

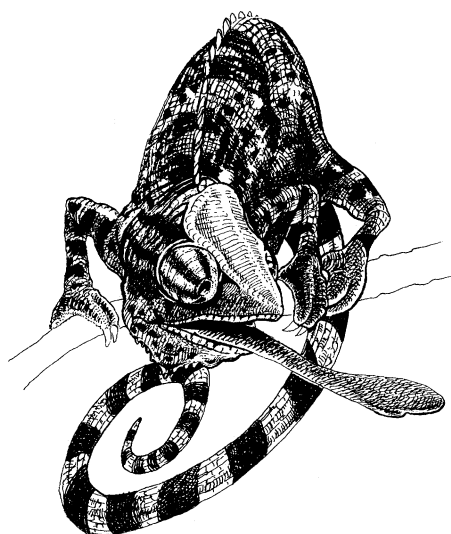
Sonoran deserts of North America offer three sets of communities whose members have independent phylogenetic affinities and thus represent three independently evolved desert systems. The three areas differ dramatically in the numbers of lizard species and in the population densities of those species. Comparative ecology in these assemblages offers the potential for considerable insight into problems of species coexistence, convergent evolution, and a host of autecological questions. With this in mind, Pianka reviews the data he has collected over the last two decades, adds new results, and, in extensive tabular appendixes, put his life's work on display for anyone to use in further hypothesis testing.

The monograph includes extensive data on the thermal relations, activity patterns, foraging modes, reproductive tactics, and morphology of 60 to 90 or more species (depending upon the topic), but nearly all the data are focused upon one theme: how do coexisting species differ? Observed differences are discussed in terms of their importance in avoiding or of having evolved in response to interspecific competition.

Pianka's approach to community ecology depicts a group of species within some major taxon as a static unit at or near equilibrium with respect to relative abundances of species and patterns of resource use. Resources are the factor limiting abundance, and nearly all the resources that are available are used up by the community as a whole. In this sense the community is very much the sort of "super-organism" envisioned by the American plant ecologist Frederick Clements.

There is nothing intrinsically wrong with this point of view as a hypothesis, testable in principle by manipulative experiments. And here in Pianka's monograph the reader will find a crossroads: no such experiments are reported, and indeed in the final chapter the author states that they are not feasible. There are no attempts to test any of the fundamental assumptions upon which the entire theory of resource partitioning is based. Pianka takes the assumptions as true and proceeds to interpret all of his data in the light of one theoretical construct. He gives mention of alternative explanations in every chapter, but it is clear that he puts little stock in them. This is a crossroads because this very issue, whether analyses of observational data alone are sufficient to test any single ecological hypothesis, has been at the core of a vigorous and often bitter argument among ecologists for the past decade. Pianka, whose approach to ecology has been at the center of that debate, cites its literature only in passing.

Whether the approach to ecology this



"*Chameleo dilepis*, a bizarre and uncommon arboreal lizard in the eastern Kalahari." [From *Ecology and Natural History of Desert Lizards*]

monograph represents and the conclusions derived therefrom are correct or not is an empirical problem; only further study and, in my view, experimentation will resolve this issue. For many animals, regardless of taxon, the manipulative experiments are difficult to perform and require long time periods for conclusive results to be obtained. Thus resolution of the more general issues will be a long time coming. Nonetheless, in Pianka's book we have a monograph that is full of information, thoroughly interesting, and provocative from start to finish. Different ecologists will be provoked in different ways, but if they are provoked enough to perform more empirical studies on lizard communities, then Pianka's book will stand as a landmark in the literature.

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Reprints of Books Previously Reviewed

Foundations of Space-Time Theories. Relativistic Physics and Philosophy of Science. Michael Friedman. Princeton University Press, Princeton, NJ, 1986. Paper, \$14.50. *Reviewed* 222, 1007 (1983).

Historical Writing on American Science. Perspectives and Prospects. Sally Gregory Kohlstedt and Margaret W. Rossiter, Eds. Johns Hopkins University Press, Baltimore, 1986. Paper, \$15. *Reviewed* 232, 406 (1986).

Books Received

American Electoral Mosaics. J. Clark Archer and Fred M. Shelley with cartography by Ellen R. White. Association of American Geographers, Washington, DC, 1986. x, 97 pp. Paper, \$6. Resource Publications in Geography.

Andrology. Male Fertility and Sterility. John D. Paulson *et al.*, Eds. Academic Press, Orlando, FL, 1986. xxiv, 656 pp., illus. \$89.

Antigenic Variation in Infectious Disease. T. H. Birkbeck and C. W. Penn, Eds. IRL Press, McLean, VA, 1986. x, 170 pp., illus. \$58; paper, \$36. Special Publications of the Society for General Microbiology, vol. 19. Based on a symposium, Nottingham, UK, Sept. 1985.

Arterial Behavior and Blood Circulation in the Brain. George Mchedlishvili. John A. Bevan, Ed. Consultants Bureau (Plenum), New York, 1986. xvi, 338 pp., illus. \$75.

Artificial Intelligence and Expert Systems Sourcebook. V. Daniel Hunt. Chapman and Hall (Methuen), New York, 1986. xii, 315 pp., illus. \$34.50. Advanced Industrial Technology Series.

Atlas of the Human Oocyte and Early Conceptus. Lucinda L. Veeck. Williams and Wilkins, Baltimore, 1986. xviii, 331 pp. \$110.

The Automated Battlefield. Frank Barnaby. Free Press (Macmillan), New York, 1986. x, 180 pp. + plates. \$18.95.

Basic Methods in Molecular Biology. Leonard G. Davis, Mark D. Dabner, and James F. Battey. Elsevier, New York, 1986. xii, 388 pp., illus. Spiral bound, \$35.

Bee Genetics and Breeding. Thomas E. Rinderer, Ed. Academic Press, Orlando, FL, 1986. xvi, 426 pp., illus. \$65.99.

Bergey's Manual of Systematic Bacteriology. Vol. 2. Peter H. A. Sneath *et al.*, Eds. Williams and Wilkins, Baltimore, 1986. xxiv pp. + pp. 965-1599, illus. \$65.50.

Biochemical and Molecular Epidemiology of Cancer. Curtis C. Harris, Ed. Liss, New York, 1986. xx, 473 pp., illus. \$140. UCLA Symposia on Molecular and Cellular Biology, New Series, vol. 40. From a symposium, Steamboat Springs, CO, April 1985. Reprinted in part from the *Journal of Cellular Biochemistry*, vols. 29 and 30.

Cool Stars, Stellar Systems, and the Sun. M. Zeilik and D. M. Gibson, Eds. Springer-Verlag, New York, 1986. xii, 501 pp., illus. \$46.40. Lecture Notes in Physics, 254. From a workshop, Santa Fe, NM, Oct. 1985.

Cooperation in Science and Technology. An Evaluation of the U.S.-Soviet Agreement. Catherine P. Ailes and Arthur E. Pardee, Jr. Westview, Boulder, CO, 1986. xxviii, 334 pp. Paper, \$26. Westview Special Studies in Science, Technology, and Public Policy.

The Correspondence of Henry Oldenburg. Edited and translated by A. Rupert Hall and Marie Boas Hall. Taylor and Francis, Philadelphia, 1986. Vol. 12, Oct. 1675-July 1676. Letters 2755-2940. xxii, 409 pp., illus. \$81. Vol. 13, July 1676-July 1681. Letters 2941-3139. Additions and Corrections to Vols. 1-11. xxx, 459 pp., illus. \$81.

Criminal Careers and "Career Criminals." Vol. 1. Alfred Blumstein *et al.*, Eds. Panel on Research on Criminal Careers, National Research Council. National Academy Press, Washington, DC, 1986. xvi, 458 pp., illus. \$34.95.

Culture, Politics, and Medicine in Costa Rica. An Anthropological Study of Medical Change. Setha M. Low. Redgrave, Bedford Hills, NY, 1985. xii, 131 pp., illus. Paper, \$14.95.

Data Base Organization for Data Management. Sakti P. Ghosh. 2nd ed. Academic Press, Orlando, FL, 1986. xiv, 487 pp., illus. \$65; paper, \$39.50. Computer Science and Applied Mathematics.

Design Sensitivity Analysis of Structural Systems. Edward J. Haug, Kyung K. Choi, and Vadim Komkov. Academic Press, Orlando, FL, 1986. xvi, 381 pp., illus. \$60; paper, \$34.95. Mathematics in Science and Engineering, vol. 177.

The Developmental Field Concept. John M. Opitz, James F. Reynolds, and LaVelle M. Spano, Eds. Liss, New York, 1986. xvi, 476 pp., illus. \$65. Also published in *American Journal of Medical Genetics*, vol. 21, no. 1, 1985, and supplement 2, 1986.

Developmental Neuropsychobiology. William T. Greenough and Janice M. Juraska, Eds. Academic Press, Orlando, FL, 1986. xx, 485 pp., illus. \$64.50; paper, \$33.50. Behavioral Biology.

Dialogues with Scientists and Sages. The Search for Unity. Renée Weber. Routledge and Kegan Paul, New York, 1986. xvi, 256 pp., illus. Paper, \$14.95.

Examining the Submicron World. Ralph Feder, J. Wm. McGowan, and Douglas M. Shinozaki, Eds. Plenum, New York, 1986. xii, 372 pp., illus. \$65. NATO Advanced Science Institutes Series B, vol. 137. From an institute, Nova Scotia, Canada, July 1984.

Excavations at Tepe Yahya, Iran 1967-1975. The Early Periods. Thomas Wright Beale *et al.* C. C. Lam-

berg-Karlovsky, Ed. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, MA, 1986 (distributor, Harvard University Press, Cambridge, MA). xviii, 346 pp., illus. Paper, \$25. American School of Prehistoric Research, bulletin 38.

Experimental Models in Antimicrobial Chemotherapy. Oto Zak and Merle A. Sande, Eds. Academic Press, Orlando, FL, 1986. Three volumes. Vol. 1. xviii, 380 pp., illus. \$63.50. Vol. 2. xviii, 387 pp., illus. \$65. Vol. 3. xvi, 398 pp., illus. \$67.50.

The Fabric of Mind. Richard Bergland. Illustrated by Kati Bromley. Viking, New York, 1986. x, 202 pp., \$16.95.

Floristic Regions of the World. Armen Takhtajan. Arthur Cronquist, transl. ed. University of California Press, Berkeley, 1986. xxii, 522 pp. \$60. Translated from the Russian edition by Theodore J. Crovello.

From Site to Sight. Anthropology, Photography, and the Power of Imagery. Melissa Banta and Curtis M. Hinsley with the assistance of Joan Kathryn O'Donnell. Peabody Museum Press, Cambridge, MA (distributor, Harvard University Press, Cambridge, MA). 136 pp., illus. Paper, \$30.

Fundamental Questions in Quantum Mechanics. Laura M. Roth and Akira Inomata, Eds. Gordon and Breach, New York, 1986. x, 332 pp., illus. \$104. From a conference, Albany, NY, April 1984.

Fundamentals of Deformation and Fracture. B. A. Bilby, K. J. Miller, and J. R. Willis, Eds. Cambridge University Press, New York, 1985. xxiv, 630 pp., illus. \$79.50. International Union of Theoretical and Applied Mechanics Eshelby Memorial Symposium (Sheffield, UK, April 1984).

Gaseous Ion Chemistry and Mass Spectrometry. Jean H. Futrell, Ed. Wiley-Interscience, New York, 1986. xiv, 335 pp., illus. \$59.95. Based on a workshop, Salt Lake City, UT, Sept. 1983.

The Gene-Splicing Wars. Reflections on the Recombinant DNA Controversy. Raymond A. Zilinskas and Burke K. Zimmerman, Eds. Macmillan, New York, 1986. xvi, 288 pp., illus. \$24.95; to AAAS members, \$19.95. AAAS Issues in Science and Technology Series. Based on a symposium, Jan. 1982.

General Chemistry. Principles and Structure. James E. Brady and Gerard E. Humiston. 4th ed. Wiley, New York, 1986. xxii, 907 pp., illus., + appendix, glossary, and index. \$39.95; SI version, \$38.95.

Generalized Coherent States and Their Applications. A. Perelomov. Springer-Verlag, New York, 1986. xii, 320 pp. \$65. Texts and Monographs in Physics.

Genetics of Livestock Improvement. John F. Lasley. Prentice-Hall, Englewood Cliffs, NJ, 1986. xvi, 477 pp., illus. \$37.95.

Geophysical Well Logging. Jay Tittman. Academic Press, Orlando, FL, 1986. x, 175 pp., illus. Paper, \$24.50. Excerpted from *Methods of Experiment Physics*, vol. 24: Geophysics.

Georgia Wetlands. Trends and Policy Options. James E. Kundell and S. Wesley Woolf. Carl Vinson Institute of Government, University of Georgia, Athens, 1986. viii, 112 pp., illus. Paper, \$10.95.

Germ Line-Soma Differentiation. W. Henning, Ed. Springer-Verlag, New York, 1986. xiv, 196 pp., illus. \$52. Results and Problems in Cell Differentiation, vol. 13.

Infrared and Millimeter Waves. Kenneth J. Button, Ed. Academic Press, Orlando, FL, 1986. Vol. 15. Millimeter Components and Techniques, Part 6. x, 290 pp., illus. \$89.50. Vol. 16. Electromagnetic Waves in Matter, Part 3. xii, 225 pp., illus. \$67.

Infrared and Raman Spectra of Inorganic and Coordination Compounds. Kazuo Nakamoto. 4th ed. Wiley-Interscience, New York, 1986. xii, 484 pp., illus. \$55.

Integrated Circuits and Microprocessors. R. C. Holland. Pergamon, New York, 1986. x, 235 pp., illus. \$30; paper, \$14.50. Applied Electricity and Electronics Series.

Integrating Scientific Disciplines. William Bechtel, Ed. Nijhoff, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). x, 354 pp., illus. \$78.50. Science and Philosophy. Based on a conference, Atlanta, May 1984.

Interaction of the Chemical Senses with Nutrition. Morley R. Kare and Joseph G. Brand, Eds. Academic Press, Orlando, FL, 1986. xxvi, 477 pp., illus. \$59.95. Nutrition Foundation. From a conference, Philadelphia, Oct. 1984.

Introduction to Biomolecular Energetics. Including Ligand-Receptor Interactions. Irving M. Klotz. Academic Press, Orlando, FL, 1986. xiv, 138 pp., illus. \$37.50; paper, \$18.95.

Investigating the Life Sciences. An Introduction to the Philosophy of Science. G. M. N. Verschuuren. Pergamon, New York, 1986. x, 148 pp., illus. \$27.50.

Foundations and Philosophy of Science and Technology Series.

Mechanical Signature Analysis. Theory and Applications. S. Braun, Ed. Academic Press, Orlando, FL, 1986. xii, 385 pp., illus. \$94.50.

Mechanics of Flow-Induced Sound and Vibration. William K. Blake. Academic Press, Orlando, FL, 1986. Two volumes. Vol. 1, General Concepts and Elementary Sources. xviii pp. + pp. 1-426, illus., + index. \$85. Vol. 2, Complex Flow-Structure Interactions. xx pp. + pp. 427-974, illus. \$99. Applied Mathematics and Mechanics, vol. 17.

Mechanisms of Yeast Recombination. Amar Klar and Jeffrey N. Strathern, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1986. x, 193 pp., illus. Paper, \$30. Current Communications in Molecular Biology. From a meeting, Cold Spring Harbor, NY.

Medical Application of Liposomes. Kunio Yagi, Ed. Japan Scientific Societies Press, Tokyo, and Karger, Basel, 1986. x, 201 pp., illus. \$79.50. From a symposium, Dec. 1984.

The Medical Implications of Nuclear War. Institute of Medicine, National Academy of Sciences. Fredric Solomon and Robert Q. Marston, Eds. National Academy Press, Washington, DC, 1986. xx, 619 pp., illus. \$43.50; paper, \$33.50. Based on a symposium, Washington, DC, Sept. 1985.

Metals in Mercury. C. Hirayama, Z. Galus, and C. Guminski, Eds. Pergamon, New York, 1986. xx, 451 pp., illus. \$100. Solubility Data Series, vol. 25. International Union of Pure and Applied Chemistry.

Methods in Enzymology. Vol. 119, Interferons, Part C. Sidney Pestka, Ed. xi, 845 pp., illus. \$84. Vol. 121, Immunochemical Techniques. Part 1, Hybridoma Technology and Monoclonal Antibodies. John J. Langone and Helen Van Vunakis, Eds. xxxvi, 947 pp., illus. \$85. Vol. 124, Hormone Action. Part J, Neuroendocrine Peptides. P. Michael Conn, Ed. xxxviii, 679 pp., illus. \$77.50. Vol. 125, Biomembranes. Part M, Transport in Bacteria, Mitochondria, and Chloroplasts, General Approaches and Transport Systems. Sidney Fleischer and Becca Fleischer, Eds. xxx, 788 pp., illus. \$85.50. Vol. 126, Biomembranes. Part N, Transport in Bacteria, Mitochondria, and Chloroplasts, Protonmotive Force. Sidney Fleischer and Becca Fleischer, Eds. xxx, 832 pp., illus. \$85. Vol. 127, Biomembranes. Part O, Protons and Water, Structure and Translocation. Lester Packer, Ed. xxviii, 830 pp., illus. \$89.50. Vol. 128, Plasma Lipoproteins. Part A, Preparation, Structure, and Molecular Biology. Jere P. Segrest and John J. Albers, Eds. xxviii, 992 pp., illus. \$89.50. Vol. 130, Enzyme Structure. Part K. C. H. W. Hirs and Serge N. Timasheff, Eds. xxiv, 587 pp., illus. \$70. Vol. 131, Enzyme Structure, Part L. C. H. W. Hirs and Serge N. Timasheff, Eds. xxiv, 653 pp., illus. \$69. Academic Press, Orlando, FL, 1986.

On the Cauchy Problem. Sigeru Mizohata. Science Press, Beijing, and Academic Press, Orlando, FL, 1985. viii, 177 pp., illus. Paper, \$36. Notes and Reports in Mathematics in Science and Engineering, vol. 3.

On the Economy of the Plant Form and Function. Thomas J. Givnish, Ed. Cambridge University Press, New York, 1986. xviii, 717 pp., illus. \$84.50. From a symposium, Harvard Forest, Aug. 1983.

Online Information Retrieval. Concepts, Principles, and Techniques. Stephen P. Harter. Academic Press, Orlando, FL, 1986. xii, 259 pp., illus. \$46; paper, \$19.95. Library and Information Science.

Opiates. George R. Lenz *et al.* Academic Press, Orlando, FL, 1986. xii, 560 pp., illus. \$95.

Ostracism. A Social and Biological Phenomenon. Margaret Gruter and Roger D. Masters, Eds. Elsevier, New York, 1986. vi, 247 pp., illus. Paper, \$20. Special issue of *Ethology and Sociobiology*, vol. 7, nos. 3/4. Based on a conference, Monterey, CA, Sept. 1984.

Parallel Distributed Processing. Explorations in the Microstructure of Cognition. David E. Rumelhart, James L. McClelland, and the PDP Research Group. MIT Press, Cambridge, MA, 1986. 2 Vols. Vol. 1, Foundations. xx, 547 pp., illus. \$27.50. Vol. 2, Psychological and Biological Models. xiv, 611 pp., illus. \$27.50. Computational Models of Cognition and Perception. A Bradford Book.

Partitioning in Aqueous Two-Phase Systems. Theory, Methods, Uses, and Applications to Biotechnology. Harry Walter, Donald F. Brooks, and Derek Fisher, Eds. Academic Press, Orlando, FL, 1985. xxvi, 704 pp., illus. \$95; paper, \$65.

Peptides of Poisonous Amanita Mushrooms. Theodor Wieland. Springer-Verlag, New York, 1986. xiv, 256 pp., illus. \$98. Springer Series in Molecular Biology.

Perspectives in Nonlinear Dynamics. M. F. Shlesinger, *et al.*, Eds. World Scientific, Singapore, 1986 (U.S. distributor, Taylor and Francis, Philadelphia).

xviii, 349 pp., illus. \$56. From a workshop, Silver Spring, MD, May 1985.

Perspectives on Methodology in Consumer Research. David Brinberg and Richard J. Lutz, Eds. Springer-Verlag, New York, 1986. xiv, 301 pp., illus. \$41.

Perturbations in the Spectra of Diatomic Molecules. Hélène Lefebvre-Brion and Robert W. Field. Academic Press, Orlando, FL, 1986. viii, 420 pp., illus. \$80; paper, \$44.95.

Quantitative Hydrogeology. Groundwater Hydrology for Engineers. Ghislain de Marsily. Academic Press, Orlando, FL, 1986. xx, 440 pp., illus. \$60; paper, \$29.95. Translated, with additions, from the French edition (Paris, 1981) by Gunilla de Marsily.

Quantum Optics 4. J. D. Harvey and D. F. Walls, Eds. Springer-Verlag, New York, 1986. x, 285 pp., illus. \$46.90. Springer Proceedings in Physics, vol. 12. From a symposium, Hamilton, New Zealand, Feb. 1986.

Radiation Carcinogenesis. Arthur C. Upton *et al.*, Eds. Elsevier, New York, 1986. xx, 459 pp., illus. \$69.50. Current Oncology.

Radiation Hydrodynamics in Stars and Compact Objects. D. Mihalas and K.-H. A. Winkler, Eds. Springer-Verlag, New York, 1986. vi, 454 pp., illus. \$38.50. Lecture Notes in Physics, 255. From a colloquium, Copenhagen, June 1985.

Radicals in Organic Synthesis. Formation of Carbon-Carbon Bonds. Bernd Giese. Pergamon, New York, 1986. xiv, 294 pp., illus. \$50; paper, \$25. Organic Chemistry Series, vol. 5.

Radio Continua During Solar Flares. Arnold O. Benz, Ed. Reidel, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). viii, 256 pp., illus. \$79. Based on a workshop, Duino, Italy, May 1985. Reprinted from *Solar Physics*, vol. 104, no. 1.

Randomized Trials in Cancer. A Critical Review by Sites. Maurice L. Slevin and Maurice J. Staquet, Eds. Raven, New York, 1986. xiv, 701 pp. \$99.50. Monograph Series of the European Organization for Research on Treatment of Cancer, vol. 15.

Reagent Chemicals. 7th ed. American Chemical Society Specifications. Official from January 1, 1986. American Chemical Society, Washington, DC, 1986. xiv, 713 pp., illus. \$107.95; paper, \$89.95.

Recent Advances in Theoretical Physics. R. Ramachandran, Ed. World Scientific, Philadelphia, 1986. x, 453 pp., illus. \$49. From a workshop, Kanpur, India, Dec. 1984.

Statistical Handbook on Aging Americans. Frank L. Schick, Ed. Oryx, Phoenix, 1986. xviii, 294 pp., illus. \$39.50.

Statistical Image Processing and Graphics. Edward J. Wegman and Douglas J. DePriest, Eds. Dekker, New York, 1986. xii, 351 pp., illus. + plates and filter glasses. \$74.75. Statistics, vol. 72. From a workshop, Luray, VA, May 1983.

Statistical Thermodynamics of Alloys. N. A. Gokcen. Plenum, New York, 1986. xvi, 326 pp., illus. \$49.50.

Story of the W and Z. Peter Watkins. Cambridge University Press, New York, 1986. xiv, 240 pp., illus. \$44.50; paper, \$13.95.

Structural Biological Applications of X-Ray Absorption, Scattering, and Diffraction. H. D. Bartunik and B. Chance, Eds. Academic Press, Orlando, FL, 1986. xiv, 425 pp., illus. \$59.50. From a symposium, Bristol, UK, Aug. 1984.

Sulfites, Selenites and Tellurites. Mary R. Masson, H. D. Lutz, and B. Engelen, Eds. Pergamon, New York, 1986. xxiv, 451 pp., illus. \$100. Solubility Data Series, vol. 26. International Union of Pure and Applied Chemistry.

Table of Radioactive Isotopes. Edgardo Browne and Richard B. Firestone. Virginia S. Shirley, Ed. Wiley-Interscience, New York, 1986. xxiv, variously paged, illus. \$59.95.

Teachers and Machines. The Classroom Use of Technology Since 1920. Larry Cuban. Teachers College Press, New York, 1986. x, 134 pp., illus. Paper, \$9.95.

Techniques in Bioproducity and Photosynthesis. J. Coombs *et al.*, Eds. 2nd ed. Pergamon, New York, 1986. xxvi, 298 pp., illus. \$37; paper, \$19. Sponsored by the United Nations Environment Programme.

Teratogen Update. Environmentally Induced Birth Defect Risks. John L. Sever and Robert L. Brent, Eds. Liss, New York, 1986. xvi, 248 pp., illus. \$79.50.

Thin-Layer Chromatography. Techniques and Applications. Bernard Fried and Joseph Sherma. 2nd ed. Dekker, New York, 1986. xiv, 395 pp., illus. \$74.75. Chromatographic Science, vol. 35.

Wide Awake at 3:00 A.M. By Choice or by Chance? Richard M. Coleman. Freeman, New York, 1986. xii, 195 pp., illus. \$19.95; paper, \$11.95.

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Literature

REPORT is a bimonthly applications newsletter for DNA and peptide researchers. MilliGen. Circle 569.

ChemAlert Guide is a poster explaining the color codes and symbols of the ChemAlert chemical labeling system. Fisher Scientific. Circle 570.

Clinical and Research Testing Products is a catalog of radioimmunoassay kits, histochemical antisera, peptides, tunicamycin homologs, and iodinated hormones and peptides arranged according to each product's action in the endocrine system. Immuno Nuclear. Circle 572.

Ephortechniques is a quarterly newsletter that highlights products and applications for and instrument design of electrophoresis apparatus. Haake Buchler Instruments. Circle 573.

Retention Times features chromatography instruments and techniques. Tracor Instruments. Circle 533.

Solutions to Spectroscopic Problems: Concave Diffraction Gratings provides information on the theory and use of a line of holographic diffraction gratings. American Holographic. Circle 535.

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1515 Broadway
New York, NY 10036
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

Box (give number)
SCIENCE
1333 H Street, NW
Washington, DC 20005

POSITIONS WANTED

Biotechnology Researcher, M.S. with industrial experience desires challenging laboratory position. Laboratory experiences include molecular biology, recombinant DNA, fermentation scale-up, microbial strain and process development, and utilization of radioisotopes. Separations techniques include: LC, HPLC, agarose/polyacrylamide electrophoresis, ultrafiltration, and supercritical fluid extraction. Box 234, **SCIENCE**. 1/23, 30

Chemical/Medical/Business Writer: Seeks free-lance projects—all types. Will organize symposia, seminars, etc. Marsha E. Daman, Ph.D., P.O. Box 554, Bedminster, NJ 07921. Telephone: 201-234-2385. 1/23, 30; 2/6, 13, 20

Drug Metabolism/Disposition, Ph.D. with 2 years of postdoctoral experience seeks position in the pharmaceutical industry. Strong background in medicinal chemistry, pharmacology and toxicology. Extensive experience in analytical development. Box 225, **SCIENCE**. X

Electron Microscopist, M.S. Ten years' biological experience including TEM, SEM, x-ray microanalysis, and morphometry. Some STEM and material science also. Looking for responsible position managing EM facility in industry or government. Box 4, **SCIENCE**. 1/23, 30

Experienced Lab Technician seeks position handling poisonous snakes. Skilled microscopist and photographer, 5 years in tissue culture and protein chemistry. Contact George Morris, 110 Parker Street, Gouveneur, NY 13642. X

POSITIONS WANTED

Immunopathologist/Electron Microscopist, Ph.D. seeks position in biomedical company or core/reference laboratory in immunology, DNA hybridization, histochemistry, pathology or microscopy as director or administrator, 10 years' experience in administrative/management/methodology. Box 2, **SCIENCE**. 1/23, 30; 2/6, 13

Marine Fisheries Biologist, Ph.D. age 60, retired from FAO and UNESCO. Ex-university professor. Would like interesting opportunity in management, research, administration or teaching. Short-term or part- or full-time acceptable. Available anytime. Harold Loesch, 2140 East Scott, Pensacola, FL 32503. 1/23, 30

Neurochemist/Biochemist/Cell Biologist, Ph.D. Experienced researcher. Broad background including receptor assays. Seeks position in research, administration or teaching (small college). Box 5, **SCIENCE**. X

Statistician, Biologist, Computist (Ph.D. 1981). I have extensive research experience, abilities and publication, especially in evolutionary biology, genetics, ecology, scientific and general programming. Freelance projects desired in any area of science. Don Gilbert, P.O. Box 302, Bloomington, IN 47402. Telephone: 812-333-5616. X

Technical Editor/Writer, Ph.D. in physics, but wide experience in many subjects: mechanical engineering, risk analysis, environmental studies, scientometrics, economics, others. Over 100 papers in journals such as *Science*, *Nature*, as well as four single-author books. In addition, can write for a lay audience: hundreds of newspaper articles, radio talks. I can help your writing/editing projects without capital outlay on your part. I'll do grant applications, library work, public relations writing, manuscript editing, speeches, manuals, many others. Competitive rates. Box 1231, Oak Ridge, TN 37830. 1/23, 30

Technical Writer, Ph.D. Twenty years of experience in research and writing for scientific, technical, and popular markets. Credits include fifteen books in three languages and articles in varied scientific and academic journals. Seeks freelance projects of all kinds, including manuals, software documentation, grants and proposals, library research, manuscript critiques and editing, ghostwriting, lectures, and speeches. Box 214, **SCIENCE**. 1/23, 30; 2/6, 13, 20

Translator: Extensive scientific background, five languages of major relevance, including Japanese. Major cultural centers only. Box 6, **SCIENCE**. X

POSITIONS OPEN

ANATOMY-NEUROBIOLOGY FACULTY POSITIONS SCHOOL OF MEDICINE UNIVERSITY OF LOUISVILLE

As part of its continuing reorganization and modernization, the Department of Anatomy at the University of Louisville is recruiting for several new faculty and postdoctoral positions in developmental neuroscience. Individuals whose research utilizes cellular and molecular approaches will be given preference. Faculty applicants will be expected to participate in teaching neuro or micro anatomy and should have evidence of a vigorous research program. Rank and salary to be commensurate with qualifications and experience. Contact: **Dr. Fred J. Roisen, Chairman, Department of Anatomy, University of Louisville, School of Medicine, Louisville, KY 40292** by 27 February 1987. *The University of Louisville is an Equal Opportunity/Affirmative Action Employer.*

ANIMAL PHYSIOLOGIST: One-year position beginning September 1987 to teach courses in the candidate's area of expertise and to participate in teaching introductory level biology. Submit letter of application, curriculum vitae, and names and addresses of three references to: **Laura G. Malloy, Physiologist Search, Department of Biology, Bates College, Lewiston, ME 04240** by 15 February 1987. *Bates College is an Equal Opportunity Employer. Minorities and women are encouraged to apply.*

POSITIONS OPEN

The **DEPARTMENT OF BIOCHEMICAL PHARMACOLOGY** seeks applications at the **Assistant Professor** level from candidates with research interests in **MOLECULAR PHARMACOLOGY**. Departmental research strengths are in CNS and cardiovascular pharmacology. In addition to traditional alliances that the department maintains with the School of Medicine, strong collaborations exist with the neighboring Departments of Chemistry, Cell Biology, and Medicinal Chemistry, affording research support in the areas of magnetic resonance, fluorescence spectroscopy, x-ray crystallography and molecular graphics, electron microscopy, peptide and polynucleotide synthesis and sequencing, gene cloning, and monoclonal antibody production. Applications with research interests in these areas or complementary specialties are invited to apply.

Applications, including a letter of intent, curriculum vitae, a brief statement of research interests, and the names of three references should be sent to: **Vijay C. Swamy, Department of Biochemical Pharmacology, School of Pharmacy, Faculty of Health Sciences, 313 Hochstetter Hall, State University of New York at Buffalo, Buffalo, NY 14260**. This advertisement represents a renewed search for the position advertised in this journal in 1986. Applications should be submitted by 31 March 1987.

An Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR, INSECT GENETICS AND TOXICOLOGY, 12-month tenure-track. Graduate and undergraduate teaching in insect genetics and toxicology. Conduct research that integrates genetics and toxicology. Examples include insecticide resistance, insect/plant interactions, or developmental endocrinology. Ph.D. and research experience with arthropods required. Application deadline 1 March 1987. Send letter of application, curriculum vitae, list of relevant courses and names of five references to: **Richard L. Jones, Department of Entomology, 219 Hodson Hall, University of Minnesota, St. Paul, MN 55108**. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages application from women and minorities.*

THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS DEPARTMENT OF CELL BIOLOGY AND ANATOMY DIVISION OF ANATOMY

Invites applications from individuals with a strong commitment to research for a tenure-track position at the assistant professor level. Ph.D., M.D., or equivalent, experience in gross anatomy (preferably human anatomy), and at least 2 years of postdoctoral research training, preferably in neuroscience, are required. Responsibilities include teaching in the human gross anatomy course for the first-year medical students and participation in the department's Graduate Program. Development of an independent research program. Curriculum vitae, description of research program, and the names of three references should be sent to: **William J. Gonyea, Ph.D., Acting Chairman, Department of Cell Biology and Anatomy, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9039**. *The University of Texas is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSORS OF BIOLOGY TWO TENURE-TRACK POSITIONS

Two tenure-track positions in the Department of Sciences and Mathematics will be filled for fall 1987. A doctorate in the biological sciences is preferred, but those near the degree will be considered. Applicants should be primarily committed to teaching, but research and interdisciplinary interests are desirable. Teaching will include introductory biology and general undergraduate biology courses. For one position, emphasis will be on organismal to supraorganismal courses. The other position emphasis will be on organismal to subcellular courses. The salary range is \$22,000 to \$25,000.

Screening will begin 15 March 1987. Send curriculum vitae, three letters of reference, evidence of teaching success or a statement on teaching to: **Dr. Richard W. Robinson, Chairman of the Search Committee, University of Maine at Farmington, 39 High Street, Preble Hall, Farmington, ME 04938**.

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

POSITIONS OPEN

ASSISTANT PROFESSOR

Department of Biology—Chemical Communication. Applicants are invited for a tenure-track position. Appropriate research interests include endocrinology, immunology, neurobiology or cell biology with emphasis on the mechanisms of intercellular communication. The successful applicant will be expected to develop an independent research program and participate in the undergraduate and graduate curriculum. The candidate should possess a Ph.D. and 2 years of postdoctoral experience. The application should include a letter indicating the candidate's principal research interests, a curriculum vitae, and the names of three references. The application should be sent to: **Dr. R. M. Glantz, Department of Biology, Rice University, P.O. Box 1892, Houston, TX 77251.**

Rice University is an Equal Opportunity/Affirmative Action Employer.

PHYSIOLOGY AND BIOPHYSICS ASSISTANT PROFESSOR

The Department of Physiology and Biophysics, University of Vermont College of Medicine, invites applications for a tenure-track position. Applicants should have a doctorate in physiology and/or biophysics and two or more years of postdoctoral training, or an M.D. and postdoctoral training. Candidates must demonstrate outstanding teaching potential and excellence in research at a molecular or cellular level. The successful candidate will be expected to fulfill moderate teaching responsibilities in medical, undergraduate, and graduate courses with distinction, and to establish a vigorous and productive independent research program that merits extramural support. Preference will be given to those whose research interests complement those of the existing faculty, and to those willing and able to teach subjects other than their specialties. *Women and minority candidates are encouraged to apply.* Letter of application, curriculum vitae, a brief description of research and career goals, and the names of three references must be received by 23 February 1987. Address to: **Dr. W. R. Gibbons, Search Committee, Department of Physiology and Biophysics, University of Vermont College of Medicine, Burlington, VT 05405.**

An Equal Opportunity/Affirmative Action Employer

ASSISTANT PROFESSOR OF ZOOLOGY, University of Arkansas—Fayetteville. Tenure-track positions available fall 1987. Genetics or cell biology are preferred areas of expertise. Required qualifications: Ph.D., evidence of research productivity and funding, and ability to teach graduate/undergraduate courses in general biology and area of specialty. Preference will be given to qualified candidates with postdoctoral research in molecular or population genetics. Review begins 1 March 1987 and continues until filled. Send curriculum vitae and names of three referees to: **Dr. C. J. Amlaner, Chairman, Department of Zoology, SE 632, University of Arkansas, Fayetteville, AR 72701.** *Affirmative Action/Equal Opportunity Employer.*

POSITION OPEN—Large interdisciplinary Department of Environmental Health Sciences seeks an ASSISTANT PROFESSOR IN TOXICOLOGY. Two to three years of postdoctoral experience in molecular approaches to toxicology preferable, with research in membrane and/or receptor interactions. Submit curriculum vitae, a brief statement of research interests, and names of three references to: **Dr. Robert J. Rubin, Program in Biochemical Toxicology, Division of Experimental Pathology and Toxicology, Johns Hopkins School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205.**

ASSISTANT PROFESSOR OR ASSOCIATE PROFESSOR DEPARTMENT OF GENETICS STANFORD UNIVERSITY

Having scientific interests in areas of human genetics and/or medical genetics. Full-time, tenure-track position that involves teaching and independent research. Send curriculum vitae, bibliography and names of three referees to: **Dr. Luigi L. Cavalli-Sforza, Chairman, Department of Genetics, Stanford University Medical Center, Stanford, CA 94305.** Applications should preferably be submitted by 31 March 1987. *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.*

POSITIONS OPEN

ASSISTANT PROFESSOR/MICROBIOLOGY—

We anticipate a tenure-track position for August 1987. Applicants must hold the Ph.D. degree and should have postdoctoral training or equivalent experience. The successful candidate will be expected to establish an active research program in some area of microbiology and participate in the undergraduate and graduate teaching programs of the department. Teaching responsibilities will include an introductory course in microbiology with laboratory. Send curriculum vitae, statement of professional goals, reprints, and names of three references to: **Michael A. Poirier, Chairman, Department of Biological Sciences, University of New Orleans, New Orleans, LA 70148,** by 15 March 1987. *The University of New Orleans is a member of the Louisiana State University System, an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT OR ASSOCIATE PROFESSOR OF ANATOMY

The Department of Anatomy of The Ohio State University is seeking to fill a tenure-track position beginning 1 October 1987.

Candidates should have a Ph.D. in anatomy with teaching expertise in histology and at least two years of postdoctoral experience. Teaching responsibilities will be in histology for professional and graduate students. The department has interactive research groups in cell biology/histology and neurobiology and is seeking an individual who would contribute to these programs. Research interests should be in the study of cells or tissues using molecular, cellular or histological techniques. Candidates are expected to establish a funded research program.

Curriculum vitae and three letters of recommendation should be sent by 6 March 1987 to:

**James S. King, Ph.D.
Professor and Chairman
Department of Anatomy
The Ohio State University
4066 Graves Hall
333 West Tenth Avenue
Columbus, OH 43210**

The Ohio State University is an Equal Opportunity Employer.

The Department of Biochemistry and Molecular Biology at The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, is seeking outstanding individuals at the ASSISTANT or ASSOCIATE PROFESSOR level who use the tools of biochemistry, cell or molecular biology to study aspects of differentiation or development. The Department of Biochemistry and Molecular Biology currently consists of 11 faculty members at all levels who are interested in differentiation or development. Qualified individuals should send their curriculum vitae and summary of research interests by 28 February 1987 to: **Dr. William Klein, Department of Biochemistry and Molecular Biology (Box 117), The University of Texas System Cancer Center, 1515 Holcombe Boulevard, Houston, TX 77030.** *An Affirmative Action/Equal Opportunity Employer.*

LABORATORY ANIMAL WELFARE DEPARTMENT THE HUMANE SOCIETY OF THE UNITED STATES (HSUS)

ASSISTANT OR ASSOCIATE DIRECTOR position available immediately. Ph.D. in the biological sciences required. Duties include monitoring the scientific literature, analyzing individual research projects or entire areas of research from an animal-protection perspective, preparing public education materials, and responding to constituents' inquiries. Submit curriculum vitae and the names and addresses of three references by 20 February 1987 to: **Dr. Martin Stephens, HSUS, 2100 L Street, NW, Washington, DC 20037.**

ASSISTANT SCIENTIST position for Ph.D. cell biologist-microbiologist to join active eye research group. Specific areas of interest will involve corneal inflammation, ulceration, and wound healing. Experience in cell culture, immunofluorescence, monoclonal antibody techniques required. Salary and academic appointment at Eye Research Institute commensurate with experience. Appointment at Harvard Medical School will be sought. Send curriculum vitae and reprints to: **Eye Research Institute, K. Kenyon, M.D., 20 Staniford Street, Boston, MA 02114.** *Affirmative Action/Equal Opportunity Employer. M/F/H/V and others.*

POSITIONS OPEN

ASSISTANT PROFESSOR DEPARTMENT OF GYNECOLOGY

The University of Texas, M. D. Anderson Hospital invites applicants for the position of assistant professor in the area of immunology. The successful candidate will be appointed to the Department of Gynecology in a tenure-track position with ample interdepartmental collaborative opportunity. Applicants should have a Ph.D. with at least 3 to 4 years of productive postdoctoral experience in immunochemistry. Special areas of interest include isolation and characterization of tumor associated antigens and work with monoclonal antibodies.

Curriculum vitae and names with addresses of three references should be sent to: **R. S. Freedman, M.D., Ph.D., Director of Research, Department of Gynecology, M. D. Anderson Hospital and Tumor Institute, 1515 Holcombe Boulevard, Box 67, Houston, TX 77030.** Closing date is 15 February 1987. *The University of Texas is an Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE DIRECTOR OF HEMATO-PATHOLOGY—The Department of Pathology, The University of Michigan Medical School, is seeking a board eligible or certified AP/CP pathologist with demonstrated competence in hematopathology. This individual will also be expected to have knowledge of the application of molecular probes in hematopathology and will be expected to be administratively responsible for the clinical applications of flow cytometric analysis involving surface markers. *The University of Michigan is an Equal Opportunity Employer.* Please send applications to: **Peter A. Ward, M.D., Professor and Chairman, Department of Pathology, The University of Michigan Medical School, M5240/0624 Medical Science I Building, 1500 East Medical Center Drive, Ann Arbor, MI 48109-0624.**

BACTERIOLOGIST with interest in fundamental host-parasite/microbe-microbe/microbe-environment interactions and/or microbial diversity. Research experience with DNA probe technology, plasmid detection and molecular tagging is desirable. Candidates with training and experience in modern molecular biology will be favored. Ph.D./postdoctoral experience required. Teaching consistent with other science faculty. Start 16 September 1987. Assistant professor, 9 months, tenure track with possibility of extension to 12 months through Agricultural Experiment Station. Application closing date: 9 March 1987. Send curriculum vitae, transcripts and three letters of recommendation to: **J. L. Fryer, Chairman, Department of Microbiology, Oregon State University (OSU), Corvallis, OR 97331-3804.** *OSU is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.*

BENTHIC ECOLOGIST—A temporary marine scientist research position is available immediately for a Ph.D. with expertise in macroinvertebrate taxonomy and benthic ecology. This contract position provides support at an annual salary range of \$23,276 to \$25,752. Interested applicants should call or write: **Dr. R. Van Dolah, Assistant Director, South Carolina Marine Resources Research Institute, P.O. Box 12559, Charleston, SC 29412; telephone: 803-795-6350** by 6 February 1987. *An Equal Opportunity Employer.*

BIOLOGY FACULTY POSITIONS

Northeast Missouri State University invites applications for four tenure-track faculty positions: developmental biologist, molecular biologist (with preference to molecular genetics, and/or virology), vertebrate biologist (with preference to anatomy and physiology), and community ecologist (with preference to plant/animal interactions). Teaching will include courses in general biology for majors and nonmajors as well as advanced courses. The individual will also be expected to involve undergraduate and graduate students in research. Laboratory space, basic instruments, and initial support will be provided. Northeast Missouri State University is a state-wide public liberal arts and sciences institution which is nationally recognized for its value-added approach to education. Please send your letter of application indicating your teaching and research goals, curriculum vitae, official undergraduate and graduate transcripts, and three letters of recommendation to: **Dr. W. J. Magruder, Head, Division of Science, Northeast Missouri State University, Kirksville, MO 63501.**

POSITIONS OPEN

BIOCHEMIST (Ph.D., D.O., or M.D.) faculty position available to teach and work independently and/or collaboratively with other research/teaching faculty. Research more than 80 percent; teaching less than 20 percent. Multiyear contracts available. Salary and academic rank commensurate with training experience and grant track record. Please send résumé, curriculum vitae with publications list, past and present grant support information and three recommendations to: **Search Committee, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, NY 11568.**

UNIVERSITY OF WASHINGTON SCHOOL OF OCEANOGRAPHY

BIOLOGICAL OCEANOGRAPHY: We invite applications for a tenure-track faculty position for which the State of Washington will provide 6 months of salary support per year. The School of Oceanography has both undergraduate and graduate degree programs, and the successful candidate will be expected to teach in both his or her specialized area and in core courses. The level of the position is open.

Applicants should be active in process-oriented research in biology either of bacteria associated with particles or of microzooplankton. These two specialties are selected to complement School-wide, interdisciplinary research thrusts in benthic processes (including diagenesis and sedimentation) and upper ocean particle dynamics as well as to expand advanced course offerings within biological oceanography.

Closing date for applications is 1 March 1987, although late applications and those from exceptional candidates with other expertise may be considered. Applicants should send a statement of interest, curriculum vitae, and the names of three potential references to: **Professor Brian T. R. Lewis, Director, School of Oceanography, WB-10, University of Washington, Seattle, WA 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

FERRIS STATE COLLEGE BIG RAPIDS, MI 49307

BIOTECHNOLOGIST position available September 1987. Coordinator of B.S. degree in a new program in biotechnology (starting fall, 1987). A techniques-oriented curriculum with a strong basic science emphasis; teaching in area of expertise.

Molecular biologist, Ph.D. in an area of biology or biochemistry with education and technical experience in recombinant DNA techniques.

Academic rank and salary are open. Salary is competitive with other Michigan state-supported colleges and universities.

Send résumé and other supportive information by 15 March 1987 to:

**Dr. Mary R. Murnik, Head
Department of Biological Sciences
Science Building, Room 221
Telephone: 616-796-0461, extension 4850.**

CHIEF, DIVISION OF MICROBIOLOGY AND IMMUNOLOGY OTTAWA CIVIC HOSPITAL

The hospital, a 922-bed tertiary care teaching hospital associated with the University of Ottawa, invites applications for the position of Chief of the Division of Microbiology and Immunology within the Department of Laboratory Medicine. The Division is being formed through the merger of preexisting Divisions of Microbiology and Immunology.

The successful candidate will be responsible for administering a clinical microbiology and immunology service and will be expected to develop a strong clinical and basic research program. The Loeb Medical Research Building, a 35,000 square foot facility on the Hospital Campus will be completed during 1987. Applicants must have a proven record in independent research. An appointment in the University of Ottawa Department of Microbiology and Immunology will be made at the appropriate academic rank. In accordance with Canadian Immigration Policies, initial preference for this position will be given to Canadian citizens and permanent residents of Canada. Please reply with curriculum vitae to: **Dr. J. D. Grimes, Vice-President, Clinical and Research Administration, Ottawa Civic Hospital, 1053 Carling Avenue, Ottawa, Ontario, Canada K1Y 4E9.**

POSITIONS OPEN

BOTANY POSITION: Colorado College invites applications for a 1-year, with an anticipated second year, non-tenure-track position in systematic botany. Courses to be taught include beginning undergraduate courses in botany, plant evolution, and field botany. Advanced undergraduate courses in flowering plant evolution will be offered based on training. Special consideration will be given to those applicants with knowledge and skills in floristics, cytogenetics, numerical taxonomy, and cladistics. Skills in maintaining and expanding a regional herbarium are required. A research program is an important aspect of the position. Ph.D. is required. Physiologists, ecologists, and paleobotanists should not apply. Starting date is 1 August 1987. The Colorado College is a private, undergraduate, liberal arts college enrolling 1850 students. Women and minorities are encouraged to apply. Send letter of application describing teaching and research interests, curriculum vitae, copies of official transcripts, publications, and three letters of recommendation to: **Jack L. Carter, Department of Biology, The Colorado College, Colorado Springs, CO 80903** prior to 28 February 1987. *An Equal Opportunity Employer.*

CANCER RESEARCH SCIENTIST. M.D. or Ph.D. for career post in comprehensive cancer centre. Current programs include photodynamic therapy, radioimmunotherapy, tumor cell biology, biochemical pharmacology and cancer metastasis. In accordance with immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents. Send letters, curriculum vitae, and three references by 31 March 1987 to: **Dr. Brian Wilson, Hamilton Regional Cancer Centre, 711 Concession Street, Hamilton, Ontario, Canada L8V 1C3; telephone: 416-387-9495.**

CURATORSHIP INVERTEBRATE PALEONTOLOGY/SYSTEMATICS AMERICAN MUSEUM OF NATURAL HISTORY

The Department of Invertebrates invites applications to fill a tenure-track position. The prime requisite is a strong research orientation including a demonstrated interest in the systematics of one or more taxa of Metazoa (excluding terrestrial Arthropoda) with a rich fossil record. Applicant should have the capacity to apply the results of systematic investigations to problems in phylogenetic reconstruction, evolutionary theory, functional morphology, biogeography, biostratigraphy or theoretical paleoecology. Training may be as a zoologist or paleontologist, though primary curatorial duties will focus on the department's holdings of invertebrate fossils. Expertise in molecular techniques as applied to systematics will also be given consideration. The successful applicant will participate in all curatorial functions including museum administration, collection management and exhibition. This position is available starting 1 July 1987. The successful applicant must have a Ph.D. or equivalent. Rank and salary to be determined. Applicants should forward, (i) a statement of research interests and goals, (ii) curriculum vitae, (iii) complete bibliography, and (iv) three letters of recommendation from persons familiar with the applicant's qualifications and accomplishments. Applications must be submitted by 1 March 1987 to:

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

DIRECTOR, ONCOLOGY CENTER

The Johns Hopkins University School of Medicine and The Johns Hopkins Hospital are seeking a physician-scientist to lead our Department of Oncology, which is also a Comprehensive Cancer Center. Applicants should have evidence of leadership qualities and demonstrated outstanding abilities in research and teaching as well as the capability to direct the service missions of the Center.

Please send letter of application, curriculum vitae and bibliography to: **Dr. Richard J. Johns, Chairman, Oncology Search Committee, 720 Rutland Avenue, Baltimore, MD 21205.**

An Affirmative Action/Equal Opportunity Employer.
Deadline date for submission: 1 March 1987.

POSITIONS OPEN

CIRCADIAN BIOLOGY THE UNIVERSITY OF VIRGINIA

The Department of Biology at the University of Virginia is forming a research group to investigate basic mechanisms of biological rhythmicity. Two faculty positions at the junior or senior level are now available. We seek applicants with research interests in circadian rhythmicity as well as expertise in a contemporary biological field such as neurobiology, molecular genetics, biochemistry, cell biology or physiology who combine outstanding research accomplishments or potential with ability to contribute to intellectual life of a department dedicated to the highest level of undergraduate and graduate education. Please send curriculum vitae, including a description of research plans and three letters of reference by 1 March 1987, to: **Michael Menaker, Chairman, Department of Biology, Gilmer Hall, University of Virginia, Charlottesville, VA 22901.** *Equal Opportunity/Affirmative Action Employer.*

DIRECTOR, VIROLOGY LABORATORY. Applications are invited for the position of scientific director (Ph.D. or M.D.) of a laboratory devoted to providing state-of-the-art clinical virology services as required by a group of growing, academically active, transplantation programs. The applicant should have strong basic virology training with emphasis on molecular and biological approaches to virile identification. This is a tenure-track position, requiring academic productivity with a primary appointment in pathology. The Medical College of Wisconsin is affiliated with the Milwaukee Regional Medical Center whose members include Childrens Hospital of Wisconsin and the Blood Center of Southeastern Wisconsin. Please send curriculum vitae, a summary of research interests, and the names of three references to: **Susan Koethe, Ph.D., Department of Pathology, Medical College of Wisconsin, 8700 West Wisconsin Avenue, Milwaukee, WI 53226.** *Equal Opportunity Affirmative Action Employer M/F.*

DIRECTOR, BUREAU OF MARINE SCIENCE (937100) \$26,395.20 to \$36,836.80 annually. The Maine Department of Marine Resources has a vacancy in the above competitive classified position based at their West Boothbay Harbor facility. Employee will direct marine research activities which are undertaken in the context of fisheries management and involve development and oversight of programs, budget development and supervision of personnel. Minimum qualifications are a Ph.D. in biological oceanography or marine fisheries science and 3 years of experience in directing marine resources conservation and management programs. Equivalent experience may be substituted for Ph.D. Applicants must complete a **Supplemental Questionnaire and Personnel Form I, Application Form**, which can be obtained from: **The Department of Marine Resources, c/o Anna Stanley, State House Station #21, Augusta, ME 04333.** All application materials must be submitted to: **The Department of Personnel, State House Station #4, Augusta, ME 04333** by 23 February 1987.

ESTUARINE MICROBIAL ECOLOGIST/BIOGEOCHEMIST

The University of Georgia's Marine Institute has an opening, beginning 1 June 1987, in the field of microbial ecology or biogeochemistry. This permanent faculty position is at the assistant/associate level; salary and rank are dependent on qualifications. Appointments are nine-month research positions with no teaching responsibilities and are not tenure track. Salary may be supplemented up to 30% through successful grant funding. The successful candidate is expected to develop a vigorous research program in estuarine science and to interact with the current staff. Special consideration will be given to individuals with research experience in salt marsh/sedimentary processes.

The Marine Institute is located on Sapelo Island, Georgia, an undeveloped barrier island isolated from the mainland with only water access. Residence on the island is expected.

Interested individuals should send curriculum vitae, names of three references and a one-page statement of research goals to: **Dr. James J. Alberts, Director, University of Georgia Marine Institute, Sapelo Island, GA 31327.** Deadline for applications is 1 March 1987.

An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

DEAN COLLEGE OF ARTS & SCIENCES UNIVERSITY OF NEW MEXICO

Applications/nominations are invited for position of Dean, College of Arts and Sciences. The College includes 20 departments in areas of humanities, social sciences, mathematics, and natural sciences with 400 faculty offering work through the doctoral level.

Dean is responsible for administration, supervision and leadership. He or she will assume responsibility for the development and implementation of policies, programs, regulations and budget within the College. Preferred qualifications include:

1. Earned terminal degree in one of the disciplines in the College.
2. Demonstrated scholarly achievement.
3. Demonstrated success as an administrator.
4. Successful university teaching experience.
5. Qualifications which support appointment as a tenured full professor in one of the disciplines of the College.
6. Ability to provide leadership to a College with diverse academic programs in a multidisciplinary environment.
7. The capacity to relate effectively to diverse faculties and students.

Salary is competitive and based upon qualifications. Position available: 1 July 1987. Application deadline: 15 February 1987. Applications, nominations, can be directed to **Dr. Paul G. Risser, Chairman, Dean of Arts and Sciences Search and Screening Committee, Scholes Hall, Room 108, The University of New Mexico, Albuquerque, NM 87131. Affirmative Action/Equal Opportunity Employer.**

The New York State College of Veterinary Medicine, Cornell University, is seeking a **DIRECTOR OF THE DIAGNOSTIC LABORATORY.** This will be an academic appointment as associate or full professor, reporting directly to the Dean, at a competitive salary level. The ideal candidate will possess a Doctor of Veterinary Medicine degree or equivalent with evidence of further postgraduate education in the form of a Ph.D. degree and/or diplomate status in an appropriate specialty college; however, candidates at the doctoral level who are otherwise qualified, are encouraged to apply. Demonstrated evidence of academic leadership in veterinary service, research, and teaching, and a record of active participation in organized veterinary and agricultural activities will be required.

Responsibilities include: providing leadership and administrative support for the service and research programs of the Diagnostic Laboratory; recruitment of faculty and staff and encouragement of their further professional development; preparation, administration, and adherence to the Laboratory's budget; development and implementation of realistic and ambitious goals for strengthening Laboratory and College programs; cooperate and assist other departments in matters affecting the service and research programs of the College, and support undergraduate and graduate training; and to provide oversight responsibility for the Mastitis Control Program and the control programs in bovine leukosis, blue tongue, paratuberculosis, brucellosis, and extension and field services.

Address inquiries to: **Robert F. Playter, D.V.M., Chairman, Search Committee, New York State College of Veterinary Medicine, Cornell University, Ithaca, NY 14853-6401.** The deadline for receipt of applications is 15 March 1987.

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

ENVIRONMENTAL TOXICOLOGIST. A tenure-track position is available immediately in the Department of Preventive Medicine and Environmental Health at the University of Kentucky Medical Center. Applicants should have a Ph.D. with postdoctoral experience or an M.D. and Ph.D. Successful applicant will be expected to develop independent research, interact closely with the faculty of the Graduate Center for Toxicology, and participate in the departmental teaching program. Salary commensurate with qualifications and rank. Send curriculum vitae, statement of research plans and objectives, and three letters of reference to: **Arthur L. Frank, M.D., Ph.D., Professor and Chairman, Department of Preventive Medicine and Environmental Health, Room MS129X, University of Kentucky College of Medicine, Lexington, KY 40536-0084. Equal Opportunity Employer.** Closing date: 30 March 1987.

POSITIONS OPEN

COMPUTATIONAL VISION/ COMPUTATIONAL NEUROSCIENCE

The Department of Psychology, Northwestern University, invites applications for a new faculty position in computational vision and/or computational neuroscience. This appointment, at any level, is part of a university-wide initiative to develop a center of excellence in cognitive science. Candidates should have an outstanding record of research and a firm commitment to teaching. Send a letter describing research and teaching interests, a résumé, copies of recent publications and names and addresses of three references to: **Dr. Gregory Phillips, Assistant Chairman, CV/CN Search Committee, Department of Psychology, Northwestern University, Evanston, IL 60201. Northwestern University is an Equal Opportunity Employer.**

ENDOTHELIAL CELL BIOLOGIST—The Milwaukee Heart Research Foundation is supporting development at Mount Sinai Medical Center of a totally implantable artificial heart. We are seeking a cell biologist (M.D./Ph.D.) with experience in endothelial cell biology to direct a major project in the Artificial Heart Program focused on endothelializing the luminal surfaces of the artificial heart prior to implantation. In addition, the candidate will be encouraged to develop an independent research program in a related area. Excellent opportunities exist for collaboration with hemostasis and cardiology research groups at the Medical Center. The position will include a tenure-track appointment at the University of Wisconsin Medical School—Milwaukee Clinical Campus (MSMC). Send curriculum vitae and a statement of research and career interests to: **Michael W. Mosesson, M.D., Coordinator for Academic Affairs, University of Wisconsin Medical School—Milwaukee Clinical Campus, Mount Sinai Medical Center, 950 North 12 Street, Milwaukee, WI 53233. MSMC is an Equal Opportunity/Affirmative Action Employer.**

ENVIRONMENTAL RESEARCH SCIENTISTS

The Holcomb Research Institute, Butler University, is seeking two research scientists for an expanding study of forest development under stressed conditions. The two positions are: **FOREST DEVELOPMENT SCIENTIST:** to focus on forest growth analysis, dendrochronology, multi-variable statistical methods, and simulation modeling of forest stand development; **AIR POLLUTION PATHOLOGIST:** to address studies of environmental influences on forest growth and the interactions of air pollutants and biotic stress agents. Research on other topics which the individuals will help to define can be included.

Applicants should possess a Ph.D. in plant ecology, plant pathology or forestry, and possess a strong background in field research methods, statistical analysis and scientific writing, including a record of publishing. Responses are invited from individuals currently completing doctoral work or who have up to 10 years of experience in research.

The Holcomb Research Institute is a division of Butler University with broad responsibilities for environmental research. An endowment allows development of independent studies and assures continuity of programs, but much of the research is carried out through external grants and contracts. The two positions are to be filled by 1 April 1987 or shortly thereafter. Appointments are viewed as long-term, although initially they will be for 2 to 4 years, depending on experience. Send letter, including statement of career research interests, résumé, and names of three references, by 6 February 1987 to:

**Dr. Orie L. Loucks, Director
Holcomb Research Institute
Butler University
4600 Sunset Avenue
Indianapolis, IN 46208**

An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION METEOROLOGY, tenure-track, assistant or associate professor, beginning fall 1987. Expertise preferred in climate dynamics and/or remote sensing. Minimum qualifications: Ph.D. in atmospheric science. Send résumé, transcripts, three letters of recommendation, and statements of teaching philosophy and research plans by 15 April 1987 to: **Chair, Meteorology Department, San Jose State University, San Jose, CA 95192.**

ANALGESICS

This is an unusual opportunity for an ambitious Ph.D. LEVEL ANALGESIC PHARMACOLOGIST to be part of a high energy level drug discovery team. A strong background in CNS Pharmacology is a plus.

Our team employs the very latest in computer assisted drug design technology, by utilizing the Computer Automated Structure Evaluation (CASE) program. We are looking for a pharmacologist who will work closely with our theoretical and synthetic chemists, using artificial intelligence techniques to identify new chemical entities. A strong knowledge of the existing literature as well as familiarity with computer assisted design is an asset.

We offer a competitive salary with the opportunity for substantial growth. We are located in Northeastern Pennsylvania near the beautiful Pocono Mountains.

Send resume and salary requirements to:

BIOFOR, INC.

P.O. Box 577
Waverly, PA 18471

MICROBIAL GENETICISTS

ChemGen Corporation is an entrepreneurial company specializing in the development of bioprocesses for the production of specialty chemicals. The company has recently opened a research and development laboratory in Rockville, Maryland, and is seeking several qualified candidates. This is an opportunity for you to join a high-potential, fast-growing biotechnology company.

You will be responsible for designing and implementing a microbial strain improvement program to yield an industrial fermentation production microorganism. A Ph.D. with 0-5 years' post doctoral experience is required. Experience with yeast, other fungi, or dissimilatory pathways in gram positive bacteria is preferred.

Please send resume in confidence to **ChemGen Corporation, 2501 Research Blvd., Rockville, MD 20850.**

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POSITIONS OPEN

Full-time **FACULTY MEMBER** for established Department of Pathology. Primary responsibility in anatomic pathology service functions. Also expected to develop an independent research program and participate in the teaching activities of the department. Requires M.D. degree and Board Certification in anatomic and clinical pathology or anatomic pathology certification with special competency. Must be eligible for licensure in the state of California. Interest in and knowledge of molecular or cellular immunology and transplantation immunology and ability to do interdisciplinary research desirable. Position open until 1 May 1987 with expected starting date of 1 July 1987. Send curriculum vitae and five references to: **Murray B. Gardner, M.D., Chair, Department of Pathology, Room 3453, MSI-A, School of Medicine, University of California, Davis, CA 95616.**

The University of California, Davis is an Equal Employment Opportunity, Affirmative Action Employer.

FACULTY POSITION AVAILABLE IN BIOCHEMISTRY-NEUROCHEMISTRY. The Division of Life Sciences, The University of Texas at San Antonio, invites applications for a tenure-track position at either a junior or senior level in biochemistry with interest and experience in neurochemistry. Candidates must show demonstrated research productivity and substantial ability and interest in teaching. Responsibilities will include teaching, research, and supervision of undergraduate and graduate student research. A Ph.D. is required and postdoctoral experience desired. Submit curriculum vitae, names of at least three professional references, and representative publications to: **Director, Division of Life Sciences, The University of Texas at San Antonio, San Antonio, TX 78285-0662.** Applications will be reviewed starting 1 January 1987 and the review will continue until the position is filled. *The University of Texas at San Antonio is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS IN MICROBIOLOGY

The Southern Illinois University at Carbondale (SIUC) Microbiology Department has available two tenure-track positions at the assistant professor level beginning August 1987. A Ph.D. degree and postdoctoral research experience in some area of microbiology/molecular biology are required. Successful candidates must have a strong record of research in microbiology with emphasis on molecular aspects. The calibre and research productivity of applicants are of more importance than their precise area of specialization. Successful applicants will be expected to initiate productive, externally-funded research programs, supervise graduate students and participate in teaching at the graduate and undergraduate level. The Department of Microbiology at SIUC is a research-oriented unit with a large graduate student enrollment and with all its faculty funded by federal agencies. Please submit curriculum vitae, the names of three referees and a summary of research interests to: **David P. Clark, Chairman Search Committee, Department of Microbiology, Southern Illinois University at Carbondale, Carbondale, IL 62901** by 1 April 1987. *SIUC is an Affirmative Action, Equal Opportunity Employer.*

FACULTY POSITION (tenure track) for teaching and research in veterinary toxicology. Opportunities for advancement and tenure consideration after appropriate service. Rank and salary are dependent on qualifications. Ph.D. degree with evidence of recent research productivity is required, D.V.M. and Toxicology Board Certification are highly desirable. Teaching in this position includes a course in poisonous plants for second year students in the D.V.M. program and participation in toxicology courses for D.V.M. and graduate students. Participation in a regional pharmacology/toxicology graduate program is expected. The successful applicant will be expected to act as a consultant in their area of expertise and supervise the testing laboratory of the Washington Animal Disease Diagnostic Laboratory. Closing date: 1 April 1987 or until filled. To apply, send curriculum vitae and names of three references to: **Dr. Ronald Borchard, Chair of Search Committee, Washington-Oregon-Idaho Regional Program in Veterinary Medicine, Veterinary Science Building, University of Idaho, Moscow, ID 83843.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

Tufts University School of Veterinary Medicine seeks applicants for **TWO FACULTY POSITIONS IN ANESTHESIOLOGY, AN ASSISTANT PROFESSOR AND INSTRUCTOR.** One position available on or after 1 March 1987, and the other after 1 July 1987. These positions involve clinical service, teaching in both the large and small animal hospitals, and research. Applicants should have the D.V.M. or equivalent degree, research interests and experience, and a minimum of 2 years' experience in clinical veterinary anesthesiology. Preference given to Board-certified or Board-eligible persons. Salary commensurate with experience. Applications will be accepted until 1 March 1987 and should include a letter of interest and current curriculum vitae with the names of at least three referees to: **Dr. Nicholas H. Dodman, Head, Section of Anesthesiology, Tufts University School of Veterinary Medicine, 200 Westboro Road, North Grafton, MA 01536.**

Tufts University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN PHARMACY at the University of California, San Francisco

An outstanding biomedical scientist is sought to assume a position as an **Assistant Professor-in-Residence in the Department of Pharmacy at the University of California, San Francisco (UCSF).** The appointee will have service responsibilities in the Drug Studies Unit, a clinical research facility within the School of Pharmacy. These responsibilities include the coordination of scientific aspects of experimental design, clinical procedure, assay, data analysis, interpretation and documentation for the clinical pharmacology/pharmacokinetic studies undertaken by the Unit. In addition, the appointee will establish a sound independent research program in areas of interest which might include clinical pharmacology, pharmacokinetic/pharmacodynamic modeling and/or data analysis and will teach both professional and graduate students. Applicants should have a Ph.D., M.D., or equivalent degree with a background in the general principles of scientific methodology, pharmacology, clinical procedures, assay methodology, pharmacokinetics, and statistics. Curriculum vitae, the names of three referees, and a summary of current and planned research interests should be sent by 1 March 1987 to: **Robert A. Upton, Ph.D., Department of Pharmacy, S-926, University of California, San Francisco, CA 94143-0446.** *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and Minority Candidates are encouraged to apply.*

FACULTY OPENINGS AT BERKELEY The University of California, Berkeley

Subject to available funds, the Physics Department is searching for **two tenure-track assistant professors** to be appointed effective 1 July 1987 (one position) and 1 July 1988 (one position). The 1987 position is restricted to experimental astrophysics; the 1988 position is restricted to experimental plasma physics. If it is desirable to bring a successful 1988 appointee to Berkeley prior to the appointment date, means to arrange an interim research appointment will be explored. Applicants should send a curriculum vitae, bibliography, statement of research interests, and the names of three references to: **Professor P. Buford Price, Chairman, Department of Physics, University of California, Berkeley, CA 94720, before 1 March 1987.** *The University of California is an Equal Opportunity, Affirmative Action Employer.*

FACULTY POSITIONS: The Hematopathology Program, Division of Laboratory Medicine, M. D. Anderson Hospital and Tumor Institute has three faculty positions open for two M.D.'s and a Ph.D. The M.D. should have training and research experience in hematologic pathology. The Ph.D. should have a record of productive research in hematopoietic neoplasia. The successful applicants will be expected to develop independent and collaborative research in hematopoietic neoplasia. Preference will be given to individuals who have a background in molecular biology. One M.D. position is at the academic rank of faculty associate. Academic rank is commensurate with qualifications and experience for the other two positions. Send curriculum vitae, names of three references, and a statement of research interests to: **Sanford A. Stass, M.D., Division of Laboratory Medicine, Box 73, M. D. Anderson Hospital and Tumor Institute, 1515 Holcombe Boulevard, Houston, TX 77030.** *The University of Texas System Cancer Center is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITIONS DEPARTMENT OF PHARMACOLOGY WAYNE STATE UNIVERSITY SCHOOL OF MEDICINE

The Department of Pharmacology at Wayne State University School of Medicine invites applications for **FIVE TENURE-TRACK FACULTY POSITIONS.** Appointments can be made at the assistant, associate or full professor level. Applicants should have a Ph.D. in Pharmacology or a related area or an M.D., significant postdoctoral research experience and excellent research accomplishment. The candidates for associate and full professorships should, in addition, have a record of consistent extramural funding. We are seeking outstanding individuals with research interests in any area of modern pharmacology including biochemical pharmacology, carcinogenesis, cancer biology, neuropharmacology, and toxicology. The successful applicants will be expected to establish vigorous independent research programs and to participate in the teaching of graduate and medical courses and in the training of graduate and postdoctoral students. Excellent start-up funds and salary on a 12-month basis are available. Applicants should send curriculum vitae, a summary of current research activities and future research plans and the names of at least three scientists who can provide an evaluation of the candidate's past accomplishments and future potential to:

**Professor Paul F. Hollenberg
Department of Pharmacology
Wayne State University School of Medicine
540 East Canfield
Detroit, MI 48201**

Deadline for submission of applications is 15 April 1987.

Wayne State University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS IN NEUROSCIENCE

Two **TENURE-TRACK POSITIONS AT THE ASSISTANT PROFESSOR LEVEL** are available in the newly formed **Department of Behavioral Neuroscience** at the **University of Pittsburgh**, to begin September 1987. The research of current faculty members focuses on a variety of areas in neuroscience, including neuroplasticity of catecholaminergic systems, the neurobiological bases of ingestive, reproductive and learned behaviors, mechanisms governing synthesis and release of neurotransmitters and neurohormones, biophysical membrane properties of nerve cells, pharmacological characteristics of retinal neurons, and mathematical modeling of neuronal networks. Applicants from all areas of basic and clinical neuroscience are invited to apply, though special attention will be given to those studying problems at the cellular and molecular levels, including those related to neurotransmitter biosynthesis, receptors and second messenger systems, and ion channels. All applicants should have at least 2 years of postdoctoral experience. Send curriculum vitae, three letters of recommendation and a description of current and future research programs to: **Search Committee, Department of Behavioral Neuroscience, 479 Crawford Hall, University of Pittsburgh, Pittsburgh, PA 15260.**

GENETICIST UNIVERSITY OF ILLINOIS

The School of Life Sciences, University of Illinois at Urbana-Champaign invites applications for a faculty position at the associate professor level. We are seeking a person who is an accomplished geneticist well versed in the modern approaches of molecular and cellular biology. The academic and research record should have a record of sustained significant and innovative research activity in genetic research. A major duty of the successful applicant will be the coordination of the campus-wide graduate genetics program. This administrative responsibility will be balanced by decreased teaching responsibilities. The departmental affiliation of the successful applicant within the School of Life Sciences will depend upon the specific interests of the applicant. Starting date is open. Send résumé and names of three references to: **Professor J. Cronan, School of Life Sciences, University of Illinois, 393 Morrill Hall, 505 South Goodwin Avenue, Urbana, IL 61801.** To receive full consideration, applications should be received by 6 February 1987. *The University of Illinois is an Affirmative Action, Equal Opportunity Employer.*

ASSOCIATE DIRECTOR
Banbury Center
of Cold Spring Harbor Laboratory

In cooperation with the Preventive Medicine Institute/Strang Clinic, the Banbury Center is expanding its program of scientific meetings. The Associate Director will be responsible for organizing meetings on the origins and detection of human cancer. Information from these meetings will be disseminated via books for specialists and other publications for non-specialist scientists and clinicians. The Associate Director will also be closely involved in the Center's other activities, which include meetings and publications in biotechnology and risk assessment.

The successful candidate will have excellent organizational skills and a good knowledge of one or more of the following: cancer research, biostatistics and biotechnology. Writing and publishing skills would also be desirable. The importance of the post will be reflected in the salary and conditions offered.

The Banbury Center is situated on the north shore of Long Island, forty miles from New York City.

Please send applications and curriculum vitae to:

Steve Prentis, Director
Banbury Center
Cold Spring Harbor Laboratory
P.O. Box 534
Cold Spring Harbor, N.Y. 11724



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Postdoctoral Position in Molecular Biology

A postdoctoral position is available at the Biotechnology Department of CIBA-GEIGY in Basle, Switzerland, to study the molecular biology and the genetics of gram-positive bacteria. The group is interested in developing microorganisms into an efficient agent for biological pest control.

Basic research will essentially concentrate on the expression and regulation of the cloned entomocidal toxin genes.

The suitable candidate will possess a Ph.D. in molecular biology or in related discipline with a good knowledge of recombinant DNA techniques.

The position is for one year initially and extendable for up to three years and offers an excellent opportunity to train in a scientifically exciting and active environment.

Applications including CV and two letters of reference should be sent under Ref. "Science 1207" to: Dr. M. Geiser, CIBA-GEIGY Ltd, Biotechnology Department, K-681.4.46, P.O. Box CH-4002 Basel/Switzerland.

CIBA—GEIGY

POSITIONS OPEN

FACULTY POSITION IN MOLECULAR PATHOGENESIS

The Department of Microbiology and Immunology invites applications for a junior- or senior-level, tenure-track position focusing on significant problems in bacterial pathogenesis using genetic and molecular approaches. Senior candidates should have a strong record of research accomplishment with sustained program growth and development. Junior candidates will be expected to develop a strong, independent research program with long-term growth potential. Teaching responsibilities, which emphasize quality rather than quantity, include medical, dental, and graduate students. The University of Tennessee, Memphis, is well into a major growth phase. The department has recently moved into a completely renovated building and will be appointing at least eight new faculty during the next several years. New faculty are also being appointed in the Departments of Pharmacology and Biochemistry. A large Center of Excellence grant has resulted in development of a Molecular Resource Center within the department featuring state-of-the-art facilities for: DNA cloning and sequencing, oligonucleotide synthesis, peptide synthesis, monoclonal antibody production, amino acid analysis, protein sequencing, and flow cytometry. Funds for the initiation of research programs will be available and salaries will be highly competitive. Applications should consist of curriculum vitae, copies of several recent publications, a brief statement of future research goals, and three letters of reference to be sent to: **Dr. Ronald K. Taylor, Department of Microbiology and Immunology, University of Tennessee, Memphis, The Health Science Center, 858 Madison Avenue, Memphis, TN 38163.** Applications will be received until 25 February 1987 or until the position is filled thereafter. *The University of Tennessee is an Affirmative Action/Equal Opportunity Employer.*

LABORATORY DIRECTOR IN VITRO FERTILIZATION

Ph.D. to direct human I.V.F. and reproductive endocrinology in a full-time clinical laboratory, research, and academic faculty position in the Department of Obstetrics and Gynecology, George Washington University Medical Center, Washington, D.C. Expertise in skills needed for human in vitro fertilization is required, including gamete and embryo biology and tissue culture techniques. Experience in human I.V.F. is especially useful, with RIA, monoclonal antibody, cryopreservation, and andrology expertise desirable. Salary and rank dependent on experience. Send curriculum vitae to: **Robert J. Stillman, M.D., Director, Division of Reproductive Endocrinology and Fertility, Department of OB/GYN, George Washington Medical Center, 2150 Pennsylvania Avenue, NW, Washington, DC 20037.** *George Washington University is an Equal Opportunity/Affirmative Action Employer.*

MATHEMATICS/PHYSICS FACULTY tenure-track opening possible at the assistant/associate level. Applied mathematics and modeling (especially biological systems) preferred. Physicist must be able to participate in lower division mathematics and computer science instruction. Ph.D. required. Liberal fringe benefits including TIAA/CREF. Send résumé and names of three references by 2 March 1987 to: **Mathematics/Physics Search Committee, c/o Mr. Richard A. Silver, Affirmative Action Officer, SUNY Purchase, Purchase, NY 10577.** *Affirmative Action/Equal Opportunity Employer.*

MOLECULAR BIOLOGIST

ASSISTANT PROFESSOR, TENURE-TRACK, to begin September 1987. Ph.D. and postdoctoral experience required. Research focus on developmental molecular genetics in plants, *Drosophila* or yeast. Plant virologists experienced in use of plant viruses or T1 plasmids as vectors for the study of gene expression in plants are particularly encouraged to apply. Candidate will teach undergraduates and graduate students in biotech, biomed program and be expected to establish active, independent research program. Applications received by 13 February 1987 will receive priority consideration. Send curriculum vitae, description of research work and three references to: **Professor Richard H. White, Chair, Search Committee, Biology Department, College of Arts and Sciences, University of Massachusetts (UMASS)/Boston, Harbor Campus, Boston, MA 02125-3393.** *An Affirmative Action/Equal Opportunity/Title IX Employer.*

POSITIONS OPEN

IMMUNOPATHOLOGIST/LABORATORY IMMUNOLOGIST: The Department of Pathology, Loyola University of Chicago, seeks a qualified individual with expertise in cellular immunology, histocompatibility testing and immunoserology. The successful candidate will be responsible for the clinical laboratory activities in these areas as well as for the supervision of all flow cytometry from the department. In addition, teaching of graduate and medical students as well as residents, fellows and medical technologists will be expected. The candidate will have the opportunity to initiate and develop research programs both independently and in collaboration with clinical immunology. A fellowship program in immunopathology is being organized which the candidate will assist in directing. Academic rank and salary will be commensurate with qualifications. The successful candidate will join a department of laboratory physicians and scientists at a 500-bed major teaching institution and medical center. Send curriculum vitae and names of three references to: **Dr. Kenneth Thompson, Loyola University Medical Center, Clinical Microbiology, 2160 South First Avenue, Maywood, Illinois 60153.** *Loyola is an Equal Opportunity Employer.*

UNIVERSITY OF WASHINGTON SCHOOL OF OCEANOGRAPHY

MARINE GEOLOGY AND GEOPHYSICS. We invite applications for the following tenure-track faculty position for which the State of Washington will provide 6 months of salary support per year. The School of Oceanography has both undergraduate and graduate degree programs and the successful candidate will be expected to teach in both his or her own specialized area and in core courses. The level of the position is open.

The candidate should have an active, process-oriented research program in either wave-current sediment transport OR marine seismology/acoustics. These two specializations are highlighted to supplement ongoing interdisciplinary programs in benthic processes and ridge-crest processes. The sediment dynamicist would be encouraged to supplement ongoing major field programs in the surf zone, estuaries, and on the continental shelf and extensive laboratory programs in organism sediment interactions. The seismologist would join an expanding program in hydrothermal processes, marine seismic, potential field and electromagnetics studies focused on the genesis and evolution of oceanic lithosphere.

Closing date for applications is 1 March 1987, although late applications and those from exceptional candidates with other expertise may be considered. Applicants should send a statement of interest, curriculum vitae, and the names of three potential references to: **Professor Brian T. R. Lewis, Director, School of Oceanography, WB-10, University of Washington, Seattle, WA 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

MATERNAL-FETAL MEDICINE

Hennepin County Medical Center and the University of Minnesota seek a **FACULTY MEMBER** to teach and conduct research in Maternal-Fetal Medicine. Candidates must have 6 years post M.D., Board-qualified or -certified in Maternal-Fetal Medicine will be considered at the assistant professor level. Recruiting deadline is 30 April 1987.

Hennepin County Medical Center and the University of Minnesota are Equal Opportunity Employers and specifically invite and encourage applications from women and minorities.

Address inquiries to:

Bruce A. Work, Jr., M.D.
Professor and Head
Obstetrics and Gynecology
University of Minnesota
Box 395 UMHC
420 Delaware Street S.E.
Minneapolis, MN 55455

MOLECULAR BIOLOGY RESEARCH POSITION, Ph.D. Academic research position as assistant research molecular biologist with immunology research group. Demonstrated research accomplishments, 2 years of postgraduate work and established bibliography required. Reply to: **Dr. Martin Kagnoff, Department of Medicine, M-023D, University of California, San Diego (UCSD), La Jolla, CA 92093,** by 28 February 1987. Salary set within UCSD research series salary scale. *UCSD is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

IMMUNOLOGIST/IMMUNOCHEMIST

Ph.D. with at least 2 years of postdoctoral research experience and demonstrated research capability. Position with research team pursuing studies in immunohematology and transfusion medicine. Opportunity for medical college appointment. Competitive salary. Send curriculum vitae and particulars to: **Richard H. Aster, M.D., President, The Blood Center of South-eastern Wisconsin, 1701 West Wisconsin Avenue, Milwaukee, WI 53233.** *An Equal Opportunity Employer.*

MEMBRANE LIPID BIOCHEMIST

Position available for a postdoctoral fellow in Membrane Lipid Biochemistry. Salary is \$11.867 per hour. Major responsibility is to investigate membrane phospholipid composition and organization in normal and pathologic human red cells. Candidates must have a Ph.D. in biochemistry and strong background in analytical chemistry and lipid biochemistry. Experience with techniques to study membrane phospholipid organization and analytical techniques to determine molecular dynamics in cell membranes. Send résumé and copy of this ad to: **Job No. WS 10891, P.O. Box 9560, Sacramento, CA 95823-0560** no later than 7 February 1987.

MOLECULAR/CELLULAR NEUROBIOLOGIST

Newly formed group working on fundamental issues in olfaction and taste seeks established neurobiologist studying molecular/cellular bases of neural development, organization and/or function. The successful candidate need not have an established background in chemosensory neuroscience, but should indicate how his/her approaches would complement existing research programs. Current programs include developmental chemical neuroanatomy, transplantation, cellular biophysics, cell surface immunology, integrative neurophysiology, and sensory evaluation. Excellent resources exist, including large-scale image analysis system, EM, and tissue culture facilities.

This is a tenure-track position in the Department of Anatomy and Cell Biology and significant space and start-up funds are available. Teaching responsibilities are in team-taught medical neuroscience and graduate neurobiology courses. Appointment at appropriate rank can be made immediately.

Interested candidates should send curriculum vitae, letter of research goals, and the names of four individuals who may be contacted for letters of recommendation to: **M. T. Shipley, Neurobiology Search Committee, Department of Anatomy and Cell Biology, Division of Neurobiology, M.L. #521, University of Cincinnati College of Medicine, Cincinnati, OH 45267.**

MOLECULAR/CELL BIOLOGIST

The Biology Department of Cumberland College, a private liberal arts college, invites application for a tenure-track position to begin in August 1987. Courses taught will include upper-division cell physiology, biochemistry, and microbiology as well as freshman-level general biology. Special topics courses in area of interest may be developed. The Biology Department is committed to making molecular biology available to undergraduate students. Essential equipment is available. This position requires a strong commitment to undergraduate education in a liberal arts, Christian atmosphere. It is expected that the individual, in addition to classroom teaching and student advising, will exhibit continued professional growth. Ph.D. required.

Send letter of application, curriculum vitae, statement of teaching philosophy, and three letters of reference to: **Dr. Joseph E. Early, Academic Dean, Cumberland College, Williamsburg, KY 40769.** Deadline: 28 February 1987.

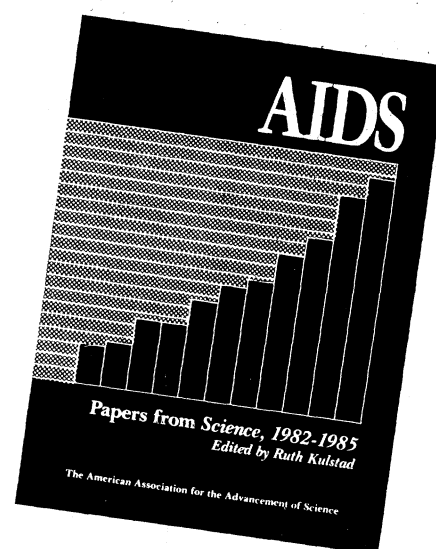
PHOSPHOLIPID BIOCHEMIST. Prefer Ph.D. interested in developing clinically relevant academic career. Research involves phospholipid biochemistry enzyme analysis, and cell culture studies. Send résumé to: **Dr. W. J. Martin, East 18A, Mayo Clinic, 200 1st Street Southwest, Rochester, MN 55905.**

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POSITIONS OPEN

PLANT COMMUNITY ECOLOGIST—The Kansas Natural Heritage Inventory (operated jointly by The Nature Conservancy and the Kansas Biological Survey at the University of Kansas in Lawrence) seeks a Ph.D. or M.A. biologist with field botany experience to conduct a county natural-areas inventory in eastern Kansas and build the community portion of a statewide Heritage database. Salary range: \$17,000 to \$19,000. Send cover letter and résumé to: **Robert Chipley, The Nature Conservancy, 1800 North Kent Street, Suite 800, Arlington, VA 22209.**

Equal Opportunity Employers.

PLANT PHYSIOLOGIST—The University of Richmond invites applications for a tenure-track position in biology. The primary teaching responsibilities will involve general botany, plant physiology and molecular genetics. Preference will be given to candidates who will develop an active research program in botany at the molecular level involving both undergraduate and M.S.-level graduate students. Candidates must have the Ph.D. degree and postdoctoral experience is desirable. While it is expected that the appointment will be at the assistant professor level, outstanding candidates at a more senior level are invited to apply. Submit résumé, undergraduate and graduate transcripts, a statement of research plans and three letters of reference to: **Dr. F. B. Leftwich, Department of Biology, University of Richmond, VA 23173.** Deadline: consideration of applications will begin on 15 February 1987. *The University of Richmond is an Equal Opportunity Employer and encourages applications from women and minority candidates.*

UNIVERSITY OF WASHINGTON SCHOOL OF OCEANOGRAPHY

PHYSICAL OCEANOGRAPHY: We invite applications for a tenure-track faculty position for which the state of Washington will provide 6 months of salary support per year. The School of Oceanography has both undergraduate and graduate degree programs and the successful candidate will be expected to teach in his or her own specialized area and in core courses. The level of the position is open.

The candidate should be active in physical oceanographic theory or numerical modeling, with strong interest in geophysical fluid dynamics. The School has programs in general circulation, equatorial dynamics, ocean mixing and internal waves, and coastal dynamics. An "ocean climate" initiative, which will address large-scale circulation, ocean tracers, and atmospheric interactions is being developed in collaboration with the other disciplines represented in the School. The University has a large number of faculty in related fields of atmospheric sciences, environmental chemistry, fluid mechanics, and applied mathematics.

Closing date for applications is 1 March 1987, although late applications and those from exceptional candidates with other expertise may be considered. Applicants should send a statement of interest, curriculum vitae, and the names of three potential references to: **Professor Brian T. R. Lewis, Director, School of Oceanography, WB-10, University of Washington, Seattle, WA 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

Ph.D., ASSISTANT PROFESSOR level, DNA/molecular biologist/chemist, to work in a variety of cancer genetic projects. Excellent opportunity for creative person to work in a multidisciplinary center. Send curriculum vitae to: **Henry T. Lynch, M.D., Department of Preventive Medicine, Creighton University School of Medicine, California at 24th Street, Omaha, NE 68178.**

POSTDOCTORAL ASSOCIATES/INSTRUCTOR to work on the characterization of eukaryotic rDNA transcription factors, enhancer elements of rat rDNA, polyadenylation of specific mRNAs by structurally distinct poly(A) polymerases, characterization of protein factor(s) and small nuclear RNAs involved in polyadenylation. Send curriculum vitae and three letters of reference to: **Dr. S. T. Jacob, Professor, Department of Pharmacology and Cell and Molecular Biology Center, Pennsylvania State University College of Medicine, Hershey, PA 17033.** Deadline: 10 March 1987. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

A position for a **POSTDOCTORAL FELLOW** is immediately available for studies in the mechanisms of immunosuppression of human and primate retroviruses. The applicant should be familiar with recombinant DNA techniques (especially in situ hybridization and immunocytochemistry) to study cellular localization of retroviral nucleic acids in tissue. Submit résumé and three letters of reference to:

**Dr. Murray Gardner
University of California, Davis
Department of Medical Pathology
School of Medicine
Davis, CA 95616**

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

POSTDOCTORAL POSITION (Pharmacology/Toxicology) to study the hepato- and nephrotoxic properties of chemical metabolites. Experience in biochemical pharmacology, toxicology and/or drug metabolism is desirable. Send résumé and the names and addresses of three references to: **Gary O. Rankin, Ph.D., Chairman, Department of Pharmacology, Marshall University School of Medicine, Huntington, WV 25704-2901.** Available on or before 1 July 1987. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available beginning May 1987 to join program on growth control and signal transduction mechanisms and their role in developing new approaches to cancer treatment. Experience in molecular or cellular biology is required. Send inquiries to either: **Dr. Jen-Fu Chiu, Department of Biochemistry or Dr. Thomas R. Tritton, Department of Pharmacology, University of Vermont Medical School, Burlington, VT 05405.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS IN NUTRITIONAL SCIENCES at the University of Illinois at Urbana-Champaign. Positions involve fundamental and applied nutrition of animals or humans. Individuals with an M.D. or Ph.D. in nutrition or allied fields are encouraged to apply. Applications must be received by 30 April. Contact: **Dr. J. A. Milner, Director, Division of Nutritional Sciences, 451 Bevier Hall, 905 South Goodwin, Urbana, IL 61801.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH OPPORTUNITIES DEPARTMENT OF BIOCHEMISTRY PURDUE UNIVERSITY

Positions are available offering training in:

Gene Expression in Eukaryotes and Prokaryotes
Protein Translocation Across Biological Membranes
Regulation of Membrane Biosynthesis
Regulation of Synthesis and Posttranslational Modification of Enzymes
Structural Analysis of Protein and DNA
Analysis of Enzyme Function by Site-Directed Mutagenesis

The faculty has extensive experience in training scientists in modern biochemical and molecular biological techniques and an impressive record of continued grant support. Interested individuals should send a résumé, including a brief statement of specific areas of research interest, to: **Postdoctoral Program S, Department of Biochemistry, Purdue University, West Lafayette, IN 47907.** *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH POSITION available immediately to participate in an NIH-funded study of the regulation of neuropeptide genes in striatal and mesencephalic brain cells in vitro and in vivo. Experience in tissue culture, radioimmunoassay, and/or molecular biology is preferred but not essential. Send curriculum vitae and three letters of reference to: **Dr. Michael Bannon, Center for Cell Biology, 6767 West Outer Drive, Detroit, MI 48235.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS IN TOXICOLOGY. Two positions are available immediately in the Department of Pharmacology and Toxicology of the Medical College of Wisconsin. The levels of the positions are open depending upon the experience of the applicants. Stipends are provided by a National Institute of Environmental Health Sciences Research Training Grant. Areas of research include aquatic toxicology, reproductive toxicology, lipid metabolism, P-450, PCB disposition/metabolism and TCDD toxicity. Candidates with a background in toxicology, pharmacology or biochemistry are invited to apply. Send curriculum vitae, representative publications and names of three references to: **Dr. Mary Jo Vodicnik, Department of Pharmacology and Toxicology, Medical College of Wisconsin, P.O. Box 26509, Milwaukee, WI 53226.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available in muscle physiology/exercise physiology/animal locomotion. To participate in a multidisciplinary project designed to understand how muscle functions during locomotion in fish, frogs, and mammals. Involves single muscle fiber mechanics, histochemistry, electrophoresis, EMGs, oxygen consumption, and functional morphology (in collaboration with R. McNeill Alexander in Leeds, England). Send curriculum vitae to: **Dr. Larry Rome, Department of Zoology, University of Tennessee, Knoxville, TN 37996.** *University of Tennessee is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION AVAILABLE immediately. In vivo and in vitro studies of insulin action and insulin receptor function in normal and disease states. M.D. and/or Ph.D. with experience in biochemistry and/or physiology preferred. Send curriculum vitae and names of three references to: **Dean H. Lockwood, M.D., Endocrine-Metabolism Unit, Department of Medicine, University of Rochester Medical Center, Rochester, NY 14642.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Postdoctoral position, available immediately, for research on the biochemical mechanisms of receptor-mediated signal transduction. Experience in recombinant DNA desirable but not essential. Apply with curriculum vitae and request three references to write supporting letters to: **Dr. Rameshwar K. Sharma, Department of Biochemistry, University of Tennessee, Memphis, 800 Madison Avenue, Memphis, TN 38163.**

The University of Tennessee is an Equal Opportunity Employer.

POSTDOCTORAL POSITION is available immediately with assured support for 3 years to study the antigenic composition of *Pneumocystis carinii*. Experience in immunology is desired with a strong background in biochemistry. Send curriculum vitae and three letters of reference to: **Dr. Don Graves, Department of Microbiology/Immunology, University of Oklahoma Health Science Center, P.O. Box 26901, Oklahoma City, OK 73190.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION. Available 1 March 1987, for studies of the biochemistry and genetics of antibiotic production by the *Streptomyces*. Isolation and characterization of enzymes and expression of the corresponding genes for the biosynthesis of macrolide or anthracycline antibiotics. Ph.D. in biochemistry, genetics or microbiology and experience with protein purification required. Send résumé and two letters of recommendation to: **Professor C. R. Hutchinson, School of Pharmacy, University of Wisconsin, Madison, WI 53706.** Telephone: 608-262-7582.

POSTDOCTORAL POSITION available immediately for studies on the pathobiology of endothelium and on lipoprotein and eicosanoid metabolism. Generation of new eicosanoid products and alterations in endothelial metabolism will be investigated. Experience with cell culture techniques, HPLC, membrane fluidity, mechanisms of free radical generation and damage, energy charge metabolism and biochemistry including ultracentrifugation is desirable. Send curriculum vitae and names of three references to: **Dr. M. B. Stemerman, Department of Medicine, New York Medical College (NYMC), Valhalla, NY 10595.** *NYMC is an Affirmative Action/Equal Opportunity Employer.*

Post Doctoral Training In Molecular And Cell Biology

Post doctoral fellowships are available for training in various areas of cancer research including cell differentiation, chemical carcinogenesis, retroviruses, membrane biochemistry, genetics and immunology. The Wistar Institute, the oldest independent biomedical research facility in the nation, is located on the University of Pennsylvania campus in Philadelphia. Wistar is organized as a community of laboratories, uniting investigators whose broad research objectives are concerned with defining cellular and molecular characteristics and function in healthy and diseased organisms. Wistar is equipped with the latest scientific technologies — DNA and peptide syntheses, flow cytometry and hybridoma facilities.

Strong background in molecular biology, virology, biomedical genetics and/or protein chemistry is required. Applicants are requested to send curriculum vitae and the names of three references to **Dr. Giovanni Rovera, Coordinator of Research Training, THE WISTAR INSTITUTE, 36th & Spruce Streets, Philadelphia, PA 19104.** Equal opportunity employer, M/F.

THE
WISTAR
INSTITUTE



NIGERIAN UNIVERSITIES

SEVERAL ACADEMIC VACANCIES EXIST IN NIGERIAN UNIVERSITIES IN THE FOLLOWING BASIC SCIENCES:

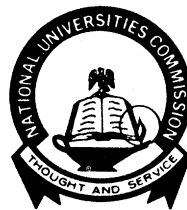
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|------------------------|---------------------------------|
| 1. BIOLOGY | 7. MATHEMATICS (PURE & APPLIED) |
| 2. BOTANY | 8. MICROBIOLOGY |
| 3. BIOCHEMISTRY | 9. MINERAL SCIENCE & TECHNOLOGY |
| 4. CHEMISTRY | 10. PHYSICS |
| 5. GEOLOGY | 11. STATISTICS |
| 6. GEOPHYSICS, APPLIED | 12. ZOOLOGY |

APPOINTMENTS WILL BE MADE AT PROFESSORIAL, ASSOCIATE PROFESSORIAL AND LECTURER LEVELS.

QUALIFICATIONS

ALL APPLICANTS ARE EXPECTED TO HOLD PH.D. OR OTHER RESEARCH DEGREES AND TO HAVE CONSIDERABLE NUMBER OF YEARS OF TEACHING AND/OR RESEARCH EXPERIENCE.

*INTERESTED APPLICANTS SHOULD SEND SIX COPIES OF THEIR DETAILED RESUME TO:



OFFICE OF THE EDUCATION ATTACHÉ
EMBASSY OF NIGERIA
2010 MASSACHUSETTS AVENUE, N.W.
4TH FLOOR
WASHINGTON, D.C. 20036

*APPLICATIONS ARE ALSO WELCOME FROM UNIVERSITY PERSONNEL WHO WOULD LIKE TO SPEND THEIR SABBATICAL LEAVE/S IN NIGERIAN UNIVERSITIES.

PLEASE NOTE THE SALARY SCALE PER ANNUM OF:

FULL PROFESSOR	USS 15	₦14,280–15,720
READER	USS 14	₦12,732–15,372
SENIOR LECTURER	USS 13	₦11,364–14,820
LECTURER I	USS 11	₦ 9,000–10,080
LECTURER II	USS 9	₦ 7,550– 8,162



PENN STATE BIOTECHNOLOGY INSTITUTE

FACULTY POSITIONS IN PLANT AND MICROBIAL BIOTECHNOLOGY

Applications are invited for faculty positions at the academic ranks of Assistant, Associate, or Full Professor in the Penn State Biotechnology Institute. The positions can be joint appointments within appropriate academic departments of the Colleges of Agriculture, Engineering, Medicine, or Science. Initial recruiting will focus in two areas: (1) The development of plant cells for chemical production which includes the molecular biology, natural product chemistry, and cell culture of plants and microalgae; and, (2) the development of microbes for new uses which includes the biochemistry, molecular biology, and culture of all microorganisms. Emphasis is placed on high quality fundamental research that will lead to products useful to society. Appointees will be located in the newly constructed Biotechnology Institute Headquarters Building, which contains several specialized preparation facilities and service laboratories including those for macromolecular synthesis and sequencing, molecular graphics, hybridoma screening, diversified cell culture using automated bioreactors and fermentors, and chemical analysis. Review of applications will begin on March 6, 1987, and continue until the positions are filled. Candidates should submit a curriculum vitae, a brief research description, and have three letters of reference sent to: **Dr. Jean E. Brechley, Director, Biotechnology Institute, The Pennsylvania State University, 105B South Frear Building, University Park, PA 16802.** AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER.

Pathology & Toxicology Research (BS/MS)

relevant laboratory experience and must not have a history of allergies.

Biology Assistant: Will design and conduct experimental studies regarding the mechanisms of toxicity and the effects in laboratory animals; utilize standard laboratory equipment; prepare protocols and technical reports. Familiarity with computers, cardiovascular physiology and/or pharmacology highly desirable. Position number is 20485-A.

Biochemistry Assistant: Study the mechanisms of compound toxicity requiring application of *in vivo* and *in vitro* techniques which include the operation of laboratory equipment (chromatograph, LSC, spectrophotometer, and radiochemical methods); conduct biochemical studies utilizing laboratory animals; assist in presentations and preparation of scientific manuscripts. Position number is 20099-A.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a rich mix of cultural, educational and recreational pursuits including numerous lakes and a four-season climate. Upjohn offers the opportunity for career growth, a competitive salary commensurate with experience, a comprehensive benefits program and relocation assistance. For confidential consideration, please call from outside of Michigan toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you immediately. Please refer to one of the above position numbers when calling.

Upjohn

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POSITIONS OPEN

POSTDOCTORAL POSITION AVAILABLE

A postdoctoral position is available immediately to study intestinal cell growth and maturation. The project will involve development of advanced cell culture techniques to study phenotypic and genotypic expression of primary cells and cultured cell lines. Background in cell culture techniques and cell biology required. Knowledge of gastrointestinal physiology and molecular biology preferred. Appointment for 3 years. Salary range is \$19,000 to \$23,000, depending on experience. Deadline for application 1 March 1987. Send curriculum vitae and three references to:

Dr. Eugene B. Chang
Department of Medicine, Box 400
University of Chicago
5841 South Maryland Avenue
Chicago, IL 60637

Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS immediately available to study the electrophysiology and pharmacology of cardiac arrhythmias and neurophysiologic control of hypertension. NRSA Training Grant. U.S. citizenship or permanent residence required.

Send curriculum vitae to: **Dr. Charles Antzelevitch**, Masonic Medical Research Laboratory, Utica, NY 13504. Telephone: 315-735-2217.

POSTDOCTORAL POSITIONS available to study cellular mechanisms involved in insulin secretion. Biochemical approaches are employed to study the role of lipid-derived mediators in signal transduction events including inositol phosphates, arachidonic acid, and the regulation and function of intracellular Ca^{2+} in insulin secretion. Please send curriculum vitae and three references to: **Dr. Michael L. McDaniel**, Department of Pathology, Washington University, Box 8118, St. Louis, MO 63110; Telephone: 314-362-7435. *Washington University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION—RETINAL PHYSIOLOGY. Available 1 March 1987 to study transmitter receptors in isolated retinal ganglion cells using patch clamp. Salary is \$22,000 plus full health plan. Write: **Gordon L. Fain**, Professor and Associate Director, Jules Stein Eye Institute, University of California, Los Angeles (UCLA), School of Medicine, Los Angeles, CA 90024.

POSTDOCTORAL RESEARCH ASSOCIATE

Position available for recent doctorate with experience in protein characterization and purification. The appointee will participate in a project at the University of Toronto in collaboration with other academic institutions and industry. Apply by sending a résumé that includes at least three references to: **Dr. Geoffrey W. Henson**, Pharmaceutical Research, Johnson Matthey Inc., 1401 King Road, West Chester, PA 19380.

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION for a person trained in cellular or molecular biology or virology to study the central nervous system infection caused by HIV. Both tissue from infected patients and cell culture models will be used to investigate the character of brain infection and the basis of HIV neurotropism. These studies are part of a combined clinical and laboratory program investigating AIDS-related dementia and CNS infection by HIV. Send curriculum vitae and names of three references to: **Richard W. Price, M.D.**, Department of Neurology, Memorial Sloan-Kettering Cancer Center (MSKCC), 1275 York Avenue, New York, NY 10021. *MSKCC is an Equal Opportunity Employer M/F/H.*

POSTDOCTORAL OR RESEARCH ASSOCIATE positions immediately available for training in immunochimistry and molecular immunology. A molecular approach will be used to examine structure and regulation of immunoglobulin V-region genes in two model systems, anti-carbohydrate (**Dr. Marcus**) and anti-protein (**Dr. Thomas**). An exciting academic environment and opportunity for advancement is available. Experience in recombinant DNA techniques is preferred. Send curriculum vitae and names of two references to: **Dr. James Thomas**, Department of Medicine, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATES

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

POSTDOCTORAL RESEARCH POSITION. To study acquired resistance to tuberculosis and atypical mycobacterial infections in normal and immunodepleted animals. Experience in cellular immunology, cell cloning or immunochemistry preferred. Position available immediately to Ph.D. graduate. Starting salary will be \$18,500.

The Trudeau Institute is a private, not-for-profit basic medical research institution located on the shore of Lower Saranac Lake and 10 miles from Lake Placid, NY. Subsidized housing and liberal fringe benefits are available.

Send curriculum vitae and names of three references to:

Dr. Frank M. Collins
Trudeau Institute
P.O. Box 59
Saranac Lake, NY 12983

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POSTDOCTORAL TRAINING IN CANCER BIOLOGY

POSTDOCTORAL POSITIONS are available at the London Regional Cancer Centre (in association with the University of Western Ontario).

Faculty available for training include:

Ann Chambers: Cellular and molecular biology of tumor metastasis in immune-deficient and immune-competent experimental hosts.

J. Gregory Cairncross: Cellular and molecular biology of glial differentiation; biology of glial tumors.

Geoff Hammond: Structure function and gene expression of steroid binding proteins; mechanism of steroid entry into target cells.

John F. Harris: Cellular and molecular biology of tumor metastasis in immune-competent hosts; development of mouse and human monoclonal antibody to tumor-associated antigens.

Rodger Inch: Sensitivity of multicell spheroids to cytotoxic drugs; magnetic resonance imaging and spectroscopy to monitor tissue damage.

Jim Koropatnick: Gene amplification in mammals, cloning avian and mammalian lectin genes (with **H. Ceri**, University of Calgary); molecular biology of human hybridoma stability (with **Dr. J. F. Harris**).

Applications should state the faculty member(s) with whom the candidate wishes to work and should include vitae and references. Inquiries or applications should be sent to:

Dr. Ann Chambers
London Regional Cancer Centre
391 South Street
London, Ontario N6A 4G5
Canada

POSTDOCTORAL RESEARCH POSITION available immediately in Division of Allergy/Immunology, Department of Pediatrics, University of Pennsylvania Medical School, The Children's Hospital of Philadelphia, to study human and murine microglia and macrophages in neural cell cultures. Recent graduates with Ph.D. or M.D. and experience in neurobiology, cell biology, cell culture, and biochemistry are favored. Send curriculum vitae, research interests, and names of references to: **Steven D. Douglas, M.D., Director, Division of Allergy/Immunology, Children's Hospital of Philadelphia, 34th and Civic Center Boulevard, Philadelphia, PA 19104. An Equal Opportunity Employer.**

POSITIONS OPEN



**Agricultural
Research
Service**

**United States
Department of
Agriculture**

AGRICULTURAL RESEARCH SERVICE has two positions available (1) to conduct biochemical studies on the regulatory properties of enzymes in mammary metabolism with the goal of understanding the control of protein and lipid synthesis in mammary tissue (research associate, GS 11-12, \$27,172 to \$32,567 per year and (2) to conduct biochemical and physiological research on mechanisms and factors affecting lipid deposition in poultry, with special emphasis directed to the role of tissue and cellular receptor sites. Serum lipoproteins, and regulatory enzymes (research affiliate, GS 7-9, \$18,358 to \$22,458 per year). Candidates must have knowledge of biochemistry or cell biology; Ph.D. is required. Appointments will be for up to 2 years at salaries commensurate with experience. For position information, telephone: **John H. Woychik, USDA, ARS, Eastern Regional Research Center, Philadelphia, PA; 215-233-6608.** For information on qualification requirements and application procedures contact: **Angie Corrao, telephone: 215-233-6573.** Applications should be sent to: **Angie Corrao, ARS, USDA, NAAO, 600 East Mermaid Lane, Philadelphia, PA 19118. Applications in response to this advertisement should be marked (1) 7E010 (2) 7E011 and received by 1 March 1987. Agricultural Research Service is an Equal Opportunity Employer. Women and minorities are encouraged to reply.**

RESEARCH ASSOCIATE with Ph.D. in electrical engineering or biophysics needed to participate in development and operation of a human motor physiology laboratory studying basic mechanisms underlying control of voluntary movement and motor disability caused by neurological disease. Physiological, electronics and computer programming experience required. Write to: **Timothy A. Pedley, M.D., Chairman, Committee on Appointments and Promotions, Department of Neurology, College of Physicians and Surgeons, 710 West 168 Street, New York, NY 10032. Columbia University is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH SCIENTIST—To conduct research in immunodiagnosis of viral diseases and human cancers; supervise lab technicians working on protein purification and diagnostic antibodies. Requirements: Ph.D. in microbiology and 2 years of postdoctoral training in chromatographic technology, electrophoresis, mammalian cell culture and cell fusions, monoclonal antibody production, characterization and purification of monoclonal antibodies, immunoanalysis and recombinant DNA technology. 40 hours 8:30 a.m. to 5:00 p.m.; \$35,000 per year. Send résumé to: **NYS Job Service, 68 West Huron Street, Buffalo, NY 14202. DOT Code 041.061.058. Job Order #01004467.**

RESEARCH ASSOCIATE IN MOLECULAR GENETICS with Ph.D. degree and postdoctoral experience in contemporary molecular genetics, animal virology, and mammalian cell culture. Primary responsibilities will be teaching experimental methods to graduate students and fellows and collaborative research. Please address application together with curriculum vitae and description of past research experience to: **Lily Mitchell, 702 Preclinical Teaching Building, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205. Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE, SCIENTIST: LIPOGEN, INC., an innovative biotechnology company involved in medical diagnostic research, seeks individuals at the scientist and research associate levels. Experience in the following areas is desired: clinical chemistry and immunoassay development, molecular biology, protein isolation and purification. Scientist level position requires Ph.D. and 0 to 3 years' experience; research associate position requires B.S. and 5 years' experience or M.S. and 3 years' experience. Prior industrial experience a plus. Address inquiries to: **Lipogen, Inc., 10515 Research Drive, Knoxville, TN 37932.**

Molecular Biologist/ Microbiologist

Syva, a subsidiary of Syntex, is a leader in the medical diagnostics field — developing, manufacturing and marketing tests to diagnose infectious diseases and to detect and quantify clinically significant substances in patients' body fluids. We currently have an opportunity available for a Molecular Biologist/Microbiologist.

You will develop non-radioactive nucleic acid hybridization based diagnostic products, as well as develop methodology for the isolation and rapid detection of pathogen nucleic acids in clinical isolates.

A broad background in molecular biology/nucleic acid biochemistry/microbiology is required; ancillary experience in enzymology/assay development would be helpful. Also requires a PhD with at least 1 year post doctoral experience, plus the creativity and energy to turn ideas into workable products.

Syva offers a competitive salary and benefits package and a stimulating research environment where scientific excellence and achievement are highly rewarded. For confidential consideration, please send your resume and references to Syva, Professional Staffing, Dept. DP/SC, P.O.Box 10058, Palo Alto, CA 94303. An equal opportunity employer.



ASSOCIATE EDITOR SCIENCE MAGAZINE

Editorial position available for a Ph.D. biochemist or molecular biologist with two or three years of research experience; specific capability in structural biochemistry, immunology, and enzymology; wide general interest in biological sciences; and publications in the refereed literature. Initial duties will include editing manuscripts for clarity and style. Progress to wide responsibilities in manuscript selection is expected. Previous editorial experience not required. This is a full-time position in our Washington, D.C. editorial office.

Please submit résumé with cover letter, including salary requirements to:

Carolyn Bell
SCIENCE Magazine
1333 H Street, NW
Washington, DC 20005

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BIOCHEMISTS/ IMMUNOCHEMISTS - SAN DIEGO -

HYBRITECH INCORPORATED, the recognized leader in monoclonal antibody-based immunodiagnostics, is now a subsidiary of Eli Lilly and Company. Hybritech currently has excellent career opportunities for biochemists/chemists for the following positions:

SR. RESEARCH SCIENTISTS - Successful candidates will have experience in immunoassay development, specifically EIA or RIA. Responsibilities will include antibody purification, antibody-protein conjugation chemistry and enzyme kinetics. Positions are also available for individuals with solid-phase chemistry experience. Ph.D. in biochemistry/chemistry or equivalent and one to three years industry experience is required.

RESEARCH SCIENTISTS - Candidates will have experience in protein isolation and characterization immunoassays, monoclonal antibody applications and knowledge of immunology. Responsibilities will include development and transfer of new diagnostic products. Ph.D. in biochemistry/chemistry or equivalent required. Postdoctoral experience preferred.

HYBRITECH offers a stimulating and rewarding work environment, competitive salaries and excellent company paid benefits. Please send your resume and salary history to: **Human Resources Department, Hybritech Incorporated, P.O. Box 269006, San Diego, CA 92126.**



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POSITIONS OPEN

RESEARCH ASSOCIATE

The Department of Surgery, Section of Pediatric Surgery, University at Buffalo, State University of New York, Children's Hospital of Buffalo seek a research associate to direct ongoing project in tumor immunology. A M.S. or Ph.D. is required with experience in the related research area. Submit curriculum vitae to: **Donald R. Cooney, M.D., Children's Hospital of Buffalo, 219 Bryant Street, Buffalo, NY 14222. Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE: Ph.D. or M.D. to study the role of CRF and IL-1 in the metabolic-endocrine responses to stress. Experience in small animal surgery required. Concurrent appointments at Harvard Medical School and Massachusetts General Hospital. Send résumé to: **Hans H. Bode, M.D., Shriners Burns Institute, 51 Blossom Street, Boston, MA 02114. An Equal Opportunity Employer.**

RESEARCH SCIENTIST-IMMUNOLOGY

The DEPARTMENT OF IMMUNOLOGY AND INFECTIOUS DISEASES OF THE RESEARCH INSTITUTE OF THE PALO ALTO MEDICAL FOUNDATION seeks an M.D. or Ph.D. immunologist with 2 or 3 years postdoctoral experience. Additional training in molecular biology/cell biology highly desirable. Applicant should be capable of establishing an active, independent research program which would be a component of a larger unit in the area of host resistance to infection.

The Research Institute of the Palo Alto Medical Foundation is a well-equipped, not-for-profit institute located in downtown Palo Alto near the Stanford University campus.

Send curriculum vitae, a description of research interests, and names, addresses and telephone number of at least three references to: **Jack S. Remington, M.D., Chairman, Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, 860 Bryant Street, Palo Alto, CA 94301.**

RESEARCH SPECIALIST/TEACHING LABORATORY MANAGER

Full-time position starting 1 April 1987 to provide logistical laboratory support for advanced courses in developmental and cell biology. In consultation with Embryology Course Committee, plan and set up all equipment and supplies required for laboratory exercises and provide general logistical support for Laboratory's program of short courses. Knowledge of laboratory equipment, including electrophoretic apparatus, ultracentrifuges, light and electron microscopes, tissue and cell culture facilities required, with experience in providing hands-on technical support. Salary \$25,000 to \$35,000 per year plus benefits. Submit résumé to: **Personnel Office, Marine Biological Laboratory, Woods Hole, MA 02543 by 7 February 1987. Affirmative Action/Equal Opportunity Employer.**

SENIOR RADIOCHEMIST. The Nuclear Reactor Laboratory is soliciting qualified applicants for a senior level position in radiochemistry and trace analysis. Applicants should have 10 years of experience in trace analysis with a major emphasis on instrumental and radiochemical neutron activation analysis. In addition to thorough familiarity with thermal and fast neutron activation analysis, both prompt and delayed, applicants should have a good understanding of other trace analysis techniques with photon activation analysis, atomic absorption and x-ray fluorescence.

A strong publication record in biological, geological, or environmental research is a requirement. Proven ability to write proposals and obtain research funding is important. The applicant will be expected to develop a funded research program with funding from outside sources to support the applicant and at least a small group of associates. Experience in administration and supervising the research of graduate level students and of junior level research scientists is also required. The applicant should have a Ph.D. in chemistry. Depending upon qualifications, salary will be in the range of \$50,800 to \$55,000 per year.

To apply, send two copies of cover letter and résumé to: **Oveta Perry, MIT Personnel Office, E19-239, 77 Massachusetts Avenue, Cambridge, MA 02139.**

MIT is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

STATISTICAL SCIENTIST

FRONTIER SCIENCE AND TECHNOLOGY RESEARCH FOUNDATION (FSTRF), is recruiting a senior statistical scientist who will fill the newly created position of executive director. FSTRF is a not-for-profit foundation devoted to carrying out research in statistical science applied to biomedical sciences. The incumbent will be expected to exert scientific leadership in expanding the scientific activities of FSTRF. Applicants should have a doctorate in biostatistics, statistics or a related field and have a distinguished record in both the theory and practice of statistics as applied to the biomedical sciences. Significant administrative experience would be helpful. Compensation and fringe benefits are excellent. FSTRF has offices in Brookline, Massachusetts, and Amherst, New York, and employs a staff of 40. Candidates should send curriculum vitae with the names of at least three references to: **Dr. Marvin Zelen, Chairman, Search Committee, Frontier Science and Technology Research Foundation, Inc., 303 Boylston Street, Brookline, MA 02146. All applications will be treated with strict confidence.**

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TENURE-LEVEL PROFESSOR

The Cancer Center of the University of California, San Diego (UCSD), invites applications for a tenured position (full or associate professor) at the Theodore Gildred Cancer Facility in a basic science related to cancer (cell or molecular biology, genetics, pharmacology, immunology). Candidates must have demonstrated independent research productivity and teaching ability. Academic appointment will be in the department most appropriate to the candidate's research and teaching specialties. Salary related to rank and step of appointment within the established salary schedule of the UCSD School of Medicine. Reply by 1 April 1987 to: **Stephen B. Howell, M.D., University of California, San Diego, Cancer Center, T-012, La Jolla, CA 92093. The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.**

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY UNIVERSITY OF ARIZONA

Applications are invited for a tenure-track position. Applicants doing research in (i) paleobiology or (ii) in the ecology or evolution of marine organisms are of particular interest to the Department. The position will probably be filled at the assistant professor rank. Applicants should mail curriculum vitae, statement of research plans, reprints or preprints, and the names and addresses of at least three referees to: **Conrad A. Istock, Head, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ 85721. The deadline for applications is 15 March 1987, or until the position is filled. The University of Arizona is an Equal Opportunity/Affirmative Action Employer.**

TENURE-TRACK POSITION IN MOTOR BEHAVIOR

Applicants are sought for the position of assistant professor to take effect August 1987. Candidates should have a Ph.D. and research experience in one or more aspects of motor behavior. The successful applicant will be expected to pursue independent research, and to teach and supervise undergraduate and graduate Exercise Science programs. Screening of applications will begin 1 March 1987. Send curriculum vitae and three letters of reference to: **Professor J. Maynard, Department of Exercise Science, The University of Iowa, Iowa City, IA 52242. Equal Opportunity/Affirmative Action Employer.**

ZOOLOGIST

Continuing faculty position at College of the Atlantic (COA). Teaching courses in zoology, physiology, anatomy, and in appropriate complementary areas. COA is a small, private nondepartmental college offering a B.A. in Human Ecology and emphasizing interdisciplinary study, self-governance, and curricular innovations. Doctorate and teaching experience are preferred. Preference may be given to applications received before 21 February. Send application, curriculum vitae and three references to: **Dr. Donald A. Cass, Chairman of Personnel Committee, College of the Atlantic, Bar Harbor, ME 04609. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

VETERINARY ANATOMISTS

The Department of Anatomy, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, invites applications for **TENURE-TRACK POSITIONS IN VETERINARY ANATOMY** at the assistant or associate professor level. Salary and rank will be commensurate with qualifications and experience. Candidates should have a D.V.M. (or equivalent) degree and/or an advanced degree in anatomical science. The position entails maintaining a research program and teaching veterinary gross, microscopic and developmental anatomy in the professional veterinary medical curriculum. Priority will be given to candidates with research interests in cells and tissues, with some preference to studies in the nervous system. Applicants should send a letter stating professional goals and including a curriculum vitae and the names of three references before 1 April 1987. The résumé should be sent to: **Dr. Stephen D. Roper, Chairman, Department of Anatomy, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO 80523. Colorado State University is an Equal Opportunity Employer and complies with Title IX requirements.**

SENIOR STAFF SCIENTIST

Applications are invited for this position to work in our new **Biotechnology Research Center (Meloy Laboratories, Inc.) in Rockville, Maryland.** Applicants must have M.D. and 5 years postdoctoral in molecular biology and cell biology with experience in experimental oncology, with particular reference to growth factors and growth factor receptors and cell differentiation. Must also have worked with epithelial cell systems and retroviruses and in the growth factor area using recombinant DNA technologies. This experience is essential. Salary commensurate with background. Qualified individuals are required to submit their curriculum vitae to: **Personnel Department, Meloy Laboratories, Incorporated, 6715 Electronic Drive, Springfield, VA 22151. ATTN: IC Deadline for application is 6 February 1987.**

ZOOPLANKTON ANALYST AND AQUATIC ENTOMOLOGIST

Ph.D. aquatic entomologist, experienced with chironomids and oligochaetes, SAS, supervision of technicians and report writing. M.S. (or experienced B.S.) zooplankton analyst to identify and count freshwater species from lakes. Positions open immediately. Contact: **Dr. James O'Hara, ECS, Incorporated, P.O. Box 1393, Aiken, SC 29802; telephone: 803-652-2206. An Equal Opportunity Employer.**

SYMPOSIUM

FOURTH SYMPOSIUM ON RECENT ADVANCES IN THE IMMUNOLOGY AND BIOCHEMISTRY OF TROPICAL DISEASES

Sponsored by
Division of Biomedical Sciences
School of Graduate Studies
Meharry Medical College
Nashville, TN
Tuesday, 28 April 1987

This 1-day symposium brings together molecular biologists, immunologists, and biochemists who share an interest in parasitic disease research. Seven speakers include: **Barry Bloom** (Albert Einstein College of Medicine), Leprosy; **John David** (Harvard School of Public Health), Immunity to Schistosomes; **Paul T. Englund** (Johns Hopkins University), Biosynthesis of Trypanosomes Variant Surface Glycoprotein; **Wayne Hockmeyer** (Walter Reed Army Institute of Research) Sporozoite Malaria Vaccine; **Alan H. Davis** (Case Western Reserve University), Cloning *Schistosoma mansoni* Hemoglobinase; **Felipe Kierszenbaum** (Michigan State University), Immunosuppression in Chagas' Disease; and **Lex H. T. Van der Ploeg** (Columbia University), Transcription and mRNA Maturation in Trypanosomes.

Registration \$30—Students \$10 (lunch included). Contact: **Dr. George C. Hill, Division of Biomedical Sciences, Meharry Medical College, 1005 D. B. Todd, Jr. Boulevard, Nashville, TN 37208. Telephone: 615-327-6193.**

This symposium is part of a Molecular Parasitology Training Program with predoctoral and postdoctoral fellowships available.

Research Scientists

We're Praxis Biologics, a research-driven, results-oriented company recognized as a pioneer in the development of pediatric vaccines. We currently seek two dedicated professionals with PhDs or equivalent to join our staff of Research Scientists.

These positions require from 3-8 years of experience, preferably in molecular biology, DNA research, gene cloning or biochemistry. A background in the expression of foreign genes in bacterial systems would be an advantage, but is not essential.

For prompt, fully confidential consideration, please send your resume including salary history to: **Human Resources Department, Praxis Biologics, 300 East River Road, Rochester, NY 14623.**

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Creative BioMolecules, Inc., a biotechnology company developing products for the human health care markets, seeks highly motivated and well qualified candidates to join our research and development team. Successful candidates will have a Ph.D. with a minimum of three years experience and a demonstrated record of accomplishment. Positions available are:

Protein Chemistry

Applicant should have extensive experience in protein chemistry, including purification and characterization of proteins from recombinant hosts.

Molecular Biology

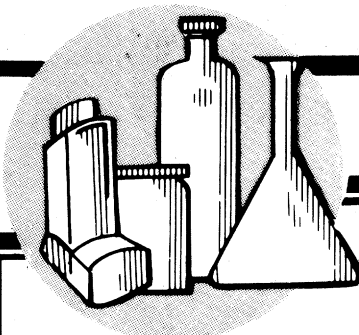
Applicant should have expertise in recombinant DNA technology including construction and screening of DNA libraries, and expression in mammalian hosts.

Creative BioMolecules offers competitive salaries and comprehensive medical/dental plan. Please send resume to **Personnel Department**.

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Background should include a Ph.D. and/or MD specializing in pharmacology, cardiology, or cardiovascular pharmacology with 4+ years of industrial experience pertaining to drug discovery in some or all of the following: cardiotonics, hypertension, antiarrhythmics, arteriosclerosis, and myocardial ischemia. Candidate must possess in-depth knowledge of cardiac physiology and first hand experience in one or more of the following: regional blood flow, renal function and respiratory function. A general working knowledge of biochemistry and autonomic/receptor pharmacology is desirable.

Your abilities and potential will be recognized with a competitive starting salary and benefits package. Our location, in the heart of North Carolina, offers a mild climate year round, access to some of the finest universities in the country, numerous cultural activities and nearby recreational facilities. For prompt consideration, please forward your resume, including salary history, to:

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PROGRAM

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with a doctorate-level degree in science the opportunity to earn the doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Dr. D. M. Chauncey, Ph.D.-O.D. Program Director, The New England College of Optometry, 424 Beacon Street, Boston, MA 02115; Telephone: 617-266-2030, extension 147.**

FELLOWSHIPS

CURATORIAL FELLOWSHIP IN SYSTEMATICS AMERICAN MUSEUM OF NATURAL HISTORY

The Museum invites applications for systematists with Ph.D.'s interested in innovative theoretical or empirical research. Training and interests should include new or promising approaches, methodologies, techniques, or philosophies in systematic and evolutionary research in zoology and paleontology. Botanists whose research involves interaction with zoological systematics and their collections will also be considered. The primary responsibility of the Curatorial Fellow will be to conduct an active research program. The Fellow will also participate in other Museum activities including administration, collection, curation, exhibition, and education. Curatorial Fellowships are equivalent in rank and responsibilities to curatorships at the Museum. The position, which will begin on or after 1 July 1987, is renewable annually with a limit of 5 years. Rank and salary will be determined on the basis of qualifications. Full museum benefits apply. Interested applicants must submit the following information by 15 March 1987: (i) curriculum vitae, (ii) statement of research interests, (iii) complete bibliography and sample publications, and (iv) contact information, including telephone numbers, for at least three professionals acquainted with the applicant's qualifications and accomplishments. Submit to:

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

GRADUATE FELLOWSHIPS IN MOLECULAR MICROBIOLOGY. The Department of Microbiology at the University of Vermont invites applications from persons interested in a career in molecular microbiology. Biochemical, immunological and molecular genetic techniques are being used to study: cytoplasmic factors affecting maintenance and control of the carcinogenic state; sexual development in higher fungi (Basidiomycetes) including isolation and function analysis of genes controlling self-incompatibility and sexual development; determinants of bacterial virulence; mechanisms of bacterial adhesion to host tissue and biological implants; response of eukaryotic cells to toxins, hormones and viruses; regulation of protein synthesis in eukaryotes; studies on increasing bioavailability of fiber by manipulating adhesion of ruminal bacteria. Full tuition remission and tax-free stipend approximately \$8400 per year. Write: **Dr. Thomas J. Moehring, Department of Microbiology, The University of Vermont, Given Building, Burlington, VT 05405**

The Institute of Ecosystem Studies (IES) of The New York Botanical Garden will award one IES summer research fellowship for a 3-month period during summer 1987. These awards provide short-term research opportunities for Ph.D.'s to do ecological research as part of the IES program at the Mary Flagler Cary Arboretum in Millbrook, New York. A diversity of terrestrial, wetland and stream habitats, as well as excellent laboratory facilities, is available on the 779-hectare site. Award provides summer stipend plus limited funds for research supplies. Applicant... should have a Ph.D., an ecosystem orientation, and be interested in collaborative multidisciplinary studies. Send letter of application, curriculum vitae and names of three references by 1 March 1987 to: **Dr. Jonathan J. Cole, Institute of Ecosystem Studies, The Mary Flagler Cary Arboretum, Box AB, Millbrook, NY 12545. An Equal Opportunity Employer.**

FELLOWSHIPS

NIH STAFF FELLOWSHIP/ NIH VISITING FELLOWSHIP MOLECULAR BIOLOGY/GENE THERAPY

The Development and Metabolic Neurology Branch, National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, Public Health Service, invites applications for NIH Staff Fellowship or NIH Visiting Fellowship position. This postdoctoral position is available to study regulation of genes following transfer into cultured cells and whole organisms using retroviral vectors and recombinant adenoviruses. The candidate will be expected to study regulation of human globin and lysosomal enzyme genes. Experience in one of the following areas is highly desirable: eukaryotic molecular biology, hemopoiesis or mouse embryology. For the NIH Staff Fellowship program, candidates must be U.S. citizens or resident aliens and must have a doctoral degree or equivalent. For the NIH Visiting Fellow program, candidates may be resident or nonresident aliens, and must have a doctoral degree, or its equivalent, in a health science field whose relevant post graduate experience does not exceed 3 years of experience at the time of their entrance on duty.

The positions are located in Bethesda, Maryland. For position information and qualification requirements, candidates may telephone: **Mr. Wallace Holland, Personnel Management Specialist, 301-496-6334.** Interested candidates should send curriculum vitae, a brief statement of research interest, and the names of three (3) references to: **Dr. Stefan Karlsson, IRP, DMNB, NINCDS, National Institutes of Health, 9000 Rockville Pike, Building 10, Room 3D04, Bethesda, MD 20892; Telephone: 301-496-3285. An Equal Opportunity Employer.**

GRADUATE FELLOWSHIPS CENTER FOR THE STUDY OF EVOLUTION (CSEOL) AND THE ORIGIN OF LIFE UNIVERSITY OF CALIFORNIA AT LOS ANGELES (UCLA)

CSEOL invites applications for three first-year predoctoral fellowships for 1987-88. Stipends are each \$9000 for 9 months with no teaching or other duties. Fellows are included in a select group of former Fellows and other graduate students invited to interact with Center faculty in a weekly dinner/seminar/discussion series. Applicants should be planning to carry out thesis research under the supervision of a CSEOL faculty member and in a subject area relating to evolution, broadly construed—of the solar system, of Earth, of the environment, of life, of humans. Areas of particular interest for 1987-88 include (i) the origin of life; (ii) Precambrian biotic-environmental evolution; (iii) biochemical phylogeny; and (iv) the interface between molecular biology and the known fossil record. Faculty are members of the UCLA Departments of Anthropology, Astronomy, Atmospheric Sciences, Biology, Chemistry and Biochemistry, Computer Science, Earth and Space Sciences, Geography, and Microbiology; the School of Medicine (Anatomy; Microbiology and Immunology; Physiology; Behavioral Sciences); and the School of Public Health. Fellowship applicants must apply by 15 February 1987, both to an appropriate academic department and to CSEOL. For application forms and a list of CSEOL members, contact: **CSEOL Fellows Committee, Geology Building, Room 5687, University of California, Los Angeles, Los Angeles, CA 90024. Telephone: 213-825-1170.**

PREDOCTORAL FELLOWSHIPS available 1 July 1987 for highly qualified students seeking a Ph.D. in microbiology and immunology. Research opportunities exist in infectious disease (vector-borne diseases are emphasized) and immunology, encompassing bacteriology, virology, and immunology at the molecular, cellular, and organismic levels. The Department has core facilities for monoclonal antibody and biopolymer production and analysis as well as for infected animals. Address inquiries to: **Dr. David Silverman, Department of Microbiology and Immunology, University of Maryland School of Medicine, 660 West Redwood Street, Baltimore, MD 21201. Affirmative Action/Equal Opportunity Employer.**

FELLOWSHIPS

INTERNATIONAL CANCER RESEARCH FELLOWSHIP

The Hayashibara Mutual Aid Fund, a nonprofit-making organization within the Hayashibara Group, announces a **fellowship program**. Two awards will be made annually. Fellowship will be taken up at the newly opened Fujisaki Cell Center which is devoted to basic and applied research related to the problems in human cancer. The fellowship is normally made for 1 year and is renewable for up to 5 years. The fellowship will be expected to commence within 6 months of the announcement of the awards. The awards are for high-quality research work in one of the three categories described below.

1. Fundamental Leukemia-Lymphoma Research,
2. Cytokine-Lymphokine Research,
3. Hematopoietic Cell Cultures.

Qualified person who has a Ph.D., an M.D., or equivalent qualifications will be awarded on merit to suitably qualified research proposal and experiences. Additional information and application forms will be obtained from: **Jun Minowada, M.D., Director, Fujisaki Cell Center, 675-1, Fujisaki, Okayama 702, Japan.**

ECOLOGIST

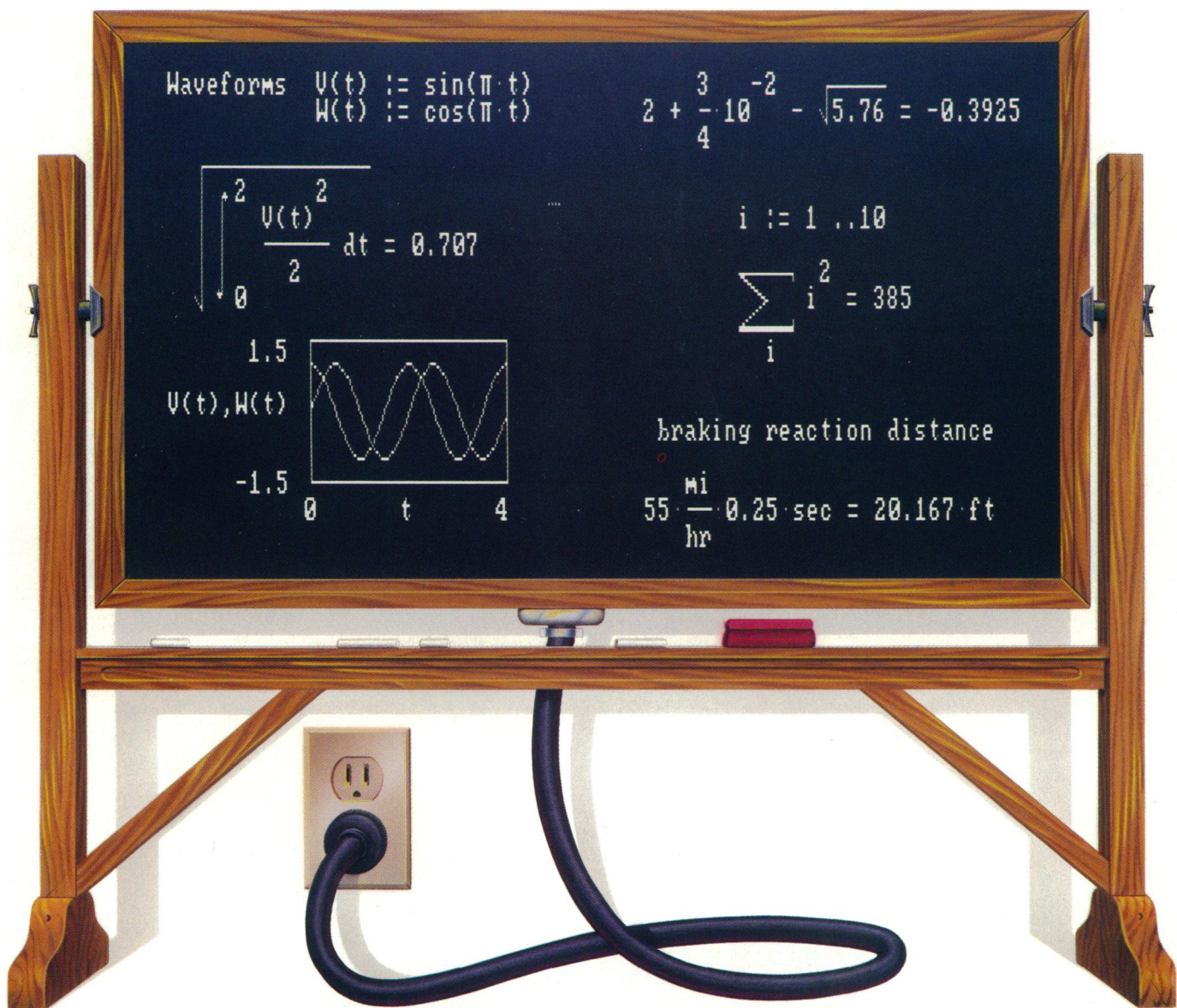
A postdoctoral fellowship in Ecology is now available at The Ecosystems Center of the Marine Biological Laboratory. Applications from both terrestrial and aquatic ecologists will be considered, but the focus of the applicants' interests should be on ecology at the ecosystem level. The successful applicant must have completed the Ph.D. degree before starting the fellowship (before 1 September 1987). He or she will be expected to work collaboratively. Applicants should send curriculum vitae, short statement of research interests, and the names and addresses of at least three reference before 15 March to: **Dr. John Hobbie, Director, The Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA 02543. Affirmative Action/Equal Opportunity Employer.**

ECOSYSTEMS ECOLOGIST/MODELER

The Ecosystems Center of the Marine Biological Laboratory is seeking applications for a new position at the level of assistant scientist/assistant professor. The successful applicant will be expected to work collaboratively with a diverse group of terrestrial and aquatic ecologists and especially to help strengthen research using simulation models. All applicants should have postdoctoral experience, with a broad background in ecosystem-level ecology. Experience in computer modeling is required. Applicants should send a curriculum vitae, short statement of research interests, and the names and addresses of at least three reference before 15 March to: **Dr. John Hobbie, Director, The Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA 02543. Affirmative Action/Equal Opportunity Employer.**

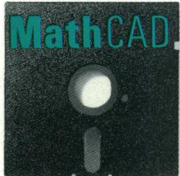
A limited number of **POSTDOCTORAL FELLOWSHIP** positions will be available in the fall of 1987 for research in marine sciences and ocean engineering. Research areas include physical oceanography, macroalgal botany, invertebrate larval biology, zooplankton biology, invertebrate reproduction and development, fish ecology and behavior; mechanical, electrical, or environmental engineering. Deadline for application is 1 April 1987. Specify area of interest with request for information brochure and application packet from: **Dr. Marsh J. Youngbluth, Postdoctoral Program, Harbor Branch Oceanographic Institution, Incorporated, 5600 Old Dixie Highway, Fort Pierce, FL 33450. An Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIPS (M.D. or Ph.D.) for advanced training involving basic and clinical research of relevance to biological psychiatry available from the **Mental Health Clinical Research Center for Effective Disorders at the University of Pittsburgh**, \$16,000 to \$23,000 annually commensurate with experience. Applications for fall 1987 Fellowships should be received before 15 February and include curriculum vitae, statement of research interests, and three letters of recommendation. Contact: **Ms. Hermi Rojahn, Western Psychiatric Institute and Clinic, E-1213, 3811 O'Hara Street, Pittsburgh, PA 15213.**



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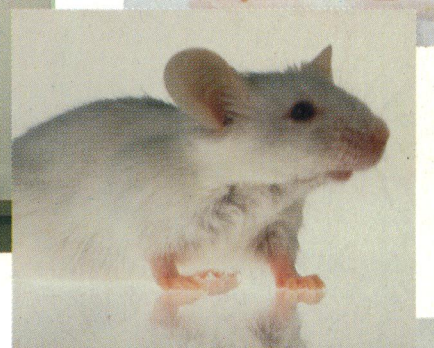
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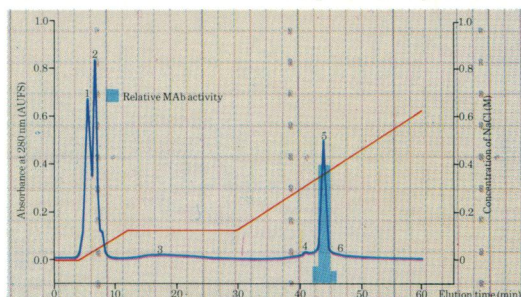
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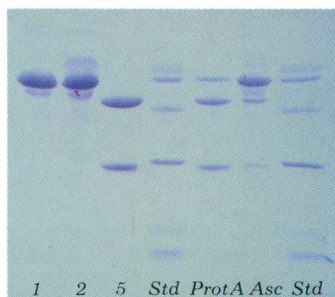
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