

classifications of algal assemblages, perhaps because of the impossibility of doing justice to an enormous algal literature in a single chapter.

With four chapters dealing with community structure or classification and none devoted specifically to production, energy flow, and the role of the macrophytic vegetation in the dynamics of the littoral, the book is unbalanced. It would also have benefitted from a chapter on sampling, with pointers on data analysis of the highly patchy macrophytic vegetation, a subject barely touched upon in the chapter by Goltzman *et al.*, and a second one on the functioning of emergent macrophyte communities, whose ecology receives short shrift. Yet most of the chapters are good in their own right, and the book provides at least a partial synthesis of the literature on aquatic macrophytes. It does not do the same with respect to the microphytes, its broad title notwithstanding.

JACOB KALFF

Department of Biology, McGill University,  
Montreal H3A 1B1, Canada

## Books Received

**Archives of Heat Transfer.** Vol. 1. Naim Afgan, Ed. Hemisphere, New York, 1988. viii, 466 pp., illus. \$95.

**The Artificial Intelligence Debate.** False Starts, Real Foundations. Stephen R. Graubard, Ed. MIT Press, Cambridge, MA, 1989. iv, 311 pp., illus. Paper, \$9.95. Reprinted from *Daedalus*, vol. 117, no. 1 (1988).

**Asymptotic Analysis of a Class of Perturbed Korteweg-de Vries Initial Problem Values.** F. de Kerf. Centrum voor Wiskunde en Informatica, Amsterdam, 1988. viii, 180 pp. Paper, Dfl. 26.70. CWI Tract 50.

**Beyond the Atom.** The Philosophical Thought of Wolfgang Pauli. K. V. Laurikainen. Springer-Verlag, New York, 1988. xx, 234 pp., illus. Paper, \$29. Translated from the Finnish edition (1985).

**Bergson and Modern Thought.** Towards a Unified Science. Andrew C. Papanicolaou and Pete A. Y. Gunter, Eds. Harwood, New York, 1987. xxii, 394 pp., illus. \$79. Models of Scientific Thought, vol. 3. Based on a conference, Galveston, TX, Feb. 1984.

**Biological Membranes.** Aberrations in Membrane Structure and Function. Manfred L. Karnovsky, Alexander Leaf, and Liana C. Bolis, Eds. Liss, New York, 1988. xviii, 406 pp., illus. \$96. Progress in Clinical and Biological Research, vol. 282. From a conference, Crans-sur-Sierre, Switzerland, June 1987.

**Ciera Autogiros.** The Development of Rotary-Wing Flight. Peter W. Brooks. Smithsonian Institution Press, Washington, DC, 1988. 384 pp., illus. \$22.50.

**Coastal Ocean Studies off Natal, South Africa.** Eckart H. Schumann, Ed. Springer-Verlag, New York, 1988. viii, 271 pp., illus. Paper, \$30.90. Lecture Notes on Coastal and Estuarine Studies, vol. 26.

**The Color Atlas of Galaxies.** James D. Wray. Cambridge University Press, New York, 1988. xii, 189 pp. \$79.50.

**Commercial Opportunities in Space.** F. Shahrokhi, C. C. Chao, and K. E. Harwell, Eds. American Institute of Aeronautics and Astronautics, Washington, DC, 1988. xviii, 540 pp., illus. \$79.95; to AIAA members, \$49.95. Progress in Astronautics and Aeronautics, vol. 110. Based on a symposium, Taipei, Taiwan, April 1987.

**Comparative Physiology of the Vertebrate Kidney.** William H. Dantzler. Springer-Verlag, New York, 1989. x, 198 pp., illus. \$113. Zoophysiology, vol. 22.

**Comparative Pulmonary Physiology.** Current Concepts. Stephen C. Wood, Ed. Dekker, New York, 1988. xxviii, 854 pp., illus. \$150. Lung Biology in Health and Disease, vol. 39.

**Developing Theories of Mind.** Janet W. Astington, Paul L. Harris, and David R. Olson, Eds. Cambridge University Press, New York, 1988. xii, 447 pp., illus. \$44.50. From conferences, Toronto, Ontario, May 1986, and Oxford, U.K., June 1986.

**Disease and Distinctiveness in the American South.** Todd L. Savitt and James Harvey Young, Eds. University of Tennessee Press, Knoxville, 1988. xx, 211 pp., illus. \$24.95. Based on a meeting, Memphis, TN, 1982.

**Diseases in the Ancient Greek World.** Mirko D. Grmek. Johns Hopkins University Press, Baltimore, 1988. xiv, 458 pp. \$45. Translated from the French edition (Paris, 1983) by Mireille Muellner and Leonard Muellner.

**Dyadic Decision Making.** David Brinberg and James Jaccard, Eds. Springer-Verlag, New York, 1989. xii, 351 pp. \$78.

**Dynamics of Ordering Processes in Condensed Matter.** S. Komura and H. Furukawa, Eds. Plenum, New York, 1988. xx, 574 pp., illus. \$110. From a symposium, Kyoto, Japan, Aug. 1987.

**Ecological Diversity and Its Measurement.** Anne E. Magurran. Princeton University Press, Princeton, 1988. x, 179 pp., illus. \$45; paper, \$14.95.

**Ecology and Effectiveness of Aphidophaga.** E. Niemczyk and A. F. G. Dixon, Eds. SPB, The Hague, 1988. 341 pp., illus. \$85. From a symposium, Teresin, Poland, Aug.-Sept. 1987.

**Ecology of Reptiles.** Harold Heatwole and Janet Taylor. Beatty, Chipping Norton, Australia, 1987. xviii, 325 pp., illus., + plates. \$44. Australian Ecology Series.

**Ecotoxicology.** Problems and Approaches. Simon A. Levin *et al.*, Eds. Springer-Verlag, New York, 1989. xiv, 547 pp., illus. \$49. Springer Advanced Texts in Life Sciences.

**Electrochemical Surface Science.** Molecular Phenomena at Electrode Surfaces. Manuel P. Soriaga, Ed. American Chemical Society, Washington, DC, 1988. xii, 553 pp., illus. \$94.95. ACS Symposium Series, vol. 378. From a symposium, New Orleans, LA, Aug.-Sept. 1987.

**Elementary and Secondary Education for Science and Engineering.** A Technical Memorandum. U.S. Congress Office of Technology Assessment, Washington, DC, 1988 (available from Superintendent of Documents, Washington, DC). viii, 146 pp., illus. Paper, \$7.

**Filamentous Fungi.** D. L. Hawksworth and B. E. Kirsop, Eds. Cambridge University Press, New York, 1988. xii, 209 pp., illus. \$29.95. Living Resources for Biotechnology.

**Genetic Recombination.** Raju Kucherlapati and Gerald R. Smith, Eds. American Society for Microbiology, Washington, DC, 1988. xii, 731 pp., illus. \$65; to ASM members, \$49.

**The Global Impact of AIDS.** Alan F. Fleming *et al.*, Eds. Liss, New York, 1988. xxxii, 426 pp., illus. \$69.50; paper, \$29.50. From a conference, London, U.K., March 1988.

**Health Care Research in an HMO.** Two Decades of Discovery. Merwyn R. Greenlick, Donald K. Freeborn, and Clyde R. Pope, Eds. Johns Hopkins University Press, Baltimore, 1988. xx, 346 pp., illus. \$45. Johns Hopkins Series in Contemporary Medicine and Public Health.

**Heat Transfer in Turbulent Mixed Convection.** B. S. Petukhov and A. F. Polyakov. B. E. Launder, trans. ed. Hemisphere, New York, 1988. xxiv, 216 pp., illus. \$50. Translated from the Russian edition (Moscow, 1986) by R. Hainsworth and G. Rybchinskaya.

**Ideology and Rationality in the History of the Life Sciences.** Georges Canguilhem. MIT Press, Cambridge, MA, 1989. xii, 160 pp. \$19.95. Translated from the French edition (Paris, 1977) by Arthur Goldhammer.

**Immunochemical Approaches to Coastal, Estuarine and Oceanographic Questions.** Clarice M. Yentsch, Frances C. Mague, and Paul K. Horan, Eds. Springer-Verlag, New York, 1988. xvi, 399 pp., illus. Paper, \$98. Lecture Notes on Coastal and Estuarine Studies, vol. 25. From a workshop, Portland, ME, Oct. 1986.

**Indo-European Origins.** V. R. Curtis. Lang, New York, 1988. viii, 212 pp., illus. \$31.25. American University Series, vol. 11.

**Interstellar Matters.** Essays on Curiosity and Astronomical Discovery. Gerrit L. Verschuur. Springer-Verlag, New York, 1989. vi, 320 pp., illus. \$29.95.

**Intracellular Bacteria.** W. Goebel, Ed. Springer-Verlag, New York, 1988. x, 179 pp., illus. \$79. Current Topics in Microbiology and Immunology, vol. 138.

**Introduction to Rock Mechanics.** Richard E. Goodman. 2nd ed. Wiley, New York, 1989. xiv, 562 pp., illus. \$61.04.

**The Nuclear Age.** Atomic Energy, Proliferation, and the Arms Race. William Sweet, 2nd ed. Congressional Quarterly, Washington, DC, 1988. xiv, 340 pp., illus. Paper, \$14.95.

**Nuclear Magnetic Resonance Spectroscopy.** Frank A. Bovey, Lynn Jelinski, and Peter A. Mirau. 2nd ed. Academic Press, San Diego, CA, 1988. xiv, 653 pp., illus. \$49.95.

**Objects and Others.** Essays on Museums and Material Culture. George W. Stocking, Jr., Ed. University of Wisconsin Press, Madison, 1988. viii, 258 pp., illus. \$25; paper, \$12.95. History of Anthropology, vol. 3. Reprint, 1985 ed.

**Off School, In Court.** An Experimental and Psychiatric Investigation of Severe School Attendance Problems. Ian Berg, Imogen Brown, and Roy Hullin. Springer-Verlag, New York, 1988. \$50. Research in Criminology.

**The Palaeoenvironment of East Asia from the Mid-Tertiary.** Pauline Whyte *et al.*, Eds. Centre of Asian Studies, University of Hong Kong, 1988. 2 vols. Vol. 1, Geology, Sea Level Changes, Palaeoclimatology and Palaeobotany. xviii pp. + pp. 1-740, illus. Paper, HK\$200. Vol. 2, Oceanography, Palaeozoology and Palaeoanthropology. xviii pp. + pp. 741-1219, illus. Paper, HK\$140. From a conference, Hong Kong, Jan. 1987.

**Physical Principles of Physiological Phenomena.** Selected Reprints. Bernard Hoop, Ed. American Association of Physics Teachers, College Park, MD, 1988. iv, 123 pp., illus. Paper, \$16.

**Post-Lesion Neural Plasticity.** Hans Flohr, Ed. Springer-Verlag, New York, 1988. xvi, 708 pp., illus. \$114. From a symposium, Bremen, F.R.G., Aug. 1987.

**Les Pouvoirs de l'Odeur.** Annick le Guérer. Bourin, Paris, 1988. 349 pp. Paper, 110 F.

**A Practical Guide to Molecular Cloning.** Bernard Perbal. 2nd ed. Wiley-Interscience, New York, 1988. xx, 811 pp., illus., + loose charts.

**The Social Impact of AIDS in the U.S.** Richard A. Berk, Ed. Abt, Cambridge, MA, 1988. viii, 143 pp. \$30; paper, \$19.95.

**The Social Impact of the Chernobyl Disaster.** David R. Marples. St. Martin's, New York, 1988. xviii, 313 pp. + plates. \$35; paper, \$14.95.

**Solutions Manual and Computer Programs for Physical and Computational Aspects of Convective Heat Transfer by T. Cebeci and P. Bradshaw.** Tuncer Cebeci. Springer-Verlag, New York, 1989. x, 113 pp., illus. Paper, \$14.98.

**The Soviet Manned Space Program.** An Illustrated History of the Mean, the Missions, and the Spacecraft. Phillip Clark. Orion, New York, 1988. 192 pp. \$24.95.

**Spain at the Dawn of History.** Iberians, Phoenicians, and Greeks. Richard J. Harrison. Thames and Hudson, New York, 1988. 176 pp., illus. \$27.50. Ancient Peoples and Places.

**Space Safety and Rescue, 1986-1987.** Gloria W. Heath, Ed. Published for the American Astronautical Society by Univelt, San Diego, CA, 1988. xii, 347 pp., illus. \$55; paper, \$45. Science and Technology Series, vol. 70. From symposia, Innsbruck, Austria, Oct. 1986, and Brighton, U.K., Oct. 1987.

**Statistical Reliability Theory.** I. B. Gertsbakh. Dekker, New York, 1988. xvi, 331 pp., illus. \$135. Probability, vol. 4.

**Statistical Reasoning in Law and Public Policy.** Joseph L. Gastwirth. Academic Press, San Diego, CA, 1988. 2 vols. Vol. 1, Statistical Concepts and Issues of Fairness. xxii pp. + pp. 1-465 + index. Vol. 2, Tort Law, Evidence, and Health. viii pp. + pp. 467-925 + index. Each vol., \$84.50. Statistical Modeling and Decision Science. "For students of law and public policy" and for those engaged in the planning or assessment of statistical studies.

**Technology and War.** From 2000 B.C. to the Present. Martin van Creveld. Free Press (Macmillan), New York, 1988. x, 342 pp. + plates. \$22.95.

**Technology in Education.** Looking Toward 2020. Raymond S. Nickerson and Philip P. Zoghbi. Erlbaum, Hillsdale, NJ, 1988. xviii, 330 pp. Paper, \$49.95. Technology in Education Series.

**The Theory of Evolution and Dynamic Systems.** Mathematical Aspects of Selection. Josef Hofbauer and Karl Sigmund. Cambridge University Press, New York, 1988. viii, 341 pp., illus. \$65; paper, \$19.95. London Mathematical Society Student Texts, vol. 7.

**Theory of Nonlinear Lattices.** Morikazu Toda. 2nd ed. Springer-Verlag, New York, 1989. x, 223 pp., illus. Paper, \$34.50. Springer Series in Solid-State Sciences, vol. 20.

**Thermal Conduction in Semiconductors.** C. M. Bhandari and D. M. Rowe. Wiley, New York, 1988. xx, 224 pp., illus. \$24.95.

# Books from AAAS

## Issues in Science and Technology

### Scientists and Journalists Reporting Science as News

EDITED BY  
Sharon M. Friedman  
Sharon Dunwoody  
Carol L. Rogers

**Scientists and Journalists: Reporting Science as News**, Edited by Sharon M. Friedman, Sharon Dunwoody, and Carol L. Rogers.

The public is interested in science and depends largely on the mass media for the latest information. But how well do scientists and journalists communicate with each other and to the public? This book examines the links between scientists and journalists as seen through the eyes of both. 1986; 334 pp.; hardcover \$24.95 (\$19.95 for AAAS members); AAAS Publication #86-20.

### SCIENCE and CREATION

Evolutionary, Theological,  
& Educational Perspectives

EDITED BY  
Robert W. Hanson

**Science and Creation: Geological, Theological, and Educational Perspectives**, Edited by Robert W. Hanson.

The creation/evolution controversy is examined by scientists, theologians, educators, and historians. These authors view the controversy as a false dichotomy and as an attempt to force a choice between two ideas that are not mutually exclusive. Includes case studies from several states. 1986; 240 pp.; hardcover \$24.95 (\$19.95 for AAAS members); AAAS Publication #86-19.

### Low Tech Education IN A HIGH TECH WORLD

CORPORATIONS AND  
CLASSROOMS IN THE NEW  
INFORMATION SOCIETY  
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**Low Tech Education in a High Tech World: Corporations and Classrooms in the New Information Society**, By Elizabeth L. Useem.

Are students in the U.S. developing the skills necessary for a high technology society, or will it be technological boom, educational gloom? Useem examines education in California's "Silicon Valley" and Boston's Route 128, two of the country's leading high tech centers, and suggests ways for education and industry to forge a stronger partnership for the future. 1986; 278 pp.; hardcover \$19.95 (\$15.95 for AAAS members); AAAS Publication #86-21.

### The Gene-Splicing Wars

Reflections on the  
Recombinant DNA Controversy

EDITORS  
Raymond A. Zilinskas  
Burke K. Zimmerman  
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**The Gene-Splicing Wars: Reflections on the Recombinant DNA Controversy**, Edited by Raymond A. Zilinskas and Burke K. Zimmerman.

Questions of safety and ethics about recombinant DNA techniques continue to surface. This book takes a look at historical, political, industrial, scientific, and international aspects of these issues. The authors show how lessons learned from the experience can be used to cope with similar issues in the future. 1986; 288 pp.; hardcover \$24.95 (\$19.95 for AAAS members); AAAS Publication #86-18.

### SCIENCE AS INTELLECTUAL PROPERTY

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**Science as Intellectual Property: Who Controls Scientific Research?** By Dorothy Nelkin.

Who controls research? A growing number of legal and administrative disputes raise critical issues of professional sovereignty, scientific secrecy, and proprietary rights. Nelkin offers cases illustrating the dilemmas that arise as the interests of scientists, the rights of citizens, and the security needs of government and industry come into increasing conflict. 1984; 130 pp.; softcover \$9.00 (\$7.25 for AAAS members); AAAS Publication #84-17.

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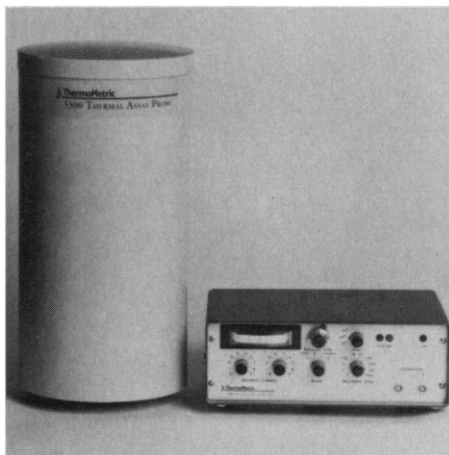
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### Antibodies

Monoclonal antibodies to the following recombinant viral proteins of the human immunodeficiency virus: p24, p17, reverse transcriptase, gp41, and gp120. Beckman Instruments. Circle 476.

Antibody to the 200-kD and the 70-kD components of the major polypeptide subunits of neurofilaments. DAKO. Circle 477.

Monoclonal antibody to the muscle cell protein desmin. DAKO. Circle 478.

Monoclonal antibodies to human interleukin-1 $\alpha$  and interleukin-1 $\beta$ . L.A.O. Enterprises. Circle 479.

Identi-T  $\alpha$ F1, a monoclonal antibody to the alpha chain of the human  $\alpha\beta$  T cell antigen receptor. T Cell Sciences. Circle 480.

### Literature

92X Spectrum MASTER Gamma Spectroscopy Workstations is a brochure about a compact, personal computer-based multichannel analysis system for gamma spectroscopy with germanium detectors. EG&G Ortec. Circle 486.

The monograph *Memory Pointers 5: RISC* discusses memory requirements for reduced instruction-set computers (RISC) and current RISC architectures. Clearpoint Research. Circle 488.

*Biomedical Applications of Mass Spectroscopy* is a wall chart with reference data for the interpretation of peptide and protein mass spectra. Finnigan MAT (United Kingdom). Circle 489.



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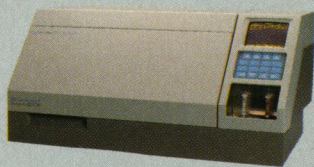
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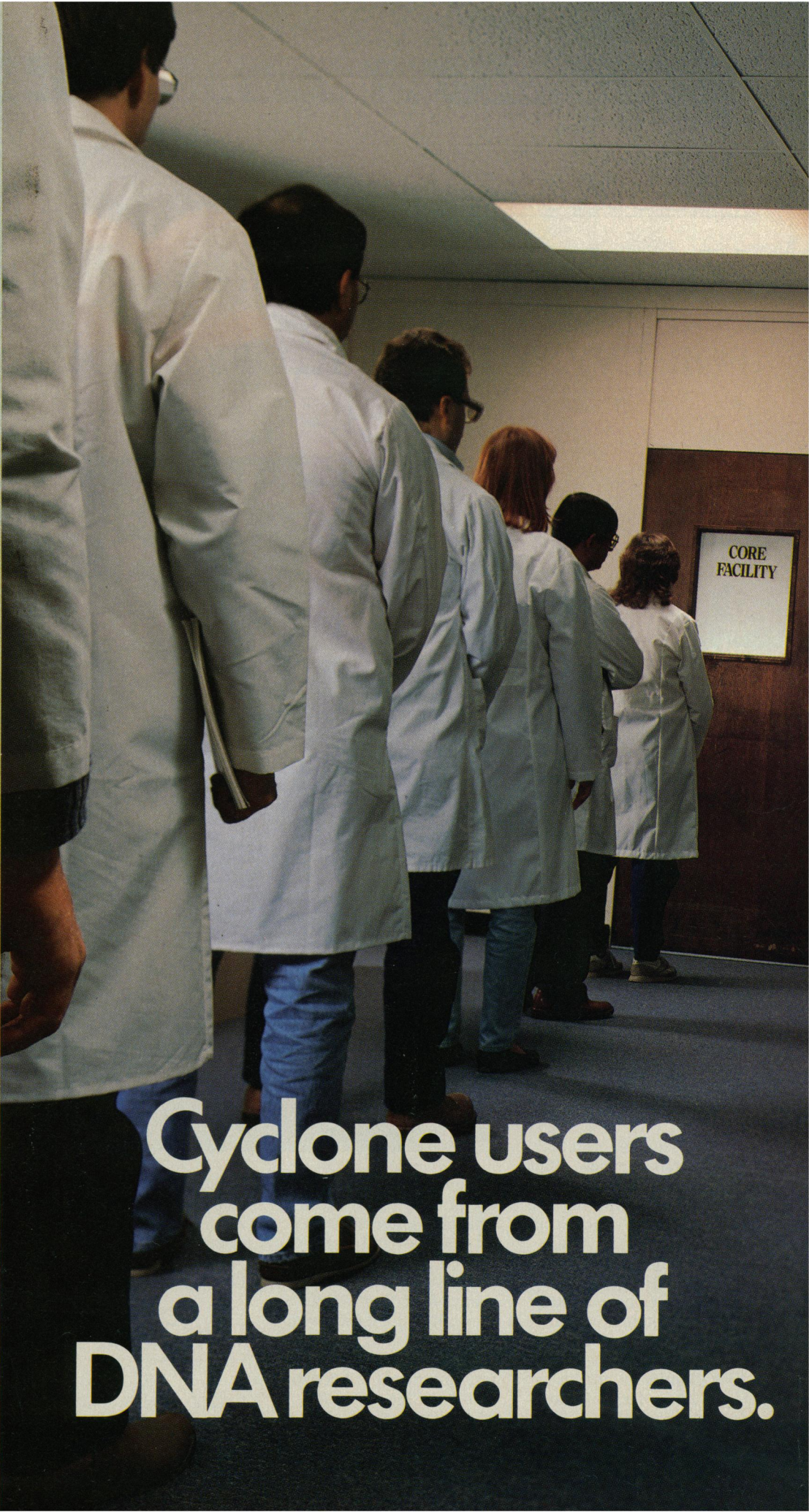
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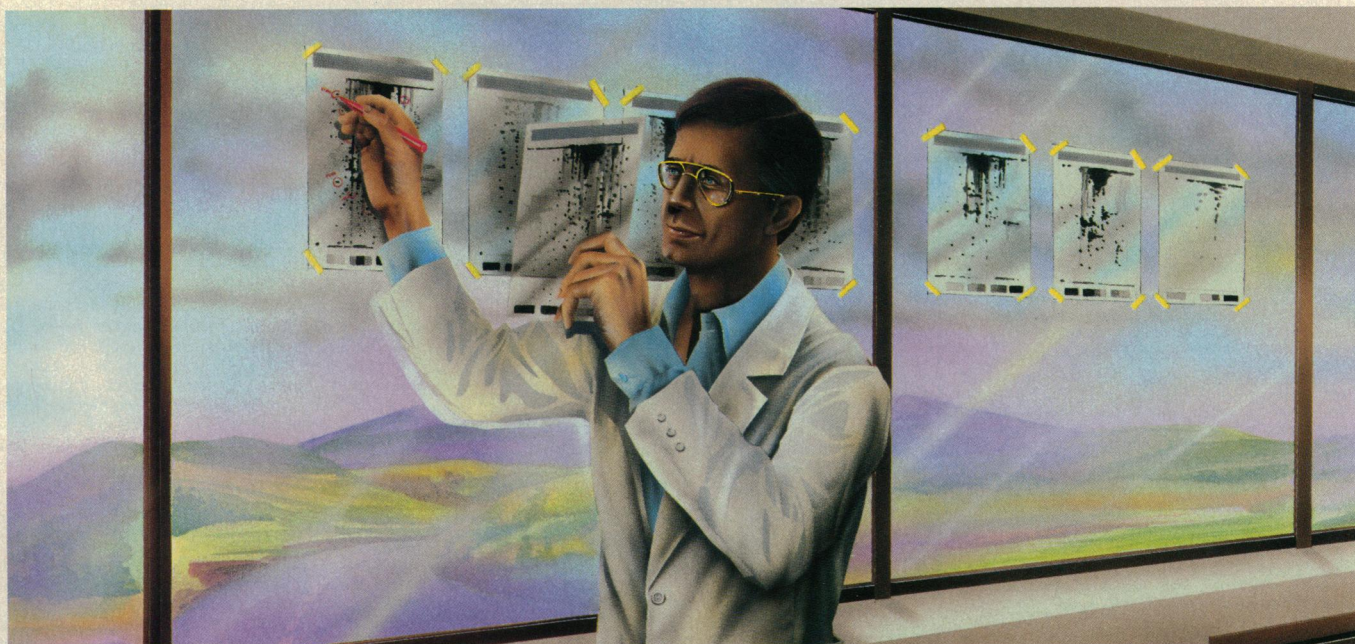
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# Personnel Placement

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

**LINE CLASSIFIED ADVERTISING DEADLINES:** Thursday, 10 a.m., 2 weeks prior to issue date (mailed on issue date). For deadlines for display advertising, please contact Scherago Associates.

**POSITIONS WANTED:** 40¢ per word, plus \$4 for use of box number, per week. \$10 minimum, per week. Prepayment required. This rate is available only to individuals seeking jobs.

**LINE CLASSIFIED (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth):** \$40.00 per line; \$400 minimum, per week (minimum charge covers one inch on a single column; one inch equals 10 lines of 52 characters and spaces per line). No charge for use of box number. No agency commission for ads less than 4 inches. No cash discount. Prepayment required for all foreign ads. Purchase orders and/or cover letter including billing address required for all other advertising.

## To ESTIMATE ad cost:

Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines x \$40.00 = approximate cost of ad. (This is an approximate cost ONLY: Allow for variation between estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

## CANCELLATION POLICY:

NOTE: Ad cancellations made after Thursday, TWO weeks prior to issue date incur a 10% production charge. Final deadline for cancellations is 12 p.m. Tuesday, ONE week prior to issue date. Cancellations must be in writing.

Send copy for all **Positions Wanted** ads and **Line Classified** ads less than 1/6 page in size (39 lines) to:

**SCIENCE Classified Advertising**  
1333 H Street, NW, Room 940  
Washington, DC 20005  
Telephone: 202-326-6555

Send copy for **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads to:

**Scherago Associates, Inc.**  
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

**Biochemical/Food/Chemical Engineer, Ph.D.**—Five years of research/industrial/consulting experience in chemical engineering, food processing, and biotechnology. Areas of interest include crystallization of biochemicals and industrial compounds, food microbiology and product development, production of biochemicals and downstream processing. Seeks industrial or academic position in research, management, consulting or teaching. Box 51, **SCIENCE**.

**Cardiovascular Physiologist, Ph.D.**, seeks position in academia at assistant professor level. Interest and background in cardiac function during circulatory shock, myocardial ischemia. Seven years of postdoctoral experience. Also excellent background in computers. Excellent teacher and research scientist. Curriculum vitae available on request. Will also consider industry. Prefer Chicago area but will consider other locations. Box 52, **SCIENCE**.

## POSITIONS WANTED

**Biologist, Ph.D. (April 1989).** Experience in protein isolation, purification and characterization, including HPLC. Seeking challenging postdoctoral position in a laboratory with ongoing research in protein chemistry. Box 47, **SCIENCE**.

**Human Psychophysicologist, Ph.D.** Research publications, teaching, and postdoctoral experience in the social, perceptual, and biological foundations of motivation and emotion. Seeks academic position offering teaching and research opportunities. Box 53, **SCIENCE**.

**Neuroscientist, Ph.D.** Five years of postdoctoral research experience in neuropharmacology, neurodegenerative disease, neuroanatomy. Immunocytochemistry, computerized image analysis, morphological and analytical histochemistry. Desires nonacademic research position. Willing to relocate. Available immediately. Box 17, **SCIENCE**.

**Veterinary Pathologist, D.V.M., Ph.D.**, boarded; extensive teaching, research and service experience; mandatory retirement August 1989; good health, seeks challenging position. Box 49, **SCIENCE**.

## POSITIONS OPEN

**ADVANCED POSTDOCTORAL OR JUNIOR FACULTY** positions for studies of the cell and molecular biology of estrogen and progesterone receptors in breast cancer. Experience with protein immunochromatography, site-directed mutagenesis and gene transfer, and/or structural analysis of mRNAs desirable. Send curriculum vitae and references to: **Dr. K. B. Horwitz, Department of Medicine-B151, University of Colorado HSC, 4200 East Ninth Avenue, Denver, CO 80262.** An Equal Opportunity/Affirmative Action Employer.

Joint appointment Department of Ophthalmology and Visual Science and Department of Physiology: Full-time academic appointment **ASSISTANT PROFESSOR** level, Ph.D. or M.D. Independent investigator who wishes to address basic cell functions of the retinal pigment epithelium. Send curriculum vitae and bibliography along with statement of your research interests to: **Chairman, Search Committee, Department of Ophthalmology and Visual Science, Yale University School of Medicine, P.O. Box 3333, New Haven, CT 06510-8061.** Affirmative Action/Equal Opportunity Employer.

**ASSISTANT PROFESSOR OF PHYSIOLOGY AND PHARMACOLOGY.** Tenure-track position available for 1 July 1989. Candidate should have Ph.D. and/or D.D.S., with qualifications and interest to teach dental and graduate students, and conduct research primarily in muscle/nervous system physiology (and pharmacology). Send letter of application, curriculum vitae, and names, addresses, and telephone numbers of three references to: **Dr. Donald B. Doemling, Chairman, Department of Physiology and Pharmacology, School of Dentistry, Loyola University Medical Center, Maywood, IL 60153.** Loyola University of Chicago is an Equal Opportunity/Affirmative Action Employer.

## ASSISTANT PROFESSOR—PSYCHIATRY

University of Minnesota's Department of Psychiatry seeks a psychiatrist to fill a probationary, tenure-track position as assistant professor. The position entails commitment to research and training. The successful applicant will share with other faculty members responsibility for a treatment team involved in the care of psychiatry, especially substance abuse disorder, and cross-cultural psychiatric care. This team, in addition to treating patients, has the responsibility of training residents, medical students, and psychology interns. Applicants should be Board-eligible, have completed psychiatric residency, and demonstrate involvement in quality psychiatric research accepted or published in peer-reviewed journals. Send résumé to: **Joseph Westermeyer, M.D., UMHC Box 393, University of Minnesota Hospitals, Minneapolis, MN 55455.**

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

## POSITIONS OPEN

The Department of Biochemistry, Duke University Medical Center, invites applications for the position of **ASSISTANT PROFESSOR** (tenure-track). The person will be expected to establish a strong independent research program and to teach both medical and graduate students. All applicants are welcome, although preference will be given to those with experience in physical biochemistry and structural biology. Send résumé, summary of research interest, and three letters of reference to: **Robert L. Hill, Duke University Medical Center, Durham, NC 27710.** Duke University is an Equal Opportunity/Affirmative Action Employer. The closing date for receipt of applications is 15 May 1989.

East Tennessee State University—Department of Biochemistry, Quillen-Dishner College of Medicine, has an immediate opening for a term-appointed **ASSISTANT PROFESSOR**, nontenure-track. Applicants should be molecular immunologists, with 3 years of postdoctoral training in research concerning interleukin synthesis, secretion and function. Additional requirements include an extensive background in cellular immunology and experience in flow cytometric and molecular genetic techniques demonstrated by publications in these areas. The appointee is expected to establish a strong research program in cytokine function and molecular mechanisms of macrophage activation. Candidates should have demonstrated the capability to obtain federal funding. The appointed candidate is expected to obtain external research funding, carry out research, and teach medical students and graduate students general biochemistry and advanced subjects. Review of applications will start 1 April 1989. Send complete résumé to: **Department of Biochemistry Chair, Quillen-Dishner College of Medicine, Box 19,930A, East Tennessee State University, Johnson City, TN 37614.** ETSU is an Equal Employment Opportunity/Affirmative Action Employer and employs only U.S. citizens and aliens authorized to work in the United States.

**ASSISTANT RESEARCH PROFESSOR OF BIOCHEMISTRY.** The University of Kentucky is seeking an assistant research professor to work in the area of calcium regulation and calcium pumping ATPases. A Ph.D. in biochemistry is required with three or more years of postdoctoral experience in protein chemistry, cell biology and calcium regulation and flux mechanisms. Send résumé and the names and addresses of three references, postmarked no later than 28 April 1989, to: **Thomas C. Vanaman, Department of Biochemistry, University of Kentucky, Lexington, KY 40536-0084.** An Equal Opportunity/Affirmative Action Employer.

The Department of Biology at Morehouse College invites applications for a tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** level in biochemistry to begin in September 1989. Applicants must hold a Ph.D. degree in biochemistry and be prepared to teach a general course in biochemistry to juniors and an advanced biochemistry seminar course to senior undergraduate students. Faculty members are expected to maintain active research programs which involve undergraduate and graduate students. Closing date: 12 May 1989 or until suitable candidates are found. Applicants should submit their curriculum vitae, graduate academic transcript and a statement of teaching and research goals, and arrange to have three letters of recommendation sent to: **Dr. J. K. Haynes, Chairman, Department of Biology, Morehouse College, 830 Westview Drive, SW, Atlanta, GA 30314.**

## ASSISTANT/ASSOCIATE PROFESSOR OF ANATOMY

We are seeking dynamic individual to be in charge of the History Lecture and Laboratory Courses, to assist in other didactic courses and to fulfill duties involving a combination of two or more of the following: research, clinical duties, and/or administrative duties. Minimum requirement Ph.D. in cell biology, genetics, anatomy, or related field; demonstrated experience and success in teaching, research, administration, grantsmanship and funding. Teaching knowledge of anatomy, ocular anatomy and related subjects. Position available 1 July 1989. Interested candidates please submit résumé and salary history requirements to: **Director of Personnel, Pennsylvania College of Optometry, 1200 West Godfrey Avenue, Philadelphia, PA 19141.** No phone calls please. Application deadline 31 May 1989. Affirmative Action Employer/Equal Opportunity Employer.

## POSITIONS OPEN

**ASSISTANT PROFESSOR.** The Channing Laboratory, Brigham and Women's Hospital, Harvard Medical School, is seeking an individual to participate in studies on the molecular regulation of bacterial polysaccharide production. We are seeking an individual with 1 to 3 years of postdoctoral experience in areas such as genetic regulation of polysaccharide production, transposon mutagenesis of regulatory and biosynthetic genes, or complementation analysis of polysaccharide deficient strains. The potential to generate independent funding must be strong. Please send curriculum vitae and names of three references to: **Dr. Dennis Kasper, Co-Director, Channing Laboratory, 180 Longwood Avenue, Boston, MA 02115.**

### UNIVERSITY OF MINNESOTA ASSISTANT PROFESSOR

The University of Minnesota invites applications for one full-time position in the field of human population genetics at the rank of assistant professor (tenure-track). The position will have a primary appointment in the Department of Laboratory Medicine and Pathology and a joint appointment in the Institute of Human Genetics. Candidates with a Ph.D. and/or M.D. with advanced training in population genetics or related disciplines, plus 2 years of relevant post-doctoral experience that includes human gene mapping or complex segregation analysis will be considered. Candidates will be expected to develop a vigorous, independent research program; participate in teaching; and interact with Institute members in the development of the Institute. Requirements: In-depth knowledge of multilocus linkage analysis; complex segregation analysis and/or evolution at the molecular level. Please send curriculum vitae; a short description of research plans; and three letters of recommendation to: **Chair, Search Committee, Institute of Human Genetics, University of Minnesota Medical School, Box 206 UMHC, Harvard Street at East River Road, Minneapolis, MN 55455.** The last date for receipt of applications is 31 July 1989. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

### ASSOCIATE DEAN ACADEMIC HEALTH SCIENCE CENTER DIVISION OF BIOLOGICAL AND BIOMEDICAL SCIENCES

**Responsibilities:** Under the supervision of the Associate Vice President, the Associate Dean has general responsibility to work creatively with the Associate Vice President in Undergraduate and Graduate Studies and Research and will facilitate seeking grant support through extramural resources. Also included are: overseeing academic advising of undergraduate majors, monitoring of students' completion of degree requirements, advertising of programs, development of new programs, teaching of at least one course/term.

**Qualifications:** An earned doctorate in biology, with administrative experience in higher education—preferably at the departmental chair level. Candidate should have evidence of achievement in research and scholarship appropriate for the rank of associate professor. Letters of application should be received by 26 April 1989, and must include curriculum vitae, official transcript, three letters of reference. Please send to:

**Sr. John Karen Frei, O.P., Ph.D.**  
Associate Vice President  
Academic Health Science Center  
Barry University  
11300 Northeast Second Avenue  
Miami Shores, FL 33161

**BIOCHEMISTRY:** Tenure-track, **ASSISTANT OR ASSOCIATE PROFESSORSHIP** beginning 1 January 1990. Ph.D. required. To teach and develop a research program in any area of biochemistry. Postdoctoral experience and background with recombinant DNA methods preferred. Send curriculum vitae and names of three references by 1 May 1989 to: **Dr. Michael McCarville, Chair, Department of Chemistry, Western Michigan University, Kalamazoo, MI 49008.** *Affirmative Action/Equal Opportunity Employer.*

## DEPARTMENT OF HEALTH AND HUMAN SERVICES Public Health Service National Institute of Mental Health

# Extramural Research Staff Fellowship Program

The National Institute of Mental Health (NIMH) in the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), Public Health Service announces a unique opportunity for both developing and well-established scientists to work closely with senior scientists and administrators in guiding its extramural research support programs. The Extramural Staff Fellowship Program will provide a limited number of fellowship appointments in the biomedical, neuroscience, behavioral, clinical and services research areas. Extramural staff fellowships are intended to give talented scientists at an early, mid-point, or senior level in their career an opportunity to participate in and bring new ideas to the scientific research supported at NIMH. Opportunities may also be available for extramural staff fellows to participate in the relevant research projects in collaboration with the Institute's intramural research program or with outside organizations. Fellows must hold an M.D., Ph.D., or equivalent degree. Salary will be in the \$29,000 to \$75,500 range, depending upon training, post-doctoral research experience, and the scope and complexity of the research skills required. Fellows would also be eligible for full Government benefits and leave. U.S. citizenship or permanent residency status is required. Appointments will be made for an initial period of up to two years, and may be extended. Positions will be located in Rockville, Maryland. Interested persons should contact either NIMH Director (Dr. Lewis Judd) or the Deputy Director (Dr. Alan Leshner) at 301-443-3673, or may submit a curriculum vitae in confidence to 5600 Fishers Lane, Room 17-95, Parklawn Building, Rockville, Maryland 20857.

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## POSITIONS OPEN

### BIOCHEMIST/IMMUNOCHEMIST

We're Pierce Chemical, an international life-science/biotech company. Our home base, Rockford, Illinois, is a mid-sized city located just minutes from Chicago and Milwaukee. Pierce has an opening in the Process Development Department for someone who is looking to grow with a successful company. We are seeking a Ph.D. scientist with experience in protein purification or immunology. This position offers significant opportunities for creative development and personal achievement.

Please send curriculum vitae, three references, and salary requirements to:

**Reference: R. L.  
Human Resource Manager  
Pierce  
P.O. Box 117  
Rockford, IL 61105  
Equal Opportunity Employer.**

**BIOCHEMISTRY—MOLECULAR BIOLOGY—FACULTY POSITIONS** available for research in the area of chemistry and function of gastric and salivary secretions. Seeking M.D., Ph.D. or D.D.S. applicants with interest in glycoprotein synthesis and processing, enzymology, biochemical pharmacology, immunology, proteoglycan and lipoprotein metabolism. Send résumé, statement of research interests, and references to: **Dr. B. L. Slomiany, Research Center, NJ-Dental School, UMDNJ, Newark, NJ 07103.**

### BIOLOGICAL PHYSICS CORNELL UNIVERSITY

**SENIOR RESEARCH ASSOCIATE** for position as supervising scientist for the Developmental Resource for Biophysical Imaging and Opto-electronics. Will have operating responsibility for the resource laboratories and ample opportunities for research applying modern physical optics to the molecular biophysics of cellular dynamics. Current emphasis on electro-optical microscopic image acquisition, digital image analysis, non-linear optics, photolysis and fluorescence photochemistry, confocal imaging, picometer imaging interferometry. Ph.D. in experimental biophysics, optical or chemical physics or biophysical chemistry should be appropriate. This position carries laboratory management responsibility as well as research opportunity for interdisciplinary research with collaborating biophysicists and biologists. Some postdoctoral experience desirable.

**A POSTDOCTORAL RESEARCH ASSOCIATE** position is also available in the Developmental Resource for Biophysical Imaging and Opto-electronics for research, innovative biophysical instrumentation development and opportunities for interdisciplinary research in molecular and cellular biophysics.

Send résumé, statement of research interests, names of three referees or letters of recommendation to: **Professor Watt W. Webb, Cornell University, Applied and Engineering Physics, Clark Hall, Ithaca, NY 14853-2501. Cornell University is an Equal Opportunity/Affirmative Action Employer.**

**BOTANIST.** Bishop Museum is seeking an assistant/associate botanist to conduct original systematic and evolutionary research on Hawaiian and tropical Pacific flowering plants and to provide expertise on Hawaiian plants to the scientific community and public. This is a Bishop Museum-funded position. Candidates must have a Ph.D. degree and preferably some experience with floristic botany. Send curriculum vitae and letter of application to: **Research Botanist Search Committee, Bishop Museum, P.O. Box 19000-A, Honolulu, HI 96817-0916.**

*An Equal Opportunity Employer.*

Position available: We are seeking a **CARDIOVASCULAR PHYSIOLOGIST** with a background in peripheral vascular physiology and blood flow regulation to work with an established, well-funded atherosclerosis research group. Experience with lesion development and imaging preferred but not required. Entry level candidates encouraged to apply. Evidence of research productivity and teaching experience essential. Address all inquiries to: **George H. Rothblat, Ph.D., Professor and Chairman, Department of Physiology and Biochemistry, Medical College of Pennsylvania, Philadelphia, PA 19129.**

## POSITIONS OPEN

United States Environmental Protection Agency, Narragansett, Rhode Island, is accepting applications for (three) **BRANCH CHIEF, GM-14**, positions, starting salary \$48,592 per annum. Incumbents will supervise employees and manage resources of their respective branch and participate in planning and developing multidisciplinary research programs within the Laboratory. Each branch is responsible for a specific area of research: Ecosystems Branch for developing state-of-the-art ecological analysis techniques to assess ecosystems status and predict pollutant effects in marine ecosystems; Effects Branch for research to develop methods for assessing effects of pollutants on marine and estuarine populations, including developing and testing whole organism bioassays, developing and testing cellular and enzymatic bioassays and developing procedures for extrapolating laboratory results to field situations; Exposure Branch for developing methods to describe and quantify transport, transformation, bioaccumulation, and fate of pollutants in marine and estuarine environments in support of marine hazard assessment in oceans and estuaries. Candidates must be U.S. citizens; have (i) experience managing modern biological/ecological laboratory/field research programs, (ii) experience in supervising scientists and technicians, (iii) recognized expertise in the appropriate subject matter field. For further job information call: **Harvey Holm, 401-782-3004.** For application forms write to: **EPA, Personnel Office, P.O. Box 98516, Las Vegas, NV 89193-8516.** Applications will be accepted until 31 May 1989. If qualified, candidates are encouraged to apply for all three positions. *The United States Environmental Protection Agency is an Equal Opportunity Employer.*

### TEMPLE UNIVERSITY SCHOOL OF MEDICINE CHAIRMAN, DEPARTMENT OF BIOCHEMISTRY

Applications or nominations are invited for the Chair of the Department of Biochemistry. Candidates should have proven leadership ability and must be nationally recognized for their scientific contributions to biochemistry or related fields. The successful candidate must have demonstrated interest and ability in effective teaching and the capability of providing the administrative leadership to continue and extend the department's established strengths in research, teaching, and service. An excellent opportunity exists to expand an already strong department and to interact with the newly expanded Fels Research Institute for Molecular Biology and Cancer Research.

Applications will be accepted until 1 May 1989 and should include curriculum vitae, a summary of current research, copies of representative publications, a description of teaching and administrative experience and the names, addresses, and telephone numbers of three or more references. Mail applications to:

**Dr. John O'Neal  
Chair of the Search Committee  
Department of Pharmacology  
Temple University School of Medicine  
3400 North Broad Street  
Philadelphia, PA 19140**

*Affirmative Action/Equal Opportunity Employer.*

### UNIVERSITY OF COLORADO SCHOOL OF MEDICINE DENVER, COLORADO DEPARTMENT OF PHARMACOLOGY CHAIRPERSON

Applications and nominations are invited from candidates for the Chairperson of the Department of Pharmacology. Individuals with a strong commitment to medical and graduate education and distinguished accomplishments in basic research are encouraged to apply.

Please send curriculum vitae and names of references to:

**Dr. Frederick C. Battaglia  
Chairman, Pharmacology Search Committee  
Department of Pediatrics, School of Medicine  
University of Colorado Health Sciences Center  
4200 East 9th Avenue  
Denver, CO 80262**

*An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### CHAIR DEPARTMENT OF VETERINARY BIOLOGY COLLEGE OF VETERINARY MEDICINE UNIVERSITY OF MINNESOTA

Applications and nominations are invited for a tenured Professor and Chair of the Department of Veterinary Biology. The department includes 17 faculty in the disciplines of anatomy, biochemistry, physiology and pharmacology, and occupies modern laboratory and teaching facilities. The College is located on the Twin Cities Campus in St. Paul with the opportunity for interaction with colleagues from many other units of the University including the Medical School, the College of Biological Sciences and the College of Agriculture. Our location also provides the cultural advantages of a large metropolitan area together with proximity to a wide variety of outdoor activities.

Candidates must have the Ph.D. degree or relevant foreign equivalent and preference will be given to individuals who also hold the D.V.M. degree or foreign equivalent. The appointee will be expected to have a distinguished record of research and teaching accomplishments, with proven leadership and administrative abilities. The appointee must be able to: (i) provide leadership, both in professional and graduate education, and in developing competitive research programs, and (ii) have an understanding of future trends in the veterinary profession and current issues relating to veterinary medical education. Letters of application should include a current curriculum vitae and a statement of goals, plus names and addresses of at least three persons who will provide letters of reference.

Applications with supporting material will be accepted until 15 June 1989, and should be sent to: **Dr. Alice A. Larson, College of Veterinary Medicine, University of Minnesota, St. Paul, MN 55108.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

### CITRUS HORTICULTURIST

Academic career-track, 11-month assistant or associate horticulturist in Integrated Citrus Management to develop more efficient cultural practices for citrus production, especially in the areas of nutrition and irrigation. The position is a 75% Agricultural Experiment Station research appointment with a 25% appointment in Cooperative Extension within the Department of Botany and Plant Sciences at the University of California, Riverside. Responsibilities include development of a research program to adapt and test the efficacy of major advances in basic research to the production of citrus. Field research will be conducted at appropriate off-campus locations, including the San Joaquin Valley. Extension responsibilities include conducting training sessions and short courses to disseminate research results to the industry and to facilitate their implementation by growers. The position is intended to combine aspects of both applied and basic research. Requires a Ph.D. degree specializing in plant physiology, botany, horticulture, or other plant science with demonstrated experience in designing, conducting, analyzing, and interpreting field research, especially the physiology of plant nutrition or irrigation of tree crops. Send letter of application, curriculum vitae, statement of research interest, transcripts (recent graduates), and at least three confidential letters of evaluation to: **Dr. Carol J. Lovatt, Chair, Search Committee, Department of Botany and Plant Sciences, University of California, Riverside, CA 92521.** The application deadline is 31 May 1989. *The University of California, Riverside, is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.*

**CYTOGENETICIST:** Vivigen Laboratory has an opening for an ABMG Board-certified or Board-eligible cytogenetics laboratory director. Applicants should hold a Ph.D. or M.D. degree with a strong interest in clinical service. This position offers an excellent salary and benefits package as well as an opportunity to join the management team of the company leading the nation in private sector genetic testing. Send curriculum vitae and three references to: **Yemia Kiamichi, Vivigen, Inc., 435 St. Michael's Drive, Santa Fe, NM 87501. Telephone: 505-988-9744.**

## THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER AT HOUSTON

Applications are invited for several tenure track positions in the Department of Molecular Genetics both at the Assistant and Associate Professor levels. Successful candidates who will join this expanding Department will develop independent and innovative programs to investigate the molecular basis of cellular functions in normal and cancer cells. The following areas are of particular interest: 1. Molecular embryology of the mouse, investigating the expression and function of specific genes during mouse development. 2. Molecular mechanisms of transcriptional regulation. 3. Intracellular mechanisms of action of growth factors, growth inhibitors, products of oncogenes, and other hormonal effectors. Although these areas are of special concern, we are primarily interested in outstanding individuals working in the field of eucaryotic genetics who will develop vigorous and strongly interactive programs.

Please apply before June 1, 1989, by sending curriculum vitae, a concise description of research interests, and name of three references to:

**Benoit de Crombrughe, M.D., Professor and Chairman**  
Department of Molecular Genetics—Box 11  
The University of Texas M. D. Anderson Cancer Center  
1515 Holcombe Boulevard  
Houston, Texas 77030

THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER  
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REOPENED**

## ASSOCIATE EDITOR

We're looking for a PhD molecular biologist with physiological orientation to join *Science* as an editor. The successful applicant will be able to demonstrate a broad range of interests and some experience with biochemical approaches to medical problems. Requirements include at least two or three years of post-doctoral experience and publications in the refereed literature.

*Science* editors have varied responsibilities in manuscript selection ranging from editing for clarity to soliciting papers. Previous editorial experience is not required. This is a full-time position in our Washington offices.

Please send resume and list of publications with cover letter and salary requirements to:

**Mr. Gregory Stokes**  
AAAS  
1333 H Street, NW  
Washington, DC 20005

EOE

## DIRECTOR OF PHARMACOLOGY

We are looking for a person with broad-based experience in pharmacology. The ideal candidate would have experience in evaluating new research areas, a depth of understanding of underlying mechanisms, and broad knowledge of *in vivo* and *in vitro* screens used in new drug discovery.

Our team employs the very latest in computer assisted drug design technology by using the Computer Automated Structure Evaluation (CASE) program. We are looking for a Director of Pharmacology 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 experience in several therapeutic areas is an asset.

If you are goal oriented, feel you can make a difference and would like to be rewarded for your efforts, Biofor is for you. We are a young and successful company focusing on rational computer-aided drug design and would welcome your experience to our team. 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, LTD.**

P.O. Box 577  
Waverly, PA 18471

**BIOFOR** → 

## Toxicology

### Associate Director, Clinical Toxicology & Safety Evaluation

Smith Kline & French, a leader in Pharmaceutical research, is consolidating and expanding its Safety Assessment Departments. The Department of Toxicology is seeking an experienced senior scientist for the position of Associate Director. This individual will provide scientific leadership and management for two expanding groups of scientists and technicians engaged in clinical and pharmacological evaluations of novel therapeutic agents in animals.

The successful candidate will participate with multi-disciplinary teams in drug discovery and development and will have responsibility for designing and conducting studies to define the toxicologic profile of novel therapeutic agents. The incumbent also would manage a group responsible for evaluating the pharmacologic and physiologic effects of therapeutic candidates on major organ system function and relating those effects to the overall determination of safety.

Candidates with a DVM or MD and a Ph.D. in pharmacology, physiology or toxicology would be ideally qualified for this position. A proven record of accomplishment in experimental and/or clinical research in one of the above areas is required. The successful candidate may be currently employed in an academic or research institution but experience in the Pharmaceutical industry would be advantageous. Board certification in internal medicine would be desirable.

Based in a modern research facility in suburban Philadelphia near Valley Forge, PA, SK&F provides excellent opportunities for innovative, interdisciplinary research in a stimulating and challenging scientific environment. Attendance at national and international scientific meetings is supported and presentation and publication of scientific work is strongly encouraged. We offer an attractive compensation/benefits and relocation package. For confidential consideration, please forward your C.V. and names of three references to Elizabeth McKendry, L0051, Associate Employment Administrator, Smith Kline & French Laboratories, Research & Development, P.O. 1539, King of Prussia, PA 19406-0939. Equal Opportunity Employer, M/F/H/V.

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**LUCILLE P. MARKEY  
SCHOLAR AWARDS  
IN BIOMEDICAL SCIENCE  
1990**

Nominations are invited for the 1990 Markey Scholar Awards which provide substantial support in post-doctoral years and in the first five years of faculty service. The sixth series of awards will be made for the twelve-month academic year beginning July 1, 1990.

A maximum of sixteen annual appointments will be made to individuals who hold a Ph.D. or D.Sc., M.D./Ph.D., M.D., D.V.M. or D.D.S. degrees. Awards will provide both a stipend/salary and support for the Scholar's research. Nominations must be submitted by the institutions in which the nominees will be pursuing postdoctoral research training when the awards are initiated.

For further information and nomination procedure, please write:

Scholar Awards in Biomedical Science  
Department 510  
Lucille P. Markey Charitable Trust  
3250 Mary Street, Suite 405  
Miami, FL 33133



**Deadline for nominations is October 1, 1989**

We are seeking candidates possessing a Ph.D. or M.D. degree for a joint faculty position in the Department of Physiology and Biophysics and the Department

## **FREE RADICAL BIOLOGIST**

of Surgery, Division of Critical Care to develop an interdisciplinary research program related to the study of free radical biology at the molecular, cell or tissue level. The individual must have a demonstrated potential to generate and lead a strong extramurally funded research program in areas including reperfusion phenomena associated with sepsis, low flow states, hemorrhage or organ transplantation. Strong collaboration with ongoing projects in Physiology and Biophysics and in Critical Care is expected. The tenure-track position is at the Assistant or Associate Professor level. Responsibilities include teaching in the medical school and the graduate education programs. Please send curriculum vitae and names and addresses of three references before September 1, 1989 to: Dr. Patrick Eggena, Free Radical Biologist Search Committee, Department of Physiology and Biophysics, Box 1218, The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.

## **MOUNT SINAI**

The Mount Sinai Medical Center of New York



### **Microbial Physiologist/ Molecular Biologist**

BioTechnica International, Inc., a company specializing in the development of advanced technologies in the areas of microbial production systems, biochemical engineering and agricultural biotechnology, has an opening at our Cambridge, Massachusetts, laboratory for a highly motivated Ph.D. Research Scientist. The scientist that fills the position will work with a group that genetically engineers bacteria to overproduce amino acids and other specialty chemicals. The ideal candidate will have had experience with biosynthetic pathways, microbial physiology, molecular biology, and gene expression. Postdoctoral experience is preferred but not absolutely necessary.

BTI offers a highly competitive salary, excellent employee benefits, and opportunities for professional growth in a stimulating and productive scientific environment. Please send a letter of application referring to position number RS50, with a resume and the names of three references by June 9, 1989, to:

Personnel Department  
BioTechnica International, Inc.  
85 Bolton Street  
Cambridge, MA 02140

BioTechnica International is an Equal Opportunity Employer.

**BIOTECHNICA  
INTERNATIONAL, INC.**

## **BIOCHEMIST**

Coors BioTech, Inc. is looking for a qualified scientist to join a multidisciplinary team seeking to develop processes for the production of vitamins and nutritional biochemicals. This position requires a Ph.D. and some relevant postdoctoral research experience. The successful candidate will have a strong background in enzyme purification and reaction kinetics and a desire to apply these skills towards the development of biotransformation processes. Skills in molecular biology are desirable, with preference given to individuals having experience in yeast or fungal expression systems.

Coors BioTech offers a competitive compensation and benefits package, as well as opportunities for personal and professional growth. Our research facilities are located in Fort Collins, Colorado, an attractive university community conveniently located to the outstanding recreational opportunities found in Colorado.

Please send your curriculum vitae along with three references to:

Personnel  
Coors BioTech, Inc.  
6204 South College Avenue  
Fort Collins, CO 80525

An Equal Opportunity Employer M/F/H/V





## EPIDEMIOLOGY CLINICAL TRIALS PREVENTION

The National Heart, Lung, and Blood Institute, National Institutes of Health, Public Health Service has three positions available. Medical Officer, GS-602 or Epidemiologist, GS-601 or individuals with appropriate background are needed to participate in design, conduct, and analysis of collaborative clinical trials or epidemiological studies. Preference given to candidates with training and experience in cardiovascular clinical trials or epidemiology and interest in cardiovascular disease and its risk factors. These positions have a salary range of \$41,121 to \$56,128 per annum depending on experience and/or education. Additional information may be obtained from: Lawrence Friedman, M.D. on (301) 496-1706 or Millicent Higgins, M.D. on (301) 496-2327. These positions are located in Bethesda, Maryland. Please send curriculum vitae to:

**Susan Berger**  
Building 31, Room  
5A32  
NHLB/NIH  
9000 Rockville Pike  
Bethesda, MD 20892  
(301) 496-6477

NIH is an Equal Opportunity Employer



## POSTDOCTORAL POSITION

The Geoanalysis Group and the Isotope Geochemistry Group are seeking postdoctoral candidates to investigate photochemical, chemical and physical processes in the atmosphere at regional/global scales. Emphasis is on incorporating atmospheric chemical processes into a general circulation model to investigate radiative and chemical effects of tropospheric and stratospheric methane and halocarbons.

Knowledge of atmospheric chemistry and experience in numerical modeling of atmospheric chemical processes are necessary. Experience with general circulation models or modern analytical instrumentation for analysis of atmospheric species is desirable. Applicants should have a demonstrated record of publishing research results and the ability to interact effectively with a staff with diversified research interests. Good verbal and written communication skills are necessary.

Applicants must have received their doctoral degree within the past three years in chemistry, atmospheric sciences or related areas.

To apply formally, send resume, employment application, graduate and undergraduate transcripts, and three letters of reference to Carol M. Rich, Human Resources Development Division PD-89-056, Los Alamos National Laboratory, Los Alamos, New Mexico 87545.

Affirmative Action/Equal Opportunity Employer. Must be able to obtain a Department of Energy Security Clearance.

University of California

# Los Alamos

## Environmental Engineer

Monsanto Company is seeking an Environmental Engineer to work in its Environmental Sciences Center located in St. Louis, Missouri. Candidates selected will have a thorough knowledge of chemical fate and transport process, modeling, and exposure analysis to support all TSCA, RCRA and CERCLA studies.

An advanced degree in Environmental Engineering plus some knowledge of chemistry and biology is required. Demonstrated achievements in mathematical modeling, computerized data bases, risk assessment principles and statistics are extremely important. Independent research capabilities and knowledge of regulatory requirements are also desirable.

Submit your resume and salary expectations in confidence to: Dr. Richard A. Kimerle; MONSANTO COMPANY—U4E; 800 N. Lindbergh Blvd.; St. Louis, MO 63167. Equal Opportunity Employer M/F/H/V

# Monsanto

BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc. is engaged in the discovery, development, manufacture and marketing of novel therapeutic agents. We currently have an opening for an experienced Scientist in the Biochemistry Department at our Research facility in DANBURY, CT.

## BIOCHEMIST

This position requires a Bachelor's or Master's Degree in Biochemistry or related discipline with experience in Enzymology. Experience with the development of enzyme assays, enzyme kinetics and protein purification required. HPLC experience is desirable.

The incumbent will pursue research on viral proteases and specifically will be responsible for the evaluation of enzyme inhibitors as well as the investigation of mechanistic questions.

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

Please send your resume to Dept. JC-15-940, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, PO Box 368, Ridgefield, CT 06877. We are an equal opportunity employer m/f/h/v.



# Boehringer Ingelheim



## POSITIONS OPEN

**EXPERIENCED CYTOGENETIC TECHNOLOGISTS** needed for high-volume private laboratory located in the mountains of northern New Mexico. These positions offer excellent salaries and benefits, resort living and the chance to become part of a dynamic, rapidly growing company through an employee stock purchase program. Send résumé and three references to: Yemias Kiamichi, Vivigen, Inc., 435 St. Michael's Drive, Santa Fe, NM 87501. Telephone: 505-988-9744.

### FOX CHASE CANCER CENTER DEVELOPMENTAL BIOLOGIST FACULTY POSITION

The Institute for Cancer Research, the basic science component of the Fox Chase Cancer Center, invites applications for a tenure-track position in the area of developmental biology. Interested candidates should send their curriculum vitae, a brief description of current scientific interest and three letters of recommendation to:

**Chairperson**  
Developmental Biologist  
Search Committee  
c/o Personnel Department  
Fox Chase Cancer Center  
7701 Burholme Avenue  
Philadelphia, PA 19111  
*Equal Opportunity Employer.*

### DEPARTMENT OF VETERANS AFFAIRS VETERANS HEALTH SERVICES AND RESEARCH ADMINISTRATION DIRECTOR MEDICAL RESEARCH SERVICE

The Department of Veterans Affairs invites applications for the position of Director, Medical Research Service. The Medical Research Service currently has a budget of about \$200 million and supports biomedical and behavioral sciences research of over 2500 VA scientists, 70 percent of whom are physicians. It is strongly committed to support of patient-oriented research across the entire spectrum from basic science to clinical applications of new knowledge. The Director is responsible for policy development, peer review management of all investigator-initiated research studies and budget formulation and distribution. Candidates are expected to be nationally recognized scientists and they must have an established record of scholarly achievement. The position is only open to U.S. citizens who hold an M.D. degree. Salary is \$75,500 with additional special pay up to \$24,000.

Qualified applicants are invited to send curriculum vitae, bibliography, and the names, addresses and telephone numbers of three respondents by 15 May 1989 to: Richard J. Greene, M.D., Ph.D., Assistant Chief Medical Director for Research and Development (15), Department of Veterans Affairs, 810 Vermont Avenue, N.W., Washington, D.C. 20420.



**Veterans  
Administration**

Applications for **TWO POSITIONS IN CHEMISTRY** at Sarah Lawrence College are invited. One position is half-time guest faculty appointment for 1 year with possibility of renewal. The other is a full-time, tenure-track position. Strong commitment to teaching is essential and the candidate will be expected to contribute to curricular development. The College is located in Westchester County, New York, some 30 minutes from Manhattan. *Equal Opportunity Employer.* Send résumé and two course descriptions (letters of recommendation will be required) to: Janet Held, Faculty Secretary, Sarah Lawrence College, Bronxville, NY 10708.

## POSITIONS OPEN



COLORADO ADVANCED TECHNOLOGY INSTITUTE

### EXECUTIVE DIRECTOR COLORADO ADVANCED TECHNOLOGY INSTITUTE (CATI) DENVER, COLORADO

The Commission of the Colorado Advanced Technology Institute (CATI) is seeking candidates for the position of Executive Director. The mission of CATI is "to establish Colorado as an acknowledged world leader in selected technologies so as to be the location of preference for conduct of education, research, product development, and manufacturing in these technologies."

The Executive Director functions as the Chief Administrative Officer of CATI and as the executive officer of the CATI Commission. The Commission is composed of seven appointed voting members representing small and large high technology companies in Colorado, and three ex-officio members representing the Colorado House of Representatives, the Colorado Senate, and the Colorado Commission on Higher Education.

Preferred candidates will be able to interface effectively with academic institutions, technology-based companies, and the Colorado legislature. The Executive Director must be a leader who is an excellent communicator. This individual will possess demonstrated management skills and an understanding of technology and technology transfer. Experience in evaluating technical proposals and business plans is highly desirable.

Nominations and applications should be sent to:

**R. William Funk**  
Heidrick and Struggles  
Attention: CATI-SCI  
1999 Bryan, Suite 1919  
Dallas, TX 75201

Review of nominations and applications will begin immediately and continue until a suitable candidate is selected.

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

**FACULTY POSITION—Microbial Molecular Biology.** The Department of Molecular and Cell Biology at the University of Connecticut, Storrs, invites applications for an anticipated tenure-track faculty position at the assistant professor level. The individual we seek will have a strong record of postdoctoral research on molecular/cell biology/genetics of prokaryotes or lower eukaryotes (including but not limited to yeasts, actinomycetes, cyanobacteria, archaeobacteria, microbial-plant interactions.) The candidate will be expected to maintain an externally funded research program and contribute significantly to departmental graduate and undergraduate teaching programs. Applicants should send curriculum vitae, a statement of current and future research plans, and names and addresses of three references to: Dr. Antonio H. Romano, Search Committee Chairperson, Department of Molecular and Cell Biology, Box U-44, The University of Connecticut, 75 North Eagleville Road, Storrs, CT 06269, by 1 September 1989. *The University of Connecticut is an Equal Opportunity/Affirmative Action Employer. (Search #9A181).*

**FACULTY POSITION—MICRO-FLUID DYNAMICS**—The Applied Ocean Science Program at the University of Delaware's College of Marine Studies invites applications for a tenure-track faculty position to start anytime after 1 September 1989. Requires Ph.D. in the physical sciences or engineering fields. Strong background in theoretical and experimental work on under-water fluid dynamics desirable. Involves teaching at the graduate level and development of an independent, funded research program in micro-fluid dynamics including interactions at solid boundaries. Opportunity to interact with ongoing research in: remote sensing, electromagnetic and sound wave interaction with suspended particles, theoretical and numerical methods in acoustic wave propagation, air/sea interactions, corrosion and fouling. Send résumé with names and addresses of three references to: Dr. Stephen C. Dexter, Chairman, AOS Search Committee, College of Marine Studies, University of Delaware, Lewes, DE 19958. Closing date: 1 June 1989. *The University of Delaware is an Equal Opportunity Employer which encourages applications from qualified minority groups and women.*

## POSITIONS OPEN

### FACULTY POSITION INVERTEBRATE ZOOLOGY

Applications are invited for a 9-month tenure-track position at the assistant professor level in the Department of Zoology and Wildlife Science at Auburn University, effective 16 September 1989. Applicants must have a Ph.D. in biological science with an emphasis in noninsect (freshwater or marine) invertebrate zoology, and must provide evidence of potential for teaching excellence. Postdoctoral experience is preferred. Applications from theorists are encouraged. The position entails participation in teaching at the freshman level in a general biology program and developing graduate-level coursework. The successful candidate will be expected to direct graduate students, to develop an externally funded research program, and to participate in position-related service activities. Salary will be commensurate with experience. Applicants should submit a letter outlining goals, curriculum vitae including training, experience, and list of publications (with selected reprints), academic transcripts, and three to five letters of reference by 21 May 1989 to: Dr. John F. Pritchett, Head, Department of Zoology and Wildlife Science, Auburn University, AL 36849-5414. Telephone: 205-844-9228. *Members of minority groups and women are encouraged to apply. AU is an Affirmative Action/Equal Opportunity Employer.*

**HIGH ENERGY ACCELERATOR RADIATION CONTROL STAFF SCIENTIST III**—Group leader responsible for defining radiation control requirements for high energy accelerator. Specify radiation source terms, radiation shielding, systems of protection and access control including instrumentation and dosimetry. Estimate radiochemical yields in target materials including those of environmental concern such as air, water, ground and groundwater. Provide information on radiation chemical effects in air, water, accelerator materials and components such as electronic devices, insulation and structural materials. Forty hours per week, 8 a.m. to 5 p.m., \$55,050 per year. B.S. in chemistry and 5 years of experience in job or 5 years of experience performing atomic energy research in industrial chemistry of hazardous wastes. Prior experience must include leadership in high energy radiation science associated with particle accelerators including experimentation, design of dosimetric devices and radiation resistant materials, evaluation of radiation effects at low temperatures, health physics, radio and radiation chemistry. Publications in the characterization of accelerator radiation fields, radiation damage and control. Will supervise three persons. Mail or hand carry résumé with copy of ad attached to: M. J. Hotchkiss, VEC, 5145 East Virginia Beach Boulevard, Norfolk, VA 23502. J.O.# VA8031495.

**JUNIOR FACULTY POSITION** available in the pharmacology and biochemistry of antineoplastic agents targeted against specific human cancer types. Studies will involve the modulation of anticancer agents with thymidylate synthase as the primary target. The focus will be on metabolism of reduced folates, modulation of reduced folate pools, and optimization of drug scheduling for therapeutic gain. Research will also identify factors that influence the regulation and turnover of thymidylate synthase in elucidating the importance of the enzyme as a therapeutic target. Candidates should have the Ph.D. degree with a minimum of 3 years of postdoctoral experience. A strong background in biochemistry is advantageous. Send curriculum vitae and names of three references to: Dr. J. A. Houghton, Laboratories for Developmental Therapeutics, Department of Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. *Equal Opportunity/Affirmative Action Employer.*

### MOLECULAR IMMUNOLOGIST BRANDEIS UNIVERSITY

The Rosenstiel Research Center and the Department of Biology, seek a tenure-track assistant professor in the area of the molecular biology of the immune system. Candidates should have a strong record of research accomplishments in this area. Exceptional individuals at a more senior level will also be considered. Please submit curriculum vitae, including a description of research goals, and the names of three individuals who can supply letters of recommendation to: Molecular Immunology Search Committee, Rosenstiel Center, Brandeis University, Post Office Box 9110, Waltham, MA 02254-9110, by 15 June 1989. *Brandeis University is an Equal Opportunity/Affirmative Action Employer.*

## Director, Environmental Toxicology Division

Health Effects  
Research Laboratory  
Research Triangle Park, NC



**U.S.  
Environmental  
Protection  
Agency**

An Equal Opportunity Employer

*The U.S. Environmental Protection Agency (EPA) is seeking candidates for the position of Director, Environmental Toxicology Division, Health Effects Research Laboratory (HERL). This position is located in Research Triangle Park, NC and is a permanent full-time position with a salary range of \$57,158 to \$74,303 per annum, commensurate with qualifications.*

*HERL has a staff of about 300, over 100 of whom hold doctoral level degrees. The Laboratory has a diverse program which includes in vitro, animal, human clinical, and epidemiological research designed to address issues related to the health effects of air and water chemical and biological pollutants.*

*The Environmental Toxicology Division (ETD) conducts research to determine the health effects of inhaled environmental pollutants. The research is designed to determine cause and effects relationships at pollutant concentrations which mimic those occurring in the environment. Particular emphasis is placed on the development and application of improved methods which enable significant advancement in the knowledge of the health effects of air pollutants. Intense investigations center on the pulmonary and cardiovascular systems, the immune system, host defense mechanisms against infectious and neoplastic disease and other extrapulmonary systems which are susceptible to inhaled pollutants. The Division serves as a primary technical resource within the Agency for activities requiring expertise in animal inhalation studies and in the health effects of common air pollutants. The program includes both intramural investigations and extramural arrangements with univer-*

*sities, industry, private research institutions and other government agencies. The primary responsibilities of the Director are to direct and manage the program. This includes developing the program to meet the evolving needs of EPA, presenting the program, developing and managing budgets, supervising the staff, directing the progress of the program, and ensuring the scientific quality and productivity of the program.*

*The preferred candidate for this position would possess the following qualifications:*

- 1. Advanced degree in a biological or environmental discipline with at least six years of professional experience in either of these areas. Applicable graduate coursework may be substituted for a portion of the preferred experience.*
- 2. Experience as a supervisor of a scientific/professional staff.*
- 3. Recognized scientific expertise as evidenced by multiple publications in peer-reviewed literature and invitations to participate in national and international meetings/panels.*
- 4. Proven ability to provide leadership in directing the development and progress of a creative and effective multidisciplinary research program.*
- 5. U.S. Citizenship is required.*

*Forward curriculum vitae and names of three references prior to May 28, 1989 to: Dr. Lawrence W. Reiter, c/o Terri Burrell, HRMD (MD-29), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.*

# Gene Expression Sciences

Smith Kline & French Laboratories, a worldwide pharmaceutical R&D organization committed to excellence in science is seeking several outstanding scientists for multiple positions in the department of Gene Expression Sciences with varying levels of experience.

### Senior Investigator/Assoc. Sr. Investigator (Job #S0097)

Pursue research on expression of heterologous proteins in mammalian cells.

The Successful Candidate will have:

- Ph.D. in Biological Science with at least 2-3 years postdoctoral experience.
- Experience in recombinant DNA techniques.
- Experience in the molecular genetics of mammalian cells.

### Postdoctoral Scientist (2 Positions)

Pursue research on:

Position #1 (Yeast, Job #S0065)

The molecular genetics of yeast (*S. cerevisiae* and *C. albicans*)

Position #2 (Microbial Systems, Job #S0098)

Clone, isolate and characterize genes which encode protein processing enzymes.

Express these gene products and aid in their purification and characterization.

The Successful Candidates will have:

- Ph.D. in Molecular Biology or other Biological Science.
- Experience in recombinant DNA techniques.
- Experience in molecular genetics of yeast and protein purification is highly desirable (yeast).
- Experience in isolation of genes from libraries and expression in microbial systems is highly desirable (microbial systems).

### Associate Scientist/Scientist (Job #S0099)

Pursue research on gene cloning and expression.

The Successful Candidate will have:

- B.A. or M.S. in Biological Science or related area with 2-5 years laboratory experience.
- Experience in recombinant DNA techniques.
- Experience in molecular genetics of bacteria or yeast and protein purification is highly desirable.

PLEASE REFERENCE APPROPRIATE JOB NUMBER.

Smith Kline & French Laboratories is located near Valley Forge, Pennsylvania. We offer an excellent compensation and benefits package as well as opportunities for personal and professional growth. Please submit resume with appropriate job number and salary requirements to: Barbara Schwartz, Employment Administrator, Smith Kline & French Laboratories, Research & Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company



## POSITIONS OPEN

### MAGNETIC RESONANCE SPECTROSCOPIST.

Applications are invited for a non-tenure-track position as research assistant professor in the Department of Biochemistry, University of Virginia. Applicants for this position must be expert in the theory of magnetic resonance spectroscopy and in the application of these techniques to lipid bilayers and biological membranes. They must also have extensive experience in the synthesis of phospho- and sphingolipids and other complex membrane lipids. The position will require advanced graduate-level teaching of the theory and applications of magnetic resonance spectroscopy. Applicants must hold a Ph.D. degree and have at least 4 years of postdoctoral research experience. Curriculum vitae, copies of academic transcripts and three letters of recommendation should be sent to: **Professor T. E. Thompson, Department of Biochemistry, The University of Virginia, Charlottesville, VA 22908.** Applications should be postmarked on or before 11 May 1989. *Affirmative Action/Equal Opportunity Employer.*

**MEDICAL DIRECTOR**—The University of Pittsburgh and Magee-Womens Hospital seek nominations and applications for the position of Medical Director of the Department of Reproductive Genetics. The person should have a M.D. and certification through the American Board of Medical Genetics as a clinical geneticist. The director is expected to establish a research program as well as expand clinical and laboratory services. The department, located in Magee-Womens Hospital, a tertiary care center with approximately 10,000 deliveries annually, provides comprehensive genetic services to both women and newborns. Applicants at the associate or professor level will be considered. Those interested in applying should send their curriculum vitae to: **Dr. Robert E. Ferrell, Department of Human Genetics, A316 Crabtree Hall, 130 DeSoto Street, University of Pittsburgh, Pittsburgh, PA 15261.** *Equal Opportunity/Affirmative Action Employer.*

### FOX CHASE CANCER CENTER MOLECULAR AND CELLULAR BIOLOGY FACULTY POSITIONS

The Institute for Cancer Research, the basic science division of the Fox Chase Cancer Center, has openings for tenure-track, independent research positions in molecular and cellular biology. Creative investigators working with any biological system from prokaryotes and yeast, to mammalian cells are invited to apply. Many of our staff have adjunct appointments in area universities. Send curriculum vitae and a brief description of scientific interest, and have three letters of recommendation sent to:

Chairperson,  
Molecular and Cellular  
Biology Research Committee  
c/o Personnel Department  
Fox Chase Cancer Center  
7701 Burholme Avenue  
Philadelphia, PA 19111  
*Equal Opportunity Employer.*

### The Department of Microbiology and Immunology of The Albert Einstein College of Medicine invites applications for a tenure-track ASSISTANT PROFESSORSHIP in MOLECULAR PATHOGENESIS OF INFECTIOUS DISEASES.

Candidates are sought who can establish a creative, independent research program that brings knowledge of genetics, molecular biology and microbiology to problems of infectious diseases. Of particular interest are research in viral pathogenesis, including HIV, and bacterial pathogenesis. Candidates should have a Ph.D. or M.D., with at least 2 years of postdoctoral training. Applications containing curriculum vitae, reprints, a description of past accomplishments, plans for future research, and names of three references, should be sent to:

Departmental Search Committee  
Department of Microbiology and Immunology  
Albert Einstein College of Medicine  
New York, NY 10461

*An Equal Opportunity and Affirmative Action Employer.*



## CATALYTIC ANTIBODIES

### DNA PROBE DIAGNOSTICS MOLECULAR IMMUNOLOGY

Motivated individuals with a Ph.D., M.S., or B.S. degree are encouraged to apply for research and development positions ranging from group leader to Research Associate in the following areas:

- Molecular Immunology
- DNA or Protein Chemistry
- Molecular Genetics
- Mutagenesis
- Expression of recombinant genes

*IGEN is a biotechnology company located in Maryland, close to Washington, DC specializing in the development of a new generic diagnostic technology and in the pharmaceutical and therapeutic applications of catalytic antibodies (AB-ZYMES™).*

For confidential consideration, please send your curriculum vitae to: **IGEN, Inc., Human Resource Manager, 1530 East Jefferson Street, Rockville, Maryland 20852.**

EEOC

# POSTDOCTORAL FELLOW

## Diabetes Research

Sandoz Pharmaceuticals Corporation is responsible for products that improve the quality of life. Our developments are the result of research conducted by professionals who specialize in many different fields.

The Diabetes Research Department, SANDOZ RESEARCH INSTITUTE, seeks a recent graduate with a Ph.D. in the life sciences to work in our physiology section. The successful candidate must have experience in whole animal and/or isolated organ physiology, as well as a working knowledge of carbohydrate and fat metabolism. The position carries an attractive stipend and offers the freedom to learn, work and publish as part of a multidisciplinary team of chemists, biochemists and molecular biologists, in an exciting and well supported research environment.

For prompt consideration, please respond to position #183RS by sending a curriculum vitae, a list of professional references and a brief summary of prior research experience to:

Robert N. Saunders, Ph.D.  
Director, Human Resources 403/1  
Sandoz Research Institute  
SANDOZ PHARMACEUTICALS CORPORATION  
East Hanover, New Jersey 07936

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**SANDOZ**  
bringing research to life

## OUR PAST. OUR PRESENT. YOUR FUTURE.

In the world of biotechnology, we have a history with a proven track record of growth and stability. Today, we are a world leader in the production of chemicals, instruments, and systems for industrial research, the life sciences and clinical diagnostics.

Our mission of helping science better serve mankind provides focus to our future of continued growth. And this growth promises interesting and challenging opportunities for you.

### RESEARCH SCIENTISTS

Bio-Rad has a special need for Research Scientists who have a BS/MS/PhD in Biology or Life Science and experience in the research and development of enzyme immunoassays for the detection of infectious diseases.

The pace here is stimulating, often going from concept to market application in a very short time. Which helps explain why we have been able to maintain a 25% annual sales growth.

If being a part of our team sounds interesting to you, apply today by sending your resume to: Bio-Rad Laboratories, Inc., Human Resources, Dept. 271-SM0414, 1000 Alfred Nobel Drive, Hercules, CA 94547. EOE.

**BIO-RAD** Bio-Rad Laboratories

**T**he Hospital for Sick Children, a fully accredited, 650-bed paediatric teaching hospital, affiliated with the University of Toronto, seeks a

## Pathologist-in-Chief

This is a joint appointment with the Department of Pathology, University of Toronto.

The hospital department has a well-equipped laboratory with facilities for electron microscopy, immunohistochemistry, cytology and histology as well as a medical staff of seven. Applicants should be paediatric pathologists with an established research program, excellent teaching skills and appropriate administrative experience.

Candidates must have a FRCPC or equivalent and be eligible for licensure in the Province of Ontario. In accordance with Canadian Immigration requirements, this announcement is directed to Canadian citizens and permanent residents. Potential candidates should submit their curriculum vitae by May 30, with the names of 4 referees, **quoting file # D021B**, to: Mary Babyn, Pathology Committee, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario Canada M5G 1X8



THE HOSPITAL  
FOR SICK CHILDREN

## MAKE AN IMPACT

APPLIED BIOSYSTEMS INC., the leading international manufacturer of instrument/reagent systems for biotechnology research, is seeking accomplished professionals to be located at our facilities in the San Francisco Bay Area.

### SCIENTISTS AND ASSOCIATE SCIENTISTS

Positions are currently available for protein chemists, molecular biologists, organic and analytical chemists with strong backgrounds in structural chemistry and separation sciences.

**CHROMATOGRAPHY**—conduct research in promising areas for micromolecular separations. Expertise in instrumentation dealing with HPLC and its use in protein or DNA isolation/characterization needed.

**ELECTROPHORESIS**—explore and develop novel directions in the separation of biomacromolecules and their constituents. Analytical capillary electrophoresis and micropreparative isolations by HPEC are areas of current interest.

**SEQUENCING**—investigate/develop new chemical methodologies for the analysis of proteins. Experience in sample preparation, protocol development and methods troubleshooting required.

A BS, MS or PhD in Biochemistry, Analytical or Organic Chemistry, or an equivalent combination is required. Practical laboratory experience from 1-5 years and indepth understanding of instrumentation essential. (Ref. #SCI89KW)

Qualified candidates may send their resume, (INDICATING THE REFERENCE CODE), to Applied Biosystems, Inc., H.R. Dept., 850 Lincoln Centre Drive, Foster City, CA 94404. We are an equal opportunity employer.

 **Applied  
Biosystems**



## POSITIONS OPEN

**MOLECULAR BIOLOGIST**, a junior level research position in our Department of Physiology and Medicine. We are seeking a scientist with research background in molecular biology and an interest in cell differentiation. Candidates should have a Ph.D., M.D., or D.V.M. degree with accomplishments that demonstrate the ability to maintain an independent research program. The appointee will complement the current research in neonatal pulmonary disease conducted by Dr. Robert A. deLemos of this institution and Drs. Richard J. King and Jacqueline J. Coalson of The University of Texas Health Science Center at San Antonio. The program focuses on the physiologic and molecular bases of chronic lung disease.

The Southwest Foundation for Biomedical Research is a nonprofit, private research institution with a staff of 45 scientists and facilities for DNA sequencing, oligonucleotide and peptide synthesis, hybridomas, electron microscopy, flow cytometry and computer modeling. It also has extensive nonhuman primate resources which include baboons, rhesus monkeys, and chimpanzees.

Interested candidates should mail curriculum vitae, brief summary of research goals, and names and telephone numbers of three references to: **Personnel Director (29), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer M/F.*

### POSITION FOR MOLECULAR BIOLOGIST/GENETICIST

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

Send application/résumés to:

**Dr. Ed Weck  
Northrup King Co.  
Research Center  
Highway 19  
Stanton, MN 55081  
Telephone: 507-663-7643**

### NEUROBIOLOGY—RESEARCH ASSOCIATE

An opening is now available in the laboratory of Dr. Robert O'Connell to study olfactory neurobiology. The major interests of the laboratory include the anatomical, behavioral, chemical, electrophysiological and hormonal substrates of olfactory communication in several mammalian species. Experience in one or more of these areas is required. Salaries are commensurate with experience. Send curriculum vitae, a statement of past research interests, and the names of at least three references to: **Dr. Robert O'Connell, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

*An Equal Opportunity/Affirmative  
Action Employer.*

### PERINATAL ANATOMIST

Full-time permanent position available immediately in the Pathology Department of a West Coast pediatric hospital for ongoing research project concerned with pregnancy loss and fetal and neonatal death. Primary responsibilities include performance of detailed post-mortem studies on second and third trimester stillborn fetuses. Will act as part of an interdisciplinary team including a pathologist, geneticist, cytogeneticist and radiologist. Additional duties to include general anatomic pathology responsibilities.

Applicants should have a graduate degree in an applicable field. To apply, send curriculum vitae and names and telephone numbers of three references (postmarked no later than 5 May 1989) to:

**Box 50, SCIENCE**

## POSITIONS OPEN

**OB/GYN FACULTY POSITION—POSTDOCTORAL**—The Department of Obstetrics and Gynecology, University of Oklahoma Health Sciences Center in Oklahoma City is seeking an individual with research interest in endometriosis. Training in immunology, biochemistry; Ph.D. required. Must be skilled in student and resident teaching, research design, and statistical analysis. Send curriculum vitae and bibliography: **Robert A. Wild, M.D., Associate Professor, Department of Obstetrics and Gynecology, University of Oklahoma College of Medicine, P.O. Box 26901, 4SP720, Oklahoma City, OK 73190.**

**PHYSICAL SCIENCE INSTRUCTOR**—Master's degree in one physical science and 24 semester units (12 upper division, 12 graduate) in a second physical science. Recent lecture and laboratory teaching experience in two or more of the physical sciences: chemistry, physics, engineering, astronomy, or geology. **San Diego Community College District, Personnel Employment, 3375 Camino del Rio South, San Diego, CA 92108-3883.** Call for appropriate certificated application form: 619-584-6579 or 1-800-648-4023 (outside California). Filing deadline: 4 May 1989. *Affirmative Action/Equal Opportunity Employer.*

**PHYSICIST**, Assistant professor, tenure-track, recent Ph.D., with background in electron optical research, particularly electron energy loss spectroscopy and interest in biological applications. Opportunity also for participating in research involving confocal microscopy and microspectrophotometry. Appointment is to be made in the Department of Physiology; the Appointee will be encouraged to develop and maintain ties with the Department of Physics and/or Materials Science. The position is suited for individuals desirous of developing an independent research program as well as collaborating with cellular biophysicists in the development and application of electron and light optical methods to problems of cell biophysics. A good grasp of theory, as well as instrumentation, is required. *The University of Virginia is an Equal Opportunity Employer.*

Please furnish curriculum vitae and résumé to: **Dr. A. P. Somlyo, Chairman, Department of Physiology, Box 449, University of Virginia, Charlottesville, VA 22908.**

### PLANT MOLECULAR BIOLOGY AND BIOCHEMISTRY

Calgene is recruiting three Ph.D. level scientists to join interdisciplinary teams working towards the genetic engineering of storage lipids and other agronomic traits in rapeseed. We are looking for:

1) A **biochemist** to work on membrane-associated enzymes. Postdoctoral experience in the areas of isolating membrane-bound proteins, active-site-labeling of enzymes, or lipid biosynthesis will be advantageous but not required. Direct inquiries to File #771.

2) A **molecular biologist** to isolate genes encoding enzymes involved in plant lipid biosynthesis. Direct inquiries to File #772.

3) A **molecular biologist** to join a team working on expression and regulation of foreign genes in plants. Direct inquiries to File #773.

Two-year appointments for postdoctoral research in prokaryotic and eukaryotic lipid biosynthesis are also available (File #774). Postdoctoral projects will collaborate with Calgene staff scientists and may also include other laboratories; publication of results is strongly encouraged. Candidates may submit their own proposals or consider ongoing in-house basic research.

Individuals interested in either postdoctoral or regular appointments should send curriculum vitae and a statement of research interests to the relevant File #, **Calgene, Inc., 1920 Fifth Street, Davis, CA 95616.**

**POSTDOCTORAL AND RESEARCH ASSISTANT POSITIONS** available immediately to study immunotherapeutic approaches to treatment of experimental metastases in a mouse model. Postdoctoral applicant should have an M.D. and/or Ph.D. with a strong background in tumor immunology. Send curriculum vitae and names of at least two references to: **Dr. Jerry A. Bash, Surgical Cancer Research Laboratory, Department of Research, Mount Sinai Medical Center, 4300 Alton Road, Miami Beach, FL 33140.**

## POSITIONS OPEN

**PHARMACOLOGIST**—University of Nevada School of Medicine Department of Pharmacology has tenure-track position for assistant/associate professor. Candidates must have Ph.D./M.D. or equivalent; minimum of 2 years of experience in cellular or molecular basis of autonomic cardiovascular or neuropharmacology; must be committed to quality teaching/research and ability to develop independent, funded research program. Submit letter of application, curriculum vitae and names/addresses of three references to: **W. T. Gerthoffer, Ph.D., University of Nevada School of Medicine, Reno, NV 89557.** Application review will begin 1 June 1989. Position will remain open until filled. *Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL ASSOCIATE**: Position available to investigate the targeting signals and mechanisms involved in the transport of macromolecules across the nuclear envelope. Experience in molecular biology preferred but not essential. Salary dependent on qualifications and experience. Please send résumé and names of three references to: **Dr. Carl Feldherr, Department of Anatomy and Cell Biology, Box J-235, University of Florida, Gainesville, FL 32610.** *Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL ASSOCIATE IN NEUROBIOLOGY

Position available in a laboratory studying the processes controlling neuronal synapse formation and the regulation of neuronal synaptic components. For the regulatory studies, particular emphasis is being given to the neuronal nicotinic acetylcholine receptor and the role of cell-cell interactions in regulating acetylcholine receptor expression in neurons. Relevant techniques include immunofluorescence, electron microscopy, and biochemical and molecular approaches. Experience in ultrastructural techniques is desirable. Please send curriculum vitae, a statement of research experience and interests, and the names of three references to: **Dr. Michael Jacob, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

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**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE**. Conduct studies on the structure and regulation of the choline acetyltransferase gene and its expression in normal and Alzheimer's brain. A Ph.D. in biochemistry, biology or related fields preferred. Stipend commensurate with experience. Send curriculum vitae and names of references to: **Dr. Louis Hersch, Biochemistry Department, Southwestern Graduate School, 5323 Harry Hines Boulevard, Dallas, TX 75235-9038.** *An Equal Opportunity University.*

**POSTDOCTORAL FELLOW** to study the regulation of gonadotropin mRNA by testicular steroids and inhibit in the rhesus monkey under the direction of **Drs. B. J. Attardi and T. M. Plant.** Experience with cloning techniques would be helpful. *Only U.S. citizens or permanent residents are eligible for this position.* Send curriculum vitae and names of two referees to: **Dr. T. M. Plant, Department of Physiology, University of Pittsburgh School of Medicine, 616 Scaife Hall, Pittsburgh, PA 15261.** *The University of Pittsburgh is an Equal Opportunity Employer.*

### POSTDOCTORAL FELLOWSHIP

NIH Staff Fellow/Senior Staff Fellow position is available at the National Institute on Alcohol Abuse and Alcoholism (NIAAA), for studies of neurotransmitter and hormone receptors and their interactions with cytokines and growth factors. Preference is given to applicants with experience in molecular biology, protein purification and receptor biochemistry/pharmacology. Salary is commensurate with experience. *Only U.S. citizens or permanent residents are eligible for this position.*

Send curriculum vitae and name of three references to: **Dr. George Kunos, Laboratory of Physiology and Pharmacologic Studies, NIAAA, 12501 Washington Avenue, Rockville, MD 20852.** Telephone: 301-443-1234. *NIAAA is an Equal Opportunity Employer.*

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### POST-DOCTORAL POSITIONS PUBLIC HEALTH SERVICE NATIONAL INSTITUTES OF HEALTH RESEARCH TRIANGLE PARK, NORTH CAROLINA

Two positions are available under the direction of Dr. Thomas Eling of the Laboratory of Molecular Biophysics, National Institute of Environmental Health Sciences, to study arachidonic acid metabolism in the development of neoplasia. The investigations center upon either eicosanoids as positive or negative regulators of cell growth or the oxidation of chemicals by prostaglandin peroxidase. Individuals with the following areas of expertise and interests are encouraged to apply: (1) Eicosanoid biochemistry, including the isolation and characterization of metabolites, structure and function of enzymes of arachidonic acid metabolism and expression of these enzymes in cellular systems using protein and molecular techniques. (2) Molecular biology, with an emphasis in the expression of proteins in cells as related to growth; the use of northern and southern analyses, cloning techniques and transfection of cells; and the use of expression vectors and other appropriate techniques. Knowledge and interest in oncogenes and suppressor genes desirable. (3) The metabolism of chemical carcinogens to reactive metabolites catalyzed by prostaglandin H peroxidase and peroxyl radicals. Studies can involve the isolation and identification of metabolites and the development of unique biochemical endpoints to assess the importance of this enzyme system *in vivo*.

Positions are under the NIH Staff Fellow, IRTA or Visiting (if non-U.S. citizen) programs with a salary range of from \$20,000 to \$28,000 for entry-level candidates. Higher salaries are possible, depending upon candidate's qualifications and experience. Send curriculum vitae, bibliography and three letters of recommendation by May 15, 1989 to:

Bruce Wiggins (HN2)  
NIEHS Personnel Office  
P.O. Box 12233  
Research Triangle Park, NC 27709



For more information, contact Dr. Thomas Eling at (919) 541-3911/3425.

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Biology

## Drug Delivery

Smith Kline and French Laboratories, a leader in pharmaceutical research, is currently building a strong multidisciplinary drug delivery department of approximately 30 scientists. This group, located in suburban Philadelphia, will be investigating membrane and transport processes that can be utilized for the delivery of conventional and biotech drugs, and the design of therapeutic systems to meet the biological needs of specific drugs and diseases.

We are therefore seeking outstanding individuals to work in the following areas:

- Drug Absorption
- Drug Targeting
- Drug Carriers

Ph.D. and non-Ph.D. scientists with backgrounds in either cell biology, physiology, biochemistry, biophysics, or chemistry, and a desire to be part of a highly interactive team, are invited to apply. Previous experience of drug delivery research and development is not a prerequisite.

Based in a new, state-of-the-art research facility near Valley Forge, Smith Kline and French provides a stimulating and challenging environment in which to grow and excel. We offer an attractive compensation/benefits and relocation package. For confidential review forward your C.V. and the names of three references to: Terry Gallagher, T103, Smith Kline & French Laboratories, Research and Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

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## SENIOR RESEARCH SCIENTISTS

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Sterling Research Group, the worldwide pharmaceutical research and development organization of Sterling Drug Inc., announces openings for Senior Research Biologists in its Immunopharmacology Department at its Great Valley, PA facility near Philadelphia.

We are currently expanding our Immunopharmacology research program. Scientists who have achieved a record of excellence in the study of molecular immunology of lymphokines and their receptors or in molecular aspects of T cell and macrophage function are invited to apply. We seek highly motivated individuals with superior bench skills, supervisory ability, and a willingness to collaborate with other scientists in a team effort to develop novel drugs for the treatment of diseases related to the immune system. A Ph.D. degree with post-doctoral experience is required.

Sterling Drug Inc. offers competitive salaries and a comprehensive benefits program, along with outstanding career opportunities for personal and professional growth. For confidential consideration, please forward your resume with salary history/requirements and the names of three references to:

Employee Relations, TP-Sc.

### STERLING RESEARCH GROUP

A Division of Sterling Drug Inc.  
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## Crystallography and Receptors

The Macromolecular Sciences Department of Smith Kline and French Laboratories, located in suburban Philadelphia, Pennsylvania, is expanding its long-term research program in protein structure-function design studies and seeks several highly motivated and innovative scientists at the senior investigator level. Positions are currently available in receptor structure-function and protein crystallography.

### Receptor Structure-Function:

To conduct a research program in the area of receptor-ligand interactions, with emphasis on understanding structural elements underlying binding and activation. Areas of interest include membrane receptors and soluble receptor domains. The position requires a Ph.D. in Chemistry/Biochemistry with two or more years of relevant postdoctoral research. Experience would be desirable in such areas as chemical crosslinking, affinity labeling and chemical modification of proteins.

### Protein Crystallography:

To conduct a research program in the determination of high resolution protein three-dimensional structures and to help use this information in protein redesign and de novo design. The position requires a Ph.D. in Chemistry/Biochemistry/Biophysics with at least 2-3 years of postdoctoral experience.

We offer an excellent compensation and benefits package and an attractive relocation policy as well as a work environment that offers considerable opportunity for personal and professional growth. For confidential consideration, send your C.V. and names of three references to Barbara Schwartz, R&D Senior Employment Consultant, Smith Kline and French Laboratories, P.O. Box 1539, King of Prussia, PA 19406. We are an Equal Opportunity Employer, M/F/H/V.

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## SAMUEL ROBERTS NOBLE FOUNDATION

### Postdoctoral Positions in Plant Molecular Biology

Applications are invited for a number of postdoctoral positions for research in plant molecular biology, biochemistry, and cellular biology. The positions will be for 2 or 3 years, and commence in August (project area 'a' below) or November 1989. Positions will be available in the following areas:

- Molecular cloning of defense response genes from potato.*
- Molecular virology and engineered plant resistance.*
- Molecular biology of plant oxygenases, cytochrome P450s, and O-methyl transferases.*
- Signal molecules and defense gene activation.*
- Plant regeneration and transformation.*

Please send resume and 3 letters of recommendation to: Dr. R.A. Dixon, Director, Plant Biology Division, S.R. Noble Foundation, P.O. Box 2180, Ardmore, OK 73402.

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## Vice President of Research

Vice President and Director of Research, Ph.D. or M.D., for company fabricating living organ equivalents for use in grafting and testing. We seek a candidate with a minimum of 10 years' research experience in cell biology, extracellular matrix biology and biochemistry with a supporting record of outstanding publications. Knowledge of transplantation immunology desirable. The individual of choice should have managed a large laboratory, been a department chairperson, section head or director of a multidisciplinary research effort. A successful past history of grant support is an element of the profile sought. The Company is prepared to offer a salary-benefits package better than those currently offered in academe. The package will include stock options and participation in a bonus plan as well as the medical, dental and other benefits usually offered. While the charge of the Director of Research is oversight of basic research, an awareness of the need to move potential products into development is expected.

For immediate consideration, forward resume and salary history to Caryle Connelly, Manager of Human Resources, Organogenesis, Inc., 83 Rogers Street, Cambridge, MA 02142.



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## POSTDOCTORAL SCIENTIST

**Amgen**, an innovative leader in the application of biotechnology to the discovery and development of promising new human therapeutic proteins and peptides, has an immediate opportunity for a post-doctoral scientist to conduct studies on the effects of growth factors on a variety of mammalian cell lines.

Qualified applicants must have a Ph.D. in Molecular Biology, Cell Biology or a related field as well as experience in culturing various primary and established cell lines. Knowledge of cell physiology and experience with recombinant DNA techniques is essential.

**Amgen** offers the unique opportunity to participate in challenging research programs with access to a variety of state-of-the-art support facilities. Amgen also offers an excellent compensation and a benefits package to post-doctoral scientists.

Qualified applicants should send a complete c.v., in confidence, to:

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### Director, Inflammation Pharmacology

Lead a team of 15 Immunopharmacologists and Cell Biologists to discover anti-inflammatory agents and agents to treat autoimmune diseases and osteoarthritis. A PhD in Pharmacology, Immunology, or Biochemistry plus 8-10 years of postgraduate research in immunopharmacology is required; extensive background in humoral and cellular immunology is essential. Please respond to Dept 357.

### Director, Enzymology and Molecular Biology

Lead a team of 20 Enzymologists and Molecular Biologists to discover agents to treat osteoarthritis, and inflammatory and cardiovascular diseases. A PhD in Biochemistry, Molecular Biology or Pharmacology plus 8-10 years of postgraduate experience in enzymology and/or molecular biology with emphasis on inflammation or cardiovascular research is required. Please respond to Dept 343.

### Manager, Osteoarthritis Research

Lead a team of 12 Pharmacologists to develop and evaluate in vivo models of osteoarthritis, rheumatoid arthritis and other inflammatory diseases. A PhD in pharmacology with at least 5 years of postgraduate experience in the pharmaceutical industry studying inflammatory diseases is required. Please respond to Dept 355.

**These positions further require experience in initiating and implementing drug discovery projects, the ability to lead multidisciplinary research teams, and excellent communication skills.**

We offer excellent salaries and benefits, plus a high level of professional visibility and career potential. Reply in confidence, by sending your resume and salary history, indicating department code to: **CIBA-GEIGY Corporation, Pharmaceuticals Division, 556 Morris Avenue, Summit, New Jersey 07901.** We Are An Equal Opportunity Employer M/F/H/V.

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## POSITIONS OPEN

### POSTDOCTORAL FELLOW

Postdoctoral position available immediately at the University of Pennsylvania to study PDGF-modulated MYC expression. Familiarity with molecular biological techniques and use of eukaryotic expression vectors required. Send curriculum vitae and three references to: **Dr. C. D. Scher, The Children's Hospital of Philadelphia, 34th and Civic Center Boulevard, Philadelphia, PA 19104. Equal Opportunity Employer.**

### POSTDOCTORAL FELLOW NEUROSCIENCES

Intracellular electrophysiological in vitro experience preferred. Join large multi-disciplinary research group investigating pathophysiology of traumatic brain injury. Research to include studies of hippocampal function after injury. Opportunities to develop innovative research program with close linkage to molecular studies. Minimal appointment of 2 years. Salary negotiable. Contract: **Stephen J. Goldberg, Ph.D., Department of Anatomy, Box 709, Medical College of Virginia/Virginia Commonwealth University, Richmond, VA 23298. Telephone: 804-786-9529.**

**POSTDOCTORAL FELLOWSHIPS IN MOLECULAR ONCOLOGY.** Up to two positions will be available as early as 1 June 1989 in the Department of Therapeutic Radiology at Yale University School of Medicine for young, innovative researchers interested in pursuing problems relevant to the molecular biology, diagnosis, and treatment of cancer. Projects include:

1) the development by genetic engineering techniques of new human hemoglobins able to improve delivery of oxygen to hypoxic tumor cells and their subsequent complete genetic, biochemical, and physiological characterization in vitro and in vivo (e.g., marrow transplant and transgenic mouse model systems), and:

2) the study of autocrine and paracrine mechanisms which govern stromal invasion by tumors, activated immune cells, and implanting embryos, with particular emphasis on the molecular biology of lymphohematopoietic cytokines, their receptors, and their biological role in the control of tumor growth, tissue invasion and metastasis, modulation of host response to foreign tumor and embryonic antigens, and alteration of tumor and normal tissue responses to radiation, chemotherapy, and other agents currently employed in cancer treatment. Preference will be given to candidates with M.D. or Ph.D. degrees and research experience (pre- or post-doctoral) in molecular biology, protein and nucleic acid biochemistry, and/or molecular immunology. Interested individuals should send letters of application, including curriculum vitae and references, to: **Barry M. Kacinski, M.D., Ph.D., 136 HRT, Department of Therapeutic Radiology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.**

### POSTDOCTORAL MOLECULAR IMMUNOLOGISTS

Two postdoctoral positions are available in an active program of Transplantation Immunology. One individual will conduct studies on immunological unresponsiveness induction in transplant recipients using either purified soluble HLA molecules, synthesized peptides, or recipient cells transfected with donor MHC genes. The second individual will study the regulation of expression of HLA genes.

Salary is commensurate with experience and begins at \$23,196.

Send curriculum vitae and names of three references to **Marvin R. Garovoy, M.D., Immunogenetics and Transplantation Laboratory, University of California, 513 Parnassus Avenue, Health Sciences East, Room 520, San Francisco, CA 94143.**

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

**POSTDOCTORAL POSITION:** Molecular modeling and dynamics simulations of enzyme structure/function and design. Facilities include academic and commercial software, ES 390, VAXs, Convex, workstations, and generous CRAY time. Publication and attendance at scientific meetings will be encouraged. Ph.D. and U.S. citizenship required. Send résumé to: **Anthony F. Gasperino, Battelle, Pacific Northwest Laboratories, P.O. Box 999, Department 102, Richland, WA 99352.** Position will start Autumn 1989. *Battelle is an Equal Opportunity Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION**—Penn State: Position available immediately to join a multidisciplinary group using genetic engineering, mutant characterization and enzymology to study lignin biodegradation. Applicants should have microbiology or molecular biology experience. Send curriculum vitae and names of three references to: **Dr. Jean Brenchley or Dr. Ming Tien, Penn State University, Biotechnology Institute, 519 Wartik Laboratory, Department SM, University Park, PA 16802.** Applications will be accepted until a suitable candidate is identified. *An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.*

**POSTDOCTORAL POSITION** available immediately to study the molecular mechanism of genetic deletion in bacteriophage T7. Experience in microbial genetics and recombinant DNA techniques highly desirable. Send curriculum vitae and the names and addresses of three references to: **Dr. Warren Masker, Department of Biochemistry, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140.** *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** is available immediately to study the response properties and morphological features of neurons in the brainstem gustatory relay nuclei. Experience with intra- and/or extracellular recording techniques is required. Experience with the use of iontophoresis for tract-tracing or intracellular marking would be of value for these studies. Although an interest in the chemical senses of olfaction and gustation would be advantageous, inquiries by applicants with interests in the brainstem control of cardiovascular, respiratory or other visceral motor functions will be welcomed. Send scientific résumé and the names of three references to: **Dr. Barry J. Davis, Cell Biology and Anatomy, Volker Hall, Room 601, University of Alabama at Birmingham, Birmingham, AL 35294.** *We are an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately for research on structural analysis of DNA conformation and interaction with drugs and other ligands. Techniques for analysis include UV, fluorescence and circular dichroism as well as 1D and 2D NMR. Previous experience with nucleic acids is preferred. Send curriculum vitae and three letters of reference to: **Professor R. H. Shafer, Department of Pharmaceutical Chemistry, Box 0446, University of California, San Francisco, CA 94143.** *UCSF is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION.** Immediate opening (2 years) for either a research biologist/plant physiologist/research chemist with the USDA, Agricultural Research Service, Western Regional Research Center, Albany, California, to conduct research on the mechanisms and constituents responsible for health-related properties of cereal grains. Salary range \$28,852 to \$44,957 commensurate with experience. For application procedures, contact: **Rita J. Millard, ARS Personnel, Beltsville, MD on 301-344-3138.** For information on the research project, contact: **Dr. Antoinette A. Betschart, WRRRC, 800 Buchanan Street, Albany, CA 94710 or 415-559-5656.** *An Equal Employment Opportunity Employer.*

**POSTDOCTORAL POSITION AVAILABLE**—Immediate opening to work on the molecular cloning and expression of carcinoma-associated antigen genes. Previous experience in molecular biology desirable. Starting salary \$20,000. For immediate consideration submit curriculum vitae plus three letters of recommendation (including telephone numbers) to: **Dr. Alban J. Linnenbach, Assistant Professor, The Wistar Institute, 36th and Spruce Streets, Philadelphia, PA 19104.** *Equal Opportunity Employer M/F.*

**POSTDOCTORAL POSITION AVAILABLE IMMEDIATELY** to study the molecular mechanism of DNA strand break repair in mammalian cells. The project involves isolation and characterization of human genes that complement the defects in a series of repair deficient CHO mutants. Send curriculum vitae and a statement of experience and goals to: **Dr. Thomas Stamato, Associate Professor, The Wistar Institute, 36th and Spruce Streets, Philadelphia, PA 19104.** Telephone: 215-898-3997. *Equal Opportunity Employer, M/F.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** open immediately to study molecular structure and organization of mitochondrial multienzyme complexes. The project will utilize both recombinant DNA and protein chemistry methods which include construction, expression and purification of recombinant proteins, x-ray crystallography and <sup>1</sup>H-NMR spectroscopy. The candidate should have a strong background in protein chemistry. Experience in molecular biology is helpful but not essential. Send curriculum vitae and names of three references to: **Dr. David T. Chuang, Department of Biochemistry, The University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9038.**

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**POSTDOCTORAL POSITION** available immediately to study the modulation of epithelial chloride channels using optical as well as electrophysiological techniques. Applicant should have a Ph.D. with a background in transport or electrophysiology desirable. Salary: \$30,000 for the first year. Applications including curriculum vitae should be sent to: **Dr. Deborah J. Nelson, The University of Chicago, Department of Medicine, Hospital Box 249, 5841 South Maryland Avenue, Chicago, IL 60637.** *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS** available in departments of biochemistry, molecular and cellular biology, molecular and medical microbiology, pharmacology and physiology. Applicants must have a Ph.D. or M.D. degree. Positions available during 1988 to 1989. Closing date: 1 October 1989 or until positions are filled. Send applications to appropriate department head: **University of Arizona, Arizona Health Sciences Center, Tucson, AZ 85724.**

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### POSTDOCTORAL POSITIONS

Public Health Service, National Institutes of Health, Research Triangle Park, North Carolina.

Postdoctoral scientists are needed in the Laboratory of Molecular Genetics of the National Institute of Environmental Health Sciences to investigate mechanisms of DNA replication, recombination and repair in the yeast *Saccharomyces cerevisiae*. Ph.D. or equivalent required in biochemistry, molecular biology, biology, microbiology, genetics or a related discipline. Salary range \$20,000 to \$28,000 for entry-level candidates, commensurate with background. For additional information, contact: **Dr. Akio Sugino at 919-541-7732.** To apply, submit curriculum vitae, bibliography, statement of future research interests and three letters of reference by 30 May 1989 to: **Bruce Wiggins (HNV1), NIEHS Personnel Office, P.O. Box 12233, Research Triangle Park, NC 27709.** *An Equal Opportunity Employer.*

**TWO POSTDOCTORAL POSITIONS IN PLANT CELL AND MOLECULAR BIOLOGY** available immediately for the study of the control of gene expression in plants and plant protoplasts and for the analysis of factors governing the targeting of gene products within the endomembrane-secretory pathway. Will also be involved in the development of flow cytometric procedures for the in vivo isolation of transformed plant protoplasts. Must have Ph.D. in an appropriate field; experience in molecular techniques is desirable. Closing date for positions 15 June 1989. Send curriculum vitae and names of three references to: **Dr. David W. Galbraith, Department of Plant Sciences, University of Arizona, Tucson, AZ 85721.** *The University of Arizona is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

**POSTDOCTORAL/RESEARCH ASSOCIATE** position available for studies of the role of gangliosides and other lipids as trophic and differentiation-promoting factors. Studies use cell cultures of neurons and photoreceptors from normal animals and from mutants affected by retinal degenerations. Analytical approaches are multidisciplinary including biochemistry, immunocytochemistry, autoradiography, and gene transfection studies. Please send curriculum vitae and names and telephone numbers of three references to: **Rubin Adler, M.D., Wilmer Institute, Johns Hopkins University School of Medicine, Baltimore, MD 21205.**

## Applied Ecologists

EG&G Energy Measurements, Inc., a prime contractor to the U.S. Department of Energy, has immediate openings for four Applied Ecologists to participate in long-term research and monitoring programs to evaluate site characterization activities at Yucca Mountain, Nevada. Two Plant Ecologists will participate in studies of plant communities, reclamation studies, interdisciplinary flora/faunal studies, and surveys for endangered species. Two Animal Ecologists will participate in field studies of small mammals, desert tortoises, and other reptiles, birds, carnivores, and the distribution and abundance of invertebrates.

### Minimum qualifications:

- BS degree in natural sciences field.
- One year of field experience.

### Preferred qualifications:

- Familiar with Mohave Desert/Great Basin flora and fauna.
- Two or more years field experience.
- Experience directing field crews.

Work location is Las Vegas, Nevada, but extensive field efforts will be required at the Nevada Test Site. For consideration submit resume to:

**EG&G Energy Measurements, Inc.**  
ATTN: Mike Kimberlain, 18-89  
P.O. Box 1912  
Las Vegas, NV 89125

An equal opportunity employer. U.S. citizenship required. Pre-employment physical examination, which includes a drug and alcohol screening, is required.



## Project Manager-

### DISCOVERY RESEARCH

The R.W. Johnson Pharmaceutical Research Institute is a Johnson & Johnson Company, and leader in the field of pharmaceutical research.

The Canadian division, located in Toronto, is currently looking for a Project Manager to lead our Discovery Research Group. You will direct a group of scientists discovering new hemopoietic/immunoregulatory factors, peptides or molecules for therapeutic use. Your responsibilities will include interaction with other laboratory managers in coordinating projects and communication with our international network of scientists.

Your qualifications should include a PhD in Molecular Biology/Immunology/Cell Biology with postdoctoral training, plus 4 to 6 years of industrial or university research experience. You must have a strong publication record, in combination with supervisory and interpersonal skills.

We offer a competitive salary and benefits package, and the opportunity to develop in a progressive state-of-the-art research environment. Please forward your resume to Pelly Shafto, Manager, Employee Relations, 19 Green Belt Drive, Don Mills, Ont. M3C 1L9, Canada.



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PHARMACEUTICAL RESEARCH INSTITUTE  
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**Radiomatic Instruments & Chemical Co., Inc.**, a world leader in radio-chromatography detection systems, is a member of the Canberra family of companies serving the life sciences and nuclear instruments markets. We are expanding our domestic operations, which has created the following new positions:

### APPLICATION SPECIALIST

As an Application Specialist in our Technical Support Group, you will provide technical assistance for our radio-chromatography detectors to our customers and field sales force around the world. You will also work closely with our R&D department in developing new applications and products.

A good command of chromatography applications, a sound knowledge of the biological science and excellent verbal and written communication skills are essential. Experience with radioisotopes is a definite plus.

If you are a professional with an M.S. or Ph.D. in chemistry, biochemistry or molecular biology, have a strong background in HPLC, GC or TLC, and possess excellent communication skills, you may be the person we are looking for.

### SALES ENGINEER

If you are a highly motivated, self-starting professional sales person, we have a position for you in our expanding domestic field sales operation. You will be responsible for selling our line of radio-chromatography products (HPLC, GC, TLC & Chemicals) to the biological research community in the North East (MA, RI and upstate NY).

For this position, we require a minimum of three years of selling experience in the biological sciences marketplace with a strong background in chromatography, radiochromatography and liquid scintillation counting. A B.S. degree in life sciences is a real plus.

### PRODUCT SPECIALIST

As a Product Specialist in our Sales Department, you will support our field sales force with training, product demonstrations and product literature. The additional responsibility for sales within Florida makes this position a unique opportunity.

If you have a B.S. degree in one of the life sciences with a strong preference toward that field, have excellent communications skills and a desire to be involved with an active field sales organization, you may be the person we are looking for. Prior experience with chromatography, scintillation counting and radioisotopes a real plus.

We offer you challenge, growth, competitive salaries or commission plans, and a comprehensive benefits package. For prompt consideration, please send your resume with salary history in confidence to:

**RADIOMATIC INSTRUMENTS, 5102 S. Westshore Blvd., Tampa, FL 33611. Attn. Human Resources**

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## BIOTECHNOLOGY

Cetus Corporation, a leader in the development of biotechnology-based therapeutics for cancer and infectious diseases, is currently seeking the following research professionals.

### POSTDOC

In this position, your studies will focus on activation and fractionation of immune effector cells for use in targeting cytotoxicity via anti-tumor/anti-effector bispecific antibodies. Duties may also include developing and characterizing bispecific antibodies from hybrid hybridomas for eventual application in human cancer therapy. We require a PhD in a relevant field, experience with hybridomas and cellular cytotoxicity combined with excellent communication skills. Experience with bispecific antibodies to targeted cytotoxicity is highly desirable. Box DR1.

### RESEARCH ASSOCIATE/ASSISTANT

Duties will include maintaining hybridomas and cell lines; purifying antibodies and antigens; characterizing antibodies by SDS PAGE, IEF, immunoprecipitation, western blotting and Scratchard studies; preparing antibody fragments and conjugates; developing and applying immunoassays; and conducting in vitro ADCC assays. We require an MS and a minimum of 2 years or a BS and a minimum of 4 years of directly relevant lab experience, plus good communication skills. A willingness to work with radioisotopes and human blood samples, as well as to work flexible hours is also required. Box DR2.

Cetus offers an excellent benefits package along with the opportunity to participate in some of the most exciting research in the Bay Area. For consideration, please send your resume/CV, including publications list and indicating appropriate Box number, to: Cetus Corporation, 1400 Fifty-Third Street, Emeryville, CA 94608. We are an Equal Opportunity Employer.





## POSITIONS OPEN

**POSTDOCTORAL/RESEARCH ASSOCIATE POSITION** available immediately for Ph.D. or M.D. to study the function of the hematopoietic extracellular matrix. Projects include matrix purification, the interaction of matrix with hematopoietic growth factors, and the effects of drugs on bone marrow function. Please submit curriculum vitae, a brief description of research experience, and three letters of reference to: **Dr. Sharon Luikart, Department of Medicine, Box 325, University of Minnesota Hospitals and Clinics, Minneapolis, MN 55455.** The University of Minnesota is an Equal Opportunity Educator and Employer.

The Board on Agriculture (BA) of the National Research Council (NRC) is seeking a **PROGRAM OFFICER** for Studies on Applications of Biotechnology to Agriculture Production and Food Technology. Requires a Ph.D./M.S./M.A. or equivalent in molecular biology or a related field or equivalent professional experience. Ability to gather and analyze data and compile information into written reports, demonstrated knowledge and understanding of molecular biology technologies, familiarity with agricultural applications of biotechnology, and excellent writing and editorial skills required. The National Research Council offers an exceptional benefits package including paid relocation to the Washington, D.C. area, and a competitive starting salary. Please send résumé in confidence to: **NRC/BA, HA 394/JT (Biotechnology), 2101 Constitution Avenue, NW, Washington, DC 20418.** Equal Opportunity Employer.



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**PROTEIN CHEMISTS AND CELL BIOLOGISTS IN BLOOD RESEARCH.** Research positions (postdoctoral fellow to senior research scientists) immediately available for qualified M.D.'s/Ph.D.'s to participate in multiple NIH-funded research projects related to interaction of complement and coagulation systems in platelet activation and blood clotting. Prior training or expertise in physical biochemistry, protein chemistry and/or cell biology desired. Position for highly-motivated M.D. desiring basic or applied research training in Transfusion Medicine also available. Contact: **Peter J. Sims, M.D., Ph.D., Oklahoma Medical Research Foundation, 825 N.E. 13th Street, Oklahoma City, OK 73104.** An Equal Opportunity/Affirmative Action Employer.

**RESEARCH SCIENTIST**, experimental hematology: Develop research program to identify novel cellular growth factors and their effects on hemopoietic cells. Identification, purification, and physico-chemical and biological characterization of these growth factors. Development of myeloid cell differentiation factors as well as other growth factors which act synergistically to stimulate stem cell populations. Development of in vitro and in vivo models for the assay and detection of growth factors which stimulate early hemopoietic stem cells termed HPP-CFC (High Proliferative Potential-Colony Forming Cells). These assays will include bone marrow colony assays, stem cells, and stromal cell assays. Ph.D. in physiology or cell biology required with 2 years of experience in experimental hematology. Salary: \$46,000 per year. Job site and interview: Thousand Oaks, California. Send this ad and a résumé to: **Job #EG 1805, P.O. Box 9560, Sacramento, CA 95823-0560** not later than 29 April 1989.

**RESEARCH SCIENTIST/PROGRAMMER** to participate in the organization and further development of programs used in protein crystallography. Codes will be optimized to take advantage of a workstation environment using an X-windows interface. At least 3 years of Fortran is prerequisite, and a knowledge of C, UNIX, X-windows, and crystallography would be considered an advantage. Salary will be commensurate with experience. Send curriculum vitae and three letters of recommendation to: **Professor Wayne A. Hendrickson, Howard Hughes Medical Institute, Department of Biochemistry and Molecular Biophysics, Columbia University, 630 West 168th Street, New York, NY 10032.**

## POSITIONS OPEN

### QUATERNARY PALEOECOLOGIST

The Department of Geological Sciences and the Graduate Program in Ecology at the University of Tennessee, Knoxville are seeking applicants for a joint faculty appointment. This is a tenure-track position at the assistant professor level, available in August 1989. Candidates should have completed a Ph.D. and have a record of published research in Quaternary paleoecology. Experience in teaching and obtaining research grants is desirable. Send résumé and names and telephone numbers of three references to: **Dr. G. Michael Clark, Chairman of Search Committee, Department of Geological Sciences, University of Tennessee, Knoxville, TN 37996-1410.** Review of applications received will commence on 1 June 1989. *UTK is an Equal Opportunity Affirmative Action/Title IX/Section 504 Employer.*

### RADIATION BIOLOGIST

The Department of Radiation Oncology has a new opportunity available for a radiation biologist to join our staff to initiate a hospital-based research program in human oncology and/or radiation biology. A close working relationship with our clinical staff and residents is desired. Qualified applicants must possess 3 years of postdoctoral experience, have excellent oral and written communication skills, and have demonstrated excellence in research.

We offer an excellent compensation package. Please send résumé, statement of research experience and interests, and three letters of reference to: **Martin J. Marino, Director of Personnel, Human Resources Department, Saint Barnabas Medical Center, Old Short Hills Road, Livingston, NJ 07039.** We are an Equal Opportunity Employer M/F/H/V.

**RESEARCH ASSISTANT PROFESSOR OR POSTDOCTORAL FELLOW** to join multidisciplinary team investigating new approaches to brain tumor therapy. Individual should have laboratory (animal) background in tumor biology, cancer drug pharmacology, brain research, or related field. Position available immediately. Send curriculum vitae, list of publications, salary requirements, and names and addresses of three references to: **Dr. Bruce F. Kimler, Department of Radiation Oncology, University of Kansas Medical Center, Kansas City, KS 66103.**

**RESEARCH ASSOCIATE** needed for overall supervision of a transgenic mouse production laboratory; DNA microinjection of mouse embryos and embryonic stem cells; correction and generation of human genetic diseases in mice. Must have Ph.D. degree in biochemistry or cellular and development biology with 2 years of postdoctoral fellowship in the biochemistry of mammalian development, tissue culture, in situ analysis, molecular biology, and embryo manipulation. \$25,000 per year; 40 hours per week. Apply at: **The Texas Employment Commission, Houston, Texas** or send résumé to: **The Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. #5190779.** Ad paid by an Equal Employment Opportunity Employer.

**RESEARCH ASSOCIATE.** This position involves cytogenetics research with rodent oocytes, spermatocytes, and early embryos. Academic requirements include a degree in genetics/cell biology and 3 years of experience in mammalian germ cell cytogenetics research. Salary is dependent upon education and experience. Send curriculum vitae and references to: **Camille Thomas, Human Resource Management, LSU School of Medicine in Shreveport, P.O. Box 33932, Shreveport, LA 71130.** An Equal Opportunity Employer.

### SOIL SCIENTIST

EnviroSphere Company, the environmental consulting division of Ebasco Services Inc., located in northern New Jersey, is seeking a soil scientist with a strong background in soil morphology, classification and surveying. Experience with soil mapping and wetland classification desirable, good oral and written communication skills essential, advanced degree preferred. Ebasco offers excellent growth opportunities as well as competitive salaries and a comprehensive benefits package. Please send résumé including salary history/requirements to: **T. A. Caparo, Ebasco Services Inc., 160 Chubb Avenue, Lyndhurst, NJ 07071.**

## POSITIONS OPEN

**RESEARCH ASSISTANT PROFESSOR** appointment in the Department of Pharmacology available 1 July 1989. Ph.D. degree in pharmacology, biochemistry, or toxicology and at least 2 years of relevant postdoctoral experience. Candidate will be encouraged to interact with some of the fifteen members of the Laboratory of Hepatobiology and Toxicology (**Professor R. Thurman**, Director) and develop a new research program. Experience with modern techniques desirable. Salary commensurate with experience, starting at \$36,000 per year. Applicants should send research interests, curriculum vitae and three letters of recommendation to: **Connie B. Britte, Administrative Manager, Department of Pharmacology, CB#7365, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7365.** UNC-CH is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

**SCIENTIST III.** Sandoz Crop Protection, a company widely recognized for excellence in agricultural research and development has an opening in the Basic Insect Research Group in Palo Alto. The successful candidate will be part of an interdisciplinary research team studying insect neuropeptide systems. Requires a B.S./M.S. in biochemistry with extensive experience in the area of peptide protein isolation and sequencing (HPLC, etc.). Microisolation of neuropeptides experience is highly desirable. Must have good laboratory work habits and recordkeeping abilities. For consideration send your résumé to: **Sandoz Crop Protection, Zocon Research Institute, Human Resources Department #89-322, 975 California Avenue, Palo Alto, CA 94304-1104.** We are an Equal Opportunity/Affirmative Action Employer.

### TECHNOLOGY TRANSFER

USET, Inc., an affiliate of the Maxwell Pergamon Publishing Group, and a major technology transfer and patent management organization serving universities, is seeking a senior professional with broad experience in life sciences. Activities include on-site investigator interviewing and technology tracking at client universities, disclosure evaluation, invention presentation and licensing. Strong organic chemistry background a plus. Entrepreneurial proclivities welcome. Candidates from academia and industry will be considered. Salary commensurate with experience. Send curriculum vitae to:

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### THEORETICAL/EXPERIMENTAL NEUROSCIENTIST NORTHWESTERN UNIVERSITY MEDICAL SCHOOL AND INSTITUTE FOR NEUROSCIENCE

Applications are invited for a tenure-track faculty position in the Department of Physiology. Level may vary from assistant to full professor depending on experience and credentials of the applicant. Candidates must have a Ph.D. and/or M.D. degree(s) and at least 2 years of postdoctoral experience. Individuals with research interests in neural network models are encouraged to apply. The appointee will complement an interactive group of faculty with strong commitment to the study of cellular and integrative aspects of neural control of physiological systems. Candidates should exhibit potential for developing a strong independent research program. Duties also include teaching to professional and Ph.D. students and development of computer-assisted instruction. In order to receive full consideration, interested applicants should submit curriculum vitae, statement of research goals and accomplishments, summary of teaching experience, and the names of four references to the address below by 1 July 1989. *Northwestern University is an Affirmative Action and Equal Opportunity Employer. Hiring is contingent upon eligibility to work in the United States.*

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Chairman, Search Committee  
Department of Physiology  
Northwestern University Medical School  
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The Sterling Research Group, the worldwide pharmaceutical research and development organization of Sterling Drug Inc., announces two openings in the Analytical Sciences Department at Sterling's Rensselaer, New York facility.

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The successful candidate will possess a Ph.D. in Organic or Analytical Chemistry with industrial experience in the analytical evaluation of drugs and drug products and possess a comprehensive knowledge of applicable current Good Manufacturing Practices regulations. Supervisory experience is required. The Scientist will be expected to supervise a chemical test program for evaluation of drug products and components, to administer the drug product stability program, and provide necessary Interim Control Monographs and reports.

# PROGRAM MANAGER

## *Ocean Optics*

**THE OFFICE OF NAVAL RESEARCH** is seeking a highly qualified individual to plan and manage a contract research program in ocean optics. The sponsored research is conducted principally at universities and private laboratories, with research performed by leading scientists in the field. This is a Civil Service position at the GM-14 or 15 level (\$48,592-\$74,303), depending on qualifications.

The individual selected will establish goals for and conceive, organize and direct research and development programs in new areas of ocean optics with emphasis on theoretical and experimental aspects of oceanographic radiative energy transfer, ocean color, visibility/imaging, and particulate optics. The incumbent will identify new research opportunities, communicate ONR interests to the scientific community, evaluate and select research proposals for funding, manage available resources, and represent the program within the Navy and DOD. An important aspect of this position is to conceive, develop and market new research ideas to higher Navy management. This position provides the challenge and opportunity to have a creative and significant impact on the direction and quality of research conducted at the national level. Additionally, the opportunity exists to establish or maintain an individual research program at an academic institution or government laboratory.

Applicants must have either (1) a Ph.D. or equivalent in optical oceanography, physics or a related discipline and at least one year of professional experience in ocean optics or (2) acquired a minimum of three years of progressively responsible professional experience. Demonstrated research experience is preferred.

Interested persons should send a resume, list of publications and a Standard Form 171, Application for Federal Employment (available at Federal Job Information Centers or from the address below), to:

OFFICE OF THE CHIEF OF NAVAL RESEARCH  
CIVILIAN PERSONNEL DIVISION, OCNR CODE 01242P  
ATTN: ANNOUNCEMENT #89-18 (S)  
800 NORTH QUINCY STREET  
ARLINGTON, VA 22217-5000

Applications will be accepted through **June 2, 1989** and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (202) 696-4705.

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## POSITIONS OPEN

**SUPERVISORY RESEARCH CHEMISTS.** FAA Civil Aeromedical Institute, Oklahoma City, Oklahoma. Two positions in Career Civil Service. One position will supervise the Combustion Toxicology Research Program; the other position will be responsible for developing the team and new program in Forensic Toxicology Research. Contact: Shirley Cox, 405-686-4506, for qualification requirements and application forms. *Equal Opportunity Employer.*

University of California, Los Angeles (UCLA) Urology Division seeks Board-certified **UROLOGIST** with expertise in renal transplantation for faculty position. Requirements: proven ability to organize clinical training; ability to collaborate in immunology research; experience in reconstructive and pediatric urology; excellent surgical skills. Applicants should contact: **The UCLA Division of Urology, Los Angeles, CA 90024-1738.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

**VERTEBRATE BIOLOGIST** with research interests in developmental biology, histology, or related area. Applications are invited for a full-time faculty position at the University of Detroit. The successful candidate will be expected to participate in undergraduate and master's-level instruction, while carrying on research interests to the degree in keeping with other standard academic involvements. Applicants should submit a résumé including teaching and research experience, and the names of three references, to be received by 1 May 1989 to: **Dr. R. G. Albright, Department of Biology and Health Sciences, University of Detroit, Detroit, MI 48221.**

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**VERTEBRATE BIOLOGIST, ASSISTANT PROFESSOR**, tenure-track, start August 1989. To teach anatomy/physiology and advanced course(s) in own specialty area. Preferred research emphasis: developmental biology or environmental toxicology. Ph.D. required, postdoctoral research and teaching experience desired. Send curriculum vitae and three references to: **Biology Search Committee, Purdue University Calumet, Hammond, IN 46323.** *Purdue Calumet is an Affirmative Action/Equal Employment Opportunity University.* Application deadline: 28 April 1989.

**VIROLOGIST**—The Department of Neurology at the University of Minnesota Medical School seeks a Ph.D. virologist at the research associate level to participate in studies of the pathogenesis of HIV infection of the nervous system. This individual will direct the laboratory component of a multidisciplinary team investigating the neurologic complications of AIDS and, particularly, the AIDS dementia complex and HIV brain infection. Past experience and publication record should include evidence of expertise in contemporary pathogenetic and molecular virology. The candidate should have a record of, or high potential for, gaining independent grant support. The position represents an excellent opportunity for a young investigator to establish a productive independent career in a milieu allowing excellent support and collaboration with both clinical and basic science faculty. Applicants should respond with curriculum vitae to: **Dr. Richard W. Price, Professor and Head, Department of Neurology, University of Minnesota Medical School, 420 SE Delaware Street, Minneapolis, MN 55455.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

## STUDENT FELLOWSHIPS

### MYOCLONUS RESEARCH STUDENT FELLOWSHIPS

The Myoclonus Research Fund, a non-profit research organization, is offering five 10-week student fellowships of \$2,000 each. The grants will be awarded for a summer research project in the field of myoclonic movement disorders to be conducted in the laboratory of an established investigator. Applicants should submit résumé, research proposal, and supporting letter from the host senior investigator to: **The Myoclonus Research Fund, 220 Hardenburgh Avenue, Demarest, NJ 07627.** Telephone: 201-585-0770.

## CONFERENCES

### THE ROBERT A. WELCH FOUNDATION CONFERENCE ON CHEMICAL RESEARCH XXXIII. MEMBRANE PROTEINS: TARGETING AND TRANSDUCTION

Program Chairman: Joseph L. Goldstein  
23 and 24 October 1989  
Houston, Texas

Speakers and Moderators\*

Michael Berridge

Gunter Blobel

Konrad Bloch\*

Michael Brown

Alfred Gilman

Hidesaburo Hanafusa

Stuart Kornfeld

Daniel E. Koshland, Jr.\*

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Shosaku Numa

George E. Palade\*

Hugh R. B. Pelham

James Rothman

Joseph Sambrook

Gottfried Schatz

Melvin Simon

Lubert Stryer

Don Wiley

Registration information will be published in August 1989. Contact: Kimberly Nelson, The Robert A. Welch Foundation, 4605 Post Oak Place, Suite 200, Houston, TX 77027. Telephone: 713-961-9884, fax: 713-961-5168.

## PROGRAM

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## WORKSHOP

### WORKSHOP ON GENETIC RESPONSE TO ENVIRONMENTAL ADVERSITY The Airlie House, Airlie, Virginia 23 to 26 April 1989

Sponsored by the National Institute of Child Health and Human Development

Speakers include: B. Ames, C. Gross, F. Neidhardt, E. Craig, C. Wu, G. Walker, S. Gottesman, P. Herrlich, T. Ohalloran, N.-H. Chua, C. Lamb, D. Hamer, J. B. Niellands, R. Klausner, D. Nebert, C.-P.D. Tu, M. Gottesman, R. Schimke, M. Cashel, A. Hinnebusch, K. Struhl, K. Arndt, L. Guarente, C. Weinberger, M. Karin, D. Goeddel, G. Fey, M. Mathews, A. Keller.

For information, please contact: Ms. Johanna McDonough, Social and Scientific Systems, Inc., 7101 Wisconsin Avenue, Suite 610, Bethesda, MD 20814. Telephone: 301-986-4870.

## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIPS IN IMMUNOLOGY

The Irvington Institute for Medical Research will award up to ten postdoctoral fellowships in basic laboratory immunologic research for 3 years of study at a hospital or laboratory in the United States, beginning 1 July 1990. Applicants holding M.D.'s, Ph.D.'s, or M.D./Ph.D.'s are encouraged to apply. Those applicants having no more than 3 years of previous postdoctoral training will receive priority. Successful candidates will receive an incremental stipend of \$22,000, \$24,000, and \$26,000 for years 1, 2, and 3; \$2000 annual overhead allowance to host institution. Write or telephone for applications: **The Irvington Institute for Medical Research, 120 East 56th Street, Suite 330, New York, NY 10022.** Telephone: 212-758-8250; FAX: 212-758-8968. Applications are due on or before 15 August 1989.

## FELLOWSHIPS

**POSTGRADUATE AND FACULTY RESEARCH PROGRAM** at The Agency for Toxic Substances and Disease Registry—ATSDR is a new agency of the Public Health Service based in Atlanta created to implement health-related sections of laws that protect the public from hazardous waste or environmental spills of hazardous substances. Immediate openings are available for those with experience in toxicology, epidemiology, health education, and related areas. *U.S. citizenship or PRA status is required.* For more information and applications contact (please indicate if faculty or postgraduate): **Research Participation Program/ATSDR, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117.** Telephone: 615-576-3190.

## SYMPOSIUM

### DNA DAMAGE AND REPAIR IN HUMAN TISSUES 1 to 4 October 1989

Brookhaven National Laboratory Symposium will spotlight new techniques for measuring DNA damage in human tissues, damage and repair measurements in human skin and lymphocytes irradiated in situ, human DNA repair enzymes, and detection of mutations in humans. Contributed posters are welcome. Seventeen hours of AMA Category 1 CME credit will be granted. Registration, including accommodations and evening meals is \$350 (deadline is 15 September 1989). Fellowships for graduate students and recent Ph.D.'s and M.D.'s are available. For program information, telephone: **Dr. Betsy Sutherland, 516-282-3293;** for registration information, telephone or write: **H. Z. Kondratuk, 516-282-3415, Biology Department, Brookhaven National Laboratory, Upton, NY 11973.**

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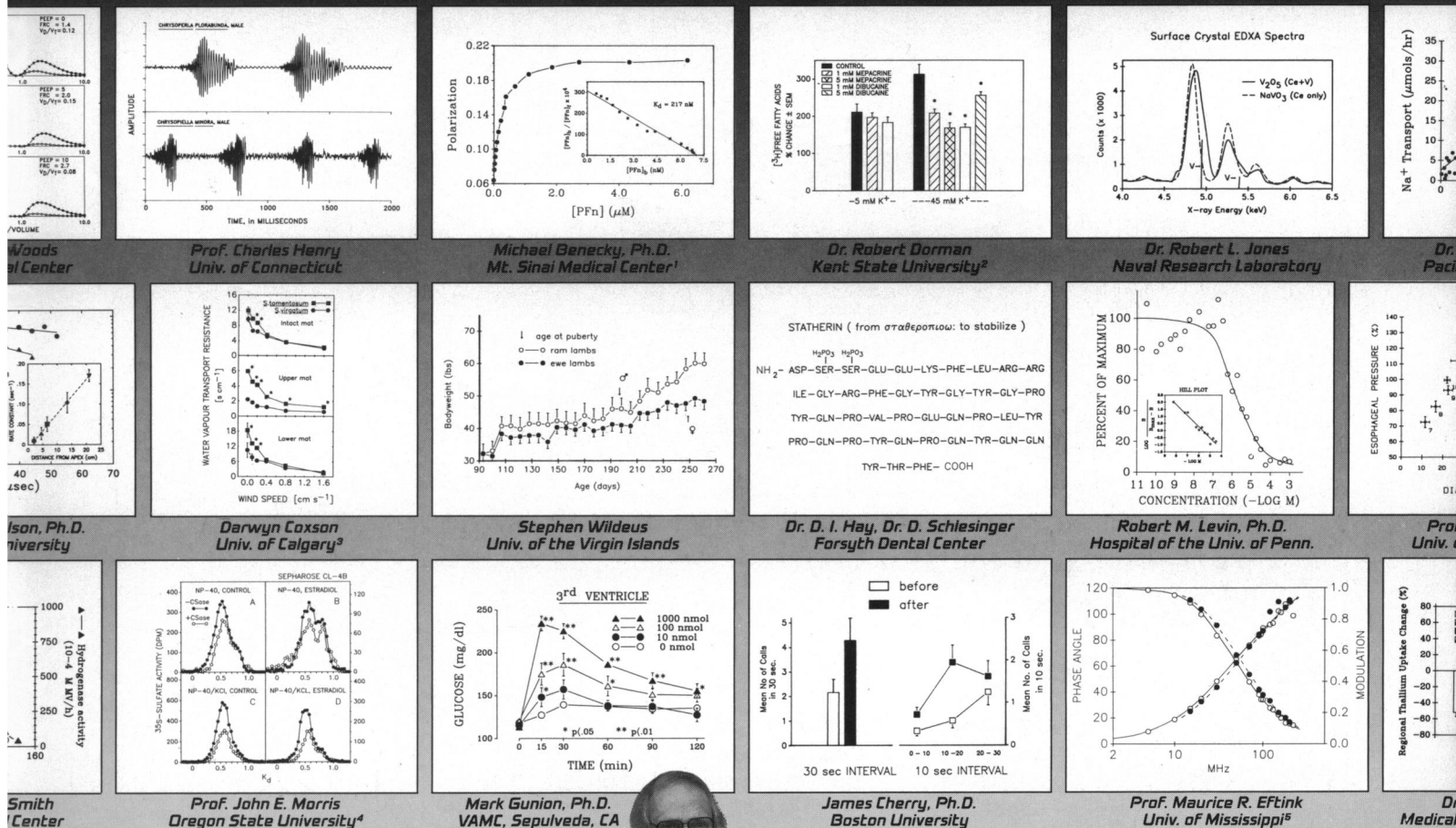
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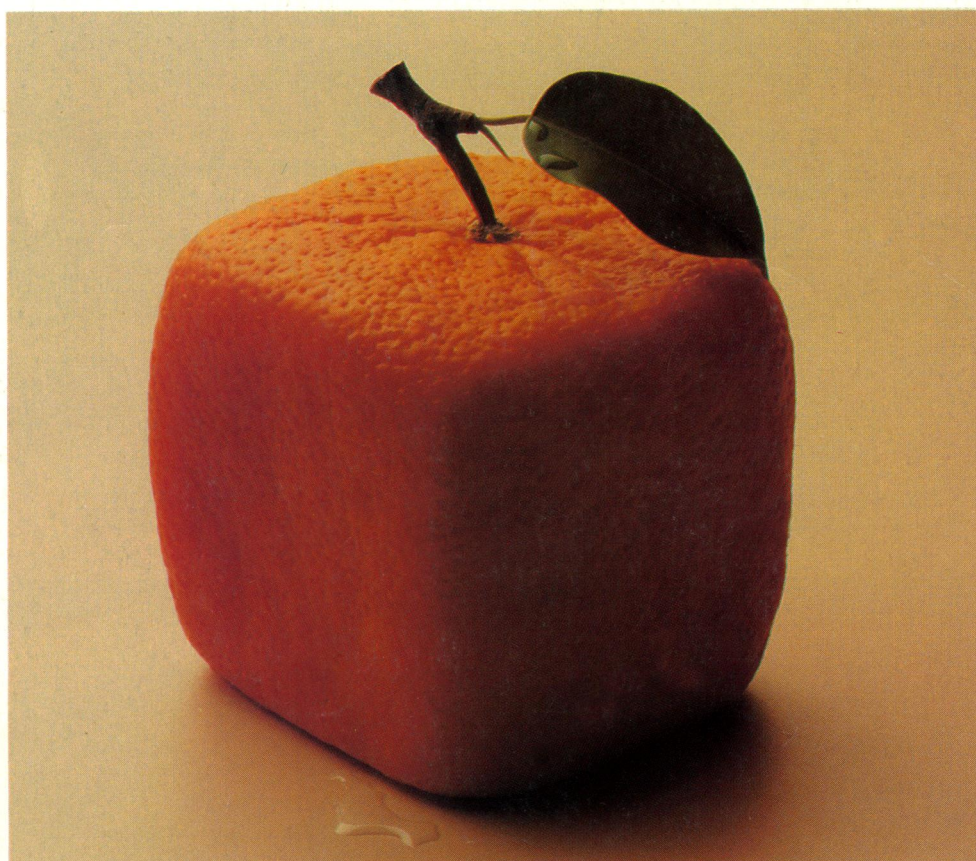
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