

## Mouse Genetics

**The Coat Colors of Mice.** A Model for Mammalian Gene Action and Interaction. WILLYS K. SILVERS. Springer-Verlag, New York, 1979. xiv, 382 pp., illus. \$29.80.

This book deals with one important branch of mouse genetics. Twenty-eight years ago, Hans Grüneberg was able to cover the whole subject in *The Genetics of the Mouse*. That was the last comprehensive work in the field. Since then, our knowledge of mouse genetics has just about doubled in each decade, so that seven or eight fairly weighty tomes would now be needed to do the same job. Thus this volume can be regarded as one of a series of monographs on different aspects of mouse genetics (another being Jan Klein's on the H-2 complex), which are urgently needed but only just beginning to appear.

Silvers describes no fewer than 62 loci that affect coat color in mice, with up to 17 known mutant alleles per locus. He successfully copes with this large body of mouse knowledge by dealing first with the best-known allelic series and then grouping in separate chapters genes with rather similar phenotypic effects, such as those for white-spotting. In addition, there are useful chapters on the pigment patterns of allophenic mice and on X-linked determinants, but there is little information on linkage relationships.

The organization of the book is somewhat unusual, since each chapter is divided into a main section that carefully describes the properties of each locus being treated, as well as actions and interactions of its mutant alleles, and subsidiary "notes" that give more detailed or more recondite information. Many fascinating items are included in these notes, from the relationships between beige and the Chediak-Higashi syndrome to the nature of the mammalian "spot test" for somatic mutations. This novel arrangement works well, ensuring a smooth passage for the reader who wants to know the essential features of a particular locus but also catering to the specialist who is interested in obtaining all the facts. The book contains many illustrations, including a series of 24 mutants in color. These are mainly of high quality but have to be hunted for, since they are listed nowhere. There are over 800 references.

The author emphasizes that the book is not a "mouse watcher's color-guide" but is meant to show how all sorts of genetic phenomena, from modifying genes to epistasis, contribute to make mice the

colors they are. However, people will buy it not for that reason but because it reveals present knowledge of one substantial slice of mouse genetics. If they want a tutorial on coat color genetics they will be disappointed, since the introduction is very brief and deals with little apart from the coat. If they want syntheses of various aspects of mouse color genetics, they will also be disappointed, and so was I. For instance, the author emphasizes that he has deliberately included accounts of the pleiotropic effects of color genes on the blood, skeleton, and other parts of the animal "in the hope that they may provide important clues for future investigations." Yet no synthesis of this valuable information is attempted, nor is the subject index of much help, since many of the references to pleiotropic effects are not indexed under that heading. This won't deter the mouse geneticist, who knows where else to look, but it may discourage someone from outside who is interested, for instance, in mouse models of human disease. In its field, therefore, the book will be very useful indeed, but the field seems to have been restricted more than it need have been.

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## Books Received

**Are Science and Technology Neutral?** Joan Lipscombe and Bill Williams. Butterworths, Boston, 1979. 60 pp. Paper, \$2.95. Science in a Social Context.

**The Arun.** A Natural History of the World's Deepest Valley. Edward W. Cronin, Jr. Houghton Mifflin, Boston, 1979. xii, 236 pp., illus. \$10.95.

**Asbestos.** Vol. 1, Properties, Applications, and Hazards. L. Michaels and S. S. Chissick, Eds. Wiley-Interscience, New York, 1979. xii, 554 pp., illus. \$62.50.

**Aspects of Chemistry for Health-Related Sciences.** Curtis T. Sears, Jr., and Conrad L. Stanitski. Prentice-Hall, Englewood Cliffs, N.J., 1979. xviii, 410 pp., illus. + index. \$16.50.

**Assessing Chemical Mutagens.** The Risks to Humans. Papers from a conference, Lloyd Harbor, N.Y., May 1978. Victor K. McElheny and Seymour Abrahamson, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1979. xvi, 368 pp., illus. \$38. Banbury Report, 1.

**Assessing Toxic Effects of Environmental Pollutants.** Papers from a symposium, Chicago. S. D. Lee and J. Brian Mudd, Eds. Ann Arbor Science, Ann Arbor, Mich., 1979. x, 306 pp., illus. \$30.

**Computer Methods in Geology.** T. V. Loudon. Academic Press, New York, 1979. x, 270 pp., illus. \$32.75.

**Computer Security.** David K. Hsiao, Doug-

las S. Kerr, and Stuart E. Madnick. Academic Press, New York, 1979. xviii, 300 pp., illus. \$18. ACM Monograph Series.

**Continental Margins.** Geological and Geophysical Research Needs and Problems. National Academy of Sciences, Washington, D.C., 1979. xxvi, 302 pp., illus. Paper, \$16.25.

**Control and Dynamic Systems.** Advances in Theory and Application. Vol. 15. C. T. Leonides, Ed. Academic Press, New York, 1979. xviii, 360 pp., illus. \$19.50.

**The Control of the Reactivity of Solids.** A Critical Survey of the Factors That Influence the Reactivity of Solids, with Special Emphasis on the Control of the Chemical Processes in Relation to Practical Applications. V. V. Boldyrev, M. Bulens, and B. Delmon. Elsevier, New York, 1979. viii, 226 pp., illus. \$46.25. Studies in Surface Science and Catalysis, vol. 2.

**Control Theory in Mathematical Economics.** Proceedings of a conference, Kingston, R.I., June 1978. Pan-Tai Liu and Jon G. Sutinen, Eds. Dekker, New York, 1979. x, 242 pp., illus. Paper, \$26.50. Lecture Notes in Pure and Applied Mathematics, vol. 47.

**Controversy.** Politics of Technical Decisions. Dorothy Nelkin, Ed. Sage Publications, Beverly Hills, Calif., 1979. 256 pp. Cloth, \$17.50; paper, \$7.95.

**Environmental Impact Assessment.** Principles and Applications. Paul A. Erickson. Academic Press, New York, 1979. xx, 396 pp., illus. \$26.

**Enzyme Histochemistry.** A Laboratory Manual. Z. Lojda, R. Gossrau, and T. H. Schiebler. Springer-Verlag, New York, 1979. x, 340 pp., illus. Paper, \$41.80.

**Epidemiology and Plant Disease Management.** Jan C. Zadoks and Richard D. Schein. Oxford University Press, New York, 1979. xvi, 428 pp., illus. Cloth, \$19.95; paper, \$8.95.

**Equations of Evolution.** Hiroki Tanabe. Translated from the Japanese edition (Tokyo, 1975) by N. Mugibayashi and H. Haneda. Fearon-Pitman, Belmont, Calif., 1979. xii, 260 pp. \$42. Monographs and Studies in Mathematics, 6.

**Essential Invertebrate Zoology.** M. S. Laverack and J. Dando. Halsted (Wiley), New York, ed. 2, 1979. viii, 194 pp., illus. Paper, \$12.95.

**Everyday Language.** Studies in Ethnomethodology. George Psathas, Ed. Irvington, New York, and Halsted (Wiley), New York, 1979. x, 300 pp. \$18.50.

**Evolution and Mineralization of the Arabian-Nubian Shield.** Vol. 1. Proceedings of a symposium, Jeddah, Saudi Arabia, Feb. 1978. Published for the Institute of Applied Geology, King Abdulaziz University, by Pergamon, New York, 1979. xii, 188 pp., illus. \$30.

**The Evolution of Human Sexuality.** Donald Symons. Oxford University Press, New York, 1979. x, 358 pp. \$15.95.

**Group Choice.** Boris G. Mirkine. Translated from the Russian edition by Yelena Oliker. Peter C. Fishburn, Ed. Winston, Washington, D.C., and Halsted (Wiley), New York, 1979. xxx, 252 pp. \$22.50. Scripta Series in Mathematics.

**Group Rings and Their Augmentation Ideals.** Inder Bir S. Passi. Springer-Verlag, New York, 1979. vi, 138 pp. Paper, \$9. Lecture Notes in Mathematics, vol. 715.

**Growth of Crystals.** Vol. 11. A. A. Chernov, Ed. Translated from the Russian edition (Continued on page 1386)

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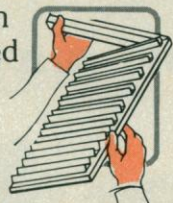


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## BOOKS RECEIVED

(Continued from page 1341)

(Moscow, 1975) by J. E. S. Bradley. Consultants Bureau (Plenum), New York, 1979. x, 386 pp., illus. \$42.50.

**Handbook for Job Placement of Mentally Retarded Workers.** Training, Opportunities, and Career Areas. Angeline M. Jacobs, Judith K. Larsen, and Claudette A. Smith. Garland STPM Press, New York, ed. 3, 1979. xviii, 326 pp. \$15. Garland Series in Mental Retardation.

**Handbook of Electronic Communication.** Gary M. Miller. Prentice-Hall, Englewood Cliffs, N.J., 1979. xii, 338 pp., illus. \$14.95.

**Handbook of Environmental Engineering.** Vol. 1, Air and Noise Pollution Control. Lawrence K. Wang and Norman C. Pereira, Eds. Humana Press, Clifton, N.J., 1979. xviii, 484 pp., illus. \$49.50.

**The Handbook of Health Education.** Peter M. Lazes, Ed. Aspen Systems Corporation, Germantown, Md., 1979. xviii, 430 pp. \$25.

**Handbook of Microprocessors, Microcomputers, and Minicomputers.** John D. Lenk. Prentice-Hall, Englewood Cliffs, N.J., 1979. xii, 404 pp., illus. \$17.95.

**An Introduction to Coal Technology.** N. Berkowitz. Academic Press, New York, 1979. xvi, 346 pp., illus. \$32.50. Energy Science and Engineering.

**Introduction to Cultural Anthropology.** Elmer S. Miller. Prentice-Hall, Englewood Cliffs, N.J., 1979. xviii, 396 pp., illus. Paper, \$10.95.

**Introduction to Evolution.** Fred A. Racle. Prentice-Hall, Englewood Cliffs, N.J., 1979. xiv, 162 pp., illus. Paper, \$8.95.

**Introduction to Graph Theory.** Robin J. Wilson. Academic Press, New York, ed. 2, 1979. viii, 164 pp., illus. Paper, \$8.

**Introduction to the Microbial World.** Roger Y. Stanier, Edward A. Adelberg, John L. Ingraham, and Mark L. Wheelis. Prentice-Hall, Englewood Cliffs, N.J., 1979. xii, 468 pp., illus. \$16.95.

**Inverse Source Problems in Optics.** H. P. Baltes. Springer-Verlag, New York, 1978, xii, 206 pp., illus. \$19.80. Topics in Current Physics, vol. 9.

**Man, Mind, and Science. A History of Anthropology.** Murray J. Leaf. Columbia University Press, New York, 1979. xvi, 376 pp. \$20.

**Man's View of the Universe.** Gerald E. Tauber. Crown, New York, 1979. 352 pp., illus. \$19.95.

**Marine Pollution. Functional Responses.** Proceedings of a symposium, Georgetown, S.C., Nov. 1977. Winona B. Vernberg, Anthony Calabrese, Frederick P. Thurberg, and F. John Vernberg, Eds. Academic Press, New York, 1979. xiv, 454 pp., illus. \$23.

**Mass Spectrometry.** Vol. 5. R. A. W. Johnstone, Senior Reporter. Chemical Society, London, 1979. xii, 450 pp. \$55. A Specialist Periodical Report.

**Mathematics for the Biological Sciences.** Jagdish C. Arya and Robert W. Lardner. Prentice-Hall, Englewood Cliffs, N.J., 1979. xx, 710 pp., illus. \$18.95.

**Mathematik und Realität.** Vorträge und Aufsätze. Herbert Meschkowski. Bibliographisches Institut, Mannheim, 1979. 184 pp., illus. Paper, DM 32.

**Mechanism of Toxic Action on Some Target organs.** Drugs and Other Substances. Proceedings of a meeting, Berlin, June 1978. P. L. Chambers and P. Günzel, Eds. Springer-



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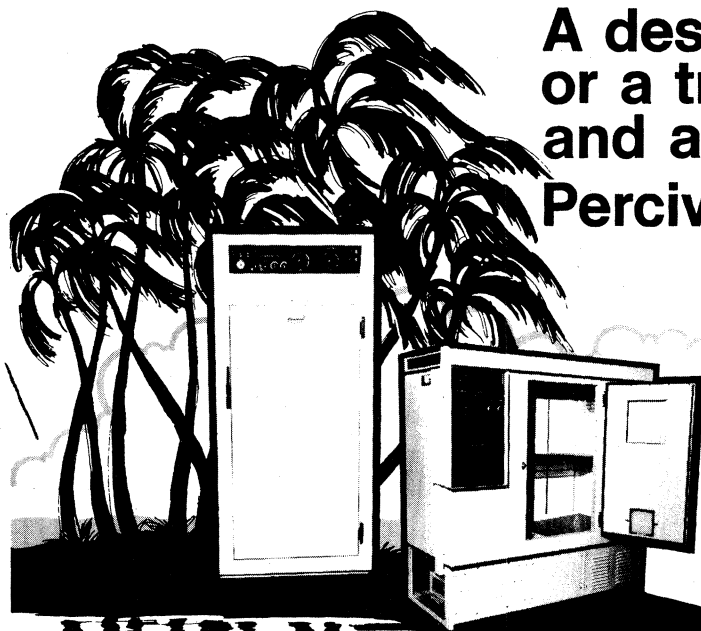
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Verlag, New York, 1979. x, 534 pp., illus. \$49.30. Archives of Toxicology, Supplement 2.

**Mechanisms of Learning and Motivation.** A Memorial Volume to Jerzy Konorski. Anthony Dickinson and Robert A. Boakes, Eds. Erlbaum, Hillsdale, N.J., 1979 (distributor, Halsted [Wiley], New York). xiv, 468 pp., illus. \$29.95.

**The Philosopher's World Model.** Archie J. Bahm. Greenwood Press, Westport, Conn., 1979. xii, 296 pp. \$22.95. Contributions in Philosophy, No. 12.

**Photochemical Oxidants.** World Health Organization, Geneva, 1979 (U.S. distributor, WHO Publications Centre USA, Albany, N.Y.). 110 pp., illus. Paper, \$6.75. Environment Health Criteria 7.

**Physiological Ecology of the Alpine Timberline.** Tree Existence at High Altitudes with Special Reference to the European Alps. W. Tranquillini. Translated from the German. Springer-Verlag, New York, 1979. xii, 140 pp., illus. \$29.70. Ecological Studies, vol. 31.

**Pion-Electroproduction.** Electroproduction at Low Energy and Hadron Form Factors. E. Amaldi, S. Fubini, and G. Furlan. Springer-Verlag, New York, 1979. viii, 164 pp., illus. \$29.80. Springer Tracts in Modern Physics, vol. 83.

**Plastic Theory of Structures.** Michael R. Horne. Pergamon, New York, ed. 2, 1979. viii, 180 pp., illus. Paper, \$8. Structures and Solid Body Mechanics Series.

**Polar Dielectrics and Their Applications.** Jack C. Burfoot and George W. Taylor. University of California Press, Berkeley, 1979. x, 466 pp., illus. \$40.

**Polychlorinated Biphenyls.** National Academy of Sciences, Washington, D.C., 1979. xiv, 182 pp. Paper, \$7.25.

**The Porphyrins.** Vol. 4, Physical Chemistry, Part B. xxii, 528 pp., illus. \$47. Vol. 7, Biochemistry, Part B. xxii, 550 pp., illus. \$55. David Dolphin, Ed. Academic Press, New York, 1979.

**Power Sources 7.** Research and Development in Non-Mechanical Electrical Power Sources. Proceedings of a symposium, Brighton, England, Sept. 1978. J. Thompson, Ed. Academic Press, New York, 1979. xii, 774 pp., illus. \$134.50.

**Practical Design with Solid State Devices.** Mannie Horowitz. Reston (Prentice-Hall), Reston, Va., 1979. xvi, 528 pp., illus. \$18.95.

**Predator-Prey Systems in Fisheries Management.** Papers from a symposium, Atlanta, July 1978. Henry Clepper, Ed. Sport Fishing Institute, Washington, D.C., 1979. viii, 504 pp., illus. \$20.

**Prehistoric Avebury.** Aubrey Burl. Yale University Press, New Haven, Conn., 1979. x, 276 pp., illus. \$19.95.

**Probability and Measure.** Patrick Billingsley, Wiley, New York, 1979. xvi, 516 pp. \$24.95. Wiley Series in Probability and Mathematical Statistics.

**Probability Measures on Groups.** Proceedings of a conference, Oberwolfach, Germany, Jan. 1978. H. Heyer, Ed. Springer-Verlag, New York, 1979. xiv, 348 pp. \$17.80. Lecture Notes in Mathematics, vol. 706.

**Probability Theory.** R. G. Laha and V. K. Rohatgi. Wiley, New York, 1979. xvi, 558 pp. \$28.95.

**Recombination in Semiconductors.** Papers from a conference, Southampton, England, Aug. 1978. P. T. Lansberg and A. F. W. Willoughby, Eds. Pergamon, New York, 1978. viii + pp. 1273-1618, illus. Paper, \$40. Originally published as a special issue of *Solid-State Electronics*, vol. 21. Nos. 11/12.

**Reef Fishes of the Sea of Cortez.** The Rocky-Shore Fishes of the Gulf of California. Donald A. Thomson, Lloyd T. Findley, and Alex N. Kerstitch. Illustrated by Alex N. Kerstitch, Tor Hansen, and Chris van Dyck. Wiley-Interscience, New York, 1979. xviii, 302 pp. + plates. \$34.50.

**Relevant Problems for Chemical Principles.** With S. I. and Conventional Units. Ian S. Butler and Arthur E. Grosser. Benjamin/Cummings, Menlo Park, Calif., ed. 3, 1979. viii, 648 pp., illus. Paper, \$8.95.

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**Solar Energy Conversion.** Solid-State Physics Aspects. B. O. Seraphin, Ed. Springer-Verlag, New York, 1979. xiv, 338 pp., illus. \$49.90. Topics in Applied Physics, vol. 31.

**Solid State Physics.** Advances in Research and Applications. Vol. 34. Henry Ehrenreich, Frederick Seitz, and David Turnbull, Eds. Academic Press, New York, 1979. xiv, 378 pp., illus. \$36.

**Space Research.** Vol. 19. Proceedings of a meeting, Innsbruck, Austria, May 1978. M. J. Rycroft, Ed. Pergamon, New York, 1979. xviii, 616 pp., illus. \$125.

**Specific Eukaryotic Genes.** Structural Organization and Function. Proceedings of a symposium, Copenhagen, Aug. 1978. Jan Engberg, Hans Klenow, and Vagn Leick, Eds. Munksgaard, Copenhagen, 1979. 502 pp., illus. D.kr. 250. Alfred Benzon Symposium 13.

**Spectroscopy in Heterogeneous Catalysis.** W. Nichols Delgass, Gary H. Haller, Richard Kellerman, and Jack H. Lunsford. Academic Press, New York, 1979. x, 342 pp., illus. \$35.

**Spinal Angiomas.** Advances in Diagnosis and Therapy. H. W. Pia and R. Djindjian, Eds. Springer-Verlag, New York, 1978. xii, 232 pp., illus. \$55.20.

**Spinal Phlebography.** Lumbar and Cervical Techniques. J. Théron and J. Moret with the collaboration of D. Dilenge, J. P. Houtteville and nine others. Springer-Verlag, New York, 1978. xiv, 166 pp., illus. \$64.90.

**Stable Isotopes.** Proceedings of a conference, Oak Brook, Ill., May 1978. E. Roseland Klein and Peter D. Klein, Eds. Academic Press, New York, 1979. xxx, 628 pp., illus. \$39.50.

**The Therapeutic Touch.** How to Use Your Hands to Help or Heal. Dolores Drieger. Prentice-Hall, Englewood Cliffs, N.J., 1979. viii, 168 pp., illus. Cloth, \$9.95; paper, \$4.95.

**<sup>31</sup>P and <sup>13</sup>C NMR of Transition Metal Phosphine Complexes.** Paul S. Pregosin and Roland W. Kunz. Springer-Verlag, New York, 1979. x, 158 pp., illus. \$39.60. NMR, 16.

**Transport in Plants.** Ulrich Lüttge and Noe Higinbotham. Springer-Verlag, New York, 1979. x, 470 pp., illus. \$28.80.

**William Harvey and His Age.** The Professional and Social Context of the Discovery of the Circulation. Papers from a conference, Kansas City, May 1978. Jerome J. Bylebyl, Ed. Johns Hopkins University Press, Baltimore, 1979. xiv, 154 pp. \$12.50. Henry E. Sigerist Supplements to the *Bulletin of the History of Medicine*, New Series, No. 2.

**The World of Goods.** Mary Douglas and Baron Isherwood. Basic, New York, 1979. xii, 228 pp. \$12.95.

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SCIENCE publishes each Friday, except the last Friday of the year. Advertising closing for a particular Friday issue is Wednesday, 3 1/2 weeks before. Advertising is accepted only in writing; no abbreviations. 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, or handicap.

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

**DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKET PLACE, and so forth):** \$7.20 per millimeter; \$180 minimum, per insertion (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing information required for all other advertising.

Send copy for all **Positions Wanted** ads and **Display** ads less than 1/6 page in size (125 millimeters) to:

SCIENCE, Room 207  
1515 Massachusetts Ave., NW  
Washington, D.C. 20005  
Telephone: 202-467-4456

Send copy for **Display** ads 1/6 page and larger to:

Scherago Associates, Inc.  
1515 Broadway  
New York, N.Y. 10036  
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

Box (give number)  
SCIENCE  
1515 Massachusetts Ave., NW  
Washington, D.C. 20005

## POSITIONS WANTED

**Biochemistry/Microbiology.** B.S., Cornell University. Seeks research position. Experience—immunology and infectious disease research, clinical laboratories, chemical techniques. Willing to relocate. R. Kosson, 19 Cambridge Drive, Massapequa, N.Y. 11758. 3/21, 28

**Biologist/Medical Technologist.** B.A. 1973. M.T. 1979. Research experience with publications, clinical and industrial laboratory experience. Seeks challenging position in academic/research laboratory. Box 72, SCIENCE. 3/21, 28; 4/4

**Biomedical Engineer,** Ph.D.; several years of non-industrial research experience; physiological, biomechanical, and rehab engineering; numerous publications. Seeks challenging position in a stimulating environment. Box 73, SCIENCE. X

**Electron Microscopist** with 15 years of experience in the fields of nervous tissue, tissue culture, and particulate material; teaching laboratory course; managing facility; seeks senior position in university or industry. New England region preferred. Replies should include salary range. Box 71, SCIENCE. X

**Instrument Scientist/Manager,** stifling in large company, needs to work/invest in small, dynamic, no-red-tape company. Proven ability to develop and market new products, instruments, and ideas. Box 70, SCIENCE. 3/21; 4/11; 5/2

**Phycologist/Ecologist.** Ph.D. 1970; botany, zoology, chemistry. Research experience in taxonomy and morphology of diatoms, TEM and SEM microscopy, aquatic ecology; 9-year working experience in water quality studies using algal community analysis, floristic, freshwater and estuarine ecology, statistical sample data processing; additional experience in algal culturing, preparatory and curatorial herbarium techniques. Recent responsibilities: scientific and administrative project direction, management of scientific consulting program and laboratory. Seeking responsible position in research or applied field. Box 69, SCIENCE. X

## POSITIONS WANTED

**Organic/Medicinal Chemist.** Ph.D., experience in broad areas of synthesis, teaching of pharmacology, and research collaboration with pharmacologists. Seeking position in industry, academia, or government. Box 68, SCIENCE. X

## POSITIONS OPEN

### ANIMAL PHYSIOLOGISTS

Two academic-year, tenure-track positions at assistant or associate professor rank to start fall 1980 or spring 1981: **MAMMALIAN PHYSIOLOGIST** to teach vertebrate and/or human physiology; **COMPARATIVE or ENVIRONMENTAL PHYSIOLOGIST** to teach environmental and/or comparative physiology. Each position requires additional teaching in undergraduate and graduate curricula to total about three courses per year. The successful candidates will be expected to pursue active, fundable research programs. Postdoctoral experience desirable. For either position, corollary interests in areas such as mammalogy, anatomy, behavior, or radiation biology helpful. To apply, send letter describing research interests and areas of teaching competence, curriculum vitae, reprints, transcripts, and three letters of reference by 7 April 1980 to: **Physiology Search Committee, Department of Zoology and Physiology, University of Wyoming, Laramie, Wyoming 82071.**

*An Equal Opportunity/Affirmative Action Employer*

### GENERAL BIOLOGY—ASSISTANT PROFESSOR

The Department of Zoology and Physiology of the University of Wyoming invites applications for a tenure-track position in biology starting fall semester 1980. The major responsibility will be the ongoing direction of a freshman biology course with laboratory which enrolls about 600 students per semester. The position will require teaching lectures, designing and coordinating laboratories, and coordinating faculty lecturers from participating departments. Research in a zoological specialization will be expected in accordance with time available. Candidates should have postdoctoral experience in teaching and research. To apply, send curriculum vitae, transcripts, statement of research and teaching interests, and three letters of reference by 11 April 1980 to: **Chairman, General Biology Search Committee, Department of Zoology and Physiology, University of Wyoming, Laramie, Wyoming 82071.**

*An Equal Opportunity/Affirmative Action Employer*

### AQUATIC ECOLOGISTS

LGL Ecological Research Associates, Inc., has positions available for freshwater and marine ecologists. At least one of these positions will be filled by a senior scientist (Ph.D. or equivalent) who will play a leadership role in development of aquatic research capabilities in LGL. Less senior positions will be filled by biologists with an M.S. degree or with a B.S. degree and experience. Current projects are primarily in the areas of freshwater, anadromous, and marine fish ecology. Quantitative skills and writing ability will be important criteria in the selection process. Locations: western Canada and Alaska.

Interested candidates should apply in confidence to:

Personnel Director  
LGL Ecological Research Associates, Inc.  
505—1200 West 73 Avenue  
Vancouver, British Columbia, Canada V6P 6G5

Copies of publications and the names of three references should be included.

The Department of Biology at Augusta College, a senior unit of the University System of Georgia, is seeking to fill a tenure-track position at the **ASSISTANT PROFESSOR** level, beginning September 1980. Applicants must have a strong commitment to effective teaching, a Ph.D. degree, and the ability to teach general biology, genetics, and microbiology. Résumés and three letters of reference should be submitted to:

Dr. John B. Black  
Department of Biology  
Augusta College  
Augusta, Georgia 30904

The closing date for applications is 30 April 1980. *Augusta College is an Affirmative Action Employer; women and members of minority groups are encouraged to apply.*

## POSITIONS OPEN

**ANALYTICAL CHEMIST:** tenure-track assistant or associate professorship, beginning September 1980, in an ACS-accredited department with ten chemists. Duties include teaching undergraduate quantitative analysis and related courses and participating in lower-division courses. Ph.D. required. Postdoctoral experience desired. Strong commitment to teaching and ability to develop a research program expected. Send application, three letters of recommendation, and transcripts by 18 April 1980 to: **Analytical Chemistry Search Secretary, College of Arts, Sciences and Letters, The University of Michigan-Dearborn, Dearborn, Michigan 48128.** A nondiscriminatory, Affirmative Action Employer.

**ASSISTANT PROFESSOR: ANATOMY.** Applicants should have a strong background in cell biology, especially cellular neurobiology, with postdoctoral research experience and demonstrated independent research ability. Teaching experience in gross anatomy desirable. Submit curriculum vitae before 30 April 1980 to: **Dr. G. D. Pappas, Head, Department of Anatomy, University of Illinois, College of Medicine, P.O. Box 6998, Chicago, Ill. 60680.**

*The University of Illinois is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

**ASSISTANT PROFESSOR OF BIOCHEMISTRY,** Louisiana State University (LSU) Medical Center, New Orleans, Louisiana.

The Department of Biochemistry, Louisiana State University Medical Center, invites applications for 12-month, tenure-track faculty positions. In addition to the School of Graduate Studies, the Medical Center includes the Dental, Medical, and Nursing Schools and the School of Allied Health Professions. The LSU Medical Center (New Orleans) is in the midst of a \$300-million building program. The applicant should have a strong background in molecular biology and biochemistry. Applicants should have postdoctoral experience and exhibit potential for developing a strong, independent research program. Research utilizing recombinant DNA techniques, nucleic acid sequence analysis, or studies on the regulation of gene expression or other areas of molecular biology are preferred. Interest and excellence in teaching are also expected. Applicants should send curriculum vitae, bibliography, and a short summary (three pages) of research goals, and have three letters of evaluation submitted to the following: **Robert Roskoski, Jr., Head, Department of Biochemistry, LSU Medical Center, 1542 Tulane Avenue, New Orleans, Louisiana 70112.**

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

**ASSISTANT PROFESSOR OF MOLECULAR BIOLOGY** available for September 1980. Undergraduate liberal arts college seeks a person with training in molecular biology to develop and teach upper division courses in molecular biology and immunology, and to teach two general biology courses for nonscience majors and psychology majors. Some teaching experience is desirable. Some direction of undergraduate research will also be required. Closing date for application is 30 April 1980. Send curriculum vitae, transcripts, three letters of reference, and a personal goals statement to: **Molecular Biologist Search Committee, Biology Department, Fairfield University, Fairfield, Conn. 06430.** An Equal Opportunity/Affirmative Action Employer.

**ENVIRONMENTAL CHEMIST:** tenure-track assistant or associate professorship, beginning September 1980, in an ACS-accredited department with ten chemists. Duties include teaching undergraduate environmental chemistry, quantitative analysis, and participating in lower division environmental science and chemistry courses. Ph.D. required. A strong background in chemistry at the graduate level required. Postdoctoral experience desired. Strong commitment to teaching and ability to develop a research program expected. Send application, three letters of recommendation, and transcripts by 18 April 1980 to: **Environmental Chemistry Faculty Search Secretary, College of Arts, Sciences and Letters, The University of Michigan-Dearborn, Dearborn, Michigan 48128.** A nondiscriminatory, Affirmative Action Employer.

## POSITIONS OPEN

### BIOLOGY: ASSISTANT PROFESSOR

Tenure-track, at small liberal arts college. Teach microbiology with medical emphasis, community health, introductory biology, and courses in area of specialty. Ph.D. required; teaching experience and emphasis in physiology desirable. Send résumé, transcript, and three letters of recommendation by 15 April 1980 to: **Dr. Richard Carter, Science Division, Pacific University, Forest Grove, Oregon 97116.** *Equal Opportunity/Affirmative Action Employer.*

### TWO ASSISTANT PROFESSORS: BIOLOGY

**BOTANIST** to teach general botany, physiology, microbiology. **CELL BIOLOGIST** to teach cell biology, genetics, development. Both are also expected to participate in the introductory course. Ph.D. and commitment to excellence in undergraduate education required; postdoctoral teaching experience preferred. Salary negotiable, starting at \$14,000. Send letter of application, résumé, transcripts, and three references to: **Margaret Simpson, Chairman, Department of Biology, Sweet Briar College, Sweet Briar, Va. 24595.** *Sweet Briar College is an Equal Opportunity Employer.*

**ASSISTANT PROFESSOR—BIOLOGY.** A 1-year opening is anticipated beginning September 1980. Duties include teaching developmental biology, general biology, and histology lectures and laboratories. The candidate must possess a Ph.D. and have evidence of excellent teaching ability. Curriculum vitae and list of references should be submitted to: **Kenneth Wittig, Biology Department, Siena College, Loudonville, N.Y. 12211.**

### ASSISTANT OR ASSOCIATE PROFESSOR EXPERIMENTAL ATOMIC PHYSICS DEPARTMENT OF PHYSICS KANSAS STATE UNIVERSITY

The Department of Physics is seeking to fill a tenure-track position in the area of experimental atomic physics beginning September 1980. Applications are invited from candidates whose interests are directly related to or could complement the current accelerator-based program in ion-atom collision physics at Kansas State University. All candidates are expected to have at least 2 years of experience beyond the Ph.D. degree. Applications should be submitted prior to 21 April 1980 to: **Professor Charles Hathaway, Head, Department of Physics, Kansas State University, Manhattan, Kansas 66506,** and should include a résumé and a list of at least three individuals who may be contacted for references. *Kansas State University is an Affirmative Action/Equal Opportunity Employer.*

### KANSAS STATE UNIVERSITY

The **DEPARTMENT OF PHYSICS** expects to have two temporary positions available in September 1980, at the rank of **assistant professor.** Candidates are sought who have an interest in any of the following areas: (i) physics education research, (ii) light scattering, (iii) research on defects in solids, (iv) heavy-ion nuclear physics, or (v) ion-atom collision physics. While the initial appointment will be for 1 year, a possibility of a second-year appointment exists. Candidates more senior in rank wishing to spend a sabbatical at Kansas State University may also apply for these positions. Applications should be submitted prior to 25 April 1980 to: **C. E. Hathaway, Department of Physics, Kansas State University, Manhattan, Kansas 66506,** and should include a résumé with a brief statement of research interests. Candidates also should arrange to have three letters of reference sent to the same address. *Kansas State University is an Affirmative Action/Equal Opportunity Employer.*

### YALE UNIVERSITY SCHOOL OF NURSING (Graduate Program)

**ASSISTANT PROFESSOR.** Major responsibility involves teaching biomedical science, a course which integrates fundamentals of biology (cell biology, genetics, and so forth), biochemistry and anatomy, with physiology, its major emphasis. Ability to teach or coordinate a seminar in pathophysiology is also necessary. Candidates with clinical knowledge are especially suitable. Faculty are expected to develop and pursue research activities of their own interest. Position is available 1 July 1980; applications will be accepted until position is filled. Please submit curriculum vitae to: **Dean Donna Diers, Yale School of Nursing, 855 Howard Avenue, New Haven, Connecticut 06520.** *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**Assistant or associate professors: microbiology or immunology.** Applications are invited for three tenure-track positions in the following areas: (i) microbial physiologist; (ii) general microbiologist; and (iii) immunologist. Applicants will be expected to develop and pursue independent research programs. Applicants should submit a résumé and names of three references to: **Dr. David Eidinger, Head, Department of Microbiology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0.**

### CORNELL UNIVERSITY ASSISTANT PROFESSOR OF NUTRITION

The Department of Poultry Science of the New York State College of Agriculture and Life Sciences is seeking qualified applicants for appointment to a 12-month, tenure-track faculty position with 60 percent research and 40 percent teaching responsibilities. Appointee will be responsible for developing an independent research program to complement existing departmental programs in proteins and amino acids and vitamin-mineral interrelationships. The research program should have a strong graduate student training component and have application to poultry production.

Teaching will include participation in undergraduate and graduate level courses in animal nutrition and poultry biology and may include a new course offering in the individual's subject matter specialization.

Applicants should have a Ph.D. in nutrition with training in biochemistry and physiology and have interest in basic nutrition research with applications in poultry production. Position available 1 July 1980; application deadline: 1 May 1980.

Submit résumé of academic training and experience, including transcripts, complete bibliography, and the names of four individuals who can provide letters of reference to:

**Dr. Richard E. Austic and  
Dr. Gerald F. Combs, Jr.,  
Chairmen, Search Committee  
Department of Poultry Science  
New York State College of  
Agriculture and Life Sciences  
Cornell University  
Ithaca, New York 14853**

*Cornell University is an Equal Opportunity/Affirmative Action Employer. Minorities, women, and the handicapped are encouraged to apply.*

**BIOCHEMIST/TOXICOLOGIST,** assistant professor, tenure-track. Starting date August 1980 or thereafter. Ph.D. and postdoctoral or equivalent experience required. Duties include: (i) participation in graduate and undergraduate teaching in biochemistry and development of a course in analytical toxicology, and (ii) conducting research in any area of biochemical toxicology at the subcellular or molecular level. Illinois Institute of Technology, a midwest center for science and technology, offers B.S., M.S., and Ph.D. programs in basic and applied areas of the life sciences. Candidates should submit curriculum vitae including a statement of research plans, and arrange for the transmission of three letters of recommendation by 15 April 1980 to:

**Professor Dale Webster  
Chairman of Search Committee  
Department of Biology  
Illinois Institute of Technology  
Chicago, Illinois 60616**

*Illinois Institute of Technology is an Equal Opportunity/Affirmative Action Employer.*

### BIOLOGICAL OCEANOGRAPHER

The graduate College of Marine Studies, University of Delaware, invites applications from qualified individuals for a tenure-track faculty position in biological oceanography. Ph.D. and several years of demonstrated experience required. The candidate should be prepared to conduct an independent research program, advise graduate students, and teach two courses per year. The biological oceanographer should be a plankton ecologist, be prepared to interact in estuarine and coastal oceanographic research, and to teach an advanced biological oceanography course and specialty course of his/her choice. Deadline for applications is 4 April 1980. Applications should include curriculum vitae with career objectives and names of at least three references, and should be submitted to: **Dr. Franklin C. Daiber, College of Marine Studies, University of Delaware, Newark, Del. 19711.** *The University of Delaware is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR OF OPHTHALMOLOGY—CORNEAL AND EXTERNAL DISEASE.** Applications are being sought for a Board-certified ophthalmologist with specialty training in corneal and external diseases. Teaching ability at the postgraduate level and medical student level are required. Evidence of research interests (basic laboratory and/or clinical) should be included. Please send inquiries and curriculum vitae to: **Stephen J. Ryan, M.D., Chairman, Department of Ophthalmology, University of Southern California, School of Medicine, 1355 San Pablo Street, Los Angeles, California 90033.** *The University of Southern California is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR OF RESEARCH OPHTHALMOLOGY.** The Department of Ophthalmology of the University of Southern California and the Estelle Doheny Eye Foundation have two non-tenure-track positions available for individuals interested in vision research. The two positions are in the field of: (i) cellular biology with expertise in cell-cycle modeling, histochemistry, and electron microscopy; and (ii) biochemistry with expertise in cell culture, collagen and proteoglycan chemistry, and cell-matrix interactions. The criterion for selection will largely rest on demonstration and potential for outstanding research accomplishments. Please send inquiries and curriculum vitae to: **Stephen J. Ryan, M.D., Chairman, Department of Ophthalmology, University of Southern California, School of Medicine, 1355 San Pablo Street, Los Angeles, California 90033.** *The University of Southern California is an Equal Opportunity/Affirmative Action Employer.*

The **CORNEA DEPARTMENT** of the Eye Research Institute of Retina Foundation has a position available at the level of **assistant or associate scientist.** We are looking for a basic scientist whose primary research interest relates to the cornea and complements ongoing programs in biochemistry, immunology, morphology, physiology, and pharmacology. Candidates should have demonstrated research abilities and a record of funding. The position also carries an appointment in the Department of Ophthalmology of Harvard Medical School.

Interested individuals should send curriculum vitae, bibliography, and the names of three references to: **Arthur H. Neufeld, Ph.D., Eye Research Institute of Retina Foundation, 20 Stanford Street, Boston, Mass. 02114.** *An Equal Opportunity/Affirmative Action Employer, M/F.*

The University of Minnesota, Department of Animal Science is seeking an **ASSOCIATE OR ASSISTANT PROFESSOR IN SWINE NUTRITION;** 50 percent teaching, 50 percent research. Responsibilities include instruction in undergraduate nutrition, student advising, participation in graduate training, and development of a research program. Available 1 July 1980. Required: Ph.D. in nutrition or animal science with emphasis on swine nutrition. Send résumé, transcripts, list of publications, and four letters of recommendation to: **W. E. Rempel, Department of Animal Science, University of Minnesota, 1404 Gortner Avenue, St. Paul, Minnesota 55108.** *The University of Minnesota is an Equal Opportunity/Affirmative Action Employer.*

**Ph.D. BIOCHEMIST/CHEMIST RESEARCH ASSOCIATE,** Center for Reproductive Sciences, Columbia University and Brookhaven National Laboratory (chemistry). To be co-investigator in studies of peptide and protein hormone metabolism and action, emphasis on reproductive endocrinology and neuroendocrinology. Preparation of high specific activity tritium-labeled hormones. Opportunity to develop independent research program. Salary open. Contact: **W. Hembree, College of Physicians and Surgeons, 630 West 168 Street, New York, N.Y. 10032;** telephone: 212-694-4067. *An Equal Opportunity/Affirmative Action Employer.*

**CHAIRMAN, DEPARTMENT OF MICROBIOLOGY.** The University of Cincinnati College of Medicine is reopening its search for candidates for the chairmanship of the Department of Microbiology. Candidates must have an interest in education in the discipline of microbiology and have demonstrated superior competence in research. The appointee will direct a department of more than ten full-time faculty with several positions unfilled. Teaching is confined to medical and graduate students. The department has 18,500 square feet of attractive laboratory and office space in a new building with the potential of additional space. Applications may be initiated by sending a letter and the candidate's curriculum vitae to: **Clark D. West, M.D., Children's Hospital Medical Center, Cincinnati, Ohio 45229.** *Affirmative Action/Equal Opportunity Employer.*



## POSITIONS OPEN

### BIOCHEMICAL ENGINEER Immobilized Enzyme/Cell Technology

Fast growing, innovative, genetic engineering company has an opening for Ph.D. with extensive experience in conventional and/or novel cell and enzyme immobilization systems and techniques. Will consider an outstanding individual holding a lesser degree combined with unique and varied industrial R & D experience.

Genex offers a unique research environment as well as competitive compensation and fringe benefits. Qualified applicants should send curriculum vitae and three references to:

**Director of Recruitment**  
**Genex Corporation**  
12300 Washington Avenue  
Rockville, Maryland 20852

*Genex Corporation is an Equal Opportunity Employer.*

**BIOLOGY PROGRAM**, Clemson University. Assistant professor, tenure-track. Primary duty is instruction of lectures and laboratories in introductory general biology courses. Ph.D. required; training and teaching interests should be in botany. Send curriculum vitae, transcripts, reprints, and three letters of recommendation to: **Dr. Doris R. Helms, Coordinator, Biology Program**, Clemson University, Clemson, S.C. 29631, by 15 April 1980; telephone: 803-656-2416. Starting date: 15 August 1980. *An Affirmative Action/Equal Opportunity Employer.*

### UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

The Ann Arbor Veterans Administration Medical Center and the Division of Nuclear Medicine of the University of Michigan Medical School are seeking a **CHIEF OF THE NUCLEAR MEDICINE SERVICE** at the VA Center. This person must be broadly experienced in all modern radionuclide imaging techniques and be qualified for an appointment as an assistant or associate professor of internal medicine. In the latter regard, the individual should be actively engaged in a basic research area; research and clinical experience in endocrinology will be very helpful. *A nondiscriminatory, Affirmative Action Employer.* Code 4700F0. Reply to: **John Sheagren, M.D., Ann Arbor VA Medical Center, 2215 Fuller Road, Ann Arbor, Mich. 48105.**

### CLINICAL IMMUNOLOGIST

To conduct studies related to childhood malignancies and immunodeficiencies. M.D. or Ph.D. with demonstrated research experience and productivity to qualify for intermediate or senior appointment. Please send curriculum vitae and bibliography to: **F. L. Adler, Chairman, Division of Immunology, St. Jude Children's Research Hospital, 332 North Lauderdale, P.O. Box 318, Memphis, Tenn. 38101.**

### CLINICAL PHARMACOLOGY

A tenure-track faculty position open in basic pharmacology department at associate professor or full professor level. Experience in biochemical pharmacology, clinical pharmacology, and advanced analytical technology such as mass spectroscopy is highly desirable. Applicants must be committed to excellence in teaching and research in both basic and clinical pharmacology. Appointment in appropriate clinical department is negotiable. Please send curriculum vitae and recommendations to:

**Joseph R. Bianchine, M.D., Ph.D.**

**Professor and Chairman**  
**Department of Pharmacology**  
**The Ohio State University College of Medicine**  
**Columbus, Ohio 43210**

*An Affirmative Action/Equal Opportunity Employer*

### PROFESSIONAL PROGRAMS DIRECTOR American Society for Microbiology

The American Society for Microbiology is seeking a professional programs director at its headquarters in Washington, D.C. The position is being created in anticipation of the retirement of the executive secretary. Major responsibilities will be meetings direction and supervision. The appointee will also be expected to serve as administrative director of the American Academy of Microbiology. A doctoral level microbiologist is sought for this position. Each applicant is encouraged to send a résumé which includes employment history, bibliography, personal references, and a transmittal letter. All inquiries or applications should be sent to: **Dr. Robert F. Acker, Executive Director, American Society for Microbiology, 1913 I Street, NW, Washington, D.C. 20006.**

## POSITIONS OPEN

### COMPUTER SERVICES MANAGER

Supervisor needed for computer service group. Manager responsible for scheduling routine flow of data from several research programs, maintaining master data system, supplying programming expertise and providing mathematical advice. Practical experience with FORTRAN languages essential. BASIC and COBOL experience desirable. Familiarity with D.E.C.-PDP 11/34 and RSX-11M preferred. Management background at marine research facility helpful. Candidates with working knowledge of basic and multivariate statistics including modeling given strong consideration. Salary commensurate with experience. Send résumé and names of three references by 1 April 1980 to: **Dr. Marsh J. Youngbluth, Search Committee, Harbor Branch Foundation, Inc., R.R. 1, Box 196, Fort Pierce, Florida 33450. Harbor Branch Foundation, Inc., is an Equal Opportunity Employer, M/F.**

### CURATORIAL TRAINEE/MAMMALOGY

The Department of Mammalogy of the New York Zoological Society invites qualified applicants, who should possess an advanced degree in one of the zoological or animal sciences, to apply for an opening as a curatorial trainee in mammalogy.

Candidates should possess a strong desire to make the management of captive wild mammals their life work. The duties of the position require that the successful applicant gain a high level of expertise in establishing care and feeding techniques, managing a large staff, writing for technical and popular audiences, and designing exhibits.

Applicants should submit curriculum vitae to:

**James B. White**  
**Personnel Department**  
**New York Zoological Society**  
**185th Street and Southern Boulevard**  
**Bronx, New York 10460**  
*An Equal Opportunity Employer*

**DIRECTOR—DIVISION OF HEMATOLOGY/ONCOLOGY.** Applications and nominations are invited for the position of Director, Division of Hematology/Oncology in the Department of Medicine. This person will be responsible for the teaching of hematology/oncology to house staff and students, associated research, and the care of such patients in cooperation with the Departments of Surgery and Radiology. Candidates will be evaluated on the basis of their scientific stature, proven teaching ability, and administrative competence. Please include the names of three references who might be contacted. Curriculum vitae and bibliographies should be sent to: **Allen B. Weiss, M.D., Department of Medicine, MSB Room 1576, COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY—New Jersey Medical School, 100 Bergen Street, Newark, N.J. 07103.** *An Equal Opportunity/Affirmative Action Employer, M/F.*

**DIRECTOR, SCIENCE LEARNING AND INSTRUCTIONAL CENTER**, an innovative learning facility in the Division of Sciences. Tenure-track assistant or associate professor, half-time directorship and half-time teaching in an appropriate department starting September 1980. Candidates should have a Ph.D. in a scientific discipline, a demonstrated commitment to science education, an interdisciplinary perspective of science, and strong communication skills. Application deadline is 15 April 1980. Submit résumé, three letters of reference, and a statement of educational philosophy to: **John W. Kenney, III, Science Learning and Instructional Center, Washington State University, Pullman, Wash. 99164.** *An Equal Opportunity/Affirmative Action Employer. We encourage minority, women, handicapped, Vietnam-era and disabled veterans, and/or aged persons to apply and identify themselves as such in their applications.*

**ECOLOGIST, TERRESTRIAL:** Natural Resources Management Department. Effective date: September 1980. Assistant professorship; tenure-track; \$16,368 to \$19,680 per academic year, depending on preparation and experience. Ph.D. with at least one degree in natural resources field to teach resource ecology, applied resource analysis, environmental impact assessment, and at least one course in related area.

CSUC Board of Trustees has recommended a general 11 percent cost of living increase effective 1 July 1980. Apply before 1 May 1980 to: **Faculty Search Committee, Natural Resources Management Department, California Polytechnic State University, San Luis Obispo, Calif. 93407.** *Affirmative Action/Equal Opportunity/Title IX Employer.*

## POSITIONS OPEN

### ECOLOGIST

The Department of Biological Sciences, De Paul University, invites applications for a tenure-track faculty appointment at the rank of assistant professor for 1 September 1980. Applicant must have a strong botanical background. The appointee is expected to serve as coordinator of a three-quarter, staff-taught general biology course with an enrollment of approximately 90 to 100 biology majors. Other assignments are quite flexible and include teaching at various levels (nonmajor, undergraduate, graduate) as well as research. Applicants should send curriculum vitae, together with the names and addresses of three references, no later than 8 April 1980, to: **Dr. Robert C. Thommes, Department of Biological Sciences, De Paul University, 1036 West Belton Avenue, Chicago, Illinois 60614.**

*De Paul University is an Equal Opportunity/Affirmative Action Employer.*

**ENVIRONMENTAL RADIOCHEMIST.** An opening is anticipated for a research assistant professor with doctoral degree and experience in chemical, instrumental, and statistical analyses. Responsibilities will include development and performance of quality control assays of radioactivity in biological and environmental media as well as participation in graduate-level teaching and research. Salary level commensurate with qualifications. Send résumé to: **David Gur, Sc.D., Department of Radiation Health, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pa. 15261.** *University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer.*

**ENVIRONMENTAL SCIENTISTS,** Ph.D., B.S. with experience required to participate in program concerned with evaluation and assessment of health effects, environmental effects, exposure levels, and risk assessment of industrial chemicals. No laboratory work is involved. Excellent communication and writing skills are required. Scientists with background and experience in the following areas will be of interest:

- Environmental Chemistry,
- Toxicology,
- Ecology, and
- Process Engineering.

Interested applicants may send résumé to: **Personnel Director, Enviro Control, Inc., 11300 Rockville Pike, Rockville, Md. 20852.**

### FACULTY POSITION IN BIOENGINEERING

The Bioengineering Program at Texas A & M University invites applications for tenure-track faculty positions beginning September 1980. Responsibilities include teaching undergraduate and graduate courses as well as developing funded research projects. Ph.D. required. Rank and salary are open and will be commensurate with experience. Direct inquiries and applications to: **Dr. William A. Hyman, Head, Bioengineering Program, Texas A & M University, College Station, Texas 77843.** *Equal Opportunity/Affirmative Action Employer.*

**GENETICIST, DEVELOPMENTAL BIOLOGIST, and/or ANATOMIST.** Tenure-track position as assistant professor of biology in a small, liberal arts college. Lecture and laboratory teaching emphasis will be in above specializations and introductory biology. Ph.D. required. Send curriculum vitae and names of three references to: **Dr. Margaret Jonah, Natural Science Department, Rosary College, River Forest, Ill. 60305.** Deadline: 11 April 1980. *Equal Opportunity/Affirmative Action Employer.*

### LABORATORY COORDINATOR

The Department of Molecular, Cellular and Developmental Biology seeks an individual with at least a bachelor's degree in science to prepare and help run teaching laboratories for large advanced undergraduate courses in cell and developmental biology. College course in biochemistry required; advanced degree, knowledge of cell and developmental biology and electron microscopy desirable. Must work well with faculty, students, and other staff; keen sense for organization essential. Position available 1 July 1980. Starting salary: \$13,896 to \$16,092 per annum, depending on qualifications.

Send curriculum vitae and three references to: **M. A. Bonneville, Campus Box 347, University of Colorado, Boulder, Colorado 80309.**

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

## WESTERN AUSTRALIA

### OFFICER IN CHARGE, Animal Breeding Institute, Department of Agriculture, Position No. 01 1930.

**SALARY:** Level 4: A\$25,595 to A\$27,029, or level 5: A\$28,280 per annum, depending on qualifications and experience.

**QUALIFICATIONS:** A university degree in agricultural science, veterinary science, or science with considerable postgraduate experience in genetics relevant to the livestock industries is required. Postgraduate qualifications or equivalent through scientific publication are also necessary. A capacity for leadership to direct and administer a professional extension and research group is required.

**DUTIES:** Primarily responsible for the development of the Institute property, its facilities, and programmes. The Animal Breeding Institute will be established on an existing rural property of approximately 1000 hectares, to be located near a major regional centre in the Great Southern Region. The Institute will be concerned with information dissemination, training, provision of services, breeding projects, and research relevant to a broad range of livestock breeding activities. Initially the programme will be directed towards the sheep and wool industries, but it is expected to expand in later years to include cattle, and perhaps other species.

### GENETICIST, Animal Breeding Institute, Department of Agriculture, Position No. 01 1932.

**SALARY:** Level 1: A\$13,634 to A\$17,769, or level 2: A\$18,515 to A\$20,131 per annum, depending on qualifications and experience.

**QUALIFICATIONS AND EXPERIENCE:** A university degree in agricultural science, veterinary science, or science with considerable postgraduate experience in genetics relevant to the livestock industries is required. Postgraduate qualifications or equivalent through scientific publication desirable. As the position will involve close contact with breeding industries, applicants must be able to communicate readily and cooperate constructively with a wide cross section of the rural community.

**DUTIES:** Undertake a range of duties relevant to the extension, training, services, livestock breeding, and research functions of the Animal Breeding Institute of Western Australia. Responsible to the officer in charge of the Institute, would assist with the planning and implementation of appropriate facilities and programmes. Initially, the work would be directed to the sheep and wool industries, but is expected to include cattle and other livestock species in the future.

**CONDITIONS OF SERVICE:** Three-month-long service leave per 7 years of continuous service, 4 weeks of annual leave plus ten Statutory Public Holidays, generous cumulative sick leave entitlements, superannuation benefits, and other general conditions applicable to permanent officers employed under the provisions of the Public Service Act, 1978.

**TRANSPORT AND REMOVAL ASSISTANCE:** The cost of first-class air fares incurred by the appointee; spouse and dependent children under the age of 16 years (where applicable); plus a reasonable amount for removal of essential personal and household effects, subject to the appointee entering into an agreement to remain in the employ of the state for 1 to 3 years, according to assistance given.

**LOCATION:** A major regional centre in the Great Southern Region of Western Australia, such as Katanning or Narrogin.

**GENERAL:** The objectives of the Institute are: • To become the focal point in Western Australia for information and training on methods to improve livestock production through genetic means, • To work closely with existing livestock breeders to develop improved strains through the application of sound genetic principles, • To adopt a pioneering role in animal breeding for those areas which appear to hold considerable potential for the industry in the long term, and • To conduct and/or foster applied research relevant to the development of new breeds, improved measurement techniques, or new breeding services.

Further information available from: H. G. Neil, Chief, Division of Animal Production, Department of Agriculture, South Perth, Western Australia 6151, Australia. CLOSING: 2:00 p.m., Thursday, 10 April 1980.

**APPLICATIONS:** To state age, citizenship, qualifications, and experience with the names of two referees to the: Chairman, Public Service Board, 111 St. George's Terrace, Perth, Western Australia, 6000, Australia.

## DEAN, COLLEGE OF ARTS AND SCIENCES OKLAHOMA STATE UNIVERSITY

Oklahoma State University invites nominations, applications, or expressions of interest for the position of **Dean, College of Arts and Sciences**.

The dean has direct administrative responsibilities for college-related on-campus programs of instruction, research programs, and off-campus extension programs. As the chief academic administrator for the college, the dean is to provide strong and forward-looking leadership for the Divisions of Natural Sciences, Social Sciences, and Arts and Letters and the 31 departments comprising these divisions. Annual operating budget is approximately \$13 million.

Minimum qualifications include: an earned doctoral degree; scholarly achievement in teaching and research; ability to work with and communicate effectively with students, faculty, professional staff, and other publics served by the college; excellent administrative skills with several years of administrative experience.

To receive full consideration, applications should be received as soon as possible; the position is expected to be filled by 1 July 1980.

Salary will be commensurate with qualifications and experience.

**Dr. Lawrence L. Boger, President  
Oklahoma State University  
107 Whitehurst Hall  
Stillwater, Oklahoma 74078  
Telephone: 405-624-6384**

*An Affirmative Action/Equal Opportunity Employer*

## DEAN, COLLEGE OF ARTS AND SCIENCES

George Mason University, the state university in Northern Virginia, announces its search for the dean of its College of Arts and Sciences (CAS). This rapidly growing university, located in Fairfax, Virginia, in the Washington, D.C., suburbs, enrolls over 12,200 students each semester. The College of Arts and Sciences, the largest academic unit of the university, comprises 13 departments, has a faculty of 310 FTE, offers a full range of baccalaureate and master's degrees, and, in the fall semester 1980, its first of several doctoral programs.

The dean is the chief academic officer of the college and reports directly to the Vice President for Academic Affairs. The dean is responsible for academic leadership, program planning, budget, personnel, student academic matters, and other principal activities of the college.

To fill this position, the university is looking for a person who possesses these qualifications:

- An earned doctorate or equivalent,
- A record of distinguished scholarship and teaching at the university level, and
- An outstanding record of administrative responsibility as head of a major academic unit.

Salary for the position is competitive and dependent upon qualifications.

Persons interested in applying for this position should send a résumé and the names, addresses, and telephone numbers of five references to:

**Dr. Robert P. Clark  
Chair, CAS Dean Search Committee  
Office of Academic Affairs  
George Mason University  
4400 University Drive  
Fairfax, Virginia 22030**

The committee will receive nominations for this position.

Applications must be postmarked no later than 4 April 1980. The position will be available 1 August 1980.

*George Mason University is an Affirmative Action/Equal Opportunity Employer.*

## RESEARCH ASSOCIATE

Expansion of our Pharmacology Department offers a professionally rewarding challenge for an individual to investigate the biochemical basis of novel compounds in specific therapeutic areas and create experimental protocols designed to develop candidate drugs.

The ideal candidate for this Ph.D.-level opportunity will have a minimum of 5 years of experience in biochemistry with at least 3 years of specialization in the CNS or cardiovascular therapeutic area and be familiar with metabolic pathways at the molecular level.

Pleasant working conditions in a modern research facility located in a southern metropolitan atmosphere complement excellent benefits and a competitive salary based on background and experience.

Send résumé and salary requirements in confidence to:

**Manager of Personnel Placement  
A. H. Robins Company  
1407 Cummings Drive  
Richmond, Virginia 21220**

*An Equal Opportunity Employer, M/F*

## POSITIONS OPEN

### THE UNIVERSITY OF BRITISH COLUMBIA

**HEAD, DEPARTMENT OF ANATOMY**, of the Faculty of Medicine at the University of British Columbia, Vancouver, British Columbia.

The person appointed would be responsible for directing and developing the teaching and research programs of the department. Individuals with a Ph.D. and/or M.D. as well as substantial academic experience are invited to apply for the position.

Starting date and salary subject to negotiation.

Applications, accompanied by detailed curriculum vitae and the names of two individuals for references, should be directed to: **Dr. W. A. Webber, Dean, Faculty of Medicine, University of British Columbia, Vancouver, British Columbia, Canada V6T 1W5.**

**HEAD OF DEPARTMENT—MEDICAL TECHNOLOGY**, Queensland Institute of Technology (QIT), Brisbane, Australia. The Institute is a federally funded, autonomous, multidisciplinary college, with a student population of around 8000, located near to the city centre in sub-tropical Brisbane, Australia. The Department of Medical Technology is responsible for the administration of the Bachelor of Applied Science—Medical Technology and the Associate Diploma in Clinical Laboratory Techniques and teaching in the disciplines of haematology, histotechnology/histochemistry, anatomy and physiology. Other clinical subjects in medical technology are taught by the Department of Public Health and Nutrition. The administration and teaching of the clinical subjects in the Diploma of Applied Science—Chiropody are also under the direction of the head of department, medical technology. The department has a number of students enrolled in the Master of Applied Science by Research and Thesis and planning has commenced for the introduction of a course work Master's Degree in Medical Technology. In addition to teaching experience, applicants should have had extensive experience in a clinical laboratory and hold higher academic and/or professional qualifications in one of the following disciplines: haematology, histotechnology/histochemistry, clinical biochemistry, clinical microbiology, immunology, or parasitology. Salary will be A\$30,105 per annum. Further information may be obtained from: **The Personnel Officer, QIT, George Street, Brisbane, Australia 4000.** Written applications quoting V.21/80 and including full personal details, telephone numbers, academic qualifications, and work experience, together with the names of three referees, should be sent to the Personnel Officer by 30 May 1980.

### HEARING LABORATORY TECHNICIAN

The Parmlly Hearing Institute of Loyola University of Chicago has a full-time opening for a laboratory technician (formal title is minicomputer systems programmer). The position requires general knowledge of electrical-acoustic equipment and ability to learn about minicomputer programming. Primary duties are: assisting with hearing experiments and programming of minicomputers. Will also oversee laboratory operations and maintain equipment. Good salary and benefits offered. Contact: **LOYOLA UNIVERSITY, Personnel Office, 6525 North Sheridan Road, Chicago, Illinois 60626. Telephone: 312-274-3000, extension 417.**

*Equal Opportunity/Affirmative Action Employer*

**MARINE AND ATMOSPHERIC CHEMISTRY.** A postgraduate or assistant research position will be offered beginning April 1980 at the Scripps Institution of Oceanography for participation in a study of carbon dioxide and other trace gases in the ocean and in the marine atmosphere. A Ph.D. with a strong background in experimental work is required, and experience in gas chromatography and vacuum work is preferred. Send complete résumé with names of three referees to: **R. F. Weiss, Scripps Institution of Oceanography, A-020, University of California, La Jolla, Calif. 92093.** *An Equal Opportunity/Affirmative Action Employer.*

**MICROBIOLOGIST.** Postdoctoral position available to study the intestinal microbial flora of the cockroach. This study includes biochemical and microbial interactions, the isolation and characterization of unique procaryotes, and the attachment and localization of bacteria in the gut. Experience with fastidious anaerobes and a background in microbial physiology is desirable. Position available immediately for two or more years. Send curriculum vitae and letters of reference to: **A. J. Markovetz, Department of Microbiology, University of Iowa, Iowa City, Iowa 52242.** *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### LABORATORY MICROBIOLOGY FELLOW

The University of California, Irvine, Department of Pathology, is recruiting a 1- or 2-year laboratory microbiology fellowship position at the clinical instructor level. Required: M.D., Board-eligibility in anatomic and/or clinical pathology. Position consists of 50 percent clinical laboratory work and 50 percent research. Postresidency training in diagnostic bacteriology, mycology, serology, parasitology, and virology. Research in the areas of molecular pathology and viral oncology is available for interested candidates. *All qualified candidates welcome; minorities and women encouraged to apply.* Send curriculum vitae and three references to: **Luis M. de la Maza, M.D., Ph.D., Director, Division of Microbiology, University of California Medical Center, Orange, California 92668** by 28 April 1980.

*An Equal Opportunity Employer*

### MARINE PHYSIOLOGICAL ECOLOGIST

A temporary appointment for the academic year 1980-1981 to replace faculty member on leave. Candidate will present a graduate level course in marine physiological ecology and participate in the undergraduate general biology courses. Ph.D. is required and preference will be given to candidates with previous teaching experience. Applicants should submit curriculum vitae and arrange to have three letters of reference sent by 15 April to: **Dr. James W. Smiley, Chairperson, Department of Biology, College of Charleston, Charleston, South Carolina 29401.** *An Affirmative Action/Equal Opportunity Employer.*

### MEMBRANE BIOCHEMISTRY

Postdoctoral position available, summer to fall 1980, for a recent Ph.D. to participate in research on energy transducing mechanisms in the plasma membrane of *Neurospora*. Specific ongoing projects include: studies of the molecular mechanisms of the electrogenic proton-translocating ATPase, the glucose-proton symporter, and the calcium-proton antiporter, and studies on the protonmotive force as a regulator of *Neurospora* adenylate cyclase. Reply with curriculum vitae and names of three references to: **Dr. Gene A. Scarborough, Department of Pharmacology, School of Medicine, The University of North Carolina at Chapel Hill, Chapel Hill, N.C. 27514.** *Equal Opportunity Employer.*

### ORGANIC CHEMIST

Immediate opening for Ph.D. with demonstrated research competence and background in synthesis to identify and pursue approaches to the destruction and disposal of chemical carcinogens. Applicants should send a résumé with the names of three references to: **R. A. Pendleton, Environmental Control and Research Laboratory, Frederick Cancer Research Center, P.O. Box B, Frederick, Md. 21701.**

### U.S. GEOLOGICAL SURVEY (USGS) ORGANIC GEOCHEMISTS/BIOGEOCHEMISTS/ SOIL SCIENTISTS

Two full-time research positions are available during 1980 at the USGS National Center in Reston, Virginia. These positions will be part of a long-term interdisciplinary CO<sub>2</sub>/carbon cycle program. Applicants will be selected on the basis of their ability to define and execute projects in one or both of the following areas: (i) stable isotopes in plant materials, including tree rings, with emphasis on developing and evaluating techniques for determining the history of atmospheric CO<sub>2</sub> by studying old plant materials; and (ii) organic carbon transport to and from soils and/or freshwater and estuarine sediments, with emphasis on understanding the response of the soil carbon mass balance to anthropogenic and climatic changes.

Although the ultimate objective of the program is the assessment of global CO<sub>2</sub> fluxes and effects, relevant research need not have immediate global implications. Specific research activities for each position will be determined by the appointees in consultation with other USGS scientists. **Research proposals are invited.** Applicants should have Ph.D. degrees by the time of proposed employment. For each position, the type of appointment and salary will depend on the qualifications of the appointee. Anticipated starting annual salary will range from \$20,600 to \$24,700. Applicants should send a brief research proposal; a résumé of education, professional experience, and published research; and the names, addresses, and telephone numbers of three referees by 25 April 1980 to: **Dr. Eric T. Sundquist, U.S. Geological Survey, 431 National Center, 12201 Sunrise Valley Drive, Reston, Va. 22092.** *The USGS is an Equal Opportunity Employer.*

## POSITIONS OPEN

### PHARMACOLOGIST

The University of South Dakota School of Medicine has a 2-year nontenure-track instructorship available in the Section on Pharmacology. This faculty position requires an individual motivated to enhance their teaching and research skills in a growing program in pharmacology. The School of Medicine will graduate its fourth class in 1980. The Graduate School offers M.A. and Ph.D. degrees in the biomedical sciences.

Candidates must have the Ph.D. degree, with postdoctoral experience preferable, and be capable of teaching medical students in areas outside their own research interest. Research funds, ample laboratory space, and instrumentation are available.

Interested persons should send their curriculum vitae and the names of three references to: **Michael A. Gordon, Ph.D., Section on Pharmacology, The University of South Dakota School of Medicine, Vermillion, S.D. 57069.** Closing date 30 April 1980. *An Equal Opportunity/Affirmative Action Employer.*

**PHARMACOLOGY/TOXICOLOGY FACULTY POSITIONS.** Two positions for assistant or associate professor open 1 July 1980. One requires strong background in biochemistry; teaching duties in biochemistry for professional and graduate students; research in biochemical pharmacology or toxicology. Second requires strong training and/or experience in toxicology; undergraduate (limited) and graduate teaching and research in toxicology. Both positions require Ph.D.; postdoctoral experience in teaching and/or research preferred; B.S. in pharmacy favorable but not required. Send curriculum vitae with names of three professional references to: **Dr. W. M. Davis, Professor and Chairman, Department of Pharmacology, School of Pharmacy, University of Mississippi (Oxford Campus), University, Miss. 38677.** Application deadline: 21 April 1980. *Equal Opportunity Employer.*

### PHYSICIST

Vacancy exists in fully affiliated suburban Detroit-area medical center for a research physicist with collateral administrative and clinical responsibilities. A B.S. degree in physics and relevant experience or an advanced degree is required. A nuclear physics/medicine background plus an advanced degree are preferred. Entrance salary will be commensurate with the education and experience of the selectee and includes a liberal benefits package. Interested applicants should submit a Personal Qualifications Statement (SF-171) or detailed résumé with minimum salary requirements to:

**VA Medical Center  
Personnel Service (05)  
Southfield and Outer Drive  
Allen Park, Mich. 48101**  
or telephone: 313-562-6000, extension 676.  
U.S. citizenship is required.  
*An Equal Opportunity Employer*

### POPULATION GENETICS NORTHWESTERN UNIVERSITY

A tenure-track position at the assistant professor level is open in the Department of Biological Sciences. Candidates should have a demonstrated creativity and productivity in theoretical or experimental population genetics. The individual hired will be expected to teach courses in genetics and evolution at the undergraduate and graduate levels. Postdoctoral experience is strongly recommended. Applicants should submit curriculum vitae, bibliography, a brief description of research plans, and names and addresses of four references to: **David C. Culver, Chairman, Population Genetics Search Committee, Department of Biological Sciences, Northwestern University, Evanston, Illinois 60201.** *Northwestern University is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS** in bioanalytical and environmental chemistry. Research involves development of new methodology: (i) for sequencing proteins and neuropeptides at the picomole level, and (ii) for analysis of toxic substances in industrial wastes. Both projects utilize positive and negative CIMS plus CID techniques on a new triple quadrupole mass spectrometer. Apply to: **Professor Donald F. Hunt, Department of Chemistry, University of Virginia, Charlottesville, Va. 22901.** *An Equal Opportunity Employer.*



## MOLECULAR BIOLOGIST

SRI INTERNATIONAL, on the SAN FRANCISCO PENINSULA, is seeking an investigator to join the molecular biology group in the Life Science Division. Individuals who are interested in conducting basic and applied research are requested to apply. Research experience with recombinant DNA technologies is an important qualification for any candidate. Senior candidates or individuals with a minimum of 2 years post-doctoral experience will be considered. Candidates should submit their resumes, including the names of three references, and statements about their professional goals and research plans. The salary is negotiable and will be commensurate with relevant experience.

Please send your resume, including salary history, in confidence, to K. Fodge Hopkins, SRI INTERNATIONAL, 333 Ravenswood Avenue, Menlo Park, CA 94025, or call (415) 326-6200, Ext. 4875 or 4137 for application. We are an equal opportunity employer.



## Molecular Geneticists

... unique professional openings at Pfizer Central Research

### • STAFF RESEARCH SCIENTIST

Opportunity to apply skills in molecular genetics and recombinant DNA technology to pharmaceutical product research. Position requires PhD and post-doctoral training in molecular genetics including substantial experience in recombinant DNA technology. Prefer candidates with experience in one or more of the following specific areas: DNA sequencing; Lambda and/or "cosmid" vector systems; expression vector construction; electron microscopy; or non-E-coli host vector systems.

### • STAFF ASSISTANT SCIENTIST

Responsibilities will involve construction of microbial strains through recombinant DNA and classical genetic techniques, and analysis of nucleic acid molecules by physical methods including electron microscopy. Must have MS with thesis work in recombinant DNA or BS with minimum 2 years relevant experience.

In addition to excellent potential for professional recognition and career growth, we offer a competitive salary/benefits package and the opportunity to live in an attractive shore community, midway between New York and Boston.

Apply in sending your resume and brief description of research interests to: Mr. F. G. Ziegler, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



An Equal Opportunity Employer

## RESEARCH SCIENTIST POSITIONS WITH THE UNIVERSITY OF PUERTO RICO'S CENTER FOR ENERGY AND ENVIRONMENT RESEARCH\*

**SAN JUAN LABORATORY**—Terrestrial Ecologist to head a research division and conduct studies with tropical vegetation as part of a team research project in a tropical forested ecosystem. Minimum requirements: PhD Degree, 3 to 5 years experience in research and administration.

**MAYAGUEZ LABORATORY**—Physical Oceanographer to perform research in physical oceanography complementary to existing studies in ocean engineering and biological oceanography. Minimum requirements: PhD Degree.

Salary and benefits to be negotiated. Send resume to:

Dr. Juan A. Bonnet, Jr., Director  
Center for Energy and Environment  
Research  
Caparra Heights Station  
San Juan, Puerto Rico 00935

\*operated by UPR for USDOE

## CANCER EXPERT

The National Institutes of Health, Public Health Service, Division of Cancer Treatment (DCT), National Cancer Institute, is seeking applicants for an "Expert Position" to develop and manage certain aspects of a contract program devoted to the acquisition, production, biological and toxicologic evaluation, and formulation of Biological Response Modifiers (BRMs) as new potential anti-tumor agents. BRMs refer to agents which will modify the relationship between tumor and host by modifying a host's biological response to tumor cells with resultant therapeutic benefit. Agents which may be considered for inclusion in the DCT's BRMs program include: (a) agents which augment antitumor immunity, modulate components of the immune response, and induce or restore effectors of immunity; (b) interferons and cytokine products; (c) thymic hormones or fucose; (d) tumor-specific vaccines and immune effectors in the form of cells or antibodies; (e) agents which interfere with carcinogenesis; and (f) agents which modify tumor cologenicity and/or the maturation of tumor or stem cells. In addition to involvement in all preclinical aspects of the development of BRMs program in the further development of these agents through clinical trials and into general medical practice.

Applicants must have an M.D. degree or Ph.D. or equivalent training and experience in experimental immunology, cell biology, and the use of animal model systems. Supervisory and managerial experience is desirable.

The position of "Expert" has a duration of 2 years with the possibility of being extended for an additional period, with responsibilities and pay equivalent to that of a Section Head. The salary range will be \$29,375 to \$40,000, depending on expertise and experience of the individual selected for the position.

Interested persons should respond, enclosing a completed curriculum vitae, to: Dr. Vincent T. Oliverio, Associate Director, Developmental Therapeutics Program, DCT, NCI, Blair Building, Room 5A03, 8300 Colesville Road, Silver Spring, MD 20910. It would be appreciated if persons active in this field of research, and who know individuals who may be qualified, interested, and available, would transmit this notice appropriately. An Equal Opportunity Employer.

**NATIONAL INSTITUTES OF HEALTH**

## POSITIONS OPEN

**POSTDOCTORAL FELLOW.** Salary: \$13,380. Available after 1 June 1980. Research topics: (i) mechanistic studies on the photochemistry of pheomelanins, (ii) biosynthetic studies on pheomelanins, and (iii) synthetic and photochemical studies on pheomelanin model compounds. Experience in organic photochemistry, biochemistry and/or organic synthesis required. Send curriculum vitae, list of publications, and letters of recommendation to: **Dr. Miles Chedekel, The Johns Hopkins University, Department of Environmental Health Sciences, Division of Environmental Chemistry, c/o COEH, 3100 Wyman Park Drive, Building Number 6, Baltimore, Maryland 21211.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITION IN IMMUNOLOGY.** Research involves study of immunologic aspects of multiple sclerosis and experimental allergic encephalitis. Recent Ph.D. in immunology preferred. Write: **Lynn E. Spitzer, M.D., Children's Hospital, 3700 California Street, San Francisco, California 94119.**

**POSTDOCTORAL POSITIONS IN VIROLOGY AND VIRAL ONCOLOGY.** Research topics include immunology and expression of mouse mammary tumor viruses, transformation by SV40, herpesviruses and human cancer, rotaviruses, reovirus genetics, hepatitis, and environmental virology. Positions available now and in the fall. Submit résumé and names of three references to: **Dr. Janet S. Butel, Department of Virology, Baylor College of Medicine, Houston, Texas 77030.**

### POSTDOCTORAL POSITION IN IMMUNOLOGY

Position available for Ph.D. or M.D. with outstanding qualifications, who is interested in studying the cell biology of mononuclear phagocytes. Emphasis will be placed on macrophage-tumor cell interactions and on the regulation of macrophage differentiation. Previous experience with macrophages, cell biology, or biochemistry desirable. Opportunity offers advanced training in a progressive laboratory in an attractive university setting. Please send curriculum vitae and the names of three referees to:

**D. O. Adams, M.D., Ph.D.**  
Departments of Pathology and Immunology  
Duke University Medical Center  
Durham, N.C. 27710

*Duke University is an Equal Opportunity Employer.*

### POSTDOCTORAL POSITIONS IN BIOENERGETICS

The Department of Biochemistry, Rice University, announces the immediate availability of two postdoctoral positions. Previous experience in enzymology, particularly of membrane bound and/or electron transfer enzymes, physical approaches to bioenergetics, will be advantageous.

Prospective candidates should submit résumés together with the names of three individuals familiar with their research accomplishments to: **Dr. G. Palmer, Department of Biochemistry, Rice University, Houston, Texas 77001.**

*Rice University is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION,** in obstetrical and gynecological endocrinology available for qualified applicant with Ph.D., to carry out research on pregnancy proteins. Applicant should have a strong background in peptide chemistry. Send curriculum vitae and a list of three or more persons who could be contacted for references to: **Dr. J. Z. Kendall, Department of Obstetrics and Gynecology, The University of Texas Health Science Center at Houston, Medical School, 6431 Fannin Street, Suite 3270 MSMB, Houston, Texas 77025. Telephone: 713-792-5363.** An Equal Opportunity Employer.

**SENIOR RESEARCH ASSISTANT** position available for a science graduate experienced in protein hormone and steroid hormone radioimmunoassay techniques. Evidence of ability to work independently and of supervisory experience very desirable. Send curriculum vitae and reference names and addresses to: **Dr. J. Z. Kendall, Department of Obstetrics and Gynecology, The University of Texas Health Science Center at Houston, Medical School, 6431 Fannin Street, Suite 3270 MSMB, Houston, Texas 77025. Telephone: 713-792-5363.** An Equal Opportunity Employer.

## POSITIONS OPEN

**POSTDOCTORAL POSITION** immediately available for a **chemical engineer** or **physical chemist** interested in working in coal surface chemistry, gas flow in coal, and in situ coal/oil shale technology. Responsibilities include laboratory research and supervision of interdisciplinary projects in synthetic fuels laboratory. Annual salary range: \$14,000 to \$19,000. Send résumé to: **Professor H. E. Nuttall, Chemical and Nuclear Engineering Department, University of New Mexico, Albuquerque, New Mexico 87131.**

**POSTDOCTORAL POSITION.** Biochemistry (cell biology). Available immediately for study of fibrinolysis (regulation) in cultured endothelial cells. Background in protein isolation/characterization required. Opportunity available for interaction with various clinical groups. Salary to \$17,000. Send curriculum vitae and three references to: **Dr. F. M. Booyse, Division of Cellular Biology, Michael Reese Research Foundation, 530 East 31 Street, Chicago, Illinois 60616.** An Equal Opportunity Employer.

**POSTDOCTORAL POSITIONS** now open in **BASIC MOLECULAR BIOLOGY.** Newly funded, vigorous research programs in three areas: mechanisms of virus-induced cell lysis; gene transposition in bacteria; molecular basis of bacterial virulence. Experience in molecular genetics, plasmids, or membrane biochemistry desired, but secondary to an eagerness to learn. Central Texas locale offers sun-belt climate: College Station/Bryan is fast-growing and congenial, midway between Houston and Austin. Send curriculum vitae and references to: **Dr. Ry Young, Department of Medical Biochemistry, 110 Heep Building, Texas A & M University, College Station, Texas 77843.** Equal Opportunity through Affirmative Action.

**POSTDOCTORAL POSITION,** in obstetrical and gynecological endocrinology available for a qualified applicant with Ph.D., to carry out research on pregnancy proteins. Applicant should have a strong background in electron microscopical techniques or tissue culture. Send curriculum vitae and a list of three or more persons who could be contacted for references to: **Dr. J. Z. Kendall, Department of Obstetrics and Gynecology, The University of Texas Health Science Center at Houston, Medical School, 6431 Fannin Street, Suite 3270 MSMB, Houston, Texas 77025. Telephone: 713-792-5363.** An Equal Opportunity Employer.

### POSTDOCTORAL POSITION IN DIABETES

One postdoctoral position is available 1 September 1980. Appointee will participate in an NIH training program for research in diabetes. Candidate must have a Ph.D. and/or M.D. degree, be a permanent resident of the United States, and be committed to a career in diabetes research. Stipend ranges from \$13,000 to \$15,000, depending on experience. Please send curriculum vitae and outline of research interests to: **A-M. Carpenter, Ph.D., M.D., Department of Anatomy, 4-135 Jackson Hall, 321 Church Street, SE, University of Minnesota, Minneapolis, Minn. 55455.**

*An Equal Opportunity Educator and Employer*

**POSTDOCTORAL POSITION** in plant physiology available in June to study the influence of fruit development on the photosynthesis and nitrogen metabolism of leaves in green pepper. A person with experience in gas exchange measurement, N-15 analysis, or amino acid analysis is preferred. This is a 12-month renewable position. Applicants should submit curriculum vitae and three letters of reference by mail to: **Leonard Beevers, Department of Botany and Microbiology, University of Oklahoma, Norman, Oklahoma 73019.** An Equal Opportunity Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE** position available for EM study of mammalian muscle spindles. Experience desired in skeletal muscle ultrastructure. Salary dependent upon qualifications. Send résumé and names of three references to: **Dr. Jan Kucera, Neurology Department, Boston University School of Medicine, 750 Harrison Avenue, Boston, Mass. 02118.**

Postdoctoral and Research Assistant Professor openings are available for immunological, chemical modification, and characterization studies on mitochondrial proton pumps. Starting time is flexible for a 2-year appointment. Salary: \$12,000 to \$15,000, depending on qualifications. Send curriculum vitae and names of three references to: **Dr. Ronald R. Fisher, Chairman, Department of Chemistry, University of South Carolina, Columbia, S.C. 29208.** An Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately. Physical chemistry of aggregation and micelle properties of bile salts; relaxation kinetics of micelle formation. Experience in analytical ultracentrifugation desirable: \$13,000 per year. Send résumé and three letters of reference to: **Professor J. Kratochvil, Department of Chemistry, Clarkson College, Potsdam, N.Y. 13676.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL OR RESEARCH ASSOCIATE (FACULTY) POSITION** available for biochemist with a background in lipid and protein biochemistry, lipoprotein metabolism, and separation of subcellular organelles. The position involves the isolation and characterization of lipoprotein particles of plasma and from livers. These biochemical studies will be correlated with morphological (light and electron microscopy) and immunocytological studies on the pathogenesis of fatty livers. Position is available immediately for a minimum of 2 years. Salary negotiable. Please send curriculum vitae to: **Dr. Phyllis M. Novikoff, Pathology Department, ALBERT EINSTEIN COLLEGE OF MEDICINE, 1300 Morris Park Avenue, Bronx, N.Y. 10461.** An Equal Opportunity/Affirmative Action Employer.

### PROFESSOR AND CHAIRPERSON DEPARTMENT OF ZOOLOGY UNIVERSITY OF MASSACHUSETTS/AMHERST

Applications are invited from senior faculty who meet the following selection criteria: extensive academic experience, a record of scholarly achievement, an ambitious ongoing research program, extramural research support, demonstrated leadership ability, and administrative competence. The department consists of 29 faculty, with 71 graduate students in its M.S./Ph.D. programs. There are more than 100 other life scientists on the campus and in the four neighboring colleges. The university has an enrollment of 23,000 students, and is located in a picturesque area of western Massachusetts. The appointment is to become effective on 1 September 1980 or 1 February 1981. Send curriculum vitae and the names and addresses of several references no later than 16 April 1980 to: **E. Brooks, Department of Zoology, University of Massachusetts, Amherst, Mass. 01003.** An Affirmative Action/Equal Opportunity Employer.

### DEPARTMENT OF ANATOMY AND NEUROBIOLOGY WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

Searching for **PROFESSOR AND HEAD** of Department of Anatomy and Neurobiology at Washington University School of Medicine, St. Louis, Missouri. Research accomplishments particularly important. If interested, please send curriculum vitae and complete bibliography to:

**M. Kenton King, Dean**  
Washington University School of Medicine  
660 South Euclid Avenue—Box 8106  
St. Louis, Missouri 63110  
*Equal Opportunity Employer*

### VISITING PROFESSOR UNIVERSITY OF MISSOURI RESEARCH REACTOR

The University of Missouri Research Reactor (MURR) has an opening for a visiting professor. The MURR is the highest flux, steady-state research reactor at a U.S. university. It operates at 10 MW, 150 hours per week, 52 weeks per year to provide a source of neutron and gamma radiation for research, education, and service. The areas of research that the MURR has identified as profitable areas to promote and those in which a program now exists are: neutron activation analysis, radioisotopes applications, studies of nuclear forces and interactions, materials studies using neutron diffraction and/or slow neutron inelastic scattering, studies of neutron properties, studies of radiation effects, applications of neutron radiography, and studies related to nuclear engineering.

This appointment provides partial salary for up to 1 year. The visiting professor should bring knowledge and experience that will expand the research, education, or service of the reactor's program. Submit letter of application and résumé to: **R. M. Brugger or D. M. Alger, Research Reactor Facility, University of Missouri, Columbia, Missouri 65211; telephone: 314-882-4211.**

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

## FOURTH INTERNATIONAL CONFERENCE ON COLLECTIVE PHENOMENA

April 13-15, 1980  
Moscow, USSR

The New York Academy of Sciences and the Committee of Concerned Scientists announce their cosponsorship of the fourth in a series of international conferences under the auspices of Soviet scientists excluded from official science in the USSR.

Soviet Organizing Committee: Solomon Alber, Jacob Alpert, Viktor Brailovsky, Yuri Golfand and Naum Meiman

Supporting Societies: American Mathematical Society  
American Physical Society  
Society for Industrial and Applied Mathematics

American Advisory Committee composed of thirty-two distinguished scientists.

This conference will bring together scientists from several countries representing diverse fields of science.

### PARTIAL PROGRAM

#### • Talks by Selected Soviet Participants:

Solomon Alber	Stationary Hamiltonian Systems
Jacob Alpert	On Some Properties of Electromagnetic Waves in a Collisional Magnetoactive Plasma in the Ion Gyro-frequency Range
Viktor Brailovsky	Estimation of Quality of Some Function Approximation Procedures Based on Use of Experimental Data
Yuri Golfand	On the Quantum Action Approach
Naum Meiman	A New Approach to the Path Integrals

#### • American Participants:\*

Max Gottesman—Head, Biochemical Genetics Section, National Cancer Institute  
John McCarthy—Director, Artificial Intelligence Laboratory, Stanford University  
Daniel McCracken—President, Association for Computing Machinery  
Alan Nixon—Past President, American Chemical Society  
Maxine Singer—Chief, Laboratory of Biochemistry, National Cancer Institute  
Patrick Winston—Director, Artificial Intelligence Laboratory, MIT

\*Affiliation for identification purposes only

Further information: Committee of Concerned Scientists, 9 East 40th St., New York, N.Y. 10016, (212) 686-8862

## HEALTH SCIENTIST ADMINISTRATOR

The National Caries Program, National Institute of Dental Research, in Bethesda, Maryland seeks a nutritional biochemist to guide and monitor the scientific and technical aspects of a research contract program on dietary factors and dental caries. Emphasis is being placed on the influence of dietary components, the possibility of dietary modification, and the development of substitutes for cariogenic sweeteners.

Applicants must have a Ph.D. or equivalent in the life or physical sciences; several years' post-doctoral research experience in which the applicant independently conducted research in nutritional biochemistry; plus at least one year of experience in research program administration. Experience in dentally related research would be advantageous. This career position is at the GS-13 or 14 grade level of the Civil Service general schedule (salary range \$29,375 to \$45,126 per annum) depending upon the qualifications of the candidate. Applicants must have or obtain a Civil Service rating.

Submit current resume and/or SF-171 by April 25, 1980, to: Dr. John Townsley, Chief, Caries Research Grants and Contracts Branch, NIDR, National Institutes of Health, Public Health Service, Westwood Building, 5333 Westbard Avenue, Bethesda, MD 20205. An Equal Opportunity Employer.

**NATIONAL INSTITUTES  
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### RESEARCH SCIENTISTS

Fisheries and Oceans Canada  
Bedford Institute of Oceanography  
Dartmouth, Nova Scotia

Salary: Up to \$42,282

The Bedford Institute of Oceanography located in Nova Scotia, Canada, one of the world's largest oceanographic institutes, has need for Research Scientists in the following specialties:

#### Physical Oceanographer

Ref. No.: 80-PSCH-DFO-SE-0213

Conducts research on the physical oceanography of the deep sea and the continental shelves, primarily from a theoretical point of view. Carries out an independent research program while co-operating with other scientists who have need of theoretical input to their programs.

#### Qualifications

Ph.D. in physical oceanography, physics, applied mathematics or related field with a sound basis in theoretical oceanography and experience in the interpretation of experimental data. Knowledge of English is essential.

#### Head, Electronics Design Section

Ref. No.: 80-PSCH-DFO-SE-6098

Conducts research with physical oceanographers and hydrographers in the investigation, evaluation and application of new measuring techniques in the field of acoustics and signal processing related to marine science and hydrography.

#### Qualifications

Ph.D. in physics, engineering physics, engineering or a related science with considerable experience in the field of marine acoustics or signal processing. Ability to conduct research at sea. Knowledge of English is essential.

For additional information on the Physical Oceanographer call collect to Dr. J. Elliott (902) 426-2502 and for information regarding the Head, Electronics Design Section call collect to Dr. D. McKeown (902) 426-3489.

(Pour obtenir des informations additionnelles sur le poste d'Océanographe physique, appeler à frais virés de Dc. J. Elliott (902) 426-2502 et pour obtenir des informations sur le poste de Chef, Service du dessin électronique, appeler à frais virés le Dc. D. McKeown (902) 426-3489.)

#### How to Apply

Send application/résumé to:

Mrs. E. Cruickshank (902) 426-2169

Public Service Commission of Canada

4th Floor, 5161 George Street

Halifax, Nova Scotia B3J 1M8

Closing Date: April 25, 1980.

Please quote the applicable reference number at all times.



## POSITIONS OPEN

**POSTDOCTORAL/RESEARCH ASSOCIATE** positions open in the area of biochemical and morphological approaches to hormone-cell interactions, metabolism, identification of second messengers for collaborative work between Dr. L. Jarett (chairman, Department of Pathology and Laboratory Medicine) and Dr. J. R. Williamson (Department of Biochemistry/Biophysics). Send curriculum vitae and names of three references to: **Dr. J. R. Williamson, University of Pennsylvania, Department of Biochemistry/Biophysics, Room 601 New Biology, Philadelphia, Pennsylvania 19104.**

**RESEARCH ASSOCIATE IN BIOCHEMISTRY.** Join an active group investigating various aspects of the biochemistry of platelets. A Ph.D. is required and experience with membranes, receptors, or proteases would be valuable. From \$16,000. Send curriculum vitae to: **Dr. Thomas Detwiler, Department of Biochemistry, State University of New York, DOWNSTATE MEDICAL CENTER, 450 Clarkson Avenue, Brooklyn, N.Y. 11203. Equal Opportunity/Affirmative Action Employer.**

### RESEARCH ASSOCIATE-TERATOLOGY-DEVELOPMENTAL BIOLOGY-TOXICOLOGY.

Available immediately to work on teratological mechanisms and testing using in vitro cultures of rat embryos. Salary to \$16,000. Send curriculum vitae and three letters of recommendation to: **Dr. Norman W. Klein, Department of Animal Genetics, University of Connecticut, Storrs, Connecticut 06268.**

*An Equal Opportunity Employer*

### RESEARCH PHYSIOLOGIST

Position available immediately for experienced research physiologist to join a dynamic, multidisciplinary group. Applicant will be required to direct the physiological aspects of an active program on circulating pancreatic proteolytic enzymes in health and disease. Must have successfully completed a full 4-year course of study in an accredited college or university, leading to a bachelor's or higher degree with major study in physiology or biochemistry. In addition, candidates must have had either professional experience or graduate education (or an equivalent combination of both). Successful applicant should show evidence of creative and productive research as demonstrated by publications. Annual salary: \$20,611. *The U.S. Government is an Equal Opportunity Employer.* Send curriculum vitae to: **Dr. Corey Largman, Enzymology Research Laboratory, Martinez VA Medical Center, 150 Muir Road, Martinez, Calif. 94553.**

**RESEARCH SUPPORT SPECIALIST.** Engineer to work on anaerobic fermentation (Biomass) processes. M.S. degree in waste management (agricultural engineering/environmental engineering). Salary competitive. Send résumé and references to: **Dr. William J. Jewell, Associate Professor, Department of Agricultural Engineering, Cornell University, Ithaca, N.Y. 14853. Cornell University is an Equal Opportunity/Affirmative Action Employer.**

### MEDICAL RESEARCH COUNCIL BRAIN METABOLISM UNIT BIOSYNTHESIS OF PROTEINS IN BRAIN SCIENTIST (BIOCHEMIST) UNITED KINGDOM

Applications are invited for a post of scientist (biochemist) to study the regulation of protein synthesis in brain cells. The main interest of the brain metabolism unit is the study of central neurotransmission in normal and disordered states. The successful candidate will be expected to establish a laboratory for studies of protein synthesis in the brain, and to investigate how this is affected in psychiatric and neurological disorders, and/or modulated by hormones. Facilities exist in the unit for the study of human postmortem brain.

Salary in the range of £7,950 to £11,853.

Applications, including curriculum vitae, a list of publications, and the names of three referees, should be sent to: **Administrative Officer, Medical Research Council, Brain Metabolism Unit, University Department of Pharmacology, 1 George Square, Edinburgh, Scotland EH8 9JZ.**

## POSITIONS OPEN

A position is available for a

### POSTDOCTORAL FELLOW

to work on the interactions between ribosomal proteins or between ribosomal RNA and proteins. This work will involve both biochemical and biophysical techniques. The position is available immediately and is funded by the DFG until the end of 1981. There is a possibility for further extension. The salary is approximately DM 40,000 per annum (BAT IIa). Applications, including curriculum vitae, should be sent to: **Dr. Jan Dijk, Max-Planck-Institut für Molekulare Genetik, Ihnestrasse 63-73, D-1000 Berlin 33, West Germany.**

**RESEARCH ASSOCIATE IN NEUROBIOLOGY.** Studies center on synaptic structure-function correlation. Experience in one or more of the following techniques desirable: EM autoradiography, cellular neurophysiology, cell culture, immunocytochemistry. Send résumé to: **Dr. G. D. Pappas, Head, Department of Anatomy, University of Illinois, College of Medicine, P.O. Box 6998, Chicago, Ill. 60680.**

*The University of Illinois is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

## DOCTORAL PROGRAM

### DOCTORAL PROGRAM IN PHARMACOLOGY AND TOXICOLOGY

Several predoctoral positions are available beginning August 1980. Research areas of emphasis include: chemical and biochemical pharmacology and toxicology, drug metabolism, pharmacological applications of NMR, analytical toxicology using GC/MS, endocrine pharmacology, neuropharmacology, neuropsychopharmacology, renal pharmacology, and drug transport and distribution. Various fellowships and assistantships are available. For applications write: **Dr. L. C. Waite, Department of Pharmacology and Toxicology, Health Sciences Center, University of Louisville, Louisville, Kentucky 40232.**

## TRAINEESHIPS

### NEURAL AND BEHAVIORAL SCIENCES THE UNIVERSITY OF IOWA

**POSTDOCTORAL TRAINEESHIPS** for research are available through a university program in neural and behavioral sciences. Application deadlines are 1 April and 1 October. Send curriculum vitae, list of references, and statement of research interests to: **Neural and Behavioral Sciences Committee, 201J Gilmore Hall, The University of Iowa, Iowa City, Iowa 52242. An Equal Opportunity/Affirmative Action Employer.**

## FELLOWSHIPS

### PREDOCTORAL FELLOWSHIPS

The Division of Experimental Pathology at the University of Kentucky College of Medicine has predoctoral fellowships available to students seeking the Ph.D. degree. An interdisciplinary program is available with research opportunities in the areas of cellular immunology, immunochemistry, tumor immunology, neuroimmunology, molecular and tumor virology, cell biology, and tumor cytogenetics. For further information contact: **Dr. Thomas L. Roszman, Division of Experimental Pathology, Department of Pathology, University of Kentucky, Lexington, Kentucky 40536.**

**POSTDOCTORAL FELLOWSHIPS** (neuroscientist: physiology, biochemistry, applied mathematics). Applications are invited for fellowships to work on axonal transport using optical and position-sensitive detector techniques.

Applicants should send curriculum vitae, transcripts, professional objectives, and names of three referees to: **Dr. R. S. Smith, 11-107 Clinical Sciences Building, University of Alberta, Edmonton, Alberta, Canada T6G 2G3.**

## FELLOWSHIPS

### TOXICOLOGY PREDOCTORAL AND POSTDOCTORAL FELLOWSHIPS

Predocotoral fellowships for Ph.D. training in environmental toxicology are available for entry of students into the program in September 1980. These are sponsored by the National Institute of Environmental Health Sciences. Several fellowships also are available in the closely related area of industrial toxicology, sponsored by the National Institute of Occupational Safety and Health. Postdoctoral fellowships also are available from 1 July 1980, sponsored by the National Institute of Environmental Health Sciences. Major areas of research are heavy metal toxicology; renal, pulmonary, and neurobehavioral toxicology; and genetic toxicology, including teratology. The Department of Environmental Health offers a good training environment, having strong research programs in the allied areas of epidemiology and biostatistics, occupational medicine, and industrial hygiene. Send letters of inquiry to: **Dr. Paul B. Hammond, Department of Environmental Health, University of Cincinnati, Kettering Laboratory, 3223 Eden Avenue, Cincinnati, Ohio 45267. An Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL FELLOWSHIP AND/OR RESEARCH ASSOCIATE** available for Ph.D., M.D., or D.D.S. for multidisciplinary Herpes research group at Emory University. Interaction among Medical School, Dental School, and Basic Science Departments. Physiologic or neurobiological background with training in flux studies and/or electrophysiology required. Salary negotiable, depending on experience and training. *Equal Opportunity/Affirmative Action Employer.* The position can begin 1 May 1980. Please send curriculum vitae to: **Dr. Michael E. Fritz, School of Dentistry, Emory University, Atlanta, Georgia 30322.**

## CONFERENCE

The Center for Immunology, State University of New York at Buffalo, announces the **Seventh International Convocation on Immunology**, to be held 6 to 10 July 1980 at Niagara Falls, New York. The theme of the program, "Immunobiology of the Major Histocompatibility Complex," will include presentation of papers by distinguished scientists internationally recognized as experts on the topics: The H-2 System; The H-2 System and the Immune Response; The HLA System; Major Histocompatibility Complex of Other Species; Major Histocompatibility Complex Associated Phenomena; Major Histocompatibility Complex in Transplantation; and Major Histocompatibility Complex and Oncogenesis. Further information may be obtained by contacting: **Dr. James F. Mohn, Director, The Center for Immunology, Room 210 Sherman Hall, State University of New York at Buffalo, Buffalo, New York 14214.**

## SYMPOSIUM

### SYMPOSIUM IN BIOLOGY Brookhaven National Laboratory

Brookhaven Symposium in Biology, Number 31, will be held from 2 to 5 June 1980 at Brookhaven National Laboratory. The symposium will be on "Primary Productivity in the Sea," and topics are to include: the physiological ecology of marine phytoplankton, macrophyte and coral reef productivity, models of marine primary productivity, and so forth. Poster presentations are invited. For further information, contact: **Dr. Paul Falkowski, Symposium Chairman, Oceanographic Sciences Division, Building 318, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973. An Equal Opportunity Employer, M/F.**

# Staff Research Scientist

## PLANT GENETICS DEPARTMENT

The Plant Genetics Department of Pfizer Central Research is looking for a creative individual to participate in a multidisciplinary research effort to identify variants in plants or cell cultures with improved agronomic properties. This department provides basic research support for the maize and soybean breeding programs of Pfizer Genetics, Inc.

Applicants should have strong formal training in plant biology, tissue culture and genetics. Experience with breeding methods, protoplast procedures, somatic cell genetics, molecular biology or ion transport for crop species, particularly field crops, is also desirable. PhD required and post-doctoral experience preferred.

In addition to an exceptional opportunity for professional recognition and growth, we offer a comprehensive salary/benefits package and attractive Connecticut shore living. Please send resume and brief description of research interests to: **Mr. F. G. Ziegler, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.**



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## MEDICAL DIRECTOR

Monsanto Company's newly reorganized Biomed Program has an important opening for a top-level Medical Director. In support of the Program Director, this individual will be responsible for worldwide clinical trials of candidate drugs targeted for the reduction or prevention of major human diseases. He/she will serve as our chief scientific officer in this area and, as such, would have vital inputs into its direction and development. Prerequisites include a medical degree from a recognized institution and at least five years experience in the field of new drug introduction.

To be considered for this exciting assignment, forward your résumé in confidence to: Dr. P. R. Schenkenberg, G4EA, Monsanto Company, 800 North Lindbergh Boulevard, St. Louis, Missouri 63166.

# Monsanto

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## JOHN E. FOGARTY INTERNATIONAL CENTER FOR ADVANCED STUDY IN THE HEALTH SCIENCES NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Opening Date: March 3, 1980

Closing Date: March 31, 1980

(All applications must be postmarked by closing date)

## Director, John E. Fogarty International Center

The National Institutes of Health invites nominations and applications for the position of Director, John E. Fogarty International Center, NIH, who will have primary responsibility in coordinating the international research activities of the NIH, maintaining liaison with other Federal components and multinational organizations, and serving as the principal advisor to the Director, NIH, on all matters relating to the substance, quality and effectiveness of these programs.

This is a Civil Service position in the Senior Executive Service with a salary range from \$47,889 to \$50,112 per year, depending on qualifications. (Alternately, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service). The SES individual selected, if not presently in the Senior Executive Service, must serve a one-year probationary period. Mandatory qualifications are: the M.D. degree, or other professional degree(s) in a biomedical science such as Biology, Microbiology, or Chemistry, or equivalent amount of education and/or experience which demonstrates a broad knowledge and understanding of the major public health problems in this country and abroad, plus research experience in a biomedical science. In addition, candidates must meet the following managerial/executive

qualifications: experience necessary to select, manage, and motivate a staff and carry out organizational goals, including the ability to implement EEO objectives. Candidates who meet the mandatory qualifications will be further evaluated by the Search Committee on the extent to which they possess the following: experience in international health activities, scientific reputation/peer recognition, honors and awards, training and education, and the extent to which they exceed the level of managerial/executive qualifications specified above.

Applications (Personal Statement of Qualifications—SF-171) are to be sent to the Chairman, FIC Search Committee, National Institutes of Health, Building 1, Room 132, 9000 Rockville Pike, Bethesda, MD 20205. A current curriculum vitae, references and/or appraisals of performance, and bibliography must accompany all applications.

The National Institutes of Health is an equal opportunity employer.

## NATIONAL INSTITUTES OF HEALTH



# Flight cancelled.



**W**hen the stars come out in Mexico, and other parts of Latin America, hordes of vampire bats do also. These bats (*Desmodus rotundus*) have been attacking cattle, bleeding them and acting as dangerous vectors of paralytic rabies.

The cattle ranchers, suffering losses of \$350 million a year in meat and milk production, saw their livelihoods at stake. And while Count Dracula may have been kept in his place by a wooden stake, the ranchers needed a better solution.

The U.S. Agency for International Development (AID) funded U.S. Fish and Wildlife Service scientists who devised a control method. An anticoagulant solution, diphenadione, based on a Kodak intermediate, was developed by a chemical firm. It is smeared on vampire bats after they are trapped in nets. The bats, grooming each other, ingest it and die as they live—by bleeding. The purpose is not to eradicate the species, but to control them. Since other bat species do not associate with vampire bats, this method selectively controls only *Desmodus rotundus*, and only in those areas where they pose a threat to domestic livestock and human needs.

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\* Eastman Kodak Company, 1979.