Stony Brook, Stony Brook, NY 11794-8651. SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK#139-B.**

POSTDOCTORAL POSITIONS IN PLANT MOLECULAR BIOLOGY are available immediately to develop transposable elements as tools for gene isolation (J. Chappell), characterize polyadenylation signals in plant genes (A. Hunt), and apply gene transfer techniques to the study of polyviruses (J. Shaw). A background in biochemistry or molecular biology is preferred. Please send curriculum vitae and arrange to have three letters of recommendation sent to: **Dr. Arthur Hunt, Department of Agronomy, University of Kentucky, Lexington, KY 40546.**

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At Cooper Laboratories Inc., in Mountain View, CA, our achievements in advanced biotechnology research and its applications to therapeutic products for respiratory diseases have put us at the forefront of respiratory technology.

With an emphasis on pulmonary therapeutics, our advanced developments include innovations in the areas of liposome encapsulation of respiratory therapeutics, and recombinant DNA sourced proteins for the treatment of genetically-deficient emphysema patients.

LIPOSOME RESEARCH SPECIALIST

Participating in a multi-disciplinary research program, you will work to develop novel formulation for the delivery of liposome encapsulated drugs for the treatment of respiratory diseases. This will involve the development of new drug/liposome systems, their evaluation in IN VITRO and IN VIVO systems, and the development of manufacturing processes.

Qualifications must include a Ph.D. and 2 years of post-doctoral experience in biochemistry with specialization in lipid chemistry. Training in liposome production and drug delivery is desirable.
PLEASE RESPOND TO DEPT. NB-01.

PULMONARY PHYSIOLOGY

Post-Doctoral Position

In this post-doctoral position, you will have the outstanding and unusual opportunity to work in a prestigious laboratory at a major research institute in the Bethesda, MD, area. Your research will involve the delivery of therapeutic proteins to the lung for the treatment of respiratory diseases such as emphysema, asthma and other related diseases. At the end of this 2-year appointment, you will have the option of joining the Cooper Laboratories research staff.

A Ph.D. in Pharmacology/Animal Physiology with training in biochemistry (particularly protein chemistry) is highly desirable, as is an understanding of pulmonary physiology and the development of animal model systems of respiratory disease.
PLEASE RESPOND TO DEPT. NB-02.

In addition to a professional and stimulating work environment, we offer excellent salaries and benefits. For immediate consideration, please send your resume with salary requirements to Professional Employment Dept., Cooper Laboratories Inc., 455 East Middlefield Road, Mountain View, CA 94043. We are an equal opportunity employer. Principals only, please.

Cooper Laboratories Inc.

CAREER OPPORTUNITIES IN PHARMACEUTICAL RESEARCH

Otsuka Pharmaceutical Co., Ltd., one of Japan's major pharmaceutical concerns, has an opening for a Project Leader at its Rockville, Maryland facility. The Project Leader will join an outstanding team of international scientists involved in clinical trials in several therapeutic fields, and will be specifically responsible for clinical trials for cardiovascular agents. The successful candidate will have a Ph.D. and relevant experience in the area of cardiovascular pharmacology.

For the dedicated professional who seeks career growth as the reward for successful performance while receiving a competitive salary and a comprehensive benefits package, this position is ideal. Forward your resume with salary history and requirements, in confidence to:



Otsuka Pharmaceutical Co., Ltd.
Maryland Office of Clinical Research
P.O. Box 4165
Rockville, Maryland 20850

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Visiting & Postdoctoral Scientists

Biotherapeutics Inc., a rapidly growing company dedicated to providing research for the biotherapy of individual cancer patients, announces a **Visiting Scientist and Postdoctoral** Research Program. Appointments will be for one year renewable up to three years.

Candidates for this program...

- Are interested in engaging in pioneering research on the utilization of monoclonal antibodies, cytokines/lymphokines, tumor cell biology or cellular immunology for the rapid development of effective biotherapies of human cancer.
- Are expected to collaborate closely with our expert scientific staff of Immunologists, Cell Biologists, Biochemists, Pathologists, etc.
- Will have access to a well-equipped, modern laboratory at either Franklin, Tennessee or at one of several other locations through the USA.
- Are expected to present their research findings at national meetings and in peer-reviewed journals.
- Can expect a competitive salary, travel relocation expenses and health insurance program.
- Should hold an M.D. or Ph.D. degree in a relevant scientific or biomedical discipline. Sabbatical candidates are welcomed.

Interested individuals please send your CV. to: **Dr. Robert K. Oldham, Re: Visiting Scientist Program, Biotherapeutics Inc., 357 Riverside Drive, Franklin, TN 37064.**

Biotherapeutics Inc.

POSITIONS OPEN

POSTDOCTORAL POSITIONS

Three postdoctoral positions are available now at the University of Florida College of Medicine, in the Departments of Neuroscience and Biochemistry. The areas of research are: (i) Biochemical studies of the ubiquitin system, (ii) Characterization of ubiquitination in Alzheimer's disease, (iii) Mechanisms and significance of neurofilament modifications. Appropriate areas of expertise for these projects include electron microscopy, protein chemistry, recombinant DNA technology, and immunocytochemistry. Applicants should send a summary of research interests, curriculum vitae, and the names of three referees to: **Drs. Gerry Shaw and Vincent Chau, University of Florida College of Medicine, Box J-244, JHMHC, Gainesville, FL 32610.**

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

POSTDOCTORAL POSITIONS IN RESPIRATORY PHYSIOLOGY. Two positions are available immediately to study the neural or chemical regulation of respiration under the sponsorship of either **G. S. Mitchell** (chest wall afferents, exercise, comparative physiology) or **G. E. Bisgard** (chemoreceptors, altitude acclimatization). Send curriculum vitae and three letters of reference by 1 September 1987 to: **G. S. Mitchell, Department of Comparative Biosciences, 2015 Linden Dr. West, University of Wisconsin, Madison, WI 53706. Telephone: 608-263-9826. Affirmative Action/Equal Opportunity Employer.**

TWO POSTDOCTORAL POSITIONS available immediately to participate in studies on either structural basis of purified human erythrocyte glucose transporter function in reconstituted system, or cellular and molecular modulation of glucose transport in adipocytes by insulin and other hormones. Recent Ph.D. with training in protein chemistry, biophysics, or cellular biology preferred. Interested individuals should send a letter stating their interest, and three referees to: **Dr. Chan Y. Jung, Department of Biophysical Sciences, SUNY at Buffalo, School of Medicine, Buffalo, NY 14214.**

POSTDOCTORAL RESEARCH ASSOCIATE, Brookhaven National Laboratory. Position available immediately for a protein crystallographer to study the structures of prokaryotic ribosomal proteins. Some experience in protein purification and crystallization would be an advantage. Applicants should submit curriculum vitae and names of three references to: **Dr. Stephen W. White, Biology Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, NY 11973. Equal Opportunity Employer M/F.**

POSTDOCTORAL/RESEARCH ASSOCIATE. A position is available for an individual having recently received a Ph.D. in pharmacology, biochemistry, or cell physiology. The successful applicant will be engaged in research involving the effects and mechanisms of action of atrial natriuretic factor in cultured vascular and renal cells, with particular emphasis on calcium and cyclic nucleotide metabolism. Competitive salary and fringe benefits are available. Appointment will be for 1 year with possibility of renewal. Please send curriculum vitae and three letters of recommendation to: **Dr. Aviv Hasid, Department of Pharmacology, University of Tennessee, Memphis, TN 38163; or telephone: 901-577-4827.**

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-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, and 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.**

Director National Institute for Medical Research

The UK Medical Research Council is seeking a Director for the National Institute for Medical Research, Mill Hill, London. The post will become vacant in October 1987 when the present Director, Dr. D.A. Rees, FRS, will relinquish it in order to take up his appointment as Secretary of the Medical Research Council.

The Institute is one of the Council's largest research establishments with some 525 staff, over 100 visiting workers and a total budget of £11m. It currently comprises 21 research teams organised into four main Groups: Genes and Cellular Controls, Infections and Immunity, Physiological and Neural Mechanisms, and Technology. There are close working links with the adjacent MRC Collaborative Centre which was set up in order to engage with industrial partners in projects of direct commercial application arising from the work of Council establishments, including the Institute.

The new Director will be a distinguished scientist with the ability both to develop the Institute's research programmes and to coordinate the activities of a large research establishment.

MRC
Medical Research Council

Requests for further particulars should be addressed to Dr. J. Alwen, MRC Headquarters Office, 20 Park Crescent, London W1N 4AL, telephone 01-636-5422 ext. 348, within four weeks of the date of the appearance of this advertisement.

Opportunities in Molecular Biology

BIOS Corporation, an innovative biotechnology company located adjacent to Yale University in New Haven, is undergoing major expansion and has several immediate openings:

Molecular Biologist

Responsibilities include directing research activities in molecular genetics especially in area of RFLP analysis of human genetic diseases. Requirements include Ph.D. plus 1-4 years relevant experience.

Human Geneticist

Responsibilities include directing on-site and off-site projects for collecting/storing/analyzing tissues from well-characterized human populations. Need to be familiar with computer-based systems for linkage/pedigree analysis. Requirements include Ph.D. and 3-5 years relevant experience.

Territory Manager - Boston

Responsibilities include both planning/implementation of promotional activities as well as direct sales. Will interact with Marketing department including telemarketing at company headquarters. Requirements include 3-5 years in sales as well as understanding of science. Salary plus commission.

Telemarketer(s)

Based in New Haven, responsibilities for these individuals include all activities associated with telemarketing, including screening and qualifying of customers. Requirements include 1-2 years experience. Salary plus commission.

Marketing Assistant(s)

Responsibilities include preparation of product brochures and advertisements. Will interact with product development in transfer of technical data to appropriate selling pieces. Will support activities of territory managers. Requirements include 1-2 years relevant marketing experience and fundamental understanding of science.

Laboratory Technician(s)

Responsibilities include tissue culture, DNA purification and restriction, DNA probe generation, hybridization, instrument testing, data analysis. Requirements include B.S. or M.S. degree with 1-3 years relevant experience.

Administrative Assistant(s)

Responsibilities include direct support of executive staff. Assist executive staff in routine day-to-day operations. Preparation of monthly reports for Board meetings, typing, filing, experience with Multimate and knowledge of Lotus. Requirements include 1-2 years relevant experience.

BIOS

Qualified candidates, please send resume to:

BIOS Corporation, 291 Whitney Avenue, New Haven, CT 06511

DNAX Research Institute

Flow Cytometry Research Assistant

DNAX Research Institute, a biotechnology research facility near Stanford University, has a position immediately available for a research assistant to operate and maintain the Flow Cytometry Facility.

This individual will operate, maintain and provide training to others on the Fluorescence-Activated Cell Sorter (Becton-Dickinson FACS IV). Other duties include establishing new techniques for fluorescence staining and cell cycle analysis, preparing immunological reagents, and preparing cell samples for cell sorting. Candidates should have the interpersonal skills necessary for interacting with a variety of users.

Candidates should possess a BS or MS in biology, biochemistry, or allied sciences and a minimum of one year of experience in flow cytometry.

Interested applicants should send a curriculum vitae to DNAX Research Institute, Human Resources Department, 901 California Ave., Palo Alto, CA 94304. DNAX is an equal opportunity employer, m/f/h.

ADVANCED BIOLOGICAL R & D

Berlex Laboratories, Inc., a rapidly growing pharmaceutical company located in Northern New Jersey, is seeking talented individuals in Research and Development.

VASCULAR RESEARCH: The expansion of vascular research, under the direction of Dr. Gabor Rubanyi, has created an opportunity involving in vitro laboratory work to study isolated vascular smooth muscle tissue. The position is equally divided between research and screening. The successful candidate must be adaptable and flexible with the ability to work independently. We require a BS degree in a biological science with three years experience or a Master's with two years experience.

CELL CULTURE: Responsibilities include assisting in the operation and maintenance of a cell culture facility in support of drug development and basic research in cardiovascular pharmacology. The position requires the ability to assume responsibility and to work with a minimum of supervision in maintaining cell culture lines, performing experiments as directed, analyzing and researching data, preparing reports, and supporting senior staff as required. An MS degree in a biological science or the equivalent, hands-on experience in cell culture techniques and a background in biochemical pharmacology are preferred.

Berlex offers a stimulating scientific environment with opportunities for personal challenge and growth as well as a comprehensive benefits package. If you would like to be considered for these career opportunities, please submit a CV with salary history, indicating position of interest, to: Lila Bernstein, Manager, Human Resources R&D, Berlex Laboratories, Inc., 110 East Hanover Avenue, Cedar Knolls, New Jersey 07927. Equal Opportunity Employer M/W/H.

BERLEX

Laboratories Inc.

PROTEIN CHEMIST

BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc. is seeking a creative Protein Chemist for our Research and Development Center, located in DANBURY, CT. This position is located in our Chemistry Department and the successful candidate will participate in new drug discoveries.

Responsibilities will include sequencing; characterization and chromatography (HPLC) of proteins and peptides. Requirements include a Masters degree and 2-5 years experience or a Bachelors degree with 5 plus years experience, proficiency in state-of-the-art protein microsequencing, HPLC and characterization techniques.

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

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



Boehringer Ingelheim

EUKARYOTIC MOLECULAR BIOLOGIST

SR. SCIENTIST

The Department of Molecular Genetics, Roche Research Center, Hoffmann-La Roche Inc., is seeking a Senior Scientist to be responsible for a basic research program in eukaryotic molecular biology, and to participate in research projects using recombinant DNA technology. We are conducting basic and applied research on prokaryotic and eukaryotic gene expression, retroviruses, lymphokines, oncogenes, growth factors and other areas with relevance to human pharmaceuticals.

Qualifications include a Ph.D. in Molecular Biology, Biochemistry or Virology, and a minimum of two years' postdoctoral training. Individuals with experience in retroviral gene regulation or eukaryotic expression systems are encouraged to apply.

The Roche Research Center is located in a suburban setting, 10 miles from New York City. Roche offers a very competitive compensation package, and a research environment that encourages scientific growth. For consideration, please send your curriculum vitae and a letter indicating past, current and future research interests to: Eleanor Malone, Dept. GJ, Hoffmann-La Roche Inc., Nutley, New Jersey 07110. We are an equal opportunity employer.

ROCHE Hoffmann-La Roche

Working Today For A Healthier Tomorrow.

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE position is available immediately for an individual interested in defining the role of alterations in the cytosolic ionic environment as it relates to growth factor stimulation of gene expression or cell injury. Approaches include digitized fluorescence microscopy, in situ hybridization, and protein phosphorylation. Salary is negotiable. Send letter, curriculum vitae, and names of three references to: **Dr. Brian Herman, Laboratories for Cell Biology, Department of Anatomy, 232 Swing Building 217H, University of North Carolina at Chapel Hill, Chapel Hill, NC 27514. Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATES, junior/senior levels, expected fall 1987. Molecular biology, protein chemistry, and immunology of the oncogenic Marek's disease herpesvirus (MDHV) system. Junior position: Ph.D. (or M.D./D.V.M. with strong research background) in molecular biology and biochemistry (preferably recombinant DNA technology) and ideally some virology/immunology. Senior position: same plus 2 years of relevant postdoctoral experience. Send résumé to: **Dr. L. F. Velicer, Microbiology, Michigan State University, East Lansing, MI 48824-1101. Telephone: 517-355-6605. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH FELLOW

Three-year position immediately available. Project involves studies on the role of prostaglandins and leukotrienes in lymphocyte regulation under altered selenium nutrition in dairy cattle. Applicants should have strong background in prostaglandins and leukotrienes. Experience in immunological methods desirable. Starting salary up to \$18,000, and negotiable for applicants with high qualifications. Send curriculum vitae and three letters of reference by 15 August 1987 to: **Dr. C. Reddy, 226 Fenske Lab, University Park, PA 16802.**

POSTDOCTORAL RESEARCH FELLOW—BIO-ORGANIC/MEDICINAL CHEMISTRY. Synthetic chemist to work in a multidisciplinary, multi-institutional group investigating the potential of polyamine biosynthesis inhibitors as chemotherapeutic agents. Our efforts in synthesis and enzymology will be coordinated with others in the group studying the effects of the new enzyme inhibitors on polyamine biosynthesis, cell growth, and antitumor activity in vitro and in vivo. [See *Biochemistry* 25, 4091 (1986).] Salary negotiable. Send curriculum vitae together with a statement of research interests and experience to: **Professor James K. Coward, Departments of Chemistry and Medicinal Chemistry, The University of Michigan, Ann Arbor, MI 48109-1065. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCHER (ANTICIPATED). Recent Ph.D. in biochemistry, chemistry, or related science with experience in drug metabolism. Experience in methods development related to metabolite extraction, isolation, and identification essential. Responsibilities include supervision of contract research on drug metabolism and identification in the equine. Submit résumé by 30 August 1987 to: **Dr. Steven Barker, Department of Veterinary Physiology, Pharmacology and Toxicology, Louisiana State University School of Veterinary Medicine, Baton Rouge, LA 70803. L.S.U. is an Equal Opportunity Employer.**

RESEARCH ASSOCIATE: The Physiology Department at the Armed Forces Radiobiology Research Institute (AFRRI), which is a command of the Defense Nuclear Agency, is seeking candidates for a research biologist/physiologist/pharmacologist position (one position). He/she will participate in electrophysiological studies on free radical and oxidative damage in hippocampal slice preparation. Requirements are a Ph.D. or equivalent experience, strong publication record, and independent research experience. This position, available immediately, is a 3-year civil service appointment. Salary ranges \$27,172 to \$35,326. To apply for this civil service position, send curriculum vitae or SF-171; and the names of three references to: **Armed Forces Radiobiology Research Institute, Civilian Personnel Office, Bethesda, MD 20814-5145 not later than 31 August 1987. Reference announcement number AFRRI 8/87. Direct inquiries to: Dr. T. Pellmar 202-295-1346 or Joann Kelleher, Personnel Management Specialist 202-295-1426. U.S. citizenship is required. AFRRI is an Equal Opportunity Employer.**

POSITIONS OPEN

PROJECT INVESTIGATOR TOPOISOMERASE II—A NOVEL TARGET OF ANTINEOPLASTIC DRUGS

A postdoctoral position funded by the American Cancer Society is available July 1987. The cellular and molecular pharmacology of topoisomerase II and its relation to the mechanism of selective cytotoxicity of several antineoplastic agents is being explored. We focus on human leukemia cells. Drug-sensitive and -resistant lines have been characterized and are currently being examined using conventional protein biochemical techniques as well as novel molecular biologic approaches. Among the projects available for study are: (i) biochemical mechanisms of cellular resistance to topoisomerase II-reactive drugs; (ii) the regulation and biochemical modulation of topoisomerase II activity and its relationship to cellular proliferation, differentiation, and cell cycle progression; (iii) topoisomerase II as an active participant in transcription; (iv) molecular mapping of topoisomerase II-reactive DNA sites and the effects of drugs on the locale and magnitude of enzyme actions. Salary: \$22,000. Send curriculum vitae and three letters of reference to: **Dr. Leonard A. Zwelling, Box 52, M. D. Anderson Hospital, 1515 Holcombe Boulevard, Houston, TX 77030. Telephone: 713-792-3694. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE, Ph.D. NIH-funded position available immediately to study effects of omega 3-fatty acids on lipoprotein metabolism and atherosclerosis. Interest and experience in molecular biology and tissue culture desirable. Salary commensurate with experience. Send curriculum vitae and names of three references to: **Dr. P. V. Subbiah, Section of Endocrinology and Metabolism, Rush Medical College, 1653 West Congress Parkway, Chicago, IL 60612.**

RESEARCH ASSOCIATE: Postdoctoral position to study the effects of calcite (limestone) treatment of acidic lakes and a watershed. Strong background in water chemistry, soil chemistry, hydrology, statistics, and computer modeling as well as demonstrated ability to conduct independent research. Submit curriculum vitae and three letters of reference to: **Dr. Charles T. Driscoll, Department of Civil Engineering, 220 Hinds Hall, Syracuse University, Syracuse, NY 13244, by 31 August 1987. Syracuse University is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE position is available immediately to investigate the control of intestinal water and electrolyte by the immune system and by inflammatory cells. This research focuses on the interactions between the epithelium, mesenchymal cells, the immune system, and the enteric system. Ph.D. applicants could have experience in either the immunology, physiology, pharmacology, or biochemistry of eicosanoids and inflammation. Send curriculum vitae, summary of research and experience and names of three references to: **Dr. D. W. Powell, Department of Medicine, 326 Burnett Womack Building, University of North Carolina, Chapel Hill, NC 27514. Telephone: 919-966-2511. The University is an Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE

Exciting opportunity to investigate control mechanisms in proteinase metabolism. Studying control of plasminogen activator metabolism using biochemical and molecular biological techniques. Looking for research associate with experience in molecular biology, including Northern blotting, in situ hybridization, sub-cloning, cell culture and enzymology. Also opportunity to clone gene for important human mast cell enzyme. Substantial interaction with molecular biology program at University encouraged.

Reply to:

**Gerald S. Lazarus, M.D.,
Department of Dermatology
University of Pennsylvania
229 Medical Education Building
36th and Hamilton Walk
Philadelphia, PA 19104-6065**

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

POSITIONS OPEN

UNIVERSITY OF SOUTH FLORIDA

RESEARCH ASSOCIATE. The Division of Pediatric Endocrinology of the University of South Florida College of Medicine invites applications for the position of research associate. Applicants should hold the Ph.D. or equivalent and must have postdoctoral training. Previous experience can cover molecular, biochemical, and other endocrine areas. Position available immediately. Applicants should telephone Dr. Bercu, and submit curriculum vitae and the names of three references to: **Dr. Barry B. Bercu, Professor of Pediatrics, University of South Florida College of Medicine, All Children's Hospital, P.O. Box 31020, St. Petersburg, FL 33701-8920. Telephone: 813-892-4233. Equal Employment Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE AND POSTDOCTORAL POSITIONS available to study the biosynthesis and gene structure of mucin glycoproteins in trachea epithelial cells and cell surface antigens in tumor cells. Studies will include carbohydrate characterization, enzyme and RNA isolation, preparation of antibodies, DNA synthesis and cloning procedures. Salary commensurate with experience. Send résumé to: **Dr. Joseph Mendicino, Department of Biochemistry, University of Georgia, Athens, GA 30602.**

RESEARCH ASSOCIATE/POSTDOCTORAL POSITION available immediately to study neurophysiology of locus coeruleus and nucleus basalis neurons in waking monkeys. Excellent facilities. Experience with behavior and extracellular recording in primates sought. Two years of funding minimum; private and federal sources. Salary commensurate with experience; excellent benefits included. Submit curriculum vitae and three references to: **G. Aston-Jones, Department of Biology, New York University, Washington Square, New York, NY 10003. Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE/ ASSOCIATE DIRECTOR

The University of Missouri invites applications for a 12-month, state-supported position as associate director of an Oligonucleotide Synthesis Facility. Duties include management of Facility operations, synthesis and purification of custom oligodeoxynucleotides, and computer analysis of nucleic acid and protein sequence data. Familiarity with DNA and protein sequence software is required. Candidates should have a Ph.D. degree or equivalent experience in biochemistry, nucleic acid chemistry, and molecular biology. Send applications to: **Dr. Mark A. McIntosh, Department of Microbiology, University of Missouri, Columbia, MO 65212. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE/ POSTDOCTORAL FELLOW COLUMBIA UNIVERSITY GENOME PROJECT

Positions available to work on projects restriction mapping human and other chromosomes and developing techniques for using these maps efficiently for biological studies. Prior experience in molecular biology or nucleic acid biochemistry is essential. Send résumé and letters of recommendation to: **Doctors C. L. Smith or C. R. Cantor, Department of Genetics and Development, 701 West 168 Street, Columbia University, New York, NY 10032.**

RESEARCH ASSOCIATE. Opportunity with active, well-funded bone/calcium research group for enthusiastic Ph.D., M.D./Ph.D. or scientifically trained M.D. (United States citizen or permanent resident). Development of independent career emphasized. Training in cell biology, biochemistry, basic physiology, or experimental pathology desirable. Send particulars and references to: **H. Heath III, M.D., Head, Endocrine Research Unit, Mayo Foundation, 5-164 West Joseph Building, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.**

POSITIONS OPEN

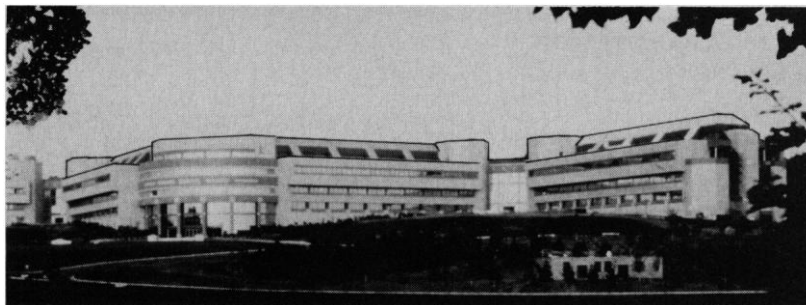
THE UNIVERSITY OF CHICAGO PRITZKER SCHOOL OF MEDICINE

RESEARCH ASSOCIATE POSITIONS are available to study cell and molecular biology of the kidney in physiological and disease states. The Section of Nephrology is seeking investigators to join highly differentiated research programs in the following areas: calcium metabolism and bone physiology (**Bushinsky**), RFLPs in patients with hereditary disorders of renal stone formation (**Coe**), cell biology of transport ATPases (**Katz**), vasopressin metabolism in pregnancy (**Lindheimer**), cell-cycle regulated genes, oncogenes and tumors (**Sukhatme**), and autocrine mechanisms and growth-regulatory proteins in renal cells (**Toback**). The successful candidates will provide expertise to integrate one or more of the following techniques into these laboratories: monoclonal antibody production, immunoaffinity purification of antibodies, immunoprecipitation of proteins, in vitro translation, protein chemistry including HPLC, recombinant DNA manipulation and DNA sequencing, in situ hybridization, site-directed mutagenesis, cell transformation, microinjection of DNA and proteins. A Ph.D. degree is essential, and postdoctoral experience is encouraged. Salary is highly competitive, and commensurate with experience. Duration of appointment is open. Send curriculum vitae, cover letter detailing specific research interests, and names and telephone numbers of three references to: **Dr. Fredric Coe, Section of Nephrology, Department of Medicine, Box 28, The University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.**

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

U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), **SIX POSITIONS—MICROBIOLOGIST (LEAD SCIENTIST), TWO ORGANIC CHEMISTS, MASS SPECTROSCOPIST, AND TWO ORGANIC CHEMISTS (POSTDOCTORAL)**, Northern Regional Research Center, Peoria, Illinois. ARS is seeking a **senior microbiologist** to lead a research program to modify vegetable oils with microorganisms, or enzymes for industrial products. The incumbent conducts fundamental and applied research on microorganism or enzymatic modification of vegetable oils. Expected modification involves hydroxylation, epoxidation, isomerization, desaturation, and lengthening and shortening fatty acid chain lengths. Applicant should have knowledge of biochemistry and enzymology and skill in team leadership. Ph.D. is desired. The position is GM 13/14/15 (\$38,727 to \$53,830). **Senior Organic Chemist** to modify vegetable oils nonenzymatically, and evaluate for industrial products. Applicant should have knowledge of physical-analytical chemistry and skill in team leadership. Ph.D. is desired. The position is GS(GM) 13/14/15 (\$38,727 to \$53,830). **Organic Chemist** with strong background in natural products, allelochemicals, and plant growth regulators. Ph.D. desired. GS 11/12 (\$27,172 to \$32,567). **Spectroscopist/Analytical Chemist** for hands-on operation of GC/MS and interpretation of data. Must have knowledge and experience with mass spectroscopy. B.S. or advanced degree, GS 7/12 (\$18,358 to \$32,567). Two **Postdoctoral Organic Chemists**. One to modify Meadowfoam seed oil from the potential new industrial oilseed crop and evaluate properties. One natural products chemist for studies of plant insect interactions. Candidates must have Ph.D. Positions available for 1 year with probability of renewal for 2nd year. The positions are GS 11 (\$27,172). U.S. citizenship is required for all positions. Additional information may be obtained by calling **Marvin O. Bagby at 309-685-4011, extension 531**. Applications in response to this advertisement must be marked **7N 020**. Send résumé to: **M. O. Bagby, Northern Regional Research Center, 1815 North University Street, Peoria, IL 61604.**

Bristol-Myers Announces Expansion In Molecular And Cellular Biology



IN ALL THE WAYS THAT SCIENTIFIC LEADERSHIP IS MEASURED, Bristol-Myers sustains an extraordinary record of performance. The pace of activity is quickening at our new multi-million dollar pharmaceutical research facility in Wallingford, Connecticut. Building on basic research achievements in cancer, infectious diseases, cardiovascular and central nervous system areas, we are entering a period of heightened growth and opportunity. Immediate openings are available for cellular and molecular biologists, and immunologists to participate in multidisciplinary teams working on research problems at the cutting edge of science.

PROTEIN CHEMISTRY

PhD with strong leadership skills and at least 5 years postgraduate experience in protein isolation/sequencing. Research positions are also available, for BS/MS chemists with 3-5 years experience in protein isolation.

VECTOR CONSTRUCTION

PhD level opening for a molecular biologist with a minimum of 2 years postdoctoral experience in vector construction and mammalian cell expression. Also BS/MS scientists with 3-5 years of molecular biology experience in vector construction and expression.

MOLECULAR BIOLOGY

Additional BS level positions are available. Prefer experience in general molecular biology, cell culture and gene expression to work in already established molecular biology programs.

IMMUNOLOGY

BS or MS scientist with 2 plus years working experience in cellular immunology or immunochemistry/biochemistry, including in vitro lymphocyte function studies, HPLC single and two-dimensional PAGE, immunoaffinity, chromatography and immunoprecipitation of cell surface antigens.

A CONTINUED COMMITMENT to pharmaceutical research is a fitting beginning to our second century. BRISTOL-MYERS careers offer the advantages of sustained growth, highly competitive salaries, extensive benefits and professional support. Our countryside location is convenient to New Haven and Hartford Connecticut, New York City and New England.

TO FIND OUT MORE, send resume with salary history, noting position of interest to: **BRISTOL-MYERS COMPANY, Pharmaceutical Research & Development Division, Attn: TZ11, P.O. Box 5100, 5 Research Parkway, Wallingford, CT 06492.**

An equal opportunity employer.

Bristol-Myers

POSITIONS OPEN

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

RESEARCH SCIENTIST

Position involves the study of the hormonal regulation of larval cuticular melanization of the tobacco hornworm, concentrating on the regulation of two key epidermal enzymes, a phenoloxidase and dopa decarboxylase, at both cellular and molecular levels.

Requires Ph.D. in insect endocrinology, agriculture, or closely related field, plus 2 years of experience to include: (i) insect tissue culture; (ii) skill in insect microsurgery, including allatectomy and removal of perivisceral organs; (iii) biochemical expertise including enzyme assays and purification, gel electrophoresis, protein and DNA extractions; and (iv) experience using immunological techniques including radioimmunoassay, immunoelectrophoresis and antibody preparation.

Salary: \$13.10 to \$18.72 per hour. Hours worked: 35 hours per week.

Submit résumé by 24 August 1987 to: **Employment Security Department, ES Division, Attention: AEC45914, Olympia, WA 98504. Equal Opportunity Employer.**

SENIOR RESEARCH ASSOCIATE/ VETERINARY VACCINE RESEARCH

IMC/Pitman-Moore, a growing force in the animal health industry, has an opportunity for a highly motivated individual in our veterinary vaccine research and development program. The candidate should possess the following qualifications:

- (i) experience in mammalian virology and tissue culture
- (ii) a master's degree and 5 to 7 years experience in veterinary vaccine research and development
- (iii) project management experience
- (iv) good interpersonal skills
- (v) excellent technical ability

Send résumé and salary requirements to: **DN-1, P.O. Box 344, Washington Crossing, NJ 08560.**

IMC/Pitman-Moore is an Equal Opportunity Employer.

The Rutgers Molecular Biology Computing Laboratory provides computing services to scientists, and engages in research in molecular biology computing. Applications include molecular modeling, genetic sequence analysis, communications, and database support. The laboratory is seeking a **SYSTEMS PROGRAMMER/SYSTEM MANAGER** for its developing facilities.

The successful candidate will work with the Director in planning, developing, and integrating research computing facilities, and will assume responsibility for running them. Present equipment includes a Digital VAX/VMS system, an Evans and Sutherland Picture System, numerous microcomputers and a local-area network, soon to be augmented by several workstations and a distributed file system.

Candidates should have a bachelor's degree or equivalent and 4 to 6 years experience in an academic or industrial setting. Experience with VAX/VMS system management in a networked environment, hardware configuration, and site management are essential. Other relevant experience might include: Unix, TCP/IP, instrument control, and microcomputers (IBM clones and Macintosh). Interest in the research environment is important, but specific knowledge of molecular biology is not required. Good interpersonal and verbal skills are essential.

Salary will depend upon qualifications and experience. Please submit curriculum vitae and three references to: **Catherine Kelble, Division of Personnel, Rutgers, The State University of New Jersey, New Brunswick, NJ 08903, referencing position 319.**

Rutgers University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

SCIENTIST/SENIOR SCIENTIST

Difco Laboratories, Ann Arbor, MI, invites applications for a Scientist/Senior Scientist position which will supervise research and development of diagnostic test systems for clinical, food, dairy, and water microbiological applications. The successful candidate should have fundamental training in microbiology and knowledge or experience in microbial growth and biochemical activities as applied to detection and identification of microorganisms. A Ph.D. in microbiology is required with 0 to 3 years experience in industrial or clinical microbiological settings. Send résumé, publications list, references, and salary history to: **D. J. Schafer, Difco Laboratories, Research and Development Center, 1180 Ellsworth Road, Ann Arbor, MI 48108. Equal Opportunity Employer, M/F.**

STAFF ASSOCIATE FLOW CYTOMETRY SUPERVISOR

Fred Hutchinson Cancer Research Center is seeking an individual to take proactive control of a flow cytometry facility serving 50+ researchers. The candidate will have excellent leadership skills plus experience with instrumental analysis, optical systems, PDP-11 series and VAX computers, and grant writing. Experience in flow cytometry is desired. Please send résumé to: **FHCRC, Human Resources Office, 1124 Columbia Street, Seattle, WA 98104, Attention: Han Nachtrieb. Equal Employment Opportunity/Affirmative Action, M/F/H Employer.**

TENURE-TRACK RESEARCH POSITIONS available in a stimulating environment including established collaborations with the CDC, Yerkes Primate Center, and Georgia Institute of Technology for investigators with experience in such areas as anaerobic microbiology, cell, or molecular biology. Applicants must have a Ph.D. or equivalent and will be expected to maintain an independent, funded research program and interact collaboratively with other investigators in the research center and the Emory academic community. Applicants should submit curriculum vitae, a detailed description of research goals, and list of references to: **Dr. Charles G. Widmer, Dental Research Center, Emory University, 1462 Clifton Road, NE, Atlanta, GA 30322. Emory is an Equal Opportunity Employer.**

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

VETERINARY PATHOLOGIST

The Laboratory of Biochemical and Genetic Toxicology of the Wadsworth Center for Laboratories and Research invites applications for a position of veterinary pathologist. The candidate must possess a D.V.M. degree or equivalent and be Board-eligible or Board-certified by the American College of Veterinary Pathologists. The individual will be expected to develop a self selected, independent research program compatible with the broad general interests of the Center and to conduct service pathology evaluations of a wide range of toxicology and other animal studies. Research collaborations with Wadsworth Center scientists, who are engaged in all aspects of biomedical research, are strongly encouraged. Research time commitment will be approximately 70% and service time commitment will be 30%. There are also opportunities available to teach and recruit graduate students in the recently initiated School of Public Health Sciences, a joint venture between the New York State Department of Health and the State University of New York at Albany. The New York State grade level, academic ranking, and salary will be commensurate with professional experience. Send curriculum vitae and three letters of reference by 31 August 1987 to: **Dr. Laurence Kaminsky, Wadsworth Center for Laboratories and Research, New York State Department of Health, Albany, NY 12201.**

CONFERENCES

NATURAL TOXINS FROM AQUATIC AND MARINE ENVIRONMENTS, Woods Hole, Massachusetts, 27 to 30 August 1987. This conference, to be conducted without taxonomic or chemical bias, will consider the entire range of source organisms and toxins, from bacteria to vertebrates and from small molecules to proteins. Attention will be focused on illuminating the structures of the compounds involved, their metabolic origins, and the molecular basis for their toxicity. For information please contact: **Dr. Sherwood Hall, FDA HFF-423, 200 C Street SW, Washington, DC 20204. Telephone: 202-245-8418.**

BODEGA MARINE LABORATORY UNIVERSITY OF CALIFORNIA INVERTEBRATE HISTORECOGNITION: THE BIOLOGY OF SELF AND NONSELF 10 to 13 SEPTEMBER 1987

The Bodega Marine Laboratory (BML) is sponsoring a colloquium which will focus upon molecular and cellular mechanisms, ecology, and evolution of historecognition in invertebrates. The invited speakers are: **C. Bigger, D. Coombe, R. Crozier, J. Danska, R. Grosberg, J. Neigel, B. Rinkevich, V. Scofield, L. Smith, J. Stoddart, G. Van de Vyver, and I. Weissman.** For more information please contact: **Nancy Stimson, BML, P.O. Box 247, Bodega Bay, CA 94923. Telephone: 707-875-2211.**

RESEARCH TRAINING

POSTDOCTORAL RESEARCH TRAINING in hypertension at the Medical College of Ohio in the Departments of Medicine and Physiology for M.D. or Ph.D. Areas of research include hormones and hypertension, prostaglandins, and atrial natriuretic factor. Clinical investigations as well as laboratory studies are carried out. Open only to U.S. citizens or permanent residents. Write: **Patrick J. Mulrow, M.D., Chairman, Department of Medicine, Medical College of Ohio, C.S. 10008, Toledo, OH 43699. We are an Equal Opportunity Employer.**

POSTDOCTORAL TRAINING IN CELLULAR AND BIOCHEMICAL TOXICOLOGY CORNELL UNIVERSITY

Postdoctoral positions on NIEHS training grant available 1 July 1987 or later. Areas of emphasis in the training program include nutritional toxicology, biochemical toxicology and metabolism, cellular and genetic toxicology, immunotoxicology, food toxicology, and environmental toxicology. Candidates must be permanent residents of the United States. Send curriculum vitae, graduate school transcript, three letters of reference, and statement of research and training interests to: **Dr. Stephen E. Bloom, Training Grant Director, Cornell University, 215 Rice Hall, Department of Poultry and Avian Sciences, Ithaca, NY 14853.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP IN NEUROBIOLOGY

The Rice University Biology Department announces a Huxley Fellowship in Biology. This is a 1-year, renewable appointment. The candidate will be expected to carry out research in Comparative Neurobiology and teach a graduate course in an area of their choosing. Appointment will commence in September 1987. Stipend is \$20,000. Send a résumé and contact three individuals for professional letters of reference. Résumé and letters should be sent to: **Dr. Raymon M. Glantz, Biology Department, Rice University, Houston, TX 77251. Rice University is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIP. Position for recent Ph.D. to study the role of differential calcium release and local pH changes on skeletal muscle fatigue. Project involves optical, mechanical, and electrophysiological studies in single isolated muscle cells. Knowledge of optical methods in biology and the use of computers for data acquisition and analysis is preferred. NIH-level stipends depend on experience. Send curriculum vitae and names of three references by 1 September 1987 to: **Dr. Hugo Gonzalez-Serratos, University of Maryland, Department of Biophysics, 660 West Redwood Street, Baltimore, MD 21201. Equal Employment Opportunity/Affirmative Action Employer.**

RESEARCH FELLOW

Postdoctoral Positions in Chemical Carcinogenesis

- 1) **Ph.D. in Organic or Medicinal Chemistry.**
This position will be responsible for *design* and *synthesis* of novel biologically active compounds as potential anticarcinogenic agents. Knowledge in structure-activity relationships desirable.
- 2) **Ph.D. in Biochemistry or Toxicology** with strong background in analytical chemistry. This position will be responsible for the development of sensitive DNA adduct assays to be used for testing potential anti-carcinogenic activities of synthetic compounds.

Independent and motivated individuals who enjoy research are encouraged to apply. Opportunities exist for these positions to become permanent. The American Health Foundation is a multidisciplinary cancer research institute. We provide state-of-the-art instrumentation as well as a stimulating research environment. To apply please send resume with references to:

Dr. Fung Lung Chung
Section of Nucleic Acid Chemistry
Division of Chemical Carcinogenesis
American Health Foundation
1 Dana Road
Valhalla, NY 10595

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Research Immunologist

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BIOCHEMICALS RESEARCH

SCIENTISTS & TECHNICIANS

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Allelix Inc., Canada's leading biotechnology company is recruiting several Research Scientists (Ph.D.) and Technicians (B.Sc./M.Sc.) for its Biochemicals Division. Successful applicants for these positions will join ongoing product-driven and exploratory research programs.

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Scientists and technicians for programs involving the purification and characterization of proteins. Applicants should have a degree in Biophysics, Biochemistry or a related subject and several years' practical experience in protein chemistry, purification analytical techniques, desirably including spectroscopy and computer programming. For one technician position, a strong background in protein crystallization is essential. File # BC8703

MICROBIAL PHYSIOLOGY

Scientists with a degree in Microbiology or Biochemistry with emphasis in microbial physiology. Applicants should have practical experience with metabolism and physiology studies, desirably in recombinant organisms. File # BC8704

MOLECULAR BIOLOGY

Scientists and Technicians for gene cloning and expression programs. Applicants should have a degree in molecular biology and several years' experience with recombinant DNA techniques. File # BC8705

MAMMALIAN CELL BIOLOGY

One Scientist and one Technician with a degree in Molecular Biology and some years' practical experience with mammalian cell expression/production systems. File # BC8706

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Mr. Walter Gagen, Manager,
Administrative Services,
Allelix Inc.
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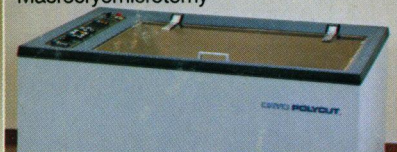
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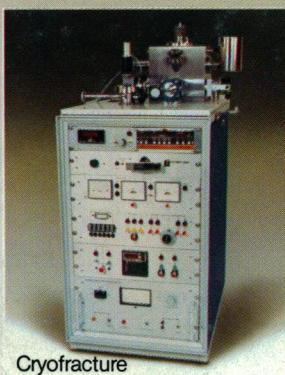
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