

biotechnology. It is difficult to separate the ecology of anaerobes from their geochemical effects, roles in global nutrient cycling, and potential influences on groundwater quality. The first chapter, an introduction to biogeochemistry, addresses these effects. The final chapter explores the potential impact of anaerobes on biotechnology, especially in biodegradation of pollutants. Development of these themes unites the text and broadens its usefulness for readers in disciplines outside microbiology, including those interested in the bioremediation of hazardous wastes.

Biology of Anaerobic Microorganisms was a pleasure to read (even the references). When it arrived at our library, I borrowed it for a six-month term, never believing I'd keep it that long. I kept it for five months, after which students have kept it constantly off the library shelf. This long-awaited book is another indication that anaerobic microbiology has come of age.

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Some Other Books of Interest

A History of Psychology in Autobiography. Vol. 8. GARDNER LINDZEY, Ed. Stanford University Press, Stanford, CA, 1989. xii, 485 pp., illus. \$49.50.

The series this volume represents dates back to 1930, having been edited successively by Clark Murchison, E. G. Boring, and (since volume 5, 1967) Gardner Lindzey. Each volume has contained autobiographical memoirs by 13 to 15 eminent psychologists. The present volume is the first to appear since 1980 and the first to be published by Stanford University Press. In his preface the editor reports that "in [his] biased judgment, this is the most interesting set of accounts that has yet appeared in the series. It includes several of the most gifted writers that psychology has (or has had); it includes our first joint autobiography; and . . . our three women contributors exceed the number in any previous volume." One contribution provides a report on "much of what has transpired in Geneva since Piaget's autobiography was published in this series more than 30 years ago." With respect to institutions, the series as a whole has, Lindzey notes, provided an array of perspectives on the development of the field at two of its preeminent institutions, Harvard and Stanford, and with this new volume the Rockefeller Institute and University are now represented.

The current set of contributors are Roger G. Barker, Roger Brown, Lee J. Cronbach, William K. Estes, Fritz Heider, Leo M. Hurvich and Dorothea Jameson, Bärbel Inhelder, R. Duncan Luce, Eleanor E. Maccoby, Paul E. Meehl, George A. Miller, Carl Pfaffmann, and Stanley Schachter. Each provides a list of his or her "selected publications," and a name index and a list of contributors to the earlier volumes are appended.—K.L.

Biotechnology and the Research Enterprise. A Guide to the Literature. WILLIAM F. WOODMAN, MACK G. SHELLEY II, and BRIAN J. REICHEL. Iowa State University Press, Ames, 1989. xviii, 358 pp. \$49.95.

This is a guide to works not on biotechnological techniques, results, and applications but on biotechnology—most specifically, agricultural biotechnology—in its social and economic ramifications. Compiled at Iowa State University with funds appropriated by the Iowa legislature for examination of the broader issues raised by biotechnology, the volume lists, summarizes, or describes publications ranging in length from editorials to full books and including reports prepared by or for government agencies, universities, foundations, associations, and other institutions. The entries are arranged according to theme: federal research policy generally, university-industry relations, conflict of interest, university research, the biotechnology industry, international biotechnology, and "related issues" (including public perceptions and ethical implications). Each set has an introduction, and the volume also includes a directory of biotechnology organizations, commercial and otherwise, a list of periodicals that regularly cover biotechnology, and a glossary of terms relating to biotechnology. It lacks a general index, and there is no cross-referencing between sections.—K.L.

Books Received

Acoustical Imaging. Vol. 16. Lawrence W. Kessler, Ed. Plenum, New York, 1988. xii, 658 pp., illus. \$115. From a symposium, Chicago, IL, June 1987.

Additive Gene Systems. An Explanation for Problems in Evolution and Selection. Roy G. Silson. Greenfield, Tring, U.K., 1988 (distributed by the author, Near Station, Tring, Herts., U.K. HP23 5QX). 312 pp., illus. \$35; paper, \$20.

Advanced Ceramics. Shinroku Saito, Ed. Oxford University Press, New York, and Ohmsha, Tokyo, 1988. viii, 278 pp., illus. \$65. Reprint, 1987 ed.

Advanced Research on Animal Cell Technology. Alain O. A. Miller, Ed. Kluwer, Norwell, MA, 1988. x, 421 pp., illus. \$119. NATO Advanced Science Institutes Series E, vol. 156. From a workshop, Brussels, Belgium, Sept. 1987.

An Ancient Air. A Biography of John Stringfellow of Chard, the Victorian Aeronautical Pioneer. Harald Penrose. Smithsonian Institution Press, Washington, DC, 1988. 183 pp. + plates. \$22.50.

Biotechnology and the New Agricultural Revolution. Joseph J. Molnar and Henry Kinnucan, Eds. Published for the American Association for the Advancement of Science by Westview, Boulder, CO, 1989. xvi, 288 pp., illus. Paper, \$27.50; to AAAS members, \$22. AAAS Selected Symposia Series, vol. 108. Based on a symposium, Philadelphia, PA, May 1986.

Biting off the Bracelet. A Study of Children in Hospitals. Ann Hill Beuf. 2nd ed. University of Pennsylvania Press, Philadelphia, 1989. xii, 206 pp. Paper, \$14.95.

Board Games Round the World. A Resource Book for Mathematical Investigations. Robbie Bell and Michael Cornelius. Cambridge University Press, New York, 1989. iv, 124 pp., illus. Paper, \$9.95.

C Tools for Scientists and Engineers. Louis Baker. McGraw-Hill, New York, 1989. xii, 321 pp. Paper, \$29.95.

CAD/CAM of Dies. J. S. Gunasekera. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1989. x, 194 pp., illus. \$64.95. Ellis Horwood Series in Mechanical Engineering.

Calculus. Vol. 1, One-Variable Calculus, With an Introduction to Linear Algebra. Tom M. Apostol. 2nd ed. Wiley, New York, 1988. xxii, 666 pp., illus. Paper, \$49.

The Cassandra Architecture. Distributed Control in a Blackboard System. Iain D. Craig. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1989. viii, 310 pp., illus. \$75. Ellis Horwood Books in Information Technology.

Dispersed Systems. K. Hummel and J. Schurz, Eds. Steinkopff, Darmstadt, and Springer-Verlag, New York, 1988. viii, 244 pp., illus. \$89. Progress in Colloid and Polymer Science, vol. 77. From a meeting, Graz, Austria, Sept. 1987.

DNA-Protein Interactions in Transcription. Jay D. Gralla, Ed. Liss, New York, 1988. xviii, 333 pp., illus. \$72. UCLA Symposia on Molecular and Cellular Biology, vol. 95. From a symposium, Keystone, CO, April 1988.

An Essay on Fevers. John Huxham. Science History Publications, Canton, MA, 1989. xxxii, 191 pp. \$15.95. Resources in Medical History. Reprint, 1757 ed.

Ethics in Engineering. Mike W. Martin and Roland Schinzinger. 2nd ed. McGraw-Hill, New York, 1988. xx, 404 pp., illus. Paper, \$23.95.

Evolutionary Progress. Matthew H. Nitecki, Ed. University of Chicago Press, Chicago, 1989. viii, 354 pp., illus. \$42.50; paper, \$16.95. From a symposium, Chicago, IL, May 1987.

The Expanding Role of Folate and Fluoropyrimidines in Cancer Chemotherapy. Youcef Rustum and John J. McGuire, Eds. Plenum, New York, 1988. x, 336 pp., illus. \$69.50. Advances in Experimental Medicine and Biology, vol. 244. From a symposium, Buffalo, NY, April 1988.

Experimental Hematology Today—1983. S. J. Baum, et al., Eds. Springer-Verlag, New York, 1989. xvi, 182 pp., illus. \$69.50. Based on a meeting, Houston, TX, Aug. 1988.

Expert Systems. Introduction to the Technology and Applications. Dieter Nebendahl, Ed. Siemens Aktiengesellschaft, Berlin, and Wiley, New York, 1988. xii, 210 pp., illus. + appendix. \$34.95. Translated from the German edition (Berlin, 1987).

Exploring the Night Sky with Binoculars. Patrick Moore. Cambridge University Press, New York, 1989. 203 pp., illus. Paper, \$11.95. Reprint, 1986 ed.

Fallout. An American Nuclear Tragedy. Philip L. Fradkin. University of Arizona Press, Tucson, 1989. xvi, 300 pp. \$24.95.

Fiber Optics in Astronomy. Samuel C. Barden, Ed. Astronomical Society of the Pacific, San Francisco, CA, 1988 (distributor, Brigham Young University Print Services, Provo, UT). xviii, 295 pp., illus. \$32. A. S. P. Conference Series, vol. 3. From a conference, Tucson, AZ, April 1988.

Finite Element Approximation for Optimal Shape Design. Theory and Applications. J. Haslinger and P. Neittaanmäki. Wiley, New York, 1989. xii, 335 pp., illus. \$79.95.

Flavor Chemistry. Trends and Developments. Roy Teranishi, Ron G. Buttery, and Fereidoon Shahidi, Eds. American Chemical Society, Washington, DC 1989. viii, 246 pp., illus. \$52.95. ACS Symposium Series, vol. 388. From a symposium, Toronto, Ontario, June 1988.

Flax. Breeding and Utilisation. G. Marshall, Ed. Published for the Commission of the European Communities by Kluwer, Norwell, MA, 1988. viii, 171 pp., illus. \$53.50. Advances in Agricultural Biotechnology. From a workshop, Brussels, Belgium, May 1988.

Fluorescent Biomolecules. Methodologies and Applications. David M. Johnson and Gregory D. Reinhart,

Eds. Plenum, New York, 1989. x, 461 pp., illus. \$89.50. From a symposium, Bocca di Magra, Italy, Sept. 1986.

Fluorine-Containing Molecules. Structure, Reactivity, Synthesis, and Applications. Joel F. Liebman, Arthur Greenberg, and William R. Dolbier, Jr., Eds. VCH, New York, 1989. xviii, 346 pp., illus. \$84. Molecular Structure and Energetics, vol. 8.

The Fokker-Planck Equation. Methods of Solution and Applications. H. Risken. 2nd ed. Springer-Verlag, New York, 1989. xiv, 472 pp., illus. Paper, \$59. Springer Series in Synergetics, vol. 18.

Les Forêts du Parc National de la Mauricie, au Québec. Richard Lalumière and Michel Thibault. Presses de l'Université Laval, Québec, 1989. xviii, 495 pp., illus., + charts. Paper, Can\$ 55. Etudes Ecologiques, vol. 11.

General Equilibrium Models of Monetary Economies. Studies in the Static Foundations of Monetary Theory. Ross M. Starr, Ed. Academic Press, San Diego, CA, 1989. x, 351 pp. \$49.50. Economic Theory, Econometrics, and Mathematical Economics.

A Greenhouse for the Mind. Jacquelyn Seevak Sanders. University of Chicago Press, Chicago, 1989. xvi, 156 pp. \$22.95.

Human Mating Patterns. C. G. N. Mascie-Taylor and A. J. Boyce, Eds. Cambridge University Press, New York, 1989. x, 237 pp., illus. \$49.50. Society for the Study of Human Biology Symposium Series, vol. 28. From a meeting, Oxford, U.K., April 1986.

Hydrothermal Vents. A Case Study of the Biology and Chemistry of a Deep-Sea Hydrothermal Vent of the Galapagos Rift. J. J. Childress, Ed. Pergamon, Elmsford, NY, 1989. iv pp. + pp. 1677-1849, illus. Paper, \$45. *Deep-Sea Research*, vol. 35, nos. 10/11 (1988).

In Defence of Science. Science, Technology, and Politics in Modern Society. J. W. Grove. University of Toronto Press, Toronto, 1989. x, 229 pp. \$35; paper, \$14.95.

Industrial Inorganic Chemistry. W. Büchner *et al.* VCH, New York, 1989. xxvi, 614 pp., illus. \$87. Translated from the German edition (Weinheim, 1984) by David R. Terrell.

Insecticides of Plant Origin. J. T. Arnason, B. J. R. Philogene, and Peter Morand, Eds. American Chemical Society, Washington, DC, 1989. x, 213 pp., illus. \$44.95. ACS Symposium Series, vol. 387. From a symposium, Toronto, Ontario, June 1988.

Laser Science and Technology. A. N. Chester, V. S. Letokhov, and S. Martellucci, Eds. Plenum, New York, 1988. x, 455 pp., illus. \$89.50. Ettore Majorana International Science Series, vol. 35. From a school, Erice, Italy, May 1987.

Leonardo Da Vinci. Martin Kemp, Jane Roberts, and Philip Steadman. Published for the South Bank Centre, London, U.K., by Yale University Press, New Haven, CT, 1989. x, 246 pp., illus. \$29.95.

Lipid Storage Disorders. Biological and Medical Aspects. Robert Salvayre, Louis Douste-Blazy, and Simon Gatt, Eds. Plenum, New York, 1988. xviii, 838 pp., illus. \$125. NATO Advanced Science Institutes Series A, vol. 150. From a workshop, Toulouse, France, Sept. 1987.

Logic and Philosophy in the Lvov-Warsaw School. Jan Woléński. Kluwer, Norwell, MA, 1988. xiv, 364 pp. \$99. Synthese Library, vol. 198.

Logo Theory and Practice. Dennis Harper. Brooks/Cole, Pacific Grove, CA, 1989. xviii, 409 pp., illus. Paper, \$33.75.

Long Term Changes in Marine Fish Populations. T. Wyatt and M. G. Larrañeta, Eds. Instituto de Investigaciones Marinas, Vigo, Spain, 1988. viii, 554 pp., illus. Paper, \$70. From a symposium, Vigo, Spain, Nov. 1986.

Machine Translation. How Far Can It Go? Makoto Nagao. Oxford University Press, New York, 1989. xii, 150 pp. \$35. Translated from the Japanese edition (Tokyo, 1986) by Norman D. Cook.

Magnetoresistance in Metals. A. B. Pippard. Cambridge University Press, New York, 1989. xiv, 253 pp., illus. \$59.50. Cambridge Studies in Low Temperature Physics, vol. 2.

Making Space Defense Work. Must the Superpowers Cooperate? A. Fenner Milton, M. Scott Davis, and John A. Parentola. Pergamon-Brassery's, McLean, VA 1989 (distributor, Pergamon, Elmsford, NY). xiv, 209 pp., illus. \$21.95.

Male Criminal Activity from Childhood Through Youth. Multilevel and Developmental Perspectives. Marc Le Blanc and Marcel Frechette. Springer-Verlag, New York, 1989. xii, 228 pp., illus. \$75. Research in Criminology.

The Man with No Endorphins and Other Reflections on Science. James Gorman. Penguin, New York, 1989. xvi, 174 pp. Paper, \$6.95. Reprint, 1988 ed.

Natural Killer Cells and Host Defense. Edwin W. Ades and Carlos Lopez, Eds. Karger, Basel, 1988. xiv, 301 pp., illus. \$196.75. From a workshop, Hilton Head, SC, March 1988.

The Nature of Time. Raymond Flood and Michael Lockwood, Eds. Basil Blackwell, New York, 1989. viii, 187 pp., illus. Paper, \$11.95. Reprint, 1986 ed.

Near Zero. New Frontiers of Physics. J. D. Fairbank *et al.*, Eds. Freeman, New York, 1989. xxviii, 959 pp., illus. \$34.95. Based on a conference, Stanford, CA, March 1982.

Nerve Cells and Animal Behaviour. David Young. Cambridge University Press, New York, 1989. x, 236 pp., illus. \$49.50; paper, \$16.95.

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Neurotoxins in Neurochemistry. J. Oliver Dolly, Ed. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1989. viii, 251 pp., illus. \$89.95. Ellis Horwood Books in the Biological Sciences. Based on a symposium, La Guaira, Venezuela, June 1987.

New Frontiers in the Archaeology of the Pacific Coast of Southern Mesoamerica. Frederick Bove and Lynette Heller, Eds. Arizona State University Department of Anthropology, Tempe, 1989. xviii, 292 pp., illus. Paper, \$35. Anthropological Research Papers, no. 39.

Oxygen Radicals in Biology and Medicine. Michael G. Simic *et al.* Plenum, New York, 1988. xxiv, 1095 pp., illus. \$139.50. Basic Life Sciences, vol. 49. From a congress, La Jolla, CA, June-July 1987.

The Pancreas in Connection with the Epigastric Unit. V. Becker and K. Hübner, Eds. Fischer, Stuttgart, 1988 (U.S. distributor, VCH, New York), vi, 223 pp., illus. \$102.75. From a meeting, 1987.

Paradigms Lost. Images of Man in the Mirror of Science. John L. Casti. Morrow, New York, 1989. xii, 598 pp., illus. \$22.95.

Risk Management of Chemicals in the Environment. Hans M. Scip and Anders B. Heiberg, Eds. Plenum, New York, 1989. xii, 227 pp., illus. \$59.50. NATO Challenges of Modern Society, vol. 12.

Rousing Minds to Life. Teaching, Learning, and Schooling in Social Context. Roland G. Tharp and Ronald Gallimore. Cambridge University Press, New York, 1988. xii, 317 pp., illus. \$42.50.

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The Structure of Conflict. Clyde H. Coombs and George S. Avrunin. Erlbaum, Hillsdale, NJ, 1988. xii, 244 pp., illus. \$29.95.

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Synesthesia. A Union of the Senses. Richard E. Cytovic. Springer-Verlag, New York, 1989. xiv, 354 pp., illus. \$75. Springer Series in Neuropsychology.

Synthetic Peptides. Approaches to Biological Problems. James P. Tam and Emil Thomas Kaiser, Eds. Liss, New York, 1989. xxii, 347 pp., illus. \$72. UCLA Symposia on Molecular and Cellular Biology, vol. 86. From a colloquium, Park City, UT, Jan.-Feb. 1988.

Technology in America. A Brief History. Alan I. Marcus and Howard P. Segal. Harcourt Brace Jovanovich, San Diego, CA, 1989. xii, 380 pp., illus. Paper \$10.

Temporal and Spatial Patterns of Vegetation Dynamics. J. Miles, W. Schmidt, and E. van der Maarel, Eds. Kluwer, Norwell, MA, 1989. 200 pp., illus. \$145. Advances in Vegetation Science, vol. 9. From symposia, Berlin, F.R.G.

We Are Here. Politics of Aboriginal Land Tenure. Edwin N. Wilmsen, Ed. University of California Press, Berkeley, 1989. xii, 210 pp. \$32.50.

Working with Animal Chromosomes. Herbert C. Macgregor *et al.* 2nd ed. Wiley-Interscience, New York, 1988. xvi, 290 pp., illus. \$49.95.

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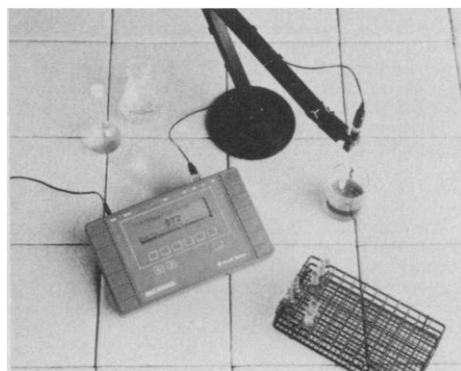
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Equation-Creation Desk Accessory

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Interactive Molecular Graphics

Desktop Molecular Modeler is a menu-driven molecular modeling software program. Molecules with as many as 1500 atoms and bonds may be viewed in various display modes, including bonds only, stereo line, ball-and-stick, or space filling. Molecules can be manipulated and edited interactively, and rotation, magnification, and panning occur in real time. Screen images may be stored and replayed in sequence with the "slide show" program included. Calculations are available for validating new structures; the program can check and monitor bond lengths and angles, check van der Waals radii, and minimize the energy in any structure containing 200 or fewer atoms. Desktop Molecular Modeler operates on IBM PC and PS/2 family and compatible computers with a graphics adapter. Oxford University Press (United Kingdom). Circle 522.

Hollow-Fiber Cell Separators

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DNA Sample Preparation

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Literature

An Easy Way to Generate Fab, F(ab')₂ and Fc Fragments describes two kits to generate antibody fragments from immunoglobulin G. Pierce. Circle 536.

Electrophoresis Supplies and Equipment is a 16-page catalog of chromatography paper, electrophoresis reagents, separation cartridges, liquid scintillation chemicals, cryobiology storage systems, shakers, and incubators. Midwest Scientific. Circle 537.

Guide to Sample Preparation for Protein Sequencing describes services for the purification of rare proteins, microsequencing of peptides and proteins, construction of synthetic peptides, generation of monoclonal antibodies, and protein database analysis. Integrated Protein Technologies. Circle 538.

The *Cell Biology and Immunology Reagent Catalog* lists extracellular matrix products, growth factors, cytokines, cell-sorting reagents, affinity resins, and other reagents. Collaborative Research. Circle 540.

Brochure BR-632 describes two homogenizers with built-in noise suppression, high peripheral speeds, and digital speed control. Brinkmann Instruments. Circle 541.

1989 Price List is a brochure with purchasing information about monoclonal antibody reagents, avidin-biotin reagents, human immunoglobulin antisera, and second-step reagents. Olympus Immunochemicals. Circle 542.

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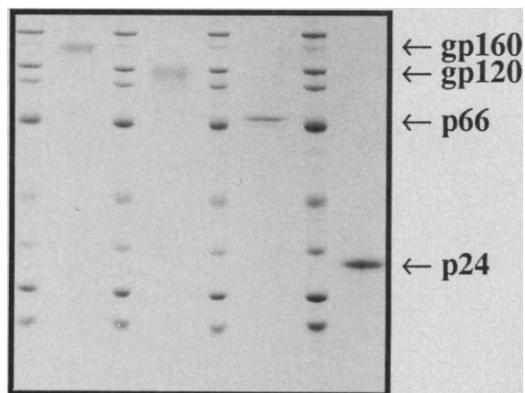
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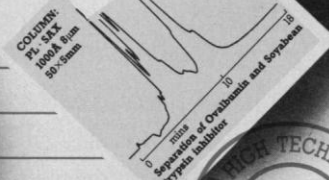
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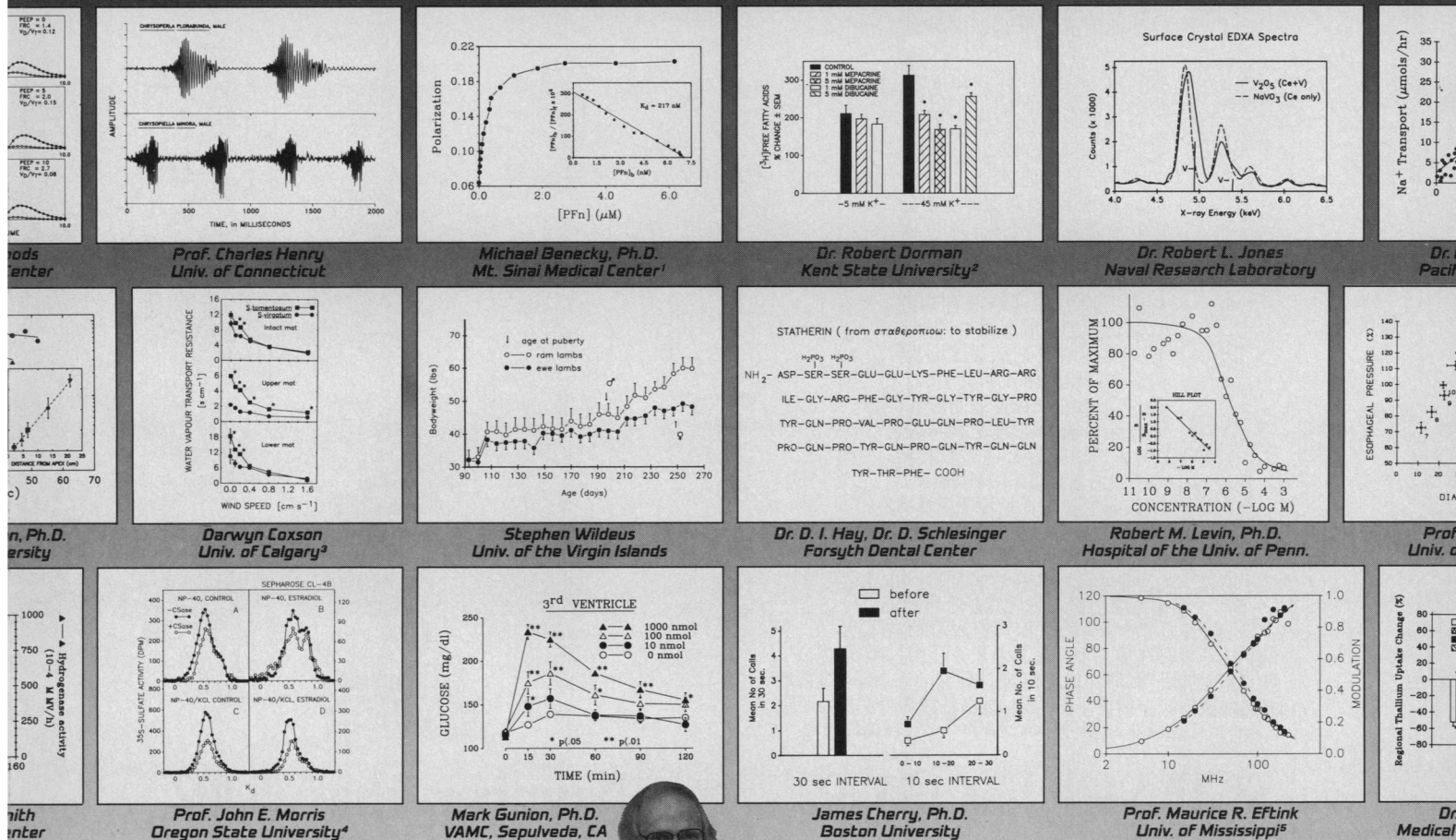


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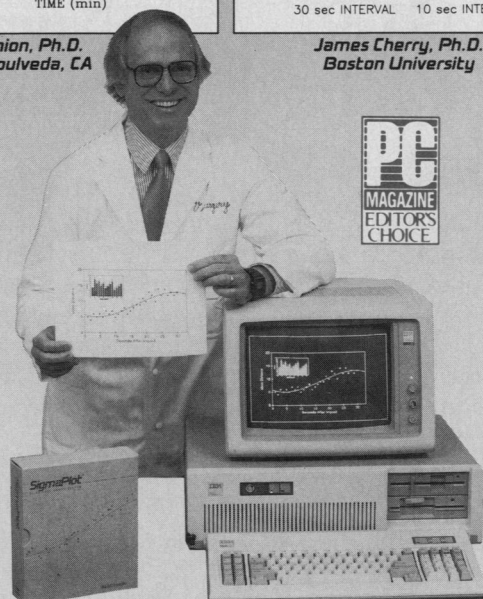
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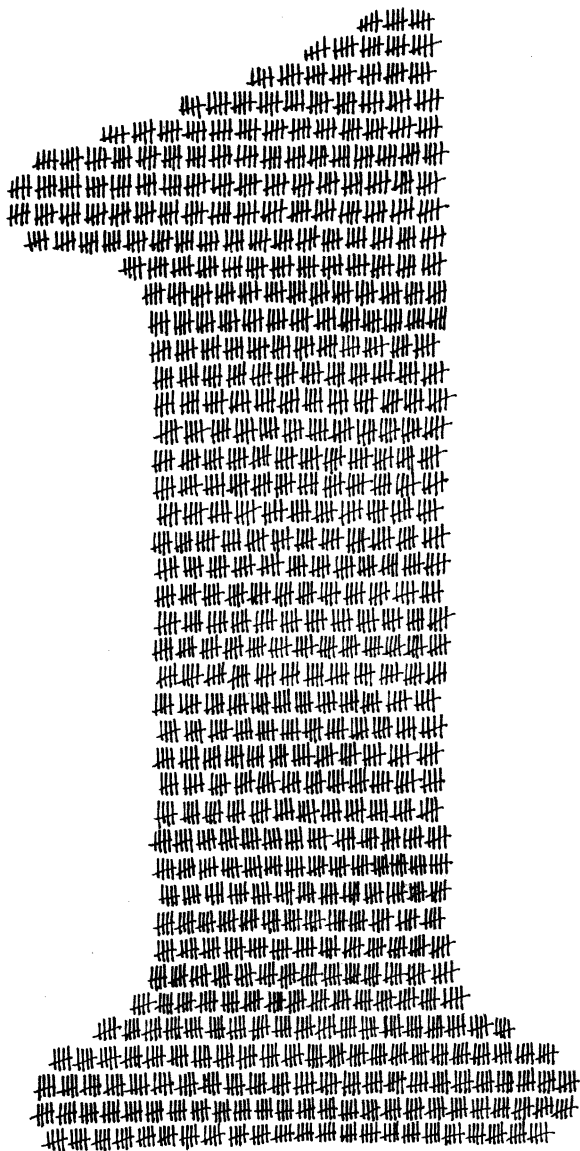
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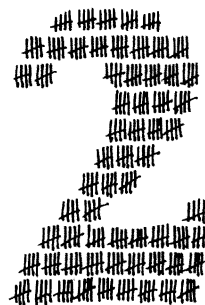
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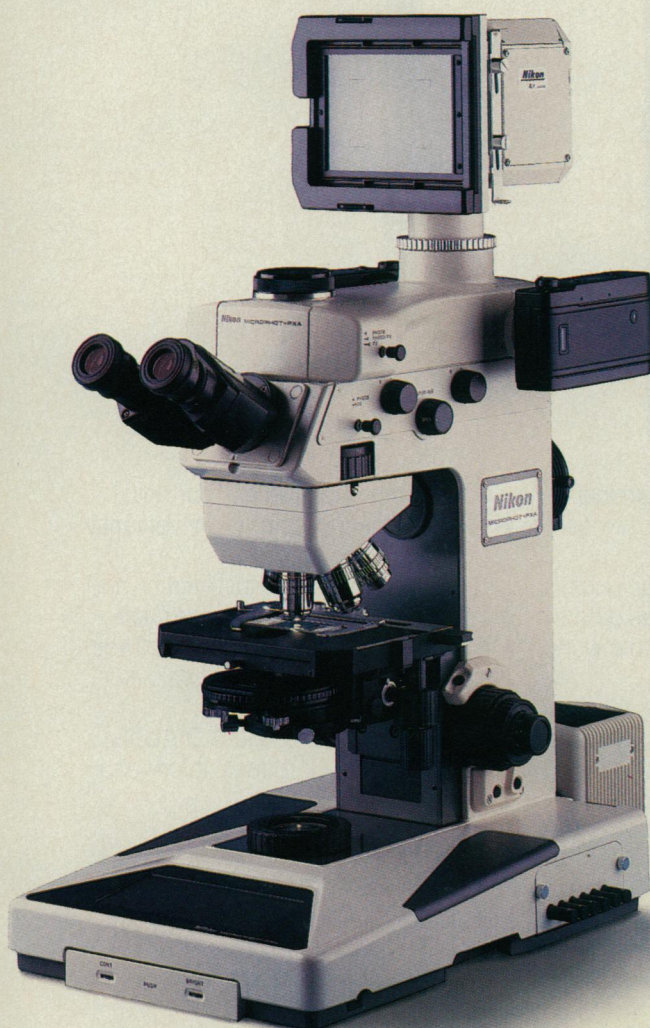
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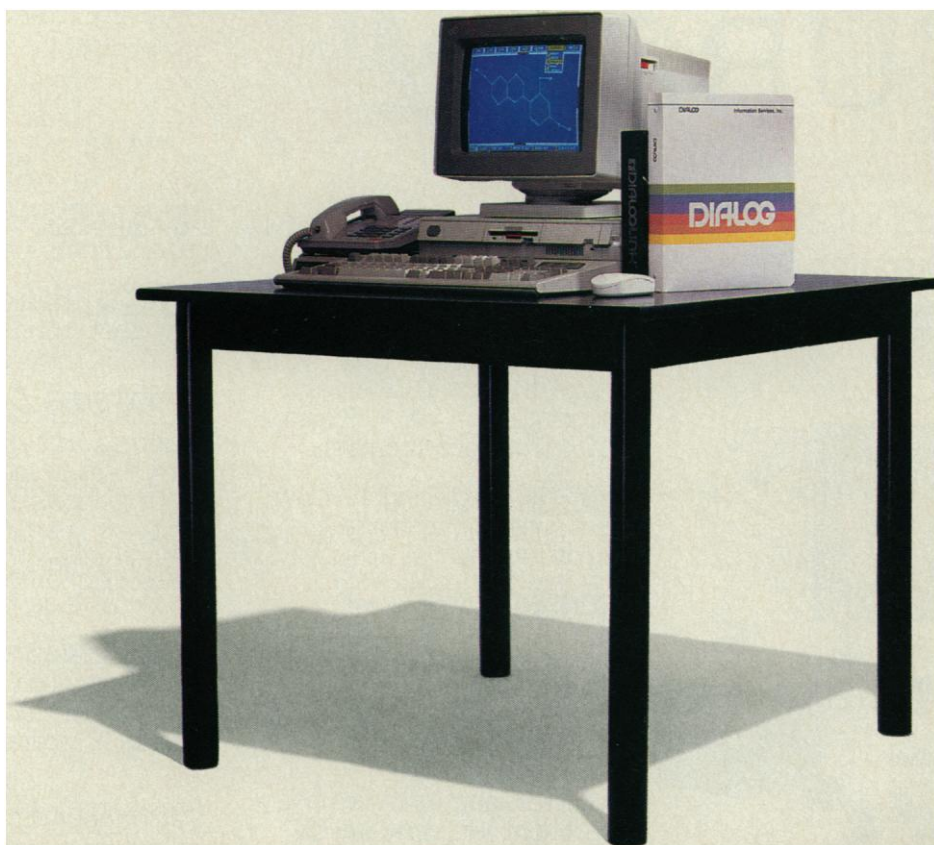
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Biochemist, Ph.D., 25 years of experience in proteinases, inhibitors, and protein purification. Fifty publications. Current subjects are new connective tissue proteinases. Japanese, single, permanent resident in U.S. Seeks academic/industrial research position, if possible, for gene studies of the new proteinases. Box 106, **SCIENCE**.

Cellular Immunologist, Ph.D. Ten years of experience in immunoregulation, animal models and genetics of autoimmune disease. Seeks challenging position in academia or industry, New Jersey/Pennsylvania. Experienced in research, teaching, grant and publication preparation. Box 100, **SCIENCE**.

Free-Lance Computer Programmer for research laboratories. Reasonable rates. Prefer C on a PC in New York Metro area. Background in neuroscience and behavioral pharmacology. Pat O'Connor, 1649 Springfield Avenue, Maplewood, NJ 07040.

POSITIONS WANTED

Biochemist/Cell Biologist, Ph.D. Flow cytometry, cell culture, intermediary metabolism, and enzymology experience. Pulmonary biochemistry background. Good publication and funding record. Experience in teaching undergraduate, graduate, and medical students. Seeks long-term position in academia or industry in Pacific Northwest. Box 99, **SCIENCE**.

Cell Biology/Flow Cytometry. Ph.D. in microbiology. Research in urologic and mammary tumor cell biology. Flow cytometry, cell cycle kinetics, oncogene expression, tissue culture, membrane protein research. Seeking employment in academic institution with teaching/research or in industry in research/technical services. Box 108, **SCIENCE**.

M.D., early retired (age 55) from drug industry seeks part-time or projects; excellent at data interpretation and medical writing for NDAs, etc. Telephone: 215-794-5581 or Box 86, **SCIENCE**.

Ph.D. Several years of experience in RIA, GC, HPLC, immunoassay development. Over 10 years in reproductive endocrinology research. Last 5 years involved in ANF research. Excellent references and publications. Seek academic, industrial, or clinical research position. Box 95, **SCIENCE**.

Pharmacokinetic, M.A., Ph.D., M.D., 3 years of postdoctoral research, seven publications, experienced in drug delivery/testing in animals, animal surgery, working knowledge in TLC, HPLC, GC-mass spectrometry protein characterization (including sequencing) desires industrial position; will relocate and travel. Box 103, **SCIENCE**.

Teacher/Researcher, Ph.D. Available for teaching position (semester, year, sabbatical replacement). Experienced in lecture and small group teaching: medical, graduate and some undergraduate courses. Primary areas: immunology, virology, microbiology; secondary areas: molecular, cellular, general biology. Could assist part-time in research in many aspects of immunology, virology. Box 107, **SCIENCE**.

Toxicologist, Ph.D., Board-certified with 10-plus years of industrial experience seeks position in California: chemical, consumer product, pharmaceutical, and hazardous waste site experience. Box 71, **SCIENCE**.

POSITIONS OPEN

ASSISTANT PROFESSOR PHYSIOLOGY AND BIOPHYSICS

Applications are being accepted for a tenure-track position at the assistant professor level. Responsibilities will include participation in team teaching medical and undergraduate physiology, graduate education, and establishment of an extramurally funded research program. Applicants should have the M.D. or Ph.D. degree and postdoctoral experience. We encourage candidates whose research interest is in the neurosciences, but will consider creative work in other contemporary areas of physiological research. Review of applications will begin 1 October 1989 and continue until the position is filled. Curriculum vitae, a brief description of current and future research interests, and names of three or more references should be sent to: **Dr. Rex Stith, Department of Physiology and Biophysics, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, OK 73190.**

An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

ASSISTANT RESEARCH BIOENGINEER— Ph.D. in bioengineering required. Experience required in application of engineering principles to cardiovascular physiology; expertise in continuum mechanics (both fluids and solids), computational mechanics and experimental techniques of cardiac pathophysiology. Salary related to established schedule of University of California, San Diego, research series. Apply by 4 August 1989 to: **Dr. James Covell, Professor of Medicine, Division of Cardiology, M-013J, University of California, San Diego, La Jolla, CA 92093.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR DEPARTMENT OF BIOCHEMISTRY UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE

Candidates for assistant professor (tenure-track) must hold a Ph.D. or equivalent degree, have at least 2 years of postdoctoral training, and have capabilities in research and teaching. Individuals working in the areas of protein chemistry (structure/function), molecular endocrinology, or biochemical regulation in mammals are especially encouraged to apply. The department has core facilities for the synthesis and sequencing of polynucleotides and peptides. The successful applicant will be expected to develop and maintain an independent, funded research program, and to participate in the training of medical, dental, and graduate students. Interested individuals should submit curriculum vitae list of references from four persons familiar with the candidate's qualifications, and a brief statement of research interests to: **Search Committee, Department of Biochemistry, University of Louisville School of Medicine, Health Sciences Center, Louisville, KY 40292.** Applications will be accepted up to 1 October 1989 or until a suitable candidate is identified. *The University of Louisville is an Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE DIRECTOR

Half-time position of associate director available immediately at the Harvard-Danforth Center for Teaching and Learning. Job involves working with graduate students and faculty to improve teaching, develop curriculum, and do research in undergraduate learning in the sciences, etc. Ph.D. in biology preferred. Previous teaching experience required. Salary commensurate with experience, starting at \$20,000. Send curriculum vitae, representative reprints, brief statement of teaching philosophy, and names and addresses of referees familiar with teaching experience to: **Dr. James Wilkinson, Science Center 317, Harvard University, One Oxford Street, Cambridge, MA 02138.** For information on the position contact: **Barbara Hall at 617-495-4869.** *An Affirmative Action/Equal Opportunity Employer.*

BIOLOGY FACULTY POSITIONS AVAILABLE (TWO) BIOLOGICAL SCIENCES

The Philadelphia College of Pharmacy and Science invites applications for two tenure-track positions at the assistant/associate professor level. The positions are effective 15 August 1989 but can be filled as late as 15 August 1990.

MICROBIOLOGIST—The successful candidate will be expected to teach introductory microbiology, advanced microbiology, applied (industrial) microbiology, and will have the opportunity to teach an elective course in area of expertise; all at the undergraduate level.

MOLECULAR GENETICIST—The successful candidate will participate in a team-taught freshman biology program, teach a dual-level course in classical and molecular genetics, and will have the opportunity to teach an elective course in area of expertise; all at the undergraduate level.

It is anticipated that the elective course for one of the successful candidates will be an undergraduate course in virology.

The successful candidates for both positions will be expected to develop and maintain a research program in which undergraduates can participate. Individuals with strong interests in biotechnological applications are encouraged to apply. To be considered for either position, the applicant must have a strong commitment to undergraduate education and can expect to advise biology and microbiology majors and interview prospective students.

Applications should consist of the following: (i) a letter of application addressing the appropriate criteria (microbiologist or molecular geneticist), (ii) a complete résumé including a current transcript, and (iii) names, addresses, and telephone numbers of three references. All applications should be submitted as soon as possible to: **Dr. Gilbert L. Zink, Chairman, Department of Biological Sciences, Philadelphia College of Pharmacy and Science, Woodland Avenue at 43rd Street, Philadelphia, PA 19104.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

HARVARD UNIVERSITY ASSISTANT PROFESSOR CELLULAR AND DEVELOPMENTAL BIOLOGY (CDB)

The Department of Cellular and Developmental Biology intends to make an appointment at the assistant professor level effective September 1991. Our department covers a broad range of topics in cellular biology, developmental biology, neurobiology and molecular genetics. We are seeking outstanding candidates in any of these fields. We are particularly interested in making an appointment in the areas of:

- vertebrate development
- cell biology (especially protein sorting)
- plant molecular biology.

However, we will consider exceptional applicants in other fields as well. *We strongly encourage applications from women and minority groups.* Applications should include curriculum vitae, reprints of publications, and a statement of present and future research plans. Complete applications and three letters of recommendation, solicited by the applicant, should be received no later than 1 October 1989.

CDB Search Committee
Cellular and Developmental Biology
Harvard University
16 Divinity Avenue
Cambridge, MA 02138
Telephone: 617-495-2327

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ASSISTANT OR ASSOCIATE PROFESSOR

Colorado State University invites applications for a tenure-track position in reproductive physiology/cellular biology. Preference will be given to individuals whose research complements ongoing programs and involves physiological changes in gametes, preservation of spermatozoa, in vitro maturation of oocytes, in vitro fertilization, culture of embryos and/or genetic engineering of embryos. Appropriate start-up funds and some intramural research support are available. The position will be available as early as fall 1989. A letter of application, including a detailed statement of interests and proposed direction of future research, curriculum vitae, transcripts, and names, addresses, and telephone numbers of four individuals to provide references should be sent to: **Dr. T. M. Nett, Search Committee Chairman, Department of Physiology, Colorado State University, Fort Collins, CO 80523.** Applications will be accepted until 18 September 1989. Salary is negotiable and will be commensurate with experience. *Colorado State University is an Equal Opportunity/Affirmative Action Employer.*

DIVISION DIRECTOR/ POLLUTION PREVENTION Center For Environmental Management

The Tufts University Center for Environmental Management is seeking qualified applicants for the position of Research Division Director for Pollution Prevention. Within the Division, the Director will have primary responsibility to manage all phases of research, audit product quality and identify environmental research needs of government, industry, and society. The Division Director will participate in overall Center planning, development and management.

Major responsibilities include managing division research projects conducted by Center Staff and Tufts faculty; maintaining expertise in the field by performing research and by publishing papers; and participating in curriculum development and teaching in an appropriate department at Tufts. Requires demonstrated skills and experience in obtaining funding; developing and managing research; applying research experience to curriculum development and teaching; communicating with peers in government, industry, and academia; and doctorate in a relevant scientific or engineering field as well as environmental science.

The Center is a multidisciplinary research, education, and policy institution seeking long-term solutions to national and international environmental problems involving hazardous materials, solid waste and toxic substances.

Deadline for application: 31 July 1989. Send two copies of résumé and salary requirement to: **Ms. Deanna Roberts, Human Resources, Tufts Administration Building, 169 Holland Street, Somerville, MA 02144.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

UNIVERSITY OF OTAGO DUNEDIN, NEW ZEALAND CHAIR IN GEOLOGY

Applications are invited for appointment to a Chair in the Department of Geology. Applicants should have a substantial research record in some area or areas of the earth sciences. While research expertise may be in any area of the earth sciences, candidates should possess a broad interest in geology, and be able to communicate effectively across different fields. Broad fields of current research within the Department include: earth deformation and tectonics; fluid flow and mineralization; marine sedimentology and geophysics; late Palaeozoic and Mesozoic stratigraphy; vertebrate paleontology; petrology and geochemistry; regional geology of New Zealand and Antarctica.

Salary: Professional salaries are paid within a range, currently NZ\$76,000 to NZ\$95,000 per annum.

Applications quoting reference A89/26 close with: **The Registrar, P.O. Box 56, Dunedin, New Zealand on 30 September 1989.** Further details are available from: **The Registrar, or from Appointments (36554), Association of Commonwealth Universities, 36 Gordon Square, London WC1H 0PF.**

Equal Opportunity in Employment is University policy.

CHAIRPERSON CHEMISTRY AND BIOCHEMISTRY

The Department of Chemistry and Biochemistry of the University of Maryland at College Park is seeking nominations and applications of scientists qualified to serve as departmental chairperson. The Department consists of 45 faculty (with several open positions) and 200 graduate students. Research programs include analytical chemistry, biochemistry, environmental chemistry, inorganic chemistry, nuclear chemistry, organic chemistry, and physical chemistry. Departmental researchers actively collaborate with scientists at the NIH, Naval Research Laboratory, National Institute of Standards and Technology, USDA, and the University's Centers of Biotechnology. Applicants should have a Ph.D. and have demonstrated outstanding abilities in research and teaching in chemistry or biochemistry. Evidence of administrative ability is also required. Appointment will be made at the professor level, with the earliest starting date of 1 January 1990. Letters of application should include curriculum vitae and the names, addresses, and telephone numbers of four references. Send by 1 October 1989 to: **Dr. Shain-dow Kung, Chair of the Search Committee, Center for Agricultural Biotechnology, 1206 H. J. Patterson Hall, University of Maryland, College Park, MD 20742. Telephone: 301-454-6056.** *An Equal Opportunity/Affirmative Action Employer.*

DIRECTOR, PEDIATRIC HEMATOLOGY/ONCOLOGY RESEARCH: Applications are invited for the position of Director of Pediatric Hematology/Oncology Research at Schneider Children's Hospital of Long Island Jewish Medical Center, the Long Island Campus for the Albert Einstein College of Medicine. Responsibilities include conducting independent research in any area of pediatric hematology or oncology; training fellows; interacting with clinical faculty in design and execution of clinical research protocols. Requirements: M.D./Ph.D. plus postdoctoral experience; demonstrated expertise in cell/molecular biology; publications; eligibility for appointment as assistant or associate professor at the Albert Einstein College of Medicine. Position available immediately; salary negotiable. Reply with curriculum vitae and bibliography to: **Robert Bienkowski, Ph.D. Associate Director, Pediatric Research Center, Long Island Jewish Medical Center, New Hyde Park, NY 11042.** *An Equal Opportunity/Affirmative Action Employer.*

The College of Dentistry, University of Iowa, is presently conducting a search to fill a full-time **FACULTY POSITION** in the Dows Institute for Dental Research with major responsibilities for the Oral Soft Tissue Research Program. The position will be available 1 July 1989; screening will begin immediately. Applicants must have a Ph.D. and experience in the area of cell and tissue culture; expertise in biochemistry/molecular biology is desirable. Academic rank and salary will be commensurate with qualifications and experience. Submit curriculum vitae to: **Dr. C. A. Squier, Professor and Assistant Dean for Research and Director of Dows Institute, College of Dentistry, University of Iowa, Iowa City, IA 52242.** *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

COGNITIVE NEUROPSYCHOLOGIST—The Department of Psychology of The University of Illinois at Urbana-Champaign invites applications for a tenure-track faculty position in cognitive neuropsychology, the study of the effects of brain damage on the mind and on behavior, available 21 August 1989. While we are particularly interested in neuropsychologists who are studying the phenomena of memory, candidates conducting research in any area of cognitive neuropsychology will be considered. The position will most likely be filled at the assistant professor level, but outstanding candidates at all levels are encouraged to apply. Salary is commensurate with experience and qualifications. *Minorities and women are particularly encouraged to apply.* Applications (curriculum vitae, representative reprints, and a statement of research interests) and three letters of recommendation should be sent to: **William T. Greenough, Chair, Cognitive Neuropsychology Search Committee, Department of Psychology, 603 East Daniel, Champaign, IL 61820. Telephone: 217-333-4472** by 15 August 1989. We may interview some candidates before the application deadline of 15 August 1989, but all applications received by that date will receive full consideration. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

CYTOPATHOLOGY FELLOWSHIP UNIVERSITY OF PITTSBURGH MAGEE WOMENS HOSPITAL

A 1-year postdoctoral fellowship is available for conducting the processing of approximately 56,000 specimens annually including 53,500 gynecologic and 2,100 non-gynecologic cases. Duties will include signing atypical gynecological specimens with emphasis on cytohistologic correlations. Rotation to Presbyterian-University Hospital to process approximately 5,000 specimens annually including 4,500 non-gynecological with a large volume of needle aspirations. Other duties will include active participation in all aspects of cytopathology including administrative responsibilities such as teaching residents and cytopathology students. Rotation in the areas of flow cytometry and immunoperoxidase, as well as molecular biology with DNA probing, are available. The candidate must be Board-certified and hold a medical license in the state of Pennsylvania. This position is immediately available. Please forward a letter of application with curriculum vitae to: **Dr. Anisa Kanbour, c/o Anna Roman-Koller, University of Pittsburgh School of Medicine, Department of Pathology, 776 Scaife Hall, Pittsburgh, PA 15261.**

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FACULTY POSITION IN CELL BIOLOGY. Tenure-track assistant/associate professor position available June 1990 for applicants with a cell or molecular approach to mammalian biology. Research interests in the department include cell-cell communication, molecular endocrinology, developmental reproductive biology, or cellular neurobiology. Teaching responsibility in cell biology/histology. Send curriculum vitae and three letters of reference to: **Reid L. Norman, Cell Biology and Anatomy, Texas Tech University Health Sciences Center, Lubbock, TX 79430.** *TTUHSC is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION, MICROBIAL PATHOGENESIS. Applications are invited for a tenure-track appointment at the assistant or associate professor level in the Department of Microbiology and Immunology, University of California, Los Angeles (UCLA) School of Medicine. Applicants should have a Ph.D. (or equivalent degree) and research interest in the pathogenesis of microbial diseases caused by bacteria or fungi. The candidate selected will participate in a program in molecular pathogenesis currently supported by an NIH training grant, in addition to teaching medical and graduate students. Salary and benefits will be commensurate with the candidate's qualifications. Applications should be submitted by 1 November 1989, and should be comprised of a letter of application, a complete curriculum vitae, copies of two recent publications, and names and addresses of three references. The complete application package should be submitted to: **Dr. Dexter H. Howard, Chairman of the Microbiology Search Committee, Department of Microbiology and Immunology, UCLA School of Medicine, Los Angeles, CA 90024-1747.** *UCLA is an Affirmative Action and Equal Opportunity Employer.*



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To study shear as means to modify milk protein functionality. Experience in food processing operations and food proteins. (Contact V. Holsinger)

ANALYTICAL CHEMIST/FOOD SCIENTIST (GS11)

To develop methodology for non-volatile nitrosoamines and amines in cured meats. Experience in analytical chemistry or food technology. (Contact W. Fiddler)

MICROBIOLOGIST/PLANT PATHOLOGIST (GS11)

To study use of bacterial enzymes to enhance uptake of herbicides & fungicides. Experience in enzymology or protein chemistry. (Contact R. Moreau)

PLANT PHYSIOLOGIST/PATHOLOGIST (GS11)

To study pathogen recognition and resistance initiation. Experience in enzymology or regulatory biochemistry. (Contact R. Moreau)

RESEARCH CHEMIST (GS11)

To study soil/clay and ground water quality using NMR and other spectroscopic methods. (Contact W. Gerasimowicz)

RESEARCH CHEMIST (GS11/12)

To identify plant exudate components affecting mycorrhizae. Experience in isolations of biologically active compounds and identification by NMR spectroscopy. (Contact P. Pfeffer)

RESEARCH CHEMIST (GS11)

To study enzymes regulating lipid composition of milk. Experience in biochemistry or cell biology. (Contact H. Farrell)

PLANT/PHYSICAL SCIENTIST (GS11)

To study pectin and other plant cell wall polysaccharides. Experience in physical chemistry of polysaccharides. (Contact M. Fishman)

CHEMIST/FOOD SCIENTIST (GS11)

To study microemulsion formation in foods. Experience in light scattering and surface tensiometry a plus. (Contact D. Cornell)

MICROBIOLOGIST (GS11/12)

To study *Bdellovibrio* as a means to control *Salmonella*. Experience in food microbiology and technology. (Contact R. Whiting)

MICROBIOLOGIST (GS11/12)

To develop rapid methods for detecting hemorrhagic *E. coli* in foods. Experience with pathogens and immunology. (Contact R. Buchanan)

BIOPHYSICIST (GS11/12)

To study changes in collagen structure during hide processing. Experience in X-ray diffraction methods. (Contact M. Komanowsky)

PHYSICAL CHEMIST (GS11/12)

To study binding of self-organizing macromolecular lipids to collagen surfaces. (Contact P. Kronick)

RESEARCH CHEMIST (GS11/12)

To study effects of ionizing radiation on phospholipids and cholesterol. Experience in HPLC and liposome techniques. (Contact G. Maerker)

Appointments are for two years. The salaries associated with GS 11/12 grades are \$28,500 – \$34,580 per year. Candidates must have obtained a relevant Ph.D., preferably within the last three years. Applicants should send resumes, which include the names and addresses of three references, to the appropriate contact at the above address by August 1, 1989. Further directions for application will be provided by the contact. For information, call (215) 233-6400.

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MOLECULAR GENETICIST

The Animal Industry Discovery and Biotechnology Department at American Cyanamid's Agricultural Research Division has an immediate opening for a Research Biologist in their molecular genetics group. The successful candidate will join a group of scientists who are using model genetic systems to study problems in receptor biology, infectious disease and animal physiology. The overall objective of this program is to apply contemporary molecular genetic approaches to the discovery of novel agricultural products. In pursuing this goal, the investigator will be expected to develop an independent research program and to publish research findings in both refereed journals and the patent literature. Collaborations with academic research groups are desired and will be encouraged.

Candidates should have a Ph.D. degree and post-doctoral experience in the molecular genetics of a microbial organism (e.g., *S. cerevisiae*, *E. coli*, *B. subtilis*, *C. elegans*). Experience with classical genetics as well as molecular biology is required. In addition, a background in one or more of the following areas would be highly desirable: receptor biology/ biochemistry/pharmacology, natural products, assay development, mammalian physiology, infectious disease.

American Cyanamid offers a competitive compensation and benefits package. We are ideally located near Princeton, one hour from New York City and Philadelphia. For prompt and confidential consideration, forward your resume to the Employment Office, Agricultural Research Division, P.O. Box 400, Princeton, NJ 08540.

An Equal Opportunity Employer M/F/H/V. No Agencies Please.



THE COMMITMENT GROWS EVERY DAY

MANAGER

GRADUATE STUDIES PROGRAM

The Missouri Botanical Garden, a premier research institution in systematic botany and tropical exploration and conservation, seeks a qualified and highly motivated candidate to manage and develop its graduate program in plant systematics. The primary functions include coordinating and stimulating the efforts of the Garden and a consortium of universities in St. Louis in recruitment, selection, and training of students in systematic botany; developing and teaching courses in modern plant systematics; and pursuing broader funding for the graduate program.

Qualified applicants will possess a Ph.D. in biology with emphasis in systematic botany and two or more years postdoctoral experience, as well as a strong interest in graduate teaching. Experience in supervision or oversight of a graduate program, fund-raising experience, and fluency in Spanish language are strengths for the position. The successful candidate will exhibit outstanding interpersonal and organizational skills. The candidate will have the opportunity to maintain a research program, but first priority will be direction of the graduate program.

The Missouri Botanical Garden provides an exceptionally stimulating work environment and offers competitive wages and benefits. We are aggressively seeking candidates although we will continue to accept applications until the position is filled. Interested individuals are encouraged to submit their curriculum vitae and three letters of reference to:

**Director, Human Resources
Missouri Botanical Garden
P.O. Box 299
St. Louis, Missouri 63166**

An equal opportunity employer. Women and minorities are encouraged to apply.

Your skills will
support our research
for the future.

Senior Research Scientist

The BOC GROUP, a worldwide leader in Health Care Research and Development, seeks a Senior Research Scientist for its state-of-the-art Technical Center located in Murray Hill, New Jersey.

This challenging position in our Biomaterial Group includes research in biocompatible materials for catheters, sensors, and other innovative health care products. The successful candidate will have a Ph.D. in Material Science or related discipline and 3-10 years' experience in biomaterial research. Expertise in surface characterization techniques and knowledge of biochemistry and blood polymer interactions is preferred.

BOC provides a complete benefits package and excellent compensation to its employees. For consideration, please forward your resume in confidence to: **Human Resources - Y.O., The BOC GROUP, 100 Mountain Avenue, Murray Hill, NJ 07974.** An Equal Opportunity Employer M/F/H/V.

THE BOC GROUP
Technical Center

DIRECTOR

U.S. - CHINA ACADEMIC PROGRAMS

The National Academy of Sciences is seeking a Director for its COMMITTEE ON SCHOLARLY COMMUNICATION WITH THE PEOPLE'S REPUBLIC OF CHINA (CSCPRC). Responsibilities include working on science, engineering, and interdisciplinary programs and U.S.-China academic relations policy issue studies. Other duties include administering programs in the social sciences and humanities for the CSCPRC's other sponsors, the Social Science Research Council and the American Council Learned Societies. A Ph.D. or equivalent and background in science, engineering or public policy with China and a minimum of 6-10 years academic or other work-related experience is required. Understanding of Chinese culture, preferably including some facility in Chinese language, and substantial previous administrative (including fundraising) experience also required. The CSCPRC also welcomes applications from senior scientists and scholar-administrators interested in 2 to 3-year appointments. We offer a salary based on academic rank and experience, and a highly competitive benefit package. Please send résumé in confidence to: **OIA/HA 450 (VR), 2101 Constitution Ave., N.W., Washington, D.C. 20418. EOE.**



PhD Behavioral Pharmacologist

An opening is available in the Central Nervous System Group in Pharmaceutical Research for a Ph.D. Behavioral Pharmacologist. This person will participate in drug discovery efforts directed toward the treatment of cognitive deficiencies and psychosis. The ideal candidate should have demonstrated skills in experimental psychology (e.g. operant procedures in rodents and primates), experience in pharmacological studies, small animal surgery and computer programming. Candidates should also have a minimum of 2-3 years post-doctoral or industrial experience.

PhD Neurobiochemist

An opening is available in the Central Nervous System Group in Pharmaceutical Research for a Ph.D. Neurobiochemist. This person will participate in drug discovery effects on neurotransmitter systems *in vitro* and *in vivo*. Other important skills include energy metabolism measurements and autoradiography. Candidates should also have a minimum of 2-3 years post-doctoral or industrial experience.

At Du Pont, you'll find a stimulating scientific environment in a modern research facility located near Wilmington, DE. Our Mid-Atlantic location offers a wide range of academic, cultural and recreational activities. We provide excellent compensation, benefits, and relocation assistance. Qualified candidates should send a curriculum vitae with three references to: Professional Staffing Section, Employee Relations Dept., Room X-51728, Du Pont Company, Wilmington, DE 19898



An Equal Opportunity Employer M/F/H/V
U.S. Citizenship or Permanent Visa Required
and meet other appropriate IRCA requirements

Lilly Research Laboratories POSTDOCTORAL SCIENTIST PROGRAM

Eli Lilly and Company



Equal Opportunity Employer

THE LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is offering a postdoctoral research opportunity in plant science. The Postdoctoral Scientist will work in close association with Lilly scientists who are involved in the basic research process of agricultural chemical discovery. Publication and presentation of results will be an integral part of the program. This postdoctoral experience is designed to give individuals in-depth research training in a focused area of biology. The program will also provide an opportunity to become acquainted with the agricultural chemical development process within our industry. The Postdoctoral Scientist will be expected to participate fully in the conceptual and design phases of projects within the following area:

Plant Biology Research

Applicant should be a Ph.D., with experience in plant physiology, biochemistry, or pesticide metabolism. The program will be to study the effects of plants on the interaction between fungicides and their targets. The role of penetration, translocation and the metabolism will be the initial focus of the research.

Postdoctoral appointments are of one-year duration and are renewable for a second year with mutual agreement. Candidates with no more than one previous postdoctoral experience are encouraged to apply.

Eli Lilly and Company will provide a comprehensive pay and benefits program including relocation expenses.

Qualified applicants should send their current *curriculum vitae* to:

John W. Crooks, Manager
Ph.D. Recruitment (PSP)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

POSITIONS OPEN

ENDOWED OSCAR M. COHN '34 PROFESSOR OF BIOCHEMISTRY AND CHAIR, DEPARTMENT OF BIOCHEMISTRY DARTMOUTH MEDICAL SCHOOL

Applications and nominations are invited for an endowed professorship and chairperson of the department of biochemistry at Dartmouth Medical School. The department has responsibilities for the education of undergraduate, medical and graduate students. The current department consists of 14 faculty members, and is well funded from federal sources. We are seeking candidates who have an outstanding record of research achievement in any field of biochemistry or molecular biology, and who are able to provide strong leadership to an already excellent department. Candidates should have a doctorate degree in a relevant discipline, experience in an academic center, and credentials for appointment as a professor. Interested individuals should forward curriculum vitae and the names, and addresses, of three references to: **Dr. Edward Bresnick, Chairman of the Biochemistry Search Committee, Department of Pharmacology and Toxicology, Dartmouth Medical School, Hanover, NH 03756.** All applications will be reviewed by 31 August 1989. *Dartmouth Medical School is an Affirmative Action Employer and encourages the application of women and minorities.*

FACULTY POSITION IN MICROBIOLOGY RETROVIRAL MOLECULAR BIOLOGY UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE

Applications are invited for a tenure-track position at any level in the Department of Microbiology. Candidates should have established research experience in the molecular biology of retroviruses. Significant opportunities are available to collaborate with other investigators interested in human retroviruses. The department has an established program in animal virology, prokaryotic genetics, and a developing immunology group. Applicants should have a doctoral degree, and at least 2 years of postdoctoral experience.

Please send: (i) curriculum vitae, (ii) names and addresses of at least three references, and (iii) a short summary of research interests to: **Joan S. Brugge, Search Committee, Department of Microbiology, School of Medicine, University of Pennsylvania, Philadelphia, PA 19104-6076.** *Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

FACULTY POSITIONS DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY THE UNIVERSITY OF CHICAGO

The Department of Biochemistry and Molecular Biology at The University of Chicago wishes to invite applications and nominations for several tenure-track or tenured faculty positions to be filled in the 1989 to 1990 academic year. At the tenure-track level, candidates should have a doctoral degree, significant postdoctoral research experience, a strong record of research accomplishment, and demonstrable potential for the development of an independent research career in an academic setting. At the tenured level, candidates must have a strong record of research accomplishment and evidence for continuation of a research program at the forefront of the field. Although we are seeking individuals with research interests in any area of modern biochemistry and molecular biology, we are particularly emphasizing recruitment of individuals with research interests in nucleic acid biochemistry, protein-nucleic acid interactions, membrane and cell biochemistry, and structural biology, including magnetic resonance and molecular dynamics. Applications should include curriculum vitae, a list of publications, a summary of current research activities and future research plans, and the names of at least four individuals from whom letters of reference may be solicited. While we have no formal deadline, we would appreciate receiving applications by 15 October 1989. Please send applications or nominations to:

**Marvin W. Makinen
Department of Biochemistry and Molecular Biology
The University of Chicago
Chicago, IL 60637**

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

POSITIONS OPEN

DIRECTOR, TECHNICAL SERVICES—A Connecticut-based health services management organization, engaged in operating high-volume, state-of-the-art in vitro fertilization programs throughout the United States, has an immediate need for a highly skilled Director, Technical Services, to take responsibility for the design, implementation, and overall management of multi-site in vitro fertilization (IVF) laboratories in support of a national network of high-volume clinical in vitro fertilization programs. Minimum requirements include at least a bachelor of science degree in biology or biochemistry (or closely related field), and 5 years of relevant laboratory experience in biological and genetic applications, at least 2 years of which specifically involved the supervision of an IVF program laboratory completing more than 600 annual treatment cycles. Also required is demonstrated evidence of the design and implementation of a large capacity clinical IVF laboratory for turn-key operation; the demonstrated ability to recruit and train entry-level and supervisory embryologists; and the demonstrated ability to develop comprehensive written standards and protocols for the operation of a high-volume IVF laboratory. Starting salary is \$65,000 per year, together with medical and life insurance, 3 weeks of paid vacation and other industry-competitive benefits. Qualified applicants respond with résumé only to: **Job Order #3052030, Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.**

EPIDEMIOLOGY/ECOLOGY OF PLANT DISEASE ASSISTANT PROFESSOR

A tenure-track, full-time research/teaching faculty position. Research in any area of theoretical quantitative epidemiology and collaboration in development of management decision tools for one or more specific diseases. Teaching advanced epidemiology course and part of a Ph.D. core course in plant pathology. Ph.D. by date of appointment in field relevant to plant epidemiology, publications in refereed journals, and some formal teaching experience required. Strong background in ecology, evidence of interest in holistic approaches to describing plant pathosystems, and postdoctoral and grant writing experience desired. Send curriculum vitae, college transcripts, statement of research, teaching and career interests, and have three letters of recommendations sent to: **Dr. James V. Groth, Chair of Search Committee Department of Plant Pathology, 495 Borlaug Hall, University of Minnesota, St. Paul, MN 55108 (Telephone: 612-625-0299) FAX: 612-625-9728.** Application deadline—31 October 1989.

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

FIELD SERVICE ENGINEER for medical equipment service and installation company in N.E. Ohio. Without assistance or supervision, responsible for planning systems layout of x-ray, diagnostic imaging and related equipment at equipment site (including hardware and software), including conventional x-ray, special procedure and cardiac systems; assemble, install, wire, calibrate, troubleshoot, repair and maintain such equipment as constant and falling load frequency generators, control circuits, intensifiers, TV cameras and monitors, pick-up tubes and dose regulation circuits using test equipment such as oscilloscope, high-tension dividers, voltmeter, dosimeter, and angle optics to ensure conformance to manufacturer and government specifications and customer requirements to improve equipment performance; establish and maintain appropriate business relations with customers; and provide technical assistance, direction and training to other service personnel. Minimum requirements: Bachelor's degree in electronic, electrical, or biomedical (with emphasis in electrical, electronic, or instrumentation) engineering or foreign equivalency of such a degree (determined by an approved credentials evaluation agency). Two years of experience in job described. Possess valid driver's license with less than six points in State of Ohio for violations and no alcohol related offenses. Travel required 30% to 50% of time (approximately 3 to 4 weeks every 2 to 3 months) primarily in Ohio and New Jersey. Possible travel to Germany. Forty hours per week; 8:30 a.m. to 5:00 p.m.; \$35,340 per year. Qualified applicants reply by résumé (no calls) to: **C. Bussard, JO#1084443, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

POSITIONS OPEN

GENETIC EPIDEMIOLOGIST

The Division of Population Science of the Fox Chase Cancer Center invites applications from Genetic Epidemiologists at the postdoctoral or junior faculty level. The Division is engaged in a number of multidisciplinary studies centered on the theme of discovering factors which differentially affect cancer susceptibility. Within this framework, there is a need for someone who is interested in developing and applying models for the inheritance of complex phenotypes. Historical and new data sets containing classical pedigree information augmented by clinical, epidemiologic and biochemical data are available to the investigator. In addition, the opportunity for molecular genetic characterization of markers of susceptibility is available. Please send curriculum vitae and brief description of research interests to: **Genetic Epidemiologist Search Committee, c/o Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** *Equal Opportunity Employer.*

HUMAN IN VITRO FERTILIZATION

IVF Australia, a highly successful in vitro fertilization program with 420 babies born to 313 patients, has challenging and rewarding laboratory opportunities at three locations: Westchester County, New York, Long Island, New York, and New Jersey.

Positions available:

• Laboratory Director

Ph.D. in biological sciences, experience in reproductive physiology, embryology or andrology, and laboratory management is desirable.

• Medical Technologists

B.S., M.T., or equivalent both in a supervisory and entry-level capacity to work in our RIA laboratory.

• Embryology Technologists

B.S., M.S., or M.T. embryology or andrology experience desired to work in our embryology laboratory. Extensive on the job training is supplied.

Candidates must be comfortable working as a team member, and have a desire to deliver service in a very patient-oriented program.

We offer salaries based on qualifications and experience. Send résumé with salary history to:

**Donna Howlett
Director of Laboratory Services
IVF Australia, Ltd.**

**137 Rowayton Avenue, P.O. Box 15
Rowayton, CT 06853**

An Equal Opportunity Employer.

Telephone inquiries are welcome, please call: **Donna Howlett, 203-854-0565, Monday through Friday.**

IMMUNOLOGIST/VIROLOGIST. One-year visiting assistant professorship at Santa Clara University. Teaching duties include virology and cellular biochemistry (both without laboratories), immunology (with laboratory), and one course for non-science majors. Ph.D. required, teaching experience preferred; salary dependent on experience. Position starts 15 September 1989. Application deadline 7 August 1989. Send curriculum vitae and three letters of reference to: **Dr. Roberta Berlani, Department of Biology, Santa Clara University, Santa Clara, CA 95053.** *Santa Clara University is an Equal Opportunity/Affirmative Action Employer.*

LABORATORY TECHNICIAN

The Salk Institute Government Services Division in Swiftwater, Pennsylvania has an immediate opening for a regular full-time laboratory technician. Minimum requirements include a B.S./B.A. in microbiology or related field and two or more years of experience in electron microscopy. Cell culture experience and knowledge in virology are desirable. The successful applicant will be expected to perform at a high level with a minimum of additional training. The Institute offers excellent benefits and a competitive salary based on qualifications. Qualified applicants may fill out applications at the laboratory on Route 611 in Swiftwater or mail a résumé including salary history to: **Director of Personnel, The Salk Institute Government Services Division, P.O. Box 250, Swiftwater, PA 18370. Telephone: 717-839-8863.** *Equal Opportunity Employer M/F/H/V.*



INSTRUMENTATION EXCELLENCE

Oxford GlycoSystems is a UK based biotechnology Company founded to commercialise innovative technology emerging from Oxford University and other sources in the rapidly growing field of Carbohydrate Research as used in modern molecular biology.

To complement our team we are now looking for experienced scientists to fill the following positions for our Instrumentation Development Group.

BIOCHEMIST

**MOLECULAR
BIOLOGIST**

CHEMIST

**CHROMATOGRAPHY
ENGINEER**

For any of the above positions at least three years experience is required in designing or optimising analytical instruments and ideally design experience in any of the following instrumentation areas:

**PEPTIDE SYNTHESIZERS
OR SEQUENCERS**

**DNA SYNTHESIZERS
OR SEQUENCERS**

**HPLC OR OTHER
CHROMATOGRAPHIC SYSTEMS**

**ELECTROPHORESIS
SYSTEMS**

AMINO ACID ANALYSERS

We are also interested in meeting

SOFTWARE ENGINEERS

MECHANICAL DESIGNERS

with design experience in the above fields.

For all the above positions the company offers an excellent salary package, including Pension Scheme, Life Assurance, Private Health Care, relocation, equity participation and an excellent working environment.

If you are a self motivated scientist or engineer and would like the opportunity and the challenge to be part of a team working on the design of the world's first **carbohydrate sequencers** then you should send your cv, stating current salary, position and qualifications, to: Marianne Band, Oxford GlycoSystems Limited, Hitching Court, Blacklands Way, Abingdon, Oxon OX14 1RG, England.

INSTITUTE OF NATURAL RESOURCES AND ENVIRONMENT
DIVISION OF ATMOSPHERIC RESEARCH, MELBOURNE, AUSTRALIA

CLIMATE CHANGE RESEARCH PROGRAM

(GREENHOUSE RESEARCH)

RESEARCH SCIENTIST/ SENIOR RESEARCH SCIENTIST OR PRINCIPAL RESEARCH SCIENTIST

LAND SURFACE (BIOSPHERE) PROCESSES
(\$32,575 - \$53,619 P.A.)

The Australian Government has recently made available funds for an enhanced research effort designed to improve substantially climate change forecasting in the Australian region. The research effort is comprehensive, with a core activity involving the development of an Australian Climate Model by the CSIRO Division of Atmospheric Research and the Australian Bureau of Meteorology.

THE DIVISION: The Division of Atmospheric Research has a staff of 120 including 70 professional scientists and undertakes research into physical, chemical and dynamic aspects of atmospheric phenomena and related areas.

THE PROGRAM: This Division has an existing commitment to the study of climate change, with special emphasis on the greenhouse effect. Applications have been called for a number of positions to join in a major research effort aimed at the development of the BMRC general circulation model for regional climate-change prediction. The central model development is to be strongly integrated into a CSIRO Institute-wide program involving scientists from other Divisions of the Institute of Natural Resources and Environment (Fisheries, Environmental Mechanics, Oceanography, Water Resources, and Wildlife and Ecology), as well as with the Division's activities in trace gas studies, drought research and climate-change assessment.

THE JOB: To undertake research into general circulation model response and sensitivity to surface, and air-surface exchange, parameterisation schemes. Interaction with other CSIRO scientists to improve the representation of the biosphere in such a model will be emphasised.

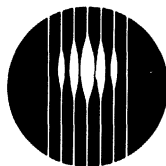
THE PERSON: Applicants should possess a Ph.D. degree or equivalent in the physical sciences, meteorology, or the atmospheric sciences, and preferably some experience appropriate to the particular position (e.g. numerical modelling experience).

CONDITIONS: Appointment will be indefinite or fixed term depending on the mutual agreement of the applicant and CSIRO. Australian Government superannuation benefits will be available.

MORE INFORMATION: Prospective applicants are invited to contact the INRE Climate Change Program Co-ordinator, Dr Graeme Pearman on (03) 586 7666 (Int. +61 3), Fax (03) 586 7600 (Int. +61 3), Telex AA34463, or Omnet G. Pearman, who can provide further details of the program. A copy of relevant duty statements and selection criteria is available from Ms K. Rodrigues on (03) 586 7666.

APPLICATIONS: Should be submitted by Friday 4th August 1989 and quote reference number AT8910. They should be framed against the selection criteria and should state relevant personal particulars including details of qualifications and experience. Applicants should nominate at least two professional referees and address their application to:

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



CSIRO
AUSTRALIA

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

AT 89/20

ANALYTICAL SERVICES FOR PLANT AND MICROBIAL COMPLEX CARBOHYDRATES

The Complex Carbohydrate Research Center (CCRC) of the University of Georgia has been designated a center for the study of the complex carbohydrates of plants and microbes. This Center is a component of the three-agency (USDA, NSF, DOE) Plant Science Centers Program. One of the responsibilities of the CCRC is to provide analytical assistance for complex carbohydrate studies by scientists carrying out basic, non-proprietary plant and microbial research in university, industrial, and government laboratories.

The complex carbohydrate analytical services provided by the CCRC include evaluation of sample purity, glycosyl-residue and glycosyl-linkage composition analyses, molecular weight determinations, and, when appropriate and when manpower is available, glycosyl-sequence analysis. The CCRC instrumentation that will be used to provide these services includes: GC, GC-MS, LC-MS, FAB-MS and 250- and 500-MHz ¹H-NMR spectroscopy, and ¹³C-NMR spectroscopy.

Those wishing to use the services of the CCRC should apply in writing, describing briefly the goals of the research project, the source of funding for the project, and, in detail, the sample(s) to be analyzed, evidence of the sample's purity, the amount of sample available for analysis, and other relevant information. Most samples will be analyzed by CCRC personnel; however, it is anticipated that sample purification, assays of biologically active samples, and perhaps other procedures will require the direct participation of those submitting samples. CCRC facilities may be made available for researchers to perform some of these tasks. Please do not submit samples without prior agreement.

Applications and inquiries should be addressed to the Technical Director for Plant and Microbial Carbohydrates, Complex Carbohydrate Research Center, The University of Georgia, 220 Riverbend Road, Athens, Georgia 30602 USA.

NEUROGENETIC CORPORATION



Neurogenetic Corporation is a rapidly growing biotechnology company involved in the cloning and expression of genes for human receptors and other drug target sites for the development of novel therapeutic and diagnostic approaches to neurological and psychiatric disorders. Our modern, well equipped laboratories are located in a pleasant suburban environment near New York City. Several positions are currently available for research scientists who have a Ph.D. and at least two years of postdoctoral experience in one of the following areas:

MOLECULAR BIOLOGY: Candidates should have experience in molecular cloning, mammalian cell transfections, or PCR technology;

NEUROBIOLOGY: ELECTROPHYSIOLOGISTS with experience in patch clamp, whole cell voltage clamp, or oocyte recordings and NEUROPHARMACOLOGISTS with experience in receptor or second messenger assays;

We offer a stimulating multidisciplinary research environment, competitive salaries and benefits, and stock ownership. Applications, which will be kept confidential, should include a curriculum vitae and names of three references. Apply to:

Personnel Manager
Neurogenetic Corporation
215 College Road
Paramus, NJ 07652

An equal opportunity employer

HEMOBIOLOGIST

In one of Europe's larger research centers

Our company is one of the leading French pharmaceutical groups with an enviable record of innovative drug research in many different therapeutic areas.

All products marketed are discoveries of the group's own R. and D. organisation. Some 25 % of sales are invested in R. and D. annually.

The company wishes to recruit a specialist in the biology of blood disorders having the profile of "drug discoverer" possessing excellent scientific and industrial drills and the ability to apply his (or her) ideas to produce solid results.

The candidate will be a Ph.D. or equivalent.

The position requires a background in the following areas:

- Mechanisms of platelet aggregation
- Interaction of blood elements with the vascular wall relevant to the etiology of atherosclerosis
- Pharmacology of haemostasis and thrombosis
- Thrombolytic agents.

Applicants should have a minimum of 2 years of post-doctoral experience in an industrial setting and the responsibilities and remuneration of the successful candidate will be commensurate with his (or her) experience.

Agenerous benefit package includes relocation costs and considerable social advantages. The laboratory is located in the Paris area.

Applicants submit their C.V. with list of publications, photo, selected reprints and list of 3 referees under ref. 56 802/S to MEDIA SYSTEM, 6/8 Impasse des Deux Cousins, 75849 Paris Cedex 17, FRANCE.

PHARMACOLOGISTS Ph.D.

Merck Sharp & Dohme Research Laboratories is currently offering several excellent career opportunities for scientists to join our growing cardiovascular research program.

POSITION #1 - Post-Doctoral Scientist - Pharmacology - The successful candidate will have a working knowledge of animal models of thrombosis and thrombolysis and will test and evaluate novel antithrombotic agents in these models. Qualifications for this position require a Ph.D. in cardiovascular pharmacology (preferred) or physiology. Furthermore, experience in platelet adhesion/aggregation would be desirable. Publication of experimental results will be highly encouraged.

POSITION #2 - Pharmacologist - The successful candidate will direct a laboratory of junior staff members evaluating novel antithrombotic agents and will develop new models of thrombosis as required. Qualifications for this position include a Ph.D. in cardiovascular pharmacology (preferred) or physiology with 2-3 years of post-doctoral experience. This position requires a thorough knowledge of thrombosis, thrombolysis and blood coagulation. Furthermore, a

candidate with ability to measure myocardial infarct size is highly desired. Collaboration with other scientists in the group is encouraged as well as publication and presentation of experimental results.

POSITION #3 - Pharmacologist - We are seeking a Ph.D./M.D. scientist with 2-5 years post-doctoral experience in cardiovascular pharmacology. Expertise in assessment of in vivo cardiac function and hemodynamics is required to compliment ongoing research and drug development in areas of hypertension, heart failure and cardiac arrhythmias. Demonstration of scientific achievement and proven oral and written skills are required.

Excellent salary and benefits programs accompany these positions at our modern research facilities in West Point, PA, 25 miles northwest of Philadelphia.

When responding, please indicate for which position (s) you are applying and send your resume with salary requirements to:

Personnel Manager A-22 Position # _____
Research Personnel WP 42-2
Merck Sharp and Dohme
Research Laboratories
West Point, PA 19486

EEO/AA/VH Employer



Merck & Co., Inc.

POSITIONS OPEN

INSTRUCTOR POSITIONS

Six special 1-year positions as instructor to gain experience in patient care, education, and research in one of the various sub-specialties of ophthalmology. Satisfactory completion of ACGME-approved ophthalmology residency a pre-requisite. Contact: **Paul R. Lichter, M.D., Chairman, Department of Ophthalmology, University of Michigan, W. K. Kellogg Eye Center, 1000 Wall Street, Ann Arbor, MI 48105. An Affirmative Action Employer.**

MATHEMATICAL GENETICIST. A tenure-track assistant professor-level position is available for a Ph.D. mathematical geneticist to join the faculty of the Department of Psychiatry, University of Utah Medical Center. The Department of Psychiatry has ongoing molecular genetic linkage studies of schizophrenia, manic-depression, and Tourettes, in collaboration with the Howard Hughes Medical Institute at Salt Lake City. Applicants should have research expertise in genetic linkage analysis and statistics. Salt Lake City is an urbane and cultured environment (Utah Symphony, Ballet West) surrounded by high mountains and life-threatening ski slopes. Contact: **William F. Byerley, Associate Professor, Department of Psychiatry, 50 North Medical Drive, Salt Lake City, UT 84132. The University of Utah is an Equal Opportunity/Affirmative Action Employer. Deadline: 30 September 1989. Applications will be accepted after the deadline if qualified person has not been identified.**

PENN STATE. MOLECULAR ANTHROPOLOGICAL GENETICIST. The Department of Anthropology seeks a human molecular geneticist for its Anthropological Genetics Laboratory. This tenure-track position, at the assistant to junior associate professor level, to apply genetic methods to the basis, origins, and evolution of human biological variation. Exceptional living conditions are accompanied by excellent resources. Department has tradition of leadership in biological anthropology. Send curriculum vitae and names of three references to: **Kenneth M. Weiss, Head, Department of Anthropology, Penn State University, Box S, 409 Carpenter Building, University Park, PA 16802. Telephone: 814-865-2509. Apply by 15 September 1989; search will remain open until candidate has been found. An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

MOLECULAR BIOLOGIST. Northeast Missouri State University has an immediate opening for a tenure-track position, starting August 1989 (negotiable), in molecular biology. Teaching responsibilities will include introductory biology (for majors and non-majors) and one of the following: Microbiology, genetics, or an upper-level specialty course. The successful candidate will show strong potential as a teacher and enthusiastically involve undergraduates and graduate students in research using modern molecular techniques. Laboratory space, basic instrumentation, and initial funding for research will be provided. The mission of Northeast Missouri State University is to provide the outstanding educational environment of a small liberal arts and sciences university while remaining economically accessible. The candidate must possess an excellent undergraduate record from a selective liberal arts and sciences institution, strong graduate experiences, and must display leadership and service qualities. *Women and minorities are especially encouraged to apply.* Please send letter of application indicating teaching and research goals, curriculum vitae, undergraduate and graduate transcripts, and three letters of recommendation to **Dr. L. Scott Ellis, Division of Science, Northeast Missouri State University, Kirksville, MO 63501. Telephone: 816-785-4597.** Complete applications will be accepted and reviewed until the position is filled.

MOLECULAR BIOLOGIST: Ph.D. with dissertation or postdoctoral experience in production of transgenic animals. Three or more years of experience with emphasis on genetic basis of animal disease resistance. Duties: Conduct basic and applied research of whole animal systems; perform procedures including cloning; DNA, RNA and protein analysis; cell culture and transgenic animal studies; coteach a multi-departmental graduate course; and supervise laboratory technician. Salary range: \$26,263 to \$36,318. Send résumé and three references to: **Thomas Wagner, Ph.D., Director, Edison Animal Biotechnology Center, West Green, Ohio University, Athens, OH 45701. Deadline: 15 August 1989. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSITION FOR MOLECULAR BIOLOGIST/GENETICIST

The Molecular Genetics Department of Northrup King Co. is recruiting a Ph.D. level molecular biologist/geneticist to conduct research with molecular markers (i.e., isozymes, RFLP's, etc.) in field and sweet corn. Experience in Southern blotting and plasmid preparation as well as a fundamental understanding of genetics is required. Computer knowledge and familiarity with DNA sequencing and PCR technology desirable. The position will be located at the Northrup King Research Center, Stanton, Minnesota; and starting salary will be commensurate with experience/accomplishments.

Send application/résumés to:

**Dr. Ed Weck
Northrup King Co.
Research Center
Highway 19
Stanton, MN 55081**

MOLECULAR/CELL BIOLOGIST, Special Pathogens Branch, Division of Viral and Rickettsial Diseases, Centers for Disease Control. We are seeking a scientist experienced in molecular and cellular biology to work creatively with a team of medical physiologists, immunologists, epidemiologists and physicians conducting research on the viral hemorrhagic fevers which cause significant mortality in developing countries. Scientist would play a major role in the development of genetically engineered vaccines, studies of pathogenesis and immune response at the cellular and molecular levels in primates and humans, and development of genetically engineered diagnostic reagents, all accomplished in a newly constructed and equipped high containment laboratory.

Ph.D., M.D. or equivalent preferred with postdoctoral experience in molecular/cell biology. Maximum salary: \$53,460 depending on experience and qualifications. Technical inquiries may be addressed to:

**Joseph B. McCormick, M.D.
Chief, Special Pathogens Branch
Division of Viral and Rickettsial Diseases
Centers for Disease Control (G14)
Atlanta, GA 30333**

Candidates are invited to send, in confidence, curriculum vitae and names of three professional references to:

**Sharlyn L. Wilkinson
Personnel Management Office 1-1058
Centers for Disease Control (DO1)
Atlanta, GA 30333**

Final date for Applications: 15 September 1989. CDC is an Equal Opportunity Employer and provides for a smoke-free work environment.

NEUROSCIENTIST. A position is available in the Physiology Department at the Armed Forces Radiobiology Research Institute (AFRRI) for a neuroscientist. Specific field is not critical; however, glial cell physiology, brain metabolism, second messenger systems and/or electrophysiology are areas of special interest. Applicants should have a Ph.D. and postdoctoral experience and be capable of establishing a strong research program. Send curriculum vitae, a statement of research interests, and SF 171 to: **Dr. Terry Pellmar, Chief, Neurophysiology Division, Physiology Department, AFRRI, Bethesda, MD 20814-5145. Telephone: 303-295-1346.** Please reference announcement number AFRRI #5/89. U.S. citizenship is required. DNA is an Equal Opportunity Employer.

PLANT MOLECULAR BIOLOGY POSTDOCTORAL RESEARCH ASSOCIATE

Postdoctoral position available January 1990 to study the molecular genetics of floral development and/or polyamine synthesis, using the higher plant model species *Arabidopsis*. Background in genetics or related areas. Send curriculum vitae and three references to: **Russell L. Malmberg, Botany Department, University of Georgia, Athens, GA 30602.**

YALE UNIVERSITY POSTDOCTORAL FELLOWSHIP snRNP STRUCTURE AND FUNCTION

A position is available to investigate the structure and function of small nuclear ribonucleoproteins. Send curriculum vitae and the names of two or more references to: **Michael R. Lerner, 510 TMP, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510. Yale University is an Equal Opportunity Employer.**

POSITIONS OPEN

MOLECULAR BIOLOGIST

The Department of Pathology, College of Veterinary Medicine, Oklahoma State University invites applications for a tenure-track research faculty position in molecular biology at the rank of **ASSISTANT or ASSOCIATE PROFESSOR**. Applicants should have a Ph.D. in molecular biology, microbiology, or biochemistry. Postdoctoral experience in molecular aspects of bacterial infection and immunity is preferred. Responsibilities include the development of a strong research program utilizing various aspects of molecular biology towards solving animal health problems important to veterinary medicine. The successful candidate will be invited to become a member of one or more of the interdepartmental research projects dealing particularly with *Pasteurella haemolytica* and *Brucella abortus*. Experience is desired in one or more of the following areas: recombinant DNA technology, protein expression, subunit vaccine development, or molecular genetics. Opportunity exists to collaborate with others in the College of Veterinary Medicine, Agricultural Experiment Station, and several other campus departments involved with molecular biology and infectious disease research. Application including curriculum vitae, statement of professional goals, and names of three references should be received by 15 August 1989. **Dr. A. W. Confer, Head, Department of Veterinary Pathology, College of Veterinary Medicine, Stillwater, OK 74078. Telephone: 405-744-6744. An Equal Opportunity/Affirmative Action Employer.**

MOLECULAR IMMUNOLOGIST

Candidates are sought at the assistant or associate professor level, tenured or tenure-track, to undertake research using molecular approaches to immunology. Candidates are expected to establish a vigorous research program and participate in graduate student education. The closing date for receipt of inquiries is 1 August 1989. Please send curriculum vitae and names of three references to: **Search Committee, Department of Pathology and Laboratory Medicine, 709 Woodruff Memorial Building, Emory University School of Medicine, Atlanta, GA 30322. Emory University is an Equal Opportunity/Affirmative Action Employer.**

NEUROBIOLOGIST

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

PHYSIOLOGIST. A position is available in the Physiology Department at the Armed Forces Radiobiology Research Institute (AFRRI) for a cell physiologist. White cell, endothelial or epithelial cell physiology, cellular metabolism, second messenger systems and/or electrophysiology are areas of special interest. Applicants should have a Ph.D. and postdoctoral experience. Send curriculum vitae, a statement of research interests, and SF-171 to: **Dr. Elaine Gallin, Chief, Cellular Physiology Division, Physiology Department, AFRRI, Bethesda, MD 20814-5145. Telephone: 301-295-1212. U.S. citizenship is required. DNA is an Equal Opportunity Employer.**



INTERNATIONAL LIVESTOCK CENTRE FOR AFRICA

CATTLE RESEARCH NETWORK COORDINATOR VACANCY INT/005/89

GENERAL

The International Livestock Centre for Africa (ILCA), with headquarters in Addis Ababa, Ethiopia is one of the 13 international agricultural research organizations which are supported by the Consultative Group on International Agricultural Research (CGIAR). The Centre has research activities throughout sub-Saharan Africa and regional offices in Kenya, Nigeria, Niger and Mali.

ILCA's major activities are research, training and information, and its goal is to achieve measurable and sustainable increases in livestock output in sub-Saharan Africa.

With purpose-built offices and research facilities on a large landscaped site close to Addis Ababa's international airport, the Centre's headquarters provide a pleasant working environment and sports and leisure facilities. The city, which enjoys pleasant weather throughout the year, has a large, diverse expatriate community and diplomatic missions from more than 75 nations. It is also the seat of the Organization of African Unity (OAU) and the United Nations Economic Commission for Africa (UNECA). There are several international schools covering American, British, French, German and Italian systems, among others.

POSITION

Main duties of the Coordinator, Cattle Research Network will be:

- Plan and coordinate regional and sub-regional research on cattle.
- Guide and assist national scientists in planning and carrying out regional/sub-regional programmes.
- Assist national scientists in the analysis and interpretation of experimental data.
- Organize and run workshops and seminars.
- Solicit material for and edit the Cattle Research Network Newsletter.
- Conduct library searches and assemble a data base on cattle research.
- Prepare the annual programme of work for consideration by the Steering Committees of the Cattle Research Network.
- Prepare an annual report on the year's activities for evaluation by the Steering Committees.

QUALIFICATIONS

- A senior scientist in the discipline closely related to cattle research with a minimum of postgraduate training at PhD level and with several years experience in a developing African country. He/She should also have administrative experience.
- Should be able to work effectively with professionals of disciplines within the Cattle Research Network in a multicultural setting.
- Should be able and willing to travel extensively.
- Should be fluent in written and spoken English and/or French but with the ability to learn the other language quickly.

Salary and related benefits are paid in US\$ and will be in line with comparable international organizations. Initial salary will be determined by qualifications and experience.

Applicants should send current curriculum vitae, recent salary history, names and addresses of three professional referees and photocopies of supporting documents (not returnable) before July 28, 1989 in confidence to, the Personnel Manager, ILCA, P.O. Box 5689, Addis Ababa, Ethiopia.

THE MARIA GOEPPERT-MAYER DISTINGUISHED SCHOLAR PROGRAM ANNOUNCEMENT

Argonne National Laboratory has established the position of Maria Goeppert-Mayer Distinguished Scholar to attract outstanding women scientists and engineers to the Laboratory. Candidates may be at early points in promising careers or may already have achieved prominence in their fields. Two awards per year will be granted on a competitive basis. A Laboratory Committee will make the selections based on the candidates creativity in research and development.

Argonne's primary purpose as a non-profit research and development organization is to explore energy sources and investigate the fundamentals of physical, chemical and biological sciences. It is engaged in nuclear reactor development, energy and environment R&D, biological, medical, chemical nuclear and high energy physics, and materials science research.

Residency will be flexible to meet mutual objectives. Typical residency will be for one year, extendable for a second, but a series of shorter periods in residence could be accommodated. During their period of residence, The Maria Goeppert-Mayer Scholars will become associated primarily with the programs of one of Argonne's Divisions. However, opportunities will be provided for the Scholars to pursue, if they desire, more interdisciplinary activities that cut across organizational structures.

Financial support and other perquisites will be attractive.

Applications and recommendations for the Maria Goeppert-Mayer Distinguished Scholar should be addressed to: **Ronald A. Johns, Box J-MGM-55, ARGONNE NATIONAL LABORATORY, 9700 South Cass Avenue, Argonne, IL 60439.** Completed applications must be received by August 31, 1989. Argonne is an affirmative action/equal opportunity employer.



Post Doctoral position in Neuropsychopharmacology

A post doctoral position is available in the Central Nervous System Group in Pharmaceutical Research for an individual skilled in the measurement of neurotransmitter release **in vivo**. This person should be proficient in state-of-the-art techniques for the analysis of monoamines, neuropeptides, and amino acids. This individual will collaborate with a team of scientists evaluating mechanism of action of novel pharmacological agents. This position is for 1 year with the possibility of renewal for a second year.

Du Pont provides competitive compensation and relocation benefits. Our mid-Atlantic location offers a wide range of academic, cultural, and recreational activities. Interested candidates should send their resumes and references to: Professional Staffing, Employee Relations Dept., Room X-51727, Du Pont Company, Wilmington, DE 19898



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and meet other appropriate IRCA requirements

Health Scientist Administrator

The Allergy Immunology and Transplantation Program (AITP) of the National Institute of Allergy and Infectious Diseases, NIH, is currently recruiting for **Chief of the Genetics and Transplantation Branch**. The incumbent plans and conducts the NIAID's research and training grants, fellowships and career award programs in this area; coordinates various support programs and develops priorities within this scientific area; reviews and presents to the National Advisory Allergy and Infectious Diseases Council applications in this program area; and develops and maintains liaison with appropriate departments of universities, other institutions, other components of the NIH and DHHS, advisory bodies and other organizations.

Applicants for this position should possess a M.D. or Ph.D. degree as well as research and grant experience and should have a track record demonstrating the ability to obtain research support.

Health Scientist Administrator, GM-601 / 602-15
\$57,158 - \$77,331

Contact: Robert A. Goldstein, M.D., Ph.D.
Building 31, Room 7A52
NIAID/NIH
9000 Rockville Pike
Bethesda, MD 20892
Phone: (301) 496-1886

U.S. Citizenship required.

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POSTDOCTORAL ASSOCIATE POSITIONS THE UNIVERSITY OF IOWA

Please contact the appropriate department to express your specific interest:

ANATOMY — Dr. Joe Dan Coulter, Professor and Head, Bowen Science Building.

ANESTHESIA — John H. Tinker, M.D., Professor and Head.

BIOCHEMISTRY — Alan G. Goodridge, Professor and Head, Bowen Science Building.

DERMATOLOGY — John S. Strauss, M.D., Professor and Head; or Kenzo Sato, M.D., Professor; 2 Boyd Tower, General Hospital. A postdoctoral research associate for the study of electrophysiology of cultured cells.

INTERNAL MEDICINE — Openings available in all disciplines in the Internal Medicine Department, College of Medicine, University of Iowa. Contact Francois M. Abboud, M.D., Professor and Head; or Darris Goerd, Administrator. Phone 319/356-2850.

MICROBIOLOGY — Dr. Irving P. Crawford, Professor and Head, Bowen Science Building.

NEUROLOGY — Postdoctoral associate positions are available in Cognitive Neuroscience, Neurophysiology, Neurobiology, Cerebrovascular Disease, Epilepsy, Sleep, and Neuromuscular Disease. Antonio R. Damasio, M.D., Professor and Head, 2151 Roy Carver Pavilion.

PATHOLOGY — Dr. Richard G. Lynch, Professor and Chairman, 144 Medical Laboratories, Research activity in all areas of pathology.

PEDIATRICS — Dr. Frank H. Morriss, M.D., Professor and Head.

PHARMACOLOGY — Dr. P. Michael Conn, Chairman and Head, Bowen Science Building. Openings available in all areas of pharmacology and toxicology.

PHYSIOLOGY & BIOPHYSICS — Positions available for cellular and molecular research in endocrinology, neurophysiology and membrane biology. Contact Robert E. Fellows, M.D., Ph.D., Professor and Head, 5-660 Bowen Science Building.

UROLOGY — Dr. Richard D. Williams, Professor and Chairman, Carver Pavilion. A postdoctoral position is available for physicians interested in the study of immune modulation of genitourinary cancer cells *in vitro* and in animal models.

A Ph.D. or equivalent is required. Desirable qualifications are based on Project Investigator's interest for research. Women and minorities are encouraged to apply. The University of Iowa, College of Medicine, Iowa City, Iowa, 52242, is an Equal Opportunity/Affirmative Action Employer.

Pharmacologist

XOMA Corporation, a leader in the development of targeted protein therapeutics, has an immediate opening for a Ph.D. level Pharmacologist. The successful candidate will design, conduct and interpret pharmacological and pharmacokinetic studies with new products in development for the treatment of immune-related diseases and sepsis.

Candidates should have a Ph.D. in pharmacology or related discipline with 1-3 years post-doctoral training. Experience in the use of laboratory rodents for pharmacokinetic and/or pharmacological studies is essential. Background in immunological model systems, biostatistics, computer use and technical supervision is desirable.

XOMA offers competitive salary and comprehensive benefits in an outstanding work environment. For consideration, please forward your C.V. and salary history to: **Technical Recruiting Coordinator, XOMA Corporation, 2910 Seventh St., Berkeley, CA 94710. EOE.**



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Challenging Opportunities in Biomedical Research

**Staff Fellowship Program
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Center for Biologics Evaluation and Research**

The Center for Biologics Evaluation and Research is searching for outstanding candidates to conduct biomedical research to provide a strong scientific base for the regulation of biological products. Current research includes investigations in the areas of viral and bacterial diseases and vaccines, mechanisms of pathogenesis, cytokines, allergy and immunology, cell biology, and monoclonal antibodies. We have active research on AIDS and related diseases.

Qualifications: Candidates must have completed all requirements for a Medical or Doctor of Philosophy/Science Degree and must be either U.S. citizens or resident aliens eligible for citizenship within four years. Foreign medical school graduates must submit a copy of their permanent Educational Commission for Foreign Medical Graduates (ECFMG) certification.

Duration: Appointments are for an initial two-year period and may be extended up to a total of seven years.

Location: Laboratories are strategically located on the campus of the National Institutes of Health in Bethesda, Maryland.

Salary: Salary range for candidates with a Doctor of Philosophy/Science Degree is from \$24,000 to \$45,234. Salary range for candidates with a Medical Degree is from \$28,000 to \$52,825. Salary, research support, and level of responsibility are commensurate with education and experience.

How to Apply: Candidates should send a current curriculum vitae and bibliography to:

FDA/Center for Biologics Evaluation and Research
Building 29, Room 114, X
8800 Rockville Pike
Bethesda, Maryland 20892

For further information call Ms. Boyer on (301) 496-5394.

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POSITIONS OPEN

MUSCULAR DYSTROPHY RESEARCH POSTDOCTORAL RESEARCH ASSISTANT ROYAL POSTGRADUATE MEDICAL SCHOOL, UNIVERSITY OF LONDON AND NEW YORK STATE COLLEGE OF VETERINARY MEDICINE CORNELL UNIVERSITY ITHACA, NEW YORK

Applications are invited for a postdoctoral research assistant to undertake a collaborative 3-year project between the Department of Pathology at the Cornell University Veterinary College (Dr. Barry Cooper) and the Department of Paediatrics and Jerry Lewis Muscle Research Centre at the Royal Postgraduate Medical School, University of London (Professor Victor Dubowitz), to study the potential treatment of muscular dystrophy by myoblast transfer techniques. Experience in cell biology and transplant techniques an advantage. Salary dependent on experience.

Further particulars may be obtained from Professor Dubowitz (Telephone: 01-740-3295, Fax 01-740-3169) or Dr. Cooper (Telephone: USA 607-253-3350; Fax: USA 607-253-3708), to either of whom applications should be sent as soon as possible, with curriculum vitae and names of two referees.

YALE UNIVERSITY SCHOOL OF MEDICINE DEPARTMENT OF THERAPEUTIC RADIOLOGY

POSTDOCTORAL FELLOWSHIP: Exciting opportunity for Ph.D. with background in protein biochemistry and immunology and interest in vascular biology or cell motility to join a vascular cell biology laboratory at Yale Medical School. Current investigations center around isolation, characterization, and cloning of vascular and epithelial cell migration factor(s). Competitive salary. Please send curriculum vitae to: Dr. Eliot M. Rosen, Department of Therapeutic Radiology, 132 HRT, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.

POSITIONS OPEN

PHARMACOLOGY

The Department of Pharmacology, Division of Functional Biology, of the West Virginia School of Osteopathic Medicine (WVSOM) has immediately available a tenure-track position in pharmacology at **ASSISTANT OR ASSOCIATE PROFESSOR** level to teach cardiovascular and renal pharmacology to second-year medical students. Ph.D. required plus significant teaching experience and a demonstrated ability to conduct independent research. Some research funding available.

Rank and salary will be commensurate with qualifications. Send current curriculum vitae and three letters of recommendation to: **Chairperson, Pharmacology Search Committee, c/o Personnel Office, WVSOM, 400 North Lee Street, Lewisburg, WV 24901.** The position is available immediately.

WVSOM is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOW, Ph.D.—Ph.D. in biochemistry, cell biology or a related area. Experience basic biochemical techniques including high-performance liquid chromatography and gel electrophoresis. Individual will be responsible for the conduct of all experiments specifically involving HPLC analysis of intracellular reduced folate pools and on photo-affinity binding studies. Send applications to: **Richard Schilsky, M.D., The University of Chicago, Department of Medicine, Hematology/Oncology, 5841 South Maryland Avenue, Box 420, Room 1-215, Chicago, IL 60637.** We are an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION in cardiovascular physiology available for an individual with experience in cardiovascular physiology and/or electrophysiology to work in a mixed biophysics/bioengineering group. Research involves analysis of beat-to-beat cardiovascular regulation and cardiac electrical stability. Animal and human studies will be conducted. Send résumé and three references to: **Richard J. Cohen, Harvard-MIT Division of Health Sciences and Technology, Building E25-330d, Massachusetts Institute of Technology, Cambridge, MA 02139.**

POSITIONS OPEN

POSTDOCTORAL POSITION available to study the molecular biology of *Clostridium difficile* toxin genes. Ph.D. in microbiology, biochemistry, or related field with strong molecular biology research background. Send curriculum vitae and two references to: **Lycurgus L. Muldrow, Ph.D., DEM Science Research Institute, Atlanta University Center, 440 Westview Drive, Atlanta, GA 30310.**

POSTDOCTORAL POSITION available to work on characterization of growth factor inhibitors. Research will involve protein chemistry, cell physiology, and molecular biology. Background in protein/peptide biochemistry preferred. Send curriculum vitae and names of three references to: **Dr. Lawrence S. Phillips, Emory University School of Medicine, 69 Butler Street, S.E., Atlanta, GA 30303.**

POSTDOCTORAL POSITION available immediately to conduct research on neuronal phospholipid metabolism in neurodegenerative diseases. Applicants should have prior research experience in neurochemistry or phospholipid biochemistry. One-year appointment (renewable for up to 3 years) in Department of Neurology at Massachusetts General Hospital and in the Department of Brain and Cognitive Sciences at Massachusetts Institute of Technology. Salary range between \$20,000 and \$25,000 per year, depending upon experience. Send curriculum vitae with two letters of recommendation to:

**John H. Growdon, M.D.
Massachusetts General Hospital
ACC 730
Boston, MA 02114**

POSTDOCTORAL POSITION available. This position involves formulation and evaluation of microencapsulated agents for drug delivery systems. Ph.D. in chemistry or a closely related area is required. Spectroscopic, polymeric chemistry knowledge and radiolabeling experience an asset. Send curriculum vitae to: **Sidney Wallace, M.D. or David Yang, Ph.D., University of Texas M.D. Anderson Cancer Center, Diagnostic Radiology, Box 57, 1515 Holcombe Boulevard, Houston, TX 77030.**

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ASSOCIATE SCIENTIST

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Hoffmann-La Roche is a world renowned leader in the field of pharmaceutical and medical research. Our firm commitment to ensuring a healthier tomorrow has created an important opportunity for an Associate Scientist to join us.

You will become involved with HPLC analyses and methods development, primarily for pharmacokinetic studies of new antibacterial agents in animals. To qualify, you must have a BS/MS in Biochemistry, Chemistry or a related field, along with at least three years of relevant industrial or academic experience. Familiarity with a variety of biochemical techniques along with thorough training and experience in HPLC is essential; knowledge of pharmacokinetics and a background with laboratory animals are also required.

We offer a competitive salary, a generous benefits package, and an exciting opportunity to become involved in significant research with progressive industry leader. For confidential consideration, please send your resume, indicating salary history/requirements, to: **Frances Newman, Staffing and Employee Services, Department JC, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



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Research Scientist II

Job #60785-4/#60758-4. Experimental Therapy Division. This position requires a Ph.D. in medicinal chemistry, biochemistry or organic chemistry **OR** a Master's degree in one of these disciplines with 5 years of research experience. Also required is demonstrated expertise in chemical and/or enzyme based synthesis or mechanistic enzymology. Experience working on synthesis, isolation and characterization of novel compounds, preferable heterocyclic compounds related to nucleosides is desired.

Job #60157-4. Experimental Therapy Division. This position requires a Ph.D. in biochemistry, chemistry or pharmacology **OR** a Master's degree in one of these disciplines with 4 years relevant experience **OR** a Bachelor's degree in one of these disciplines with 6 years relevant experience. **Training and experience in liposomes is necessary to qualify for this position.** Training and experience in the use of radioisotopes, tissue culture, HPLC, computers, quantitative chemical/biochemical analysis, enzyme kinetics and virology is desired.

Job #61087-4. Medicinal Biochemistry Division. This position requires a Master's degree in organic chemistry, analytical chemistry, pharmacy or biochemistry plus 2 years laboratory experience with HPLC and laboratory computer/data systems **OR** a Bachelor's degree in the disciplines above plus 4 years laboratory experience in the above areas. Gas chromatography and *in vivo* testing experience, knowledge of statistics, pharmacokinetics, metabolite isolation and PC word processing desired. Experience in conducting ADME (absorption, distribution, metabolism and elimination) studies preferred.

Clinical Research Scientist I

You will assist in the performance of those activities associated with the execution of Medical Division clinical studies of developmental drugs and marketed products. Candidates should have a Ph.D. in a biological science with a minimum of one additional year of clinical or research experience **OR** a Master's degree with 5 years experience as above. Other factors to be considered include: familiarity with clinical research methodology/activities (e.g. study design, site monitoring). May require frequent travel.

Job #60637-3 provides an opportunity to work in the field of infectious diseases in a dynamic setting facing major health challenges with particular emphasis on antivirals.

Job #60951-3 provides an opportunity to work in the respiratory, cardiovascular and hematologic areas of clinical research, involving new chemical entities requiring innovative approaches to clinical drug development. This is a Ph.D. level position.

Job #61219-3 provides an opportunity to work in clinical research and development involving immunologic products targeted for treatment and prevention of infectious diseases and autoimmune diseases in a rapidly expanding environment of medical biotechnology.

Research Scientist I

Job #61053-4. Medicinal Biochemistry Division. This position requires a Master's degree in chemistry, biochemistry, biology or enzymology **OR** a Bachelor's degree in these fields plus 2 years relevant laboratory experience. **Extensive experience in enzyme kinetics, protein purification and HPLC experience is required to qualify for this position.** Computer literacy, tissue culture experience and surgical experience is desired.

Burroughs Wellcome Fellow

Job #61184-5. One year appointment available after October 1, 1989. This position requires a Ph.D. in biochemistry, oncology or closely related field. Knowledge and ability to work with radioisotopes and *in vivo* testing experience required. A knowledge of HPLC, enzymology and tissue culture techniques is desired. Techniques related to the maintenance and use of murine tumors and knowledge of folate biochemistry are also preferred.

Burroughs Wellcome Co. offers top benefit programs along with very competitive salaries. If you are interested in working for us, submit your resume, indicating position number in your cover letter by August 15, 1989 to: **Burroughs Wellcome Co., Recruiting and Staffing, 3030 Cornwallis Road, Research Triangle Park, NC 27709.**

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POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for recent Ph.D. with interests in environmental toxicology to investigate mechanisms of chemical-induced disorders of porphyrin and heme metabolism and the relationship of these events to cell injury. Particular interests focus on mechanisms of reactive oxidant formation by trace metals and the role of endogenous antioxidants in attenuation of free radical-mediated porphyria and toxicity. Please send curriculum vitae, statement of research interests, and names and addresses of three references to: **James S. Woods, Ph.D., Department of Environmental Health, SC-34, University of Washington, Seattle, WA 98195. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION

NIH-funded position is available for postdoctoral fellow to study immunologic and inflammatory mechanisms of chronic infectious respiratory diseases. Experience with basic immunological techniques would be preferred, and interest in the role of cytokines in inflammatory responses or experience with *in situ* hybridization or Northern blotting would be helpful. Successful applicants will join a large, well-funded, interdisciplinary group involved with mycoplasma research and other infectious agents in the areas of disease pathogenesis, genetics, protein chemistry, and clinical research and diagnostics. Send curriculum vitae and the names of three references to: **Dr. Gail Cassell, University of Alabama at Birmingham, UAB Station, Department of Microbiology, 501 Volker Hall, Birmingham, AL 35294. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION: Isolation of opioid receptors from neuroblastoma cell culture and cloning of the opioid receptor genes; mutational analysis of receptor functions. Background in molecular pharmacology, protein isolation, and/or recombinant DNA technology. Five-year NIDA grant, available August 1989. Résumé and names of three references to: **Dr. W. Sadée, School of Pharmacy, University of California, San Francisco, (UCSF), San Francisco, CA 94143. Telephone: 415-476-1947.**

POSTDOCTORAL POSITION available for 1 to 2 years. Candidate must have Ph.D. in pharmacology with experience in CNS pharmacology including rodent behavioral tests, receptor binding with DA, NE, 5HT systems, etc. Salary is competitive. Candidate must be able to join by 15 October 1989. Apply with detailed résumé by 17 August 1989 to: **Dr. Koppaka V. Rao, Medicinal Chemistry Department, Box J-485 JHMC, University of Florida, Gainesville, FL 32610.**

POSTDOCTORAL POSITION

Full-time position available September 1989 to study biochemical and molecular aspects of signal transduction in bacterial chemotaxis. Experience in biochemical and/or molecular techniques is desirable. Send curriculum vitae and names of four references to: **Dr. Philip Matsumura, University of Illinois at Chicago, Department of Biological Sciences M/C 067, P.O. Box 4348, Chicago, IL 60680. UIC is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available to study motile behavior of lung macrophages and their role in lung's host defense and bacterial clearance. Research will be directed at molecular events involved in cell motility. Experimental approach will include time-lapse video microscopy coupled with computer modeling to study motile properties. Candidate should have Ph.D. or M.D. and experience in cell biology. Send curriculum vitae to: **Ronald P. Daniele, M.D., 807 East Gates Building, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104-4283. Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN HARVARD/MIT JOINT PROGRAM at Deaconess Hospital. Project involves developing an immobilized enzyme reactor to reduce blood cholesterol. Background in chemical engineering or bioengineering desirable. Send curriculum vitae and names of three references to: **Laura Garber, Human Resources, New England Deaconess Hospital, 185 Pilgrim Road, Boston, MA 02215. Equal Employment Opportunity/Affirmative Action.**

POSITIONS OPEN

POSTDOCTORAL POSITION IN BIOCHEMICAL IMMUNOLOGY AND IMMUNOTOXICOLOGY. Immediate openings to study the biochemistry of resting and activated lymphocytes with emphasis on cellular thiols and biosynthesis/structure/location of plasma membrane-associated constituents (proteins/lipids). Molecular and cellular biological approaches utilized to evaluate environmental toxicant effects on lymphocyte functions. Submit curriculum vitae and names of three references to: **Dr. David Lawrence, Department of Microbiology and Immunology, A-68, Albany Medical College, Albany, NY 12208. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION MOLECULAR NEUROBIOLOGY

A postdoctoral position is available for studies of the molecular mechanisms of synaptogenesis. Specific areas of investigation include the function and regulation of postsynaptic membrane proteins associated with the nicotinic acetylcholine receptor, and the molecular structure, regulation, and distribution of voltage-sensitive calcium channels in skeletal muscle and neurons. Send curriculum vitae and the names of three references to: **Dr. Stanley C. Froehner, Department of Biochemistry, Dartmouth Medical School, Hanover, NH 03756.**

POSTDOCTORAL POSITIONS AVAILABLE UNIVERSITY OF FLORIDA

Several postdoctoral positions are available to work on the molecular biology and immunology of veterinary infectious diseases. The research will involve: (i) cloning, expression and analysis of genes coding for immunoprotective proteins of *Babesia* or *Anaplasma*; (ii) molecular analysis of antigenic and strain variation in these parasites; (iii) delineation of immune mechanisms; (iv) development of assays for diagnosis of infection; (v) experimental immunization with synthetic or recombinant peptides. A degree in veterinary medicine and/or experience in genetics, molecular biology, or immunology would be an advantage.

Please send application including curriculum vitae, statement of research goals, and three letters of reference to: **Dr. A. F. Barbet, Department of Infectious Diseases, College of Veterinary Medicine, University of Florida, Box J-137, JHMC, Gainesville, FL 32610. The University of Florida is an Equal Opportunity/Affirmative Action Employer.**

Two **POSTDOCTORAL POSITIONS** available fall 1989, to study brain function for motor control and for sign language. Background in neuropsychology, computer science, or cognitive science useful. Send curriculum vitae and names of three references to: **Dr. Howard Poizner, Center for Molecular and Behavioral Neuroscience, Rutgers University, 195 University Avenue, Newark, NJ 07102. Telephone: 201-648-1080. Equal Opportunity Employer M/F.**

POSTDOCTORAL RESEARCH ASSOCIATES. Positions will be available 1 July 1989, in two ongoing projects. The first concerns the mechanism of action of DNA polymerases and reverse transcriptases, and the effects of nucleotide analogs on these enzymes. The research is related to the anticancer and antiviral activity of several nucleoside analogs. Candidates should have experience in enzyme kinetics, and preferably some experience with DNA research. Training will be provided in methods for studying DNA polymerases, including the use of transient state kinetics. The second position concerns the effect of single amino acid changes in an enzyme on the catalytic mechanism and binding of ligands. Candidates should have research experience in enzymology and preferably in biophysical chemistry. Training will be provided in methods for studying ligand binding, conformational equilibria and catalysis, including methods for the study of transient state kinetics. Candidates for both positions should have received their Ph.D. within the last 3 years, and may be requested to appear for an interview. Starting salary: \$22,000 or higher, depending on relevant experience. To apply, send curriculum vitae and three references to: **Dr. R. L. Blakley, Department of Biochemical and Clinical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. An Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS IN MEDICINE AND MOLECULAR BIOLOGY CASE WESTERN RESERVE UNIVERSITY

Postdoctoral positions with competitive salaries are available for study in the following areas:

1. Molecular aspects of regulation of macrophage functions by human immunodeficiency virus.
2. Mechanisms of action of human immunodeficiency virus on blood and lung macrophage biology/immunology.

Applicants should submit curriculum vitae and names and addresses of three references to: **Dr. E. A. Rich, Department of Medicine, Case Western Reserve University, 2074 Abington Road, Cleveland, OH 44106. Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS IN IMMUNOCHEMISTRY—Two positions open immediately to develop immunoassays for natural and human-made toxins in a broadly based, interdisciplinary study. Successful candidates will be expected to address fundamental questions in analytical, bio, organic, and/or immunochemistry. Send application letter, curriculum vitae, relevant publications, and names of three references to: **Mark Kurth, Department of Chemistry, or Bruce D. Hammock, Departments of Entomology and Environmental Toxicology, University of California, Davis, CA 95616 by 1 September 1989. The University of California is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

Full-time position available for an individual with a Ph.D. in biochemistry or molecular biology to work in a basic science laboratory involved with biochemical, molecular biological, and cellular research. Experience in carcinogenesis preferred but not essential. Interested candidates send résumé to: **Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE: Conduct independent research into restenosis following percutaneous transluminal angioplasty (PTA) in rabbit model of focal femoral atherosclerosis: induce atherosclerotic lesion, perform FTA, obtain tissue for histology, analyze histology morphometrically, interpret angiograms. Produce monoclonal antibodies to rabbit platelet glycoproteins. Design and conduct experiments to evaluate role of monoclonal antibodies, other therapeutic interventions, and procedural variations in reducing restenosis. Analyze data, first author scientific publications, present data at national and international scientific meetings. Interface as physician in clinical studies on as needed basis. M.D. or equivalent in medicine/surgery plus 1 year and 6 months of internship/residency, plus 6 months of experience in job or 6 months of experience as research associate required. Experience as research associate must include 6 months of experience in angioplasty research in rabbit model of focal femoral atherosclerosis, and 6 months of experience in production on monoclonal antibodies. Must have 1 year of surgical training. Forty hours per week, \$24,000 per year. Submit résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109. Ref to J.O. 3053585.**

POSTDOCTORAL RESEARCH ASSOCIATE position available for qualified Ph.D. in the pharmacology and biochemistry of antineoplastic agents targeted against specific human cancer types. Studies will involve the modulation of anticancer agents with thymidylate synthase as the primary target. The focus will be on metabolism of reduced folates, modulation of reduced folate pools, and optimization of drug scheduling for therapeutic gain. Research will also identify factors that influence the regulation and turnover of thymidylate synthase in elucidating the importance of the enzyme as a therapeutic target. Candidates may have up to 5 years of postdoctoral experience. A strong background in biochemical pharmacology or biochemistry is advantageous. Send curriculum vitae and names of three references to: **Dr. J. A. Houghton, Laboratories for Developmental Therapeutics, Department of Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. Equal Opportunity/Affirmative Action Employer.**

Applied Physicist

A better way to work.

Our manufacturing operation is seeking an Applied Physicist to support the manufacture of our Cesium Frequency Standard. This position requires knowledge of: vacuum tube manufacturing processes; product/process performance measures; and electronic circuit troubleshooting.

Minimum requirements are: MS in Engineering Physics or Applied Physics; at least 3 years related experience; excellent written and verbal communication skills; demonstrated ability to be successful in a team environment; background in microwave measurements and surface physics is a plus.

Hewlett-Packard offers an excellent compensation and benefits package. For immediate consideration, please send your resume to: Professional Staffing, #6424, Hewlett-Packard Company, 5301 Stevens Creek Blvd., Santa Clara, CA 95052-8059. Hewlett-Packard Company is an Equal Opportunity/ Affirmative Action Employer.



**HEWLETT
PACKARD**

BIOTECHNOLOGY

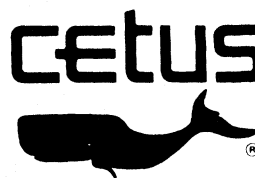
SCIENTIST

Analytical Development

Cetus Corporation, a leader in biotechnology, has an opening in the Analytical Development Group for a Scientist to help lead a group of researchers in the development of immunoassays and DNA assays in support of the production of recombinant products.

Requirements include a PhD/MS or equivalent experience in immunology or allied field, with a minimum of 2-4 years' experience developing immunological and DNA assays. Demonstrated supervisory skills are also required; biotechnological/pharmaceutical experience is desirable.

Cetus offers an excellent benefits package along with an environment that encourages innovation and growth. For consideration, please send your resume to Cetus Corporation, Box MG, 1400 Fifty-Third Street, Emeryville, CA 94608. We are an Equal Opportunity Employer.



BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc. is engaged in the discovery, development, manufacture and marketing of novel therapeutic agents. The major expansion of our Research and Development programs, facilities and staff has created the need for the following regular and postdoctoral positions in our BIOCHEMISTRY department at our DANBURY, CT location.

STAFF POSITIONS

BIOCHEMIST/ CELL BIOLOGIST

This position requires an individual with particular interest in signal transduction and/or mediator induced gene expression to investigate molecular mechanisms of inflammatory processes.

The successful candidate will have a Ph.D. in Biochemistry or related discipline with 2 or more years postdoctoral experience. *Respond to Dept. JC-1S-961.*

ENZYMOLOGIST

This position requires an individual interested in elucidating enzyme mechanisms for the purpose of advancing drug discovery. Relevant experience includes enzymology, physical organic chemistry and related areas of biochemistry. This work will support our anti-viral/anti-inflammatory research programs.

Ph.D. in relevant discipline and 2 or more years postdoctoral experience required. *Respond to Dept. JC-1S-915.*



**Boehringer
Ingelheim**

POSTDOCTORAL POSITIONS

BIOCHEMISTRY

Candidates should have an interest in investigating basic molecular mechanisms of inflammation. *Respond to Dept. JC-1S-PF.*

ENZYMOMOLOGY

Candidates should have a background and interest in enzymology, physical organic chemistry or kinetics. Research goals will be to investigate the kinetics, specificity and mechanism of viral proteases. *Respond to Dept. JC-1S-MS.*

BOEHRINGER INGELHEIM offers a competitive salary and benefits package including relocation assistance, modern facilities and the opportunity to have your contributions recognized.

If interested, please send your curriculum vitae to the appropriate Department Code, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. We are an equal opportunity employer m/f/h/v.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available September 1989 for investigation of cell proliferation-associated nuclear proteins in normal and neoplastic cells. These efforts are aimed toward examining the derangement of normal growth control mechanisms in cancer. Strong background in immunocytochemistry or protein biochemistry preferred. Applicants should be highly motivated, creative scientists. Salary: \$27,500 to \$37,500 for 2 or 3 years, depending upon qualifications. Send curriculum vitae including the names of three references to: **Dr. K. D. Bauer, Department of Pathology, Northwestern University, School of Medicine, 250 East Superior Street, Chicago, IL 60611. Telephone: 312-908-2430.**

POSTDOCTORAL/RESEARCH ASSOCIATE available beginning Summer of 1989 for the study of the mechanism of interaction of antibiotics with proteins. Preference will be given to individuals with a strong background in the isolation and structural identification of drug conjugates. Salary commensurate with experience. Send curriculum and names of three references to: **Dr. Harold L. Kohn, Department of Chemistry, University of Houston, TX 77204-5641. An Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH POSITION

A postdoctoral research position is currently available in the field of molecular biology with application to studying gene regulatory aspects of xenobiotic metabolism in mammalian systems. The applicant will be involved in studying the regulation of cytochrome P-450 gene expression at the level of mRNA and protein synthesis/degradation in the lung and liver.

Send curriculum vitae and three letters of reference to: **Dr. Robert A. Blouin, College of Pharmacy, University of Kentucky, Lexington, KY 40536-0082.**

MEDICAL RESEARCH COUNCIL CLINICAL RESEARCH CENTRE WATFORD ROAD HARROW, HA1 3UJ Telephone: 01.864.5311 POSTDOCTORAL SCIENTIST MOLECULAR GENETICS OF THE MOUSE X CHROMOSOME

Applications are invited for a 3-year postdoctoral appointment to join an established group working on the molecular genetics of the mouse X chromosome. The project will initially involve the construction of genomic libraries in Yeast Artificial Chromosome vectors (YAC's). Subsequent work will involve the use of this resource to isolate genes associated with a number of X-linked loci. This project will complement ongoing research on the genetic and physical mapping of CpG island clones onto the X chromosome. The group also has established facilities for making transgenic mice by oocyte injection and embryonic stem (ES) cell manipulation.

Experience in the methods of molecular genetics/molecular biology is desirable.

Salary will be at an appropriate point on the scales for non-clinical university academic staff.

Application forms and further details available from **The Personnel Department, extension: 2673 quoting ref 102/13912.**

The Medical Research Council is an Equal Opportunity Employer.

RESEARCH ASSISTANT II (ELECTRON MICROSCOPY TECHNICIAN). Vacancy #174-89, full-time, permanent position to coordinate the facility. Duties include: routine maintenance and operation of TEM, SEM, and auxiliary equipment. Process samples, prepare EM negatives and prints and instruct faculty and student users. Minimum of a B.S. degree or 6 years of EM research level experience is required. Send Northern Arizona University (NAU) application, descriptions of EM experiences, transcripts, and three letters of recommendation to: **Northern Arizona University Human Resources Department, Box 4113, Flagstaff, AZ 86011-4113. Salary: \$21,336 to \$25,000 (DOE) plus excellent benefit package. Screening will begin 1 August 1989. Questions concerning the Department should be addressed to: Dr. Norm Grim, (Telephone: 602-523-7218), Box 5640, Northern Arizona University, Flagstaff, AZ 86011. NAU is an Equal Employment Opportunity/Affirmative Action Institute.**

THE FELS INSTITUTE FOR CANCER RESEARCH AND MOLECULAR BIOLOGY POSITIONS AVAILABLE FACULTY-POSTDOCTORAL- GRADUATE STUDENTS

MOLECULAR BIOLOGISTS—Tenure track positions. All areas of molecular biology and genetics are of interest. Some preference will be given to developmental molecular biology and research on transgenic animals. Send curriculum vitae, a brief statement of research plans and request that three letters of recommendation be sent to the address below.

PROTEIN CHEMISTS—Tenure track positions. Send curriculum vitae, a brief statement of research plans and request that three letters of recommendation be sent to the address below.

POSTDOCTORAL POSITIONS—Postdoctoral positions are available in the areas of molecular biology and genetics, gene mapping, cell biology, biochemistry or carcinogenesis. Stipends are competitive and an enlarging faculty creates a unique training opportunity. Send curriculum vitae, a brief statement of training interests and request that three letters of recommendation be sent to the address below.

GRADUATE STUDENTS—A new program is starting at the Fels Institute for Cancer Research and Molecular Biology with a new Department of Molecular Biology and Genetics in the planning stages. Areas of study include molecular biology and genetics, gene mapping, cell biology, biochemistry and carcinogenesis. Active programs include oncogenes, genetic alterations in cancer formation, gene mapping, genes in growth control, DNA repair mechanisms, receptors and cellular transduction systems. Send curriculum vitae, a short statement on training interests, if known, and request that three letters of recommendation be sent to the address below. Entrants for the fall of 1989 will be considered.

Send information requested above to:

**Dr. Gerald Litwack, Deputy Director
The Fels Institute for Cancer Research
and Molecular Biology
Temple University School of Medicine
3420 North Broad Street
Philadelphia, PA 19140**

An Equal Opportunity Employer

RESEARCH ASSOCIATE

Merck Sharp & Dohme Research Laboratories has an opening for a scientist in a research group studying the metabolism of cholesterol-carrying lipoproteins and its relationship to atherosclerosis. A B.S. or M.S. or equivalent in biochemistry or a related discipline is required, along with experience in cell culture techniques. Skills in protein purification and the handling of small animals would be useful.

Merck Sharp and Dohme Research Laboratories is located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. For consideration, send your resume with the names of three references to **Dan Hoffman, Merck & Co., Inc., P.O. Box 2000, Rahway, New Jersey 07065.**

EQUAL OPPORTUNITY EMPLOYER



Merck & Co., Inc.

Receptor Genetics, Inc.

Receptor Genetics, Inc., (R-GENE) is a rapidly growing biotechnology company located in Bethesda, MD. R-GENE collaborates closely with a research group directed by Dr. Mark R. Brann in the Laboratory of Molecular Biology, National Institute of Neurological Disorders and Stroke. Based on recent advances in molecular genetics, R-GENE is developing receptor based assays of neuroactive drugs for use by the pharmaceutical industry. The initial focus of R-GENE is on acetylcholine dopamine and excitatory amino acid receptors. A **senior scientist** with experience in transgenic animals and neuronal promoters is sought. **Postdoctoral and technical** positions are also available for individuals with experience in molecular pharmacology, molecular genetics, signal transduction, G-proteins and/or electrophysiology.

Please send your curriculum vitae and a statement of research interests to: **Shirley Forehand, Business Mgr., Receptor Genetics, Inc., c/o Lab. of Molecular Biology, NINDS, Building 36, Room 3D-02, Bethesda, MD 20892**

BONE MARROW TRANSPLANTATION PROGRAM UNIVERSITY OF MINNESOTA

Assistant or Associate Professor (Tenure track, Tenure)

The Bone Marrow Transplantation Program at the University of Minnesota seeks to fill up to two positions in the field of bone marrow transplantation. Candidates should be physicians with experience in clinical and/or laboratory research and in teaching. Candidates will be expected to actively participate in one or more subspecialty areas in clinical and/or laboratory research, teach in the department of appointment and attend on the bone marrow transplant unit. Individuals with interest and experience in unrelated donor/immunogenetics, graft versus host disease, autologous transplantation, immunotherapy or infectious diseases are especially sought.

Qualifications:

Assistant Professor (tenure track): demonstrated involvement in quality research accepted or published in peer-reviewed journals;

Associate Professor (tenure): professional distinction in research and writing and demonstrated effectiveness in teaching and advising.

Salary will be commensurate with education and experience. Interested individuals should send curriculum vitae, a brief description of career plans and goals and a list of three references to the following address. **The last date for receipt of applications is OCTOBER 1, 1989.**

**Chair, Search Committee
Bone Marrow Transplantation Program
Box 803 UMHC
Harvard Street at East River Road
Minneapolis, MN 55455**

*THE UNIVERSITY OF MINNESOTA IS AN EQUAL OPPORTUNITY
EDUCATOR AND EMPLOYER AND SPECIFICALLY INVITES AND
ENCOURAGES APPLICATIONS FROM WOMEN AND MINORITIES*

FELLOW/SENIOR FELLOW-VIRAL IMMUNOLOGY

Division of Cell Biology
John Curtin School of Medical Research
Australian National University

A Divisional structure came into existence in the John Curtin School of Medical Research on 1 January 1989. The new Division of Cell Biology incorporates research programs from the former departments of Microbiology and Experimental Pathology. Investigation of immune responses to viral infections constituted a long-standing theme in these former departments and this theme will be continued. A Fellow or Senior Fellow is sought to participate in this research program. In particular, future work will involve analysis of the immunobiology of infection with flaviviruses and poxviruses. Preference will be given to applicants who have a consistent record of research achievement in fundamental cellular immunology pertinent to responses against viral infections with particular emphasis on experience with flaviviruses and poxviruses.

Closing date: 28 July 1989.

Ref. JC 10.6.3.

SALARY: Senior Fellow: A\$48,086-A\$55,814 p.a.

Fellow: A\$36,205-A\$48,025 p.a.

APPOINTMENT: tenurable.

APPLICATIONS should be submitted in duplicate to the Registrar, The Australian National University, GPO Box 4, Canberra, ACT 2601, Australia, quoting reference number and including curriculum vitae, list of publications and names of at least three referees. The University reserves the right not to make an appointment or to appoint by invitation at any time. Further information is available from the Registrar.

THE UNIVERSITY IS AN EQUAL OPPORTUNITY EMPLOYER

Regulatory Affairs Specialist

Immediate opening for an experienced Regulatory Affairs Specialist at Procter & Gamble's Miami Valley Laboratories, Cincinnati. Ph.D. or equivalent research experience required in one of the drug development life or physical sciences.

Will work with FDA to expedite new chemical entities and drug delivery systems through Phase I and II clinical testing. As a member of drug research teams, he/she will develop regulatory strategies for our drug research efforts and provide leadership in preparing INDs and other regulatory submissions.

Experience required in successfully working with FDA's drug reviewing divisions. Familiarity preferred with FDA requirements in preparation of clinical supplies, drug stability testing, clinical/nonclinical research, and adverse drug experience reporting.

Must be presently authorized to work in US on full-time basis. Send resume and publication list to:

Dr. T.J. Logan
Regulatory Position
THE PROCTER & GAMBLE
COMPANY
P.O. Box 398707
Cincinnati, Ohio 45239-8707

An Equal Opportunity Employer

Procter & Gamble

Postdoctoral Fellowship in Developmental Lung Biology

The mandate of this position is to study the regulation of neuroendocrine functions in developing lungs. Candidates with a PhD should be experienced and trained in developmental biology, molecular biology, regulatory peptide expression and identification, cell culture techniques and have some background in biochemistry. Qualified professionals interested in pursuing this challenge are invited to submit a curriculum vitae and names of 3 referees, quoting file #D061, to: Dr. Ernest Cutz, Department of Pathology, The Hospital for Sick Children, 555 University Avenue, Toronto, Ont, Canada M5G 1X8.



THE HOSPITAL
FOR SICK CHILDREN

RESEARCH ASSOCIATE DRUG DELIVERY

Amgen, one of the leading innovators in the research and development of human pharmaceuticals through recombinant DNA technology, has an immediate opportunity for a BS or MS level biochemist to join a new group involved in the design and development of novel formulation and delivery systems for protein and peptide-based pharmaceuticals. Responsibilities for this position will include the characterization of physical and chemical properties of proteins as well as formulation design.

Candidates for this position must have a BS or MS in Pharmacy, Pharmacology or a related discipline with experience in dosage form development, pre-formulation, formulation and/or pharmacological research. Experience with one or more of the following techniques is highly desirable: biochemical assays, chromatography, SDS-PAGE, ELISA, DSC, FTIR and light scattering. Some experience with research animals and peptide/protein-based drugs is also desirable.

Amgen offers a stimulating and challenging research environment as well as the unique opportunity to contribute to exciting research programs on the leading edge of biotechnology. Amgen also offers an excellent compensation and benefits package. If you would like to be a part of a company that maintains a commitment to scientific excellence and highly values its human resources, please send a resume, in confidence, to:

AMGEN, INC.
Recruitment, Dept. #398
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal
Opportunity
Employer

AMGEN

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

A position is available fall 1989 to study regulation of RNA stability by interferon. Antiviral and cell growth inhibitory activities of the 2'-5' oligoadenylate-dependent RNase pathway will be explored. Recombinant DNA technology and a background in biochemistry and microbiology highly desirable. Send curriculum vitae to: **Dr. Robert H. Silverman, Department of Pathology, c/o Civilian Personnel, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.**

PROGRAM DIRECTOR IN BIOLOGY

The Department of Biology at Emory University seeks a person to head a program of new undergraduate initiatives funded by the Howard Hughes Medical Institute, to begin 1 January 1990. The initiatives include new advanced laboratory courses, a summer program for entering minority students interested in biology, and faculty and curriculum development. The candidate should have a Ph.D., a strong background in biology, knowledge of current research and practice in undergraduate science education, and experience in instruction and faculty development. Experience in grant writing would also be helpful. The position is a 12-month appointment for a period of at least 5 years; salary is commensurate with qualifications and experience. Send curriculum vitae, a statement of your interests and experience in teaching and science education, and have three letters of recommendation sent to: **Dr. Gray F. Crouse, Chairman, Department of Biology, Emory University, Atlanta, GA 30322.** Review of applications will begin immediately, and the position will remain open until filled. *Emory is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH GENETICIST GS-440-11

National Marine Fisheries Service, Alaska Fishery Center, Juneau. Temporary 1-year, may be extended annually up to 4 years. Collects and analyzes biochemical genetic data to develop, refine and apply methods to provide fishery managers salmon stock composition information. Salary: \$28,852 plus 25% COLA. B.S. in genetics or biology with nine semester hours in genetics and at least 3 years of professional experience or graduate education related to genetics. Contact: **Lori Budbill at: 206-526-6066** by 11 August 1989 for application forms. *Equal Opportunity Employer.*

SENIOR CLINICAL RESEARCH SCIENTIST

The successful applicant will take charge of an interdisciplinary team in the endocrinology clinical research unit. An M.D. degree and 4 years of experience in growth hormone physiology is required. He or she must have expertise in knemometry and nonhuman primate physiology relating to growth and development, and in neurohormonal control mechanisms of the gonadal and adrenal axes. Also clinical research experience with growth hormone deficiency is required. Salary is commensurate with credentials and experience and an excellent benefits package is provided.

This position is with a biotechnology/biomedical company located in the southwestern United States which is focused on the development of peptide/protein substances for human use. *The company is an Equal Opportunity Employer.*

Applicants are requested to send their résumé in confidence to: **Box 104, SCIENCE.**

SUPERINTENDENT OF SOUTHERN EXPERIMENT STATION UNIVERSITY OF MINNESOTA WASECA, MINNESOTA

The Minnesota Agricultural Experiment Station, University of Minnesota, is requesting applications for a 12-month, administrative position, as Superintendent of the Southern Experiment Station at Waseca, Minnesota, and associate professor/professor, with tenure in a relevant discipline. Qualifications include a Ph.D. degree in an agriculture or related science with 8 years of experience in research, extension, and/or teaching. Application deadline is 1 October 1989. For further information and/or a complete position description, call: **Orvin C. Burnside at 612-625-8761.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

POSITIONS OPEN

RESEARCH SCIENTIST. Position available for a research scientist in the Rheumatology and Immunology Division of Winthrop-University Hospital. The successful candidate will have a Ph.D. and at least 2 years of postdoctoral experience. Research interests of the division include the role of extracellular matrix and adhesive proteins in inflammation. Send curriculum vitae to: **John F. Aloia, M.D., Chairman, Department of Medicine, Winthrop-University Hospital, 259 First Street, Mineola, NY 11501.**

SENIOR RESEARCH ASSISTANT for longitudinal research study at diabetes center. Responsibilities include conduct/supervise individual/family interviews with adolescent diabetic patients; train/supervise undergraduate/graduate students to conduct psychological tests and interviews; manage complex longitudinal database; statistical analysis and interpretation of results. Applicant must have master's degree in child development or related field. Minimum of 3 years of experience in family research using multivariate statistical analysis on microcomputers. Knowledge of insulin-dependent diabetes mellitus preferred. Salary: \$27,000 per annum. Submit résumés to: Department of Employment and Training, Hurley Building, 19 Stanford Street, Boston, MA 02114. Refer to job reference # 9745. *Affirmative Action/Equal Opportunity Employer.*

LIFE SCIENCE RESEARCH—ROME TOXICOLOGY CENTER SEEKS A SENIOR TOXICOLOGIST

Candidates should have several years of experience in general toxicology in a contract research laboratory or in the pharmaceutical or chemical industry, and have a Ph.D. in toxicology or a related science. Certification by the American Board of Toxicology would be an asset. Instruction in Italian will be provided. The ability to effectively communicate in English is essential.

The environment is attractive, the tasks challenging and the salary highly competitive for this position of responsibility. All enquiries will be treated in strict confidence.

Please send curriculum vitae preferably by fax or special delivery mail to:

**The Managing Director
Life Science Research Roma Toxicology Centre
Via Tito Speri 12/14
00040 Pomezia (Roma)
Italy
Fax: 39-6-9125387. Telephone: 39-6-9120351.**

WATERSHED SCIENTIST/ ECOSYSTEM SCIENTIST/ SOIL SCIENTIST

Work with data synthesis and interpretation for a national research project concerning the environmental effects of acidic deposition on forested ecosystems and their associated surface waters. An M.S. in quantitative ecology, watershed science, soil chemistry, environmental science or a related discipline plus experience/training in statistics and strong verbal and written communication skills is required. Field experience involving forest or aquatic ecosystems is desired, as well as PC/Mainframe computer experience with SAS, dBASE III+ and/or Fortran.

Send a letter of application, curriculum vitae and a listing of three references, by 28 July 1989, to: **Ms. Susan Carey, NSI Technology Services Corp., 1600 SW Western Boulevard, Corvallis, OR 97333.** NSI works in support of the Environmental Protection Agency's Corvallis Environmental Research Laboratory. *We're an Equal Opportunity Employer and a subsidiary of Man Tech International Corporation.*

CONFERENCE

CONFERENCE ON: MOLECULAR AND CELLULAR MECHANISMS OF ALCOHOL AND ANESTHETICS

Sponsored by The New York Academy of Sciences
The University of Calgary, Alberta, Canada
25 to 28 June 1990

For further information: Conference Department, The New York Academy of Sciences, 2 East 63rd Street, New York, NY 10021. Telephone: 212-838-0230, FAX: 212-888-2894.

POSITIONS OPEN

STAFF SCIENTIST

Study Director for Environmental Fate Studies. Design and perform experiments in microbiometabolism and chemical degradation of pesticides in soil and water using ¹⁴C radiolabeled compounds. Isolate and purify metabolites and degradates and identify them using TLC, GC, and HPLC. Model the fate of pesticides in the environment using mathematical models. Prepare protocols, evaluate research data, and review reports. Prepare manuscripts for publication. Supervise four technical staff in development of research procedures, and train junior staff. Ph.D. in soil chemistry and 6 months of postdoctoral training in environmental fate-pesticides; and 3 years of experience in environmental fate of pesticides; and at least two publications on environmental fate of pesticides. Salary: \$16.35 per hour, 40 hours per week. Résumé to: **Carlyn Waller, Job Service, 206 North Broom, Box 7163, Madison, WI 53707.** Employer paid ad.

SYMPOSIUM

ENDOTHELIAL CELLS IN DEVELOPMENT AND DISEASE 20 to 21 November 1989

Hyatt Regency, Crystal City, Virginia
Organizers: N.I.A.—George Martin,
N.Y.U.—Daniel Rifkin,
Schering-Plough Research—David Emerson

Topics to be discussed include:
Cell Biology—R. Montesano, D. Grant, P. D'Amore, J. Madri.
Fibroblast Growth Factors—T. Maciag, M. Klagsbrun, J. Abraham, D. Rifkin.
Regulation of Proliferation—J. Schlessinger, S. Aaronson.
Regeneration and Disease—G. Grotendorst, P. Di Corleto, S. Schwartz.
Kaposi's Sarcoma—S. Z. Salihuiddin, C. Basilico, G. Jay, M. Green.

For registration, write to: **Rita Cuniff, Department of Tumor Biology, Schering-Plough Research, 60 Orange Street, Bloomfield, NJ 07003.** Telephone: 201-429-4232. fax: 201-429-3706.

TRAINING GRANT

GRADUATE STUDENT POSITIONS AVAILABLE— UNIVERSITY OF FLORIDA

Graduate student positions are available leading to a Ph.D. or M.S. degree. Training will be provided in genetics, molecular biology or immunology of veterinary infectious diseases. Ongoing research projects in the department involve: (i) cloning, expression and analysis of genes coding for biologically important proteins of parasites, bacteria and viruses; (ii) genetic analysis of antigenic and strain variation in these disease agents; (iii) delineation of immune mechanisms; (iv) experimental immunization with synthetic or recombinant peptides; (v) development of assays for diagnosis of infection. A degree in veterinary medicine would be an advantage for some of the positions.

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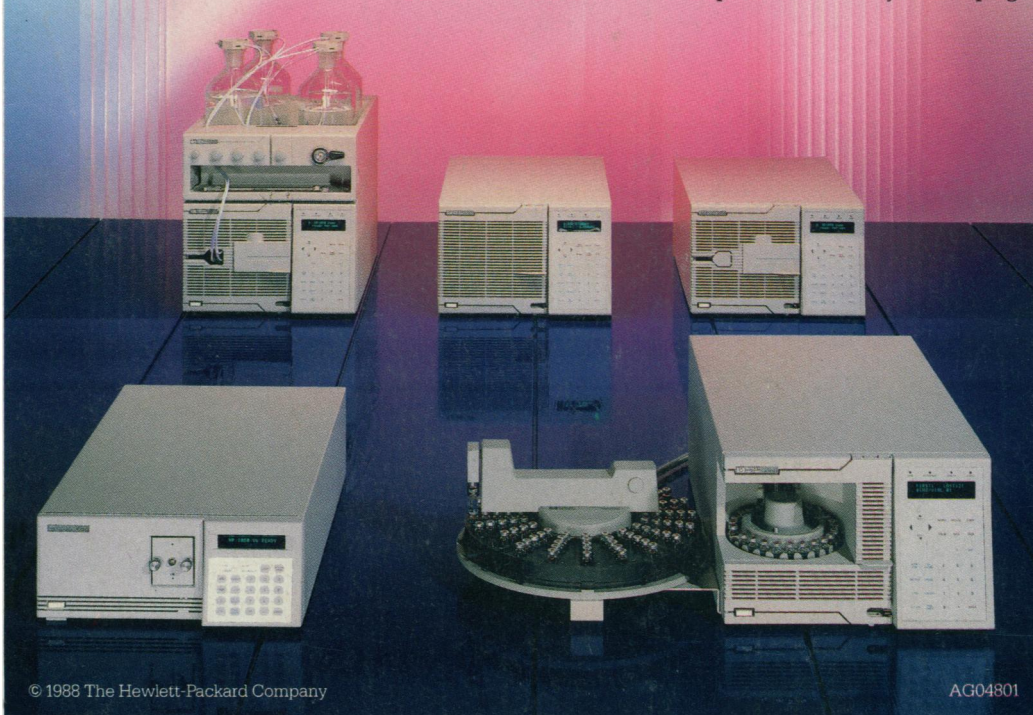
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