

tion is presented as quantitatively reliable at chemical energies. This is not true in all cases, but no exceptions are mentioned. There is an unfortunate misprint on p. 192, where "intersecting" is printed "interesting."

There are a generous number (156) of well-chosen illustrations. Most are adapted from journal articles and are accompanied by references so the reader may find further details. The book also contains a bibliography of 278 books, book chapters, and review articles. This book is a rarity for chemical physics in that one could actually read it cover to cover without struggle, and I will be disappointed if any student in my research group does not do so.

DONALD A. TRUHLAR

Department of Chemistry,  
University of Minnesota,  
Minneapolis 55455

## Books Received

**Advances in Cryogenic Engineering.** Vol. 27. Proceedings of a conference, San Diego, Aug. 1981. R. W. Fast, Ed. Plenum, New York, 1982. xxviii, 1224 pp., illus. \$95.

**Advances in Cryogenic Engineering.** Vol. 28. Materials. Proceedings of a conference, San Diego, Aug. 1981. R. P. Reed and A. F. Clark, Eds. Plenum, New York, 1982. xx, 924 pp., illus. \$85.

**Advances in Genetics, Development, and Evolution of Drosophila.** Proceedings of a conference, Oulu, Finland, July 1981. Seppo Lakovaara, Ed. Plenum, New York, 1982. x, 470 pp., illus. \$57.50.

**Carbon Dioxide. Emissions and Effects.** Irene M. Smith. IEA Coal Research, London, 1982. 132 pp., illus. Paper. £20; to organizations within member nations of the International Energy Agency, £10. Report No. ICTIS/TR 18.

**Career Lines and Careers.** Kenneth I. Spinner, Luther B. Otto, and Vaughn R. A. Call. Lexington (Heath), Lexington, Mass., 1982. xvi, 238 pp., illus. \$24.95. Entry into Careers Series, vol. 3.

**Cell Analysis.** Vol. 1. Nicholas Catsimopoulos, Ed. Plenum, New York, 1982. xiv, 336 pp., illus. \$37.50.

**Cellulose and Other Natural Polymer Systems.** Biogenesis, Structure, and Degradation. R. Malcolm Brown, Jr., Ed. Plenum, New York, 1982. xx, 520 pp., illus., + plates. \$49.50.

**Cements Research Progress 1981.** J. Francis Young, Ed. American Ceramic Society, Columbus, Ohio, 1982. ix, 347 pp. Paper. \$20.

**Chemical Manipulation of Crop Growth and Development.** Papers from a meeting, Sutton Bonington, Eng. Mar. 1981. J. S. McLaren, Ed. Butterworths, Boston, 1982. xiv, 564 pp., illus. \$89.95.

**Chemistry of Water and Microbiology.** N. F. Voznyaya. Translated from the Russian edition (1979) by Alexander Rosinkin. Mir, Moscow, 1981 (U.S. distributor, Imported Publications, Chicago). 348 pp., illus. \$10.

**Climate from Tree Rings.** Papers from a workshop, Norwich, Eng., July 1980. M. K. Hughes, P. M. Kelly, J. R. Pilcher, and V. C. LaMarche, Jr., Eds. Cambridge University Press, New York, 1982. x, 224 pp., illus. \$37.50.

**Coastal Research in the Gulf of Bothnia.** Karl Müller, Ed. Junk, The Hague, 1982 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xiv, 462 pp., illus. \$87. Monographiae Biologicae, vol. 45.

**Cobalt and Its Alloys.** W. Betteridge, Ellis Horwood, Chichester, Eng., 1982 (U.S. distributor, Halsted [Wiley], New York). 160 pp., illus. \$49.95.

**Cognitive Rehabilitation.** Conceptualization and Intervention. Proceedings of a conference, Indianapolis, Jan. 1981. Lance E. Trexler, Ed. Plenum, New York, 1982. xii, 280 pp. \$37.50.

**Combined Loadings in the Theory of Plasticity.** Micha Zyczkowski. Based on the Polish edition (Warsaw, 1981). PWN—Polish Scientific Publishers, Warsaw, 1981 (distributor, Sijthoff and Noordhoff, Alphen aan den Rijn, Netherlands). xx, 714 pp., illus., + tables. \$62.50.

**Comparative Statistical Inference.** Vic Barnett. Wiley, New York, ed. 2, 1982. xvi, 324 pp. \$38.

**The Comparative Study of the Planets.** Proceedings of an institute, Vulcano, Italy, Sept. 1981. Angioletta Coradini and Marcello Fulchignoni, Eds. Reidel, Boston, 1982 (distributor, Kluwer Boston, Hingham, Mass.). xii, 516 pp., illus. \$59.50. NATO Advanced Study Institutes Series C, vol. 85.

**Compendium in Astronomy.** Elias G. Mariolopoulos, Pericles S. Theocaris, and L. N. Mavridis, Eds. Reidel, Boston, 1982 (distributor, Kluwer Boston, Hingham, Mass.). xvi, 464 pp., illus. \$49.50.

**Computational Crystallography.** Papers from a meeting, Ottawa, Aug. 1981. David Sayre, Ed. Clarendon (Oxford), New York, 1982. viii, 540 pp., illus. \$34.50.

**Computer Applications in Large Scale Power Systems.** Proceedings of a symposium, New Delhi, Aug. 1979. In three volumes. B. R. Subramanyam, Ed. Published for the International Federation of Automatic Control by Pergamon, New York, 1982. Vol. 1, xvi, 380 pp., illus. Vol. 2, xvi, 342 pp., illus. Vol. 3, xvi, 274 pp., illus. The set, \$250.

**Computer Techniques and Meteorological Data Applied to Problems of Agriculture and Forestry.** A Workshop. Papers from a workshop, Anaheim, Calif., Mar. 1981. A. Weiss, Ed. NTIS, Springfield, Va., 1982. vi, 386 pp., illus. Paper. \$28.50.

**Computers in Critical Care and Pulmonary Medicine.** Vol. 2. Proceedings of a symposium, Lund, Sweden, June 1980. O. Prakash, Ed. Plenum, New York, 1982. xii, 248 pp., illus. \$39.50.

**Digital Picture Processing.** Azriel Rosenfeld and Avinash C. Kak. Academic Press, New York, ed. 2, 1982. Two volumes. Vol. 1, xiv, 438 pp., illus. \$35. Vol. 2, xii, 352 pp., illus. \$29. Computer Science and Applied Mathematics.

**Don't Scratch! The Book about Poison-Oak.** Daliel Leite. Weatherlane Books, Walnut Creek, Calif., 1982. viii, 64 pp., illus. Paper. \$3.95.

**An Economic Analysis of a Pioneer Deep Ocean Mining Venture.** John E. Flipse. Sea Grant College Program, Texas A&M University, College Station, 1982. xii, 132 pp. Paper. \$3. COE Report No. 262.

**Effective Psychotherapy for Low-Income and Minority Patients.** Frank X. Acosta, Joe Yamamoto, and Leonard A. Evans. Plenum, New York, 1982. xviii, 164 pp. Paper. \$14.95.

**Families That Work.** Children in a Changing World. Sheila B. Kamerman and Cheryl D. Hayes, Eds. National Academy Press, Washington, D.C., 1982. xii, 342 pp. Paper. \$15.95.

**Fundamentals of Light Microscopy.** Michael Spencer. Cambridge University Press, New York, 1982. x, 94 pp., illus. Cloth, \$19.95; paper, \$7.95. IUPAB Biophysics Series.

**General Chemistry.** N. L. Glimka. V. Rabinovich, Ed. Translated from the Russian edition (1980) by G. Leib. Mir, Moscow, 1981 (U.S. distributor, Imported Publications, Chicago). Two volumes. Vol. 1, 372 pp., illus. Vol. 2, 396 pp., illus. \$16.50.

**A History of the Theory of Structures in the Nineteenth Century.** T. M. Charlton. Cambridge University Press, New York, 1982. viii, 194 pp., illus. \$42.50.

**Human Conception In Vitro.** Proceedings of a meeting, Cambridge, England, 1981. R. G. Edwards and Jean M. Purdy, Eds. Academic Press, New York, 1982. xvi, 436 pp., illus. \$49.

**Human Endocrinology.** An Interactive Text. Melvin J. Fregly and William G. Luttig. Elsevier, New York, 1982. viii, 366 pp., illus. Paper. \$24.50.

**Identification of Modern and Tertiary Woods.** A. C. Barefoot and Frank W. Hankins, with assistance from L. H. Daugherty. Clarendon (Oxford University Press), New York, 1982. x, 190 pp., illus. \$98.

**Impact of Marine Pollution on Society.** Papers from a conference, Kingston, R.I. Virginia K. Tippie and Dana R. Kester, Eds. Praeger, New York, 1982. vi, 314 pp., illus. \$27.95.

**The Lighter Side of Gravity.** Jayant V. Narlikar. Freeman, San Francisco, 1982. x, 194 pp., illus. Cloth, \$17.95; paper, \$8.95.

**The Limbic System.** Robert L. Isaacson. Plenum, New York, ed. 2, 1982. xiv, 328 pp., illus. \$24.

**Loneliness.** A Sourcebook of Current Theory, Research and Therapy. Letitia Anne Peplau and Daniel Perlman, Eds. Wiley-Interscience, New York, 1982. xviii, 430 pp. \$37.95. Wiley Series on Personality Processes.

**The Lung in Its Environment.** Proceedings of a symposium, Erice, Italy, June 1980. G. Bonsignore and G. Cumming, Eds. Plenum, New York, 1982. x, 518 pp., illus. \$62.50. Ettore Majorana International Science Series, vol. 6.

**Macro-Engineering and the Future.** A Management Perspective. Papers from a meeting, Cambridge, Mass., June 1981. Frank P. Davidson and C. Lawrence Meador, Eds. Westview, Boulder, Colo., 1982. xxviii, 276 pp., illus. \$26. Westview Special Studies in Science, Technology, and Public Policy/Society.

**Modern Methods in Pharmacology.** Vol. 1. Sydney

Spector and Nathan Back, Eds. Liss, New York, 1982. viii, 94 pp., illus. \$14.

**Module Categories of Analytic Groups.** Andy R. Magid. Cambridge University Press, New York, 1982. x, 134 pp. \$29.50. Cambridge Tracts in Mathematics 81.

**Molecular and Cellular Mechanisms of Mutagenesis.** Papers from a symposium, Gatlinburg, Tenn., Apr. 1981. J. F. Lemontt and W. M. Generoso, Eds. Plenum, New York, 1982. xiv, 388 pp., illus. \$52.50. Basic Life Sciences, vol. 20.

**Molecular Cloning.** A Laboratory Manual. T. Maniatis, E. F. Fritsch, and J. Sambrook. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1982. x, 546 pp., illus. Spiral bound. \$40.

**Money, Interest and Wages.** Collected Essays on Economic Theory, Vol. 2. John Hicks. Harvard University Press, Cambridge, Mass., 1982. xiv, 352 pp. \$32.

**Morphometry in Morphological Diagnosis.** Proceedings of a conference, Koli, Finland, Sept. 1981. Yrjö Collan and Timo Romppanen, Eds. Kuopio University Press, Kuopio, Finland, 1982. xiv, 220 pp., illus. Paper. \$20.

**The Mouse in Biomedical Research.** Vol. 2, Diseases. Henry L. Foster, J. David Small, and James G. Fox, Eds. Academic Press, New York, 1982. xvi, 450 pp., illus. \$74.50. American College of Laboratory Animal Medicine Series.

**Multiphase Chemical Reactors.** Vol. 1, Fundamentals. Papers from an institute, Vimeiro, Portugal, Aug. 1980. Alirio E. Rodrigues, Joseph M. Calo, and Norman H. Sweed, Eds. Sijthoff and Noordhoff, Rockville, Md., 1981 (distributor, Kluwer Boston, Hingham, Mass.). viii, 600 pp., illus. \$65. NATO Advanced Study Institutes Series E, No. 51.

**Multiphase Chemical Reactors.** Vol. 2, Design Methods. Papers from an institute, Vimeiro, Portugal, Aug. 1980. Alirio E. Rodrigues, Joseph M. Calo, and Norman H. Sweed, Eds. Sijthoff and Noordhoff, Rockville, Md., 1981 (distributor, Kluwer Boston, Hingham, Mass.). viii, 514 pp., illus. \$57. NATO Advanced Study Institutes Series E, No. 52.

**The Natural Coumarins.** Occurrence, Chemistry and Biochemistry. Robert D. H. Murray, Jesus Méndez, and Stewart A. Brown. Wiley-Interscience, New York, 1982. xii, 702 pp., illus. \$162.

**Nematodes in Soil Ecosystems.** Papers from a symposium, Diana W. Freckman, Ed. University of Texas Press, Austin, 1982. xiv, 206 pp., illus. \$20.

**New Perspectives in Wood Anatomy.** Papers from a symposium, Sydney, Aug. 1981. P. Baas, Ed. Martinus Nijhoff, The Hague, 1982 (U.S. distributor, Kluwer Boston, Hingham, Mass.). vi, 252 pp., illus. \$54. Forestry Sciences.

**New Perspectives on Noise-Induced Hearing Loss.** Papers from a symposium, Cazenovia, N.Y., June 1980. Roger P. Hamernik, Donald Henderson, and Richard Salvi, Eds. Raven, New York, 1982. xvi, 534 pp., illus. \$69.50.

**New Trends in Basement Membrane Research.** Papers from a conference, Eibsee, Germany, May 1981. Klaus Kuehn, Hans-H. Schoene, and Rupert Timpl, Eds. Raven, New York, 1982. xvi, 294 pp., illus. \$63.

**Problem Solving with ADA.** Brian Mayoh. Wiley, New York, 1982. viii, 234 pp., illus. \$23.95. Wiley Series in Computing.

**Problems in Chemical Kinetics.** N. M. Emanuel, Ed. Translated from the Russian edition (1979), with revisions, by Artavazd Beknazarov. Mir, Moscow, 1981 (U.S. distributor, Imported Publications, Chicago). 224 pp., illus. Paper. \$7. Advances in Science and Technology in the USSR: Chemistry Series.

**Professionals in Search of Work.** Coping with the Stress of Job Loss and Underemployment. H. G. Kaufman. Wiley-Interscience, New York, 1982. xx, 360 pp. \$28.95.

**Progress and Privilege.** America in the Age of Environmentalism. William Tucker. Doubleday (Anchor), Garden City, N.Y., 1982. xvi, 314 pp. \$17.95.

**Progress in Energy and Combustion Science.** Vol. 7. N. A. Chigier, Ed. Pergamon, New York, 1982. vi, 324 pp., illus. \$130.

**Progress in Medical Ultrasound.** Reviews and Comments. Vol. 3/1982. A. Kurjak, Ed. Excerpta Medica, Amsterdam, 1982 (U.S. distributor, Elsevier, New York). x, 368 pp., illus. \$67.50.

**Prostaglandins and Thromboxanes.** Roger F. Newton and Stanley M. Roberts, Eds. Butterworths, Boston, 1982. xii, 144 pp., illus. \$34.95. Butterworths Monographs in Chemistry.

**Protein Contribution of Feedstuffs for Ruminants.** Application to Feed Formulation. Papers from a symposium, Amsterdam, Oct. 1980. F. L. Miller, I. H. Pike, and A. J. H. Van Es, Eds. Butterworths, Boston, 1982. viii, 160 pp., illus. \$39.95. Studies in the Agricultural and Food Sciences.

**Psychology and Social Action.** Selected Papers. Seymour B. Sarason. Praeger, New York, 1982. xii, 276 pp. \$24.95. Centennial Psychology Series.

(Continued on page 1250)

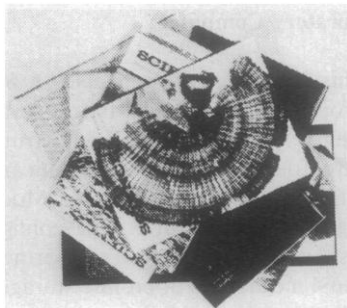


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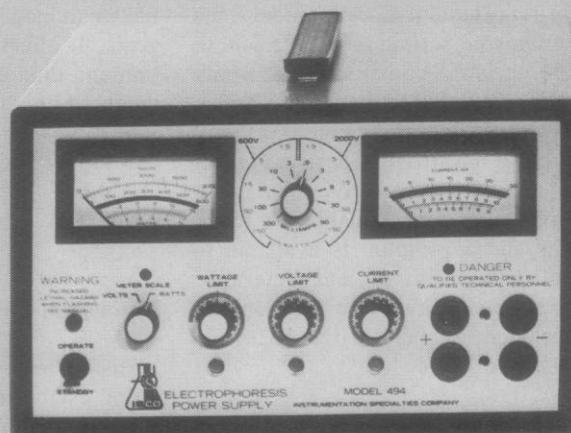
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### Monoclonal Antibody Production

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### Protein Marker Kits

The SDS protein kit determines molecular weights under 100,000 daltons by SDS-polyacrylamide disc gel electrophoresis. The HPLC protein kit determines molecular weights up to 300,000 daltons or more by HPLC gel filtration columns. The SDS kit contains a mixture of approximately 100 micrograms each of five marker proteins. These are cross-linked cytochrome c's. The HPLC kit consists of a single vial mixture of five purified proteins: glutamate dehydrogenase, lactate dehydrogenase, enolase, adenylate kinase, and cytochrome c. Both kits are supplied in a salt-free, lyophilized form. United States Biochemical. Circle 564.

### DNA Fragment Synthesizer

The Synthesis Automation Machine (SAM) incorporates microprocessor control, pump and valve components, and chemical protocols to produce oligonucleotides for research. Nucleotides up to 20 residues long may be prepared after only 30 minutes set up. Precursors and reagents are supplied by the manufacturer. Phosphate triester and phosphite triester methodologies are among those that may be used. Biosearch. Circle 566.

### Laboratory Computer

This laboratory system uses a 68000 microprocessor and real-time operating system software provides instrument control, data acquisition, and data analysis for multiple instruments. Modular design renders a variety of configurations that may be tailored to user needs. Up to 4 megabytes of on-line storage are available on optional diskettes. Standard capacity is 128,000 bytes of RAM and up to five additional feature cards are offered that hold up to 1 megabyte each. The system also provides up to 128,000 bytes of ROM. IBM Instruments. Circle 559.

### Literature

*Surgical Instruments for Dissection* includes all tools for animal anatomic and physiologic preparation. Accurate Surgical & Scientific Instruments. Circle 571.

*Hybridoma Bulletin* reports new techniques for cell sorting, purification, and radioiodination of monoclonal antibodies, epitope analysis, and others. Bio-Rad Laboratories. Circle 575.



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Raymond E. Stephens, MBL and Boston University School of Medicine, Instructor-in-Chief, assisted by Alfred Zweidler, Institute for Cancer Research, Fox Chase Cancer Center, Philadelphia. Offered for the second time, attendance is limited to 18.

#### **MARICULTURE: CULTURE OF MARINE INVERTEBRATES FOR RESEARCH PURPOSES. MAY 15 - 21, 1983.**

Carl J. Berg, Jr., MBL, Instructor-in-Chief, with guest lecturers from the U.S. and Canada. Offered for the fourth time, attendance is limited to 20.

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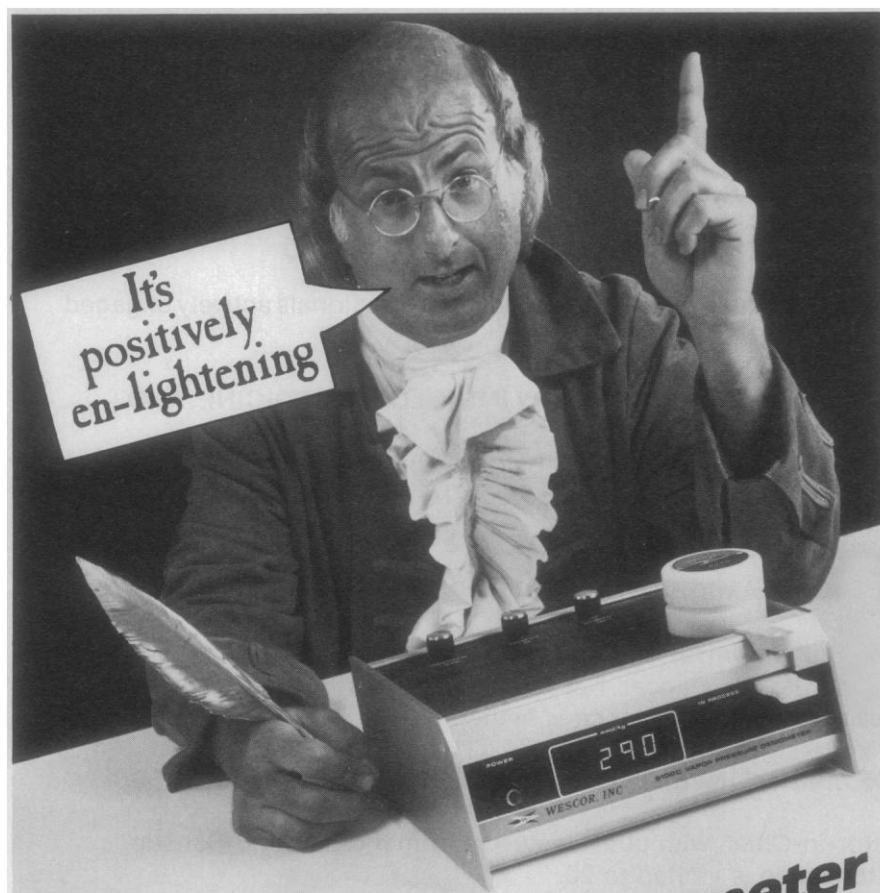


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## BOOKS RECEIVED

(Continued from page 1216)

**Radio Circuits and Signals.** I. S. Gonorovsky. Translated from the Russian edition (1977), with revisions, by N. Utkin. Mir, Moscow, 1981 (U.S. distributor, Imported Publications, Chicago). 640 pp., illus. \$12.50.

**Soil Degradation.** Proceedings of a seminar, Wageningen, Netherlands, Oct. 1980. D. Boels, D. B. Davies, and A. E. Johnston, Eds. Balkema, Rotterdam, 1982 (U.S. distributor, MBS, Salem, N.H.). vi, 280 pp. \$30.

**Southern Ocean Atlas.** Arnold L. Gordon, Eugene J. Molinelli, and Ted N. Baker. Columbia University Press, New York, 1982. viii, 34 pp. + plates + microfiche. \$30.

**Space Industrialization.** Brian O'Leary, Ed. CRC Press, Boca Raton, Fla., 1982. Two volumes. Vol. 1. viii, 168 pp., illus. \$61. Vol. 2. viii, 226 pp., illus. \$78.

**Sports Medicine.** Scientists at Work. Melvin Berger. Crowell, New York, 1982. vi, 122 pp., illus. \$10.50.

**A Stratigraphical Index of Calcareous Nannofossils.** A. R. Lord, Ed. Published for The British Micropalaeontological Society by Ellis Horwood, Chichester, Eng., 1982 (U.S. distributor, Halsted [Wiley], New York). 192 pp., illus. \$84.95. British Micropalaeontological Society Series.

**Stress and Hypertension.** Papers from a symposium, Hannover, May 1981. J. Bahlmann and H. Liebau, Eds. Karger, Basel, 1982. xiv, 206 pp., illus. Paper, \$54. Contributions to Nephrology, vol. 30.

**Structure and Function Relationships in Biochemical Systems.** Proceedings of a symposium, Rome, Sept. 1981. Francesco Bossa, Emilia Chiancone, Alessandro Finazzi-Agrò, and Roberto Strom, Eds. Plenum, New York, 1982. x, 386 pp., illus. \$49.50. Advances in Experimental Medicine and Biology, vol. 148.

**Studies in Learning and Memory.** Selected Papers. Benton J. Underwood. Praeger, New York, 1982. xiv, 332 pp., illus. \$24.95. Centennial Psychology Series.

**Study and Management of Large Mammals.** Thane Riney. Wiley-Interscience, New York, 1982. x, 552 pp., illus. \$59.95.

**Sun and Planetary System.** Proceedings of a meeting, Dubrovnik, Oct. 1981. W. Fricke and G. Teleki, Eds. Reidel, Boston, 1982 (distributor, Kluwer Boston, Hingham, Mass.). xiv, 538 pp., illus. \$65. Astrophysics and Space Science Library, vol. 96.

**Suppressive Soils and Plant Disease.** Papers from a symposium, New Orleans, Aug. 1981. R. W. Schneider, Ed. American Phytopathological Society, St. Paul, Minn., 1982. vi, 88 pp. Paper, \$9.

**System Theory.** A Hilbert Space Approach. Avraham Feintuch and Richard Saeks. Academic Press, New York, 1982. xiv, 310 pp., illus. \$39.50.

**Systematics and the Origin of Species.** Ernst Mayr. Introduction by Niles Eldredge. Columbia University Press, New York, 1982. xxxviii, 334 pp., illus. Paper, \$14. Reprint of the 1942 edition. Columbia Classics in Evolution Series.

**Systematics of Bees of the Genus *Eufriesea* (Hymenoptera, Apidae).** Lynn Siri Kimsey. University of California Press, Berkeley, 1982. x, 126 pp., illus. Paper, \$11.50. University of California Publications in Entomology, vol. 95.

**Tales about Metals.** S. I. Venetsky. Translated from the Russian edition (Moscow, 1978) by N. G. Kittell. Mir, Moscow, 1981 (U.S. distributor, Imported Publications, Chicago). 212 pp., illus. \$5.80.

**Technology's Future.** Thomas J. Knight. Robert E. Krieger, Malabar, Fla., 1982. xiv, 250 pp. \$11.50.

**Turbulent Buoyant Jets and Plumes.** Wolfgang Rodi, Ed. Pergamon, New York, 1982. viii, 184 pp., illus. \$35. HMT: The Science and Applications of Heat and Mass Transfer.

**Use and Abuse of Diagnostic Services.** The Canadian Experience. Olding C. MacIntosh. Eden Press, Montreal, 1982. xii, 162 pp. \$19.50.

**Vestibular Neurology.** Papers from a symposium, Montreal, Sept. 1980. P. Molina-Negro and R. A. Bertrand, Eds. Karger, Basel, 1982. viii, 148 pp., illus. \$69. Advances in Oto-Rhino-Laryngology, vol. 28.

**Veterinary Pharmacology and Therapeutics.** Nicholas H. Booth and Leslie E. McDonald, Eds. Iowa State University Press, Ames, ed. 5, 1982. xii, 1134 pp., illus. \$61.95.

**Who Decides? Conflicts of Rights in Health Care.** Papers from a conference. Nora K. Bell, Ed. Humana, Clifton, N.J., 1982. xiv, 218 pp. \$24.50. Contemporary Issues in Biomedicine, Ethics, and Society.

**The Woman Patient.** Vol. 3. Aggression, Adaptations, and Psychotherapy. Malkah T. Notman and Carol C. Nadelson, Eds. Plenum, New York, 1982. xii, 314 pp. \$24.50. Woman in Context.

# Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. 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, handicap, or sexual preference.

## CLASSIFIED ADVERTISING DEADLINES:

7 January issue (mailed 31 December): **17 December**  
14 January issue (mailed 7 January): **23 December**  
21 January issue (mailed 14 January): **30 December**  
28 January issue (mailed 7 January): **7 January**

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## POSITIONS WANTED

**Aquatic Biologist.** M.S., benthos specialist, certified fisheries scientist; 11 years of consulting experience; technical and administrative expertise. Any position considered; prefers Midwest, but will relocate. Box 321, SCIENCE. 12/17, 24: 1/7

**Biochemist.** Ph.D. MT(ASCP). Ten years in clinical laboratories. Supervisory, management, and teaching experience. Seeking supervisory position in medical laboratory and/or teaching position in biochemistry medical technology. North central, northwestern, Rocky Mountain regions preferred. Box 317, SCIENCE. X

**Biomedical Writing/Editing.** Former biomedical researcher and instructor, Ph.D.; 7 years as technical writer, biomedical journals editor, experienced proposal and grants writer. Soliciting research articles, brochures, proposals, exhibits, public relations pieces for writing and editing with expertise and style. Publications Inc., P.O. Box 2350, Stanford, Calif. 94305. X

**Molecular Biologist.** Ph.D. in biochemistry. Ten years of experience in regulatory mechanisms of *Escherichia coli* and two-dimension electrophoresis of proteins. Doctoral work on nucleic acid metabolism in rats. Wide range of analytical techniques. Experienced in personnel training and laboratory management. Box 322, SCIENCE X

## POSITIONS WANTED

**Biochemist.** Ph.D., 1969; research background in hormonal/drug regulation, biotransformation, toxicology; many publications; graduate-level teaching; computer applications experience. Seeking academic/research/management/industrial position. Box 324, SCIENCE. X

**Collagen Biochemist.** Ph.D. Extensive experience in connective and hard tissue research. Collagen types, glycoproteins, phosphoproteins, and proteoglycans. Preparative, analytical, and HPLC methods development. Publications. Box 329, SCIENCE. X

**Nutrition of Plants and Algae Research Assistant.** Two years' college; 8 years' maintaining collection of 400 algae, seaweeds, mosses, and plants; 2 years' plant cell tissue culture; 2 years' mass algae culture. Interest in nutrient studies of mosses and ferns. G. Ferris, 1 Bowhay Hill, Stony Creek, Conn. 06405. Telephone: 203-481-0459. X

## POSITIONS OPEN

**ANIMAL PHYSIOLOGIST.** The University of North Carolina at Asheville (UNC-A) seeks an animal physiologist with strong background in biochemistry; will also teach some introductory biology sections. Tenure-track assistant professor position available August 1983. Ph.D. preferred. Strong interest in undergraduate teaching necessary. Send transcripts, three letters of reference, and résumé by 31 January to: Dr. James D. Perry, Chairman, Biology, UNC-A, P.O. Box 8467, Asheville, N.C. 28814. An Equal Opportunity Employer, M/F.

**ASSISTANT PROFESSOR.** Department of Genetics, Stanford University, having scientific interests in areas of (i) human genetics (for example, cytogenetics, human biochemical genetics) or (ii) cellular genetics (particularly chromosome structure and function). Full-time tenure-track position that involves teaching and independent research. Send curriculum vitae, bibliography, and names of three referees to: Dr. Stanley N. Cohen, Chairman, Department of Genetics, Stanford University Medical Center, Stanford, California 94305. Stanford University is an Affirmative Action Employer and welcomes nominations of women and minority group members and applications from them.

## ASSISTANT PROFESSORS

The Department of Biological Sciences, University of Illinois, Chicago, invites applications for tenure-track assistant professorships beginning September 1983. Preference will be given to candidates with postdoctoral experience who have demonstrated outstanding potential for experimental research in an area which can expand the department's graduate program in molecular genetics; plant cell and molecular biology; and vertebrate biology.

Responsibilities include teaching undergraduate and graduate courses in one of the above general fields and supervision of M.S. and Ph.D. candidates.

Applications, including curriculum vitae, reprints, a statement of research plans, and three letters of reference, should be sent to: Dr. S. K. Shapiro, Head, Department of Biological Sciences, University of Illinois, Box 4348, Chicago, Ill. 60680. Closing date: 7 January 1983. Availability of these positions is contingent upon budgetary allocation.

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

## ASSISTANT PROFESSOR—CELLULAR PHYSIOLOGY/MOLECULAR BIOLOGY

Applications are invited for a 2-year renewable undergraduate teaching position at the level of assistant professor starting September 1983. Preference will be given to candidates who have completed the Ph.D. degree. Major responsibility will be sharing in the teaching of introductory courses in general biology and a sophomore course in cellular and molecular biology. This position will offer an occasional opportunity to teach an advanced course in molecular biology, bacteriology, or animal physiology. Teaching load will consist of two courses with laboratories each semester. *Women and minorities are urged to apply.* Closing date for applications will be 15 February 1983. Please send letter of application, résumé, graduate transcripts, and at least three letters of reference to: Dr. Robert E. Goodwin, Chairman, Department of Biology, Colgate University, Hamilton, New York 13346. Colgate University is an Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR OF AGRONOMY.** The Department of Agronomy and Soils seeks a Ph.D. to teach undergraduate and graduate courses in crop production and management and to conduct a research program in some area(s) of seed production, forage management, irrigated crop, and/or dryland grain production. Salary open; application review begins 15 February 1983. Submit résumé, statement of career interests, academic transcripts, and names of five personal/program evaluators to:

Dr. J. C. Engibous, Chairman  
Department of Agronomy and Soils  
Washington State University  
Pullman, Wash. 99164-6420

An Equal Opportunity/Affirmative Action Employer

**ASSISTANT PROFESSOR: DEVELOPMENTAL NEUROBIOLOGIST.** The Division of Biological Sciences of The University of Michigan invites applications for a tenure-track position, in the area of developmental neurobiology, to begin September 1983 or later. Primary duties include the development of a productive research program and participation in the graduate teaching program and an undergraduate course in animal physiology. Postdoctoral experience is strongly favored. An application should include curriculum vitae, reprints and preprints of selected publications, a brief statement of future research plans, and three letters of recommendation sent independently. Respond by 15 February 1983 to: Professor S. S. Easter, Jr., Division of Biological Sciences, The University of Michigan, Ann Arbor, Mich. 48109. The University of Michigan is an Equal Opportunity/Affirmative Action Employer.

An **ASSISTANT PROFESSORSHIP IN MICROBIOLOGY** will be available for July 1983. Applicants should have a doctoral degree in microbiology and be qualified to teach bacteriology/virology to medical students. Submit curriculum vitae and the names of three references to: Dr. H. E. Laubach, Chairman, Department of Microbiology, Southeastern College of Osteopathic Medicine, 1750 N.E. 168 Street, North Miami Beach, Florida 33162. Closing date is 1 February 1983.

**SUNY COLLEGE AT GENESEO, N.Y.: DEPARTMENT OF BIOLOGY.** Applications are invited for the following tenure-track positions:

- 1) DEVELOPMENTAL BIOLOGIST** with an interest in animal development, at the assistant or associate professor level. Teaching responsibilities include: an undergraduate course in Developmental Biology, involvement in the undergraduate program and a graduate course in the area of research specialization. Areas of research interest may include: ultrastructure, cell-cell interaction, pattern formation, or regeneration.
- 2) IMMUNOBIOLOGIST** at the assistant professor level. Teaching responsibilities include: an undergraduate course in Immunology, involvement in the undergraduate program, and a graduate course in the area of research specialization. Areas of research interest may include monoclonal antibody technology, tissue culture, cell fusion, or somatic cell genetics.
- 3) MOLECULAR BIOLOGIST** with an interest in methods of recombinant DNA technology at the assistant professor level. Teaching responsibilities include: an undergraduate course in Molecular Biology, involvement in the introductory biology program, and a graduate course in the area of research specialization. Areas of research could include the construction of vector-vehicle systems in either prokaryotes or eukaryotes.
- 4) PLANT CELL BIOLOGIST** with an interest in cell physiology. Teaching responsibilities include: an undergraduate course in Plant Physiology/Cell Physiology, involvement in the undergraduate program, and a graduate course in the area of specialization. Areas of research may include plant tissue culture, protoplast fusion technology, or plant molecular biology.

All positions require the advisement of students and involvement in the administration of the department through faculty committees. Establishment of an active research program is necessary. Candidates must have an earned doctorate in Biological Sciences; those with postdoctoral experience are preferred.

Applications should be submitted to Dr. Robert Simon, Chairman, Department of Biology, State University College, Geneseo, New York 14454. A curriculum vitae, undergraduate and graduate academic transcripts, a statement of research interests and plans, and a minimum of 3 letters of reference should be submitted. Closing date for completed applications is January 31, 1983. Clearly identify the position(s) for which you wish to be considered.

Women and minority candidates are especially encouraged to apply. State University College at Geneseo is an Equal Opportunity Affirmative Action Employer.

# Radioautography Expert

Smith Kline & French Laboratories, a leader in pharmaceutical research, has an opening in our expanding Drug Metabolism department which provides an excellent opportunity for an expert in radioautography. The selected individual will be responsible for:

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- Developing the radioautographic technique to a level where it could be used as a quantitative as well as visual technique for the assessment of drug disposition.

The position will also provide an opportunity for cooperative interdisciplinary research efforts utilizing radioautographic techniques.

We require a Bachelors or Masters degree in biology, biochemistry or chemistry and at least 2 to 3 years experience in radioautographic techniques. Training and experience with whole body and Micro-autography is required. Must have proven ability to interpret results and make both oral and written presentations of data.

We offer an excellent salary and benefits package including liberal relocation policy. Please forward your resume, in confidence, to: C.J. Elder, SMITH KLINE & FRENCH LABORATORIES, a division of SMITHKLINE BECKMAN CORPORATION, 1582 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

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## RESEARCH SCIENTISTS

### JOIN THE LEADER IN NEW DIAGNOSTIC RESEARCH AND DEVELOPMENT— ABBOTT LABORATORIES

Diagnostics are dramatically emerging as one of the most significant growth areas in the medical products industry. Of the companies involved in this rapidly expanding field, Abbott Diagnostics Division is the recognized leader in new Diagnostics product research and development. To maintain our leadership position and continue our exceptional growth, we are seeking innovative Ph.D.'s to join our dynamic research team.

#### PH.D. — BIOCHEMISTRY/IMMUNOCHEMISTRY/ MOLECULAR BIOLOGY

This position involves developing novel approaches in the area of monoclonal antibody immunoassays. The qualified candidate will have a Ph.D., post-doctoral experience preferred. A strong knowledge of biochemical and immunochemical laboratory procedures is essential, with experience in immunodiagnostic or monoclonal antibodies considered helpful.

#### PH.D. — BIOCHEMISTRY/IMMUNOCHEMISTRY

The qualified candidate will be an innovative individual with a Ph.D. and a strong background in immunochemistry. This position involves investigating new approaches and ideas in immunodiagnostic technology using monoclonal antibodies and synthetic peptides. Operating within an independent environment, the qualified candidate will have the opportunity to utilize their creative talents to the fullest extent in developing new ways of approaching diagnostics.

If you are looking for a challenging career in research, look to the leader in Diagnostics ... Abbott. A Fortune 200 company, we're headquartered in an attractive suburban community near Lake Michigan, just 30 miles north of Chicago. We offer an excellent salary and benefits package that includes profit sharing and a stock retirement plan. For consideration, send your resume and salary history to: **Sue Hart-Wadley/Corporate Placement.**

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## POSITIONS OPEN

**ASSISTANT PROFESSOR OF OPHTHALMOLOGY—CORNEAL AND EXTERNAL DISEASES AND SURGERY.** University of Southern California (USC), Department of Ophthalmology, invites applications for ophthalmologist with strong commitment to research and education in the specialty of corneal/external diseases. This academic position requires completion of an approved 3-year residency in ophthalmology, fellowship in corneal/external diseases, Board-certification, teaching and research experience, and administrative ability. Send inquiries and curriculum vitae to: **Stephen J. Ryan, M.D., Chairman, Ophthalmology, USC School of Medicine, Doheny Eye Foundation, 1355 San Pablo, Los Angeles, Calif. 90033. Affirmative Action/Equal Opportunity Employer.**

**ASSISTANT OR ASSOCIATE PROFESSOR OF OPHTHALMOLOGY—GLAUCOMA.** University of Southern California (USC), Department of Ophthalmology, is recruiting ophthalmologist with specialty training in glaucoma. This faculty member will also function as the faculty director of the Residency Training Program in Ophthalmology. Teaching ability at the postgraduate level and medical student level required, as well as postresidency training and experience in glaucoma. Research and administrative abilities required. Send inquiries and curriculum vitae to: **Stephen J. Ryan, M.D., Chairman, Ophthalmology, USC School of Medicine, Doheny Eye Foundation, 1355 San Pablo, Los Angeles, Calif. 90033. Affirmative Action/Equal Opportunity Employer.**

**ASSISTANT PROFESSOR OF OPHTHALMOLOGY—NEURO-OPHTHALMOLOGY.** University of Southern California (USC) is seeking applications for ophthalmologist with specialty training in neuro-ophthalmology. Applicants must have strong commitment to research and education, completion of an approved 3-year residency in ophthalmology, fellowship in neuro-ophthalmology, Board-certification, teaching and research experience, and administrative ability. Send inquiries and curriculum vitae to: **Stephen J. Ryan, M.D., Chairman, Ophthalmology, USC School of Medicine, Doheny Eye Foundation, 1355 San Pablo, Los Angeles, Calif. 90033. Affirmative Action/Equal Opportunity Employer.**

**ASSISTANT OR ASSOCIATE PROFESSOR OF OPHTHALMOLOGY—OPHTHALMIC PATHOLOGY AND ONCOLOGY.** The University of Southern California (USC), Department of Ophthalmology, invites applications for an ophthalmologist and/or pathologist with strong commitment to research and education in ophthalmic pathology. This academic position requires completion of an approved 3-year residency in ophthalmology and a fellowship in ophthalmic pathology with Board-certification, teaching and research experience, and administrative ability. Preference will be given to individuals with expertise in ocular oncology and the management of such patients. Send inquiries and curriculum vitae to: **Stephen J. Ryan, M.D., Chairman, Ophthalmology, USC School of Medicine, Doheny Eye Foundation, 1355 San Pablo, Los Angeles, Calif. 90033. Affirmative Action/Equal Opportunity Employer.**

**ASSISTANT PROFESSOR OF OPHTHALMOLOGY—RETINAL AND VITREOUS DISORDERS AND SURGERY.** University of Southern California, (USC), Department of Ophthalmology, is seeking ophthalmologist with strong commitment to research and education in retinal/vitreous disorders. This academic position requires completion of an approved 3-year residency in ophthalmology, fellowship in retinal/vitreous diseases, Board-certification, teaching and research experience, and administrative ability. Send inquiries and curriculum vitae to: **Stephen J. Ryan, M.D., Chairman, Ophthalmology, USC School of Medicine, Doheny Eye Foundation, 1355 San Pablo, Los Angeles, Calif. 90033. Affirmative Action/Equal Opportunity Employer.**

#### ASSISTANT PROFESSOR FOR RESEARCH

A Ph.D. or M.D. scientist with experience in tissue culture and biochemistry is needed for ongoing research projects. Prefer individual with solid background in the neurosciences. Salary and faculty position are negotiable. Send curriculum vitae and supporting materials to:

**Dr. Michael D. Norenberg**  
Department of Pathology D-33  
University of Miami School of Medicine  
P.O. Box 016960  
Miami, Florida 33101  
Telephone: 305-325-7017

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## POSITIONS OPEN

### ASSISTANT PROFESSOR OF MICROBIOLOGY—

Applications are invited for a tenure-track position at the assistant professor level. We seek a faculty member with a background and postdoctoral training in the molecular biology (genetics, physiology, biochemistry) of bacteria. The ideal candidate will be motivated toward excellence in the teaching of medical microbiology and infectious diseases to medical students and to the development of a strong, independent research program. Applicants should send curriculum vitae, a statement of research and teaching interests, and the names of three references to: **Gerald J. Tritz, Ph.D., Professor and Chairman, Department of Microbiology and Immunology, KIRKSVILLE COLLEGE OF OSTEOPATHIC MEDICINE, 800 West Jefferson Street, Kirksville, Missouri 63501. We are an Equal Opportunity/Affirmative Action Employer.**

### ASSISTANT PROFESSOR IN MOTOR CONTROL.

Tenure-track position in Department of Physical Education. Ph.D. or equivalent. Desired: knowledge of physiological, biomechanical, and/or action-perception systems in motor control. Expertise in EMG, kinematic, or metabolic analysis of movement. Conduct research and teach. Screening of applications begins 1 February 1983. Send curriculum vitae, transcripts, and reprints to: **Dr. D. Larish, Motor Behavior Laboratory, S301 Fieldhouse, The University of Iowa, Iowa City, Iowa 52242. An Equal Opportunity/Affirmative Action Employer.**

### ASSISTANT PROFESSOR

Zoology Department  
University of Wisconsin-Milwaukee

We anticipate an opening for a tenure-track ASSISTANT PROFESSOR position effective 29 August 1983. Applicants must be well qualified by training and/or experience to teach courses in human anatomy and physiology to health-science and zoology majors. The area of research is open but a strong dedication to research and the ability to maintain extramurally funded research programs are essential. Ph.D. required; postdoctoral experience preferred. Send letter of application, curriculum vitae, summary of teaching qualifications and goals, summary of research achievements and goals, selected reprints, and three letters of recommendation to: **Chairperson, Anatomy/Physiology Search Committee, Zoology Department, P.O. Box 413, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53201. Closing date is 15 February 1983.**

*The University of Wisconsin-Milwaukee is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR OF ZOOLOGY** in the area of mammalogy; full time, tenure track; \$19,044 to \$22,896, 9-month appointment; starting date: 22 August 1983. Teaching responsibilities to include mammalogy, human anatomy, introductory zoology, and other courses or seminars in the candidate's area of specialization. Applicants must hold the Ph.D. degree or equivalent by the end of August 1983. Preference will be given to candidates with strong evidence of quality research and teaching. Submit curriculum vitae, reprints, statement of research interests, and three letters of reference by 15 February 1983 to: **Roger E. Carpenter, Mammalogy Search Committee, Department of Zoology, San Diego State University, San Diego, Calif. 92182. An Equal Opportunity/Affirmative Action/Title IX Employer.**

### BIOCHEMISTRY FACULTY POSITIONS MEHARRY MEDICAL COLLEGE

Applications are invited for several tenure-track positions at the ASSISTANT or ASSOCIATE PROFESSOR LEVELS. The anticipated starting date is 1 July 1983, or as soon as suitable candidates are located. Applicants should have a Ph.D. or M.D. degree and postdoctoral training or previous faculty experience. We are primarily interested in individuals with research interests in eukaryotic gene regulation, enzymology, molecular mechanisms of hormone action, and/or regulation of metabolism, although outstanding applicants in other areas of biochemistry will also be considered. Successful applicants will be expected to maintain a research program of high quality as well as to teach in the graduate and medical/dental biochemistry programs. Applications, including curriculum vitae, representative publications, a concise statement of research interests and/or proposed research, and names of three references, should be sent to: **Dr. Ifeanyi J. Arinze, Chairman, Department of Biochemistry, School of Medicine, Meharry Medical College, Nashville, Tennessee 37208.**

17 DECEMBER 1982

## BUTLER UNIVERSITY DIRECTOR OF HOLCOMB RESEARCH INSTITUTE

Butler University invites applications for the position of Director of the Holcomb Research Institute (HRI). The Director is the chief operating officer and reports to the President of the University.

HRI is dedicated to three programs: research concerning environmental and related fields of particular significance to Indiana and the Midwest; research focusing on national or global issues; and a joint program with Butler faculty and students to provide for scholarships and fellowships to support inquiry into pertinent or related disciplines.

The Director will be responsible for planning, developing, organizing and implementing programs related to the attainment of the three research and educational objectives, as well as directing the professional and support staff of the Institute. Development of new programs, appropriate for the next decade, is anticipated.

HRI occupies a building of 52,000-square feet on the Butler campus which also houses the University's main computer center. HRI has an endowment of approximately \$11,500,000 from which 72% of the income is applied to an annual operating budget of approximately \$1,000,000.

Candidates must have an earned doctorate in environmental studies, one of the natural sciences or related fields (e.g., contemporary biology), a well-recognized record of published research, and at least five years of management experience in inter-disciplinary research programs at a university or research institute.

Butler University is an independent, non-sectarian, coeducational institution located on a scenic 300-acre campus in a residential section of Indianapolis. There are approximately 3,000 full-time equivalent undergraduate and graduate students. The University includes colleges of liberal arts and sciences, business administration, pharmacy, fine arts, and education, and a 2,200-seat performing arts center.

The appointment may be effective as early as April 1, 1983. Salary is negotiable. Applications should include a comprehensive vita and documentation of experience. Names, addresses and phone numbers of at least three references should also be included. Application deadline is January 31, 1983. Please submit applications to:

**Dean Dale W. Doerr  
Chairman, Search Committee  
College of Pharmacy  
Butler University  
4600 Sunset Avenue  
Indianapolis, IN 46208**

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BUTLER UNIVERSITY

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Ortho Diagnostic Systems, a Johnson & Johnson Company, has made a commitment to major long term research, development and clinical applications.

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Responsibilities include both at-the-bench research and the supervision of professionals engaged in the research and development of enzyme labeled immunoassays.

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Qualified candidates are encouraged to send their resumes and salary requirements to: Employment Office, Box S



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## POSITIONS OPEN

**ASSISTANT/ASSOCIATE/(TWO) PROFESSOR OF PATHOLOGY (IMMUNOLOGY):** The individuals applying for these positions should have a Ph.D. or M.D. degree and an established record of expertise in the field of immunology. They would have interests in the field of cellular immunology, though not necessarily limited thereto, and would be expected to develop (or expand existing) programs of independent research. Full salary at competitive levels is provided. Please send applications to: **Dr. Frederick Miller, Department of Pathology, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794.** *SUNY Stony Brook is an Equal Opportunity/Affirmative Action Employer. AK number 449B.*

### AUDITORY RESEARCH

A research associate position is available immediately for studies of auditory psychophysics and auditory-evoked responses in humans and animals. Other opportunities exist for studies of single-unit auditory physiology and cochlear and CNS anatomy. Applicants should hold a Ph.D. degree with background in auditory psychophysics or physiology. This position is nontenure track and is renewable annually for as long as 4 years. Send curriculum vitae and names of three references to: **J. H. Mills, Department of Otolaryngology, Medical University of South Carolina, Charleston, S.C. 29425.** *The Medical University of South Carolina is an Equal Opportunity/Affirmative Action Employer.*

**BIOCHEMISTRY.** Tenure-track position available at the assistant professor level, fall 1983. The department offers the B.S. degree in biochemistry, the B.S. and M.S. degrees in chemistry, and has a joint Ph.D. degree program in biomedical sciences with Eastern Virginia Medical School. A candidate should have an earned doctorate in biochemistry with postdoctoral experience. Responsibilities will include teaching undergraduate and graduate courses and initiating a vigorous research program. Areas of research preferred are nucleic acid chemistry or immunochemistry. Salary commensurate with qualifications and experience. Send curriculum vitae and a brief statement of research interests and have three letters of recommendation sent by 31 January 1983 to: **Dr. John D. Van Norman, Search Committee Chairman, Department of Chemical Sciences, Old Dominion University, Norfolk, Va. 23508.** *An Affirmative Action/Equal Opportunity Employer*

### BIOLOGICAL ANTHROPOLOGIST—ANATOMIST

The Departments of Cell Biology and Anatomy and Anthropology of Northwestern University invite applications for a tenure-track position at the assistant or associate professor level in human and/or primate morphology. Excellence in research and teaching is essential. This joint appointment would involve teaching both undergraduate and graduate students in anthropology and first-year medical and dental students. Particular attention will be paid to candidates with strong research interests in functional morphology, evolutionary biology, and hominid/primate paleontology, but other research areas will be considered. Applicants should send their curriculum vitae, statement of research interests, and names of three references to: **Anthro/Anatomy Search, Departments of Anthropology and Cell Biology and Anatomy, Northwestern University, 3006 Sheridan Road, Evanston, Ill. 60201.** *An Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS IN CELL BIOLOGY

Applications are invited for several tenure-track positions in the newly reorganized Department of Cell Biology and Anatomy at the Northwestern University Medical and Dental Schools. These positions are for assistant professors and, in exceptional cases, for associate professors. Applicants must have a Ph.D., M.D., or D.D.S. degree with research experience in cell biology, cellular neurobiology, structural biology, or related areas. Applicants should be able to demonstrate excellence or the potential for excellence in their respective fields. Successful applicants will be expected to carry on vigorous research programs and to participate in the teaching of graduate, medical, and dental students. Send complete curriculum vitae, brief description of previous and future research and teaching interests (three to four pages), and recommendations from at least three referees by 15 February 1983 to: **Dr. Robert D. Goldman, Chairman, Department of Cell Biology and Anatomy, Northwestern University Medical and Dental Schools, 303 East Chicago Avenue, Chicago, Illinois 60611.** *Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

## POSITIONS OPEN

### NATIONAL SCIENCE FOUNDATION DIVISION OF OCEAN SCIENCES BIOLOGICAL OCEANOGRAPHER

The National Science Foundation (NSF), Division of Ocean Sciences, is seeking qualified applicants for the position of **Program Director for Biological Oceanography.** This position may be filled on a rotational basis (1- to 2-year assignment) at the GG-15 level, \$48,553 to \$57,500 per annum, depending on qualifications and experience. The program provides support for scientists primarily from academic institutions to pursue fundamental research in biological oceanography. The selected candidate will carry out program planning, proposal evaluation, administration of research grants, and liaison with other federal agencies. Applicants should have a Ph.D. in biological oceanography or a related biological science or the equivalent in experience, plus at least 3 years of specialized experience in biological oceanography. Field experience in an academic institutional program is highly desirable. Those interested in being considered for the position should send letters of interest and SF-171 or current résumé by 1 February 1983 to: **Division of Personnel and Management, Personnel Administration Branch, 1800 G Street, NW, attention: E. Paul Broglio, EX 83-14, Washington, D.C. 20550.** For further information, telephone: 202-357-7841. *NSF is an Equal Opportunity Employer.*

**CHAIR IN MICROBIOLOGY.** Applications and nominations are invited for the chairmanship of the Department of Microbiology at Rutgers Medical School. The Department of Microbiology is involved in medical and graduate education and has active research and training programs. The search committee is soliciting candidates with backgrounds in microbiology, virology, or related disciplines, such as cell and molecular biology and infectious disease. Please send curriculum vitae to: **Dr. Robert L. Trelstad, Department of Pathology, UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY—Rutgers Medical School, P.O. Box 101, Piscataway, New Jersey 08854.** *An Equal Opportunity/Affirmative Action Employer, M/F.*

### UNIVERSITY OF TORONTO CHAIRMAN—DEPARTMENT OF BIOCHEMISTRY

Applications are being received for the position of professor and chairman of the Department of Biochemistry, University of Toronto. Candidates should have an M.D. or Ph.D. degree with an established record of achievement in research in this discipline and proven administrative skills. Duties are to provide academic leadership in research and teaching and to be responsible for overall departmental administration. Salary will be negotiated, and the position is to be filled as soon as possible. Applications should be sent to: **Dr. D. W. Clarke, Associate Dean, Basic Sciences, Faculty of Medicine, University of Toronto, 1 King's College Circle, Toronto, Ontario, Canada M5S 1A8,** before 31 January 1983. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

### NATIONAL SCIENCE FOUNDATION DIVISION OF OCEAN SCIENCES PHYSICAL OCEANOGRAPHER

The National Science Foundation (NSF), Division of Ocean Sciences, is seeking qualified applicants for the position of **Assistant/Associate Program Director in the Ocean Dynamics Program.** This position may be filled on a rotational basis (1- to 2-year assignment) at the GG-12 through GG-14 level, \$29,374 to \$53,661 per annum, depending on qualifications and experience. The program provides support for scientists primarily from academic institutions to pursue fundamental research in physical oceanography. The selected candidate will carry out program planning, proposal evaluation, administration of research grants, and liaison with other federal agencies. Applicants should have a Ph.D. in physical oceanography, a related physical science, or the equivalent in experience, plus 3 years of specialized experience in physical oceanography. Field experience in an academic institution program is highly desirable. Those interested in being considered for the position should send letters of interest and SF-171 or current résumé by 1 February 1983 to: **Division of Personnel and Management, Personnel Management Branch, National Science Foundation, attention: E. Paul Broglio, EX 83-13, 1800 G Street, NW, Washington, D.C. 20550.** For further information, telephone: 202-357-7841. *NSF is an Equal Opportunity Employer.*

## POSITIONS OPEN

### BIOLOGY FACULTY POSITIONS

Williams College anticipates two positions available at the assistant professor level, 1 July 1983. Applicants must have Ph.D., preferably with postdoctoral experience.

**CELL BIOLOGIST:** Regular 3-year position with possibility of reappointment and consideration of tenure. Teaching duties to include advanced cell biology and introductory genetics courses. Interest in immunology preferred.

**PHYSIOLOGICAL ANIMAL ECOLOGIST:** A 1- or 2-year visiting position. Teaching duties to include courses in general ecology and animal physiology, perhaps alternating with a course on social issues in human biology.

Send curriculum vitae, a statement of research and teaching interests, and three letters of recommendation by 5 February 1983 to:

**Dr. Henry W. Art, Chairman  
Department of Biology  
Williams College  
Williamstown, Mass. 01267**

*An Equal Opportunity/Affirmative Action Employer. We are especially eager to identify minority and women candidates.*

**BIOLOGY TEACHING OVERSEAS:** Positions open in biological sciences at American University of Beirut for the academic year 1983-1984. Applications are invited for positions in the following specialties: developmental biology, plant biochemistry, plant taxonomy/anatomy, vertebrate zoology. Ph.D. required; rank and salary depend on experience and qualifications, but normally appointments are in the rank of assistant professor. Usual contract is for 3 years. Curriculum vitae and three letters of recommendation should be forwarded to: **Chairman, Biology Department, American University of Beirut, Beirut, Lebanon.** The department has a faculty of nine and offers the B.S. and M.S. degrees, with a thesis requirement for the M.S. degree. *An Affirmative Action/Equal Opportunity Employer.*

### BIOPHYSICIST BROWN UNIVERSITY

The Physiology/Biophysics Section of the Division of Biology and Medicine invites applications for a tenure-track position at the assistant professor level available as of 1 July 1983. Candidates must have M.D. or Ph.D. with at least 2 years of postdoctoral experience and must have demonstrated high potential for independent research productivity, for acquiring external research funding, and for effective teaching in physiology. We prefer that the individual work in the area of membrane biophysics and have facility in quantitative approaches to physiological problems. The candidate must be qualified to teach medical physiology and cell physiology/biophysics to medical, graduate, and undergraduate students. Send résumé, including research and teaching experience, future research plans, and a list of publications, and have three letters of recommendation sent before 1 February 1983 to: **Dr. Donald C. Jackson, Chairman, Search Committee, Box G, Brown University, Providence, R.I. 02912.** *Brown University is an Affirmative Action/Equal Opportunity Employer.*

### BOTANIST

Immediate opening for **SYSTEMATIC BOTANIST** to carry out long-term study of neotropical *Leguminosae*. Applicants should have Ph.D. in botany; 1 to 2 years of postdoctoral experience and experience with computers helpful. Send résumé and names of three references to:

**Personnel Office  
Missouri Botanical Garden  
P.O. Box 299  
St. Louis, Mo. 63166-0299**

*An Equal Opportunity/Affirmative Action Employer*

### DEAN, COLLEGE OF AGRICULTURE

The University of Illinois at Urbana-Champaign is seeking a dean for the College of Agriculture. The dean is the chief executive officer of the College, responsible to the chancellor for its administration and agent of the faculty for execution of educational policy. Available 1 June 1983. Nominations and applications should be submitted by 15 January 1983 to: **Dr. J. B. Hanson, Chair, Search Committee for the Dean of the College of Agriculture, c/o Office of the Chancellor, University of Illinois at Urbana-Champaign, 801 South Wright Street, Champaign, Ill. 61820, attention: Andreen Neukrantz-Butler (telephone: 217-333-8158).** *The University is an Affirmative Action/Equal Opportunity Employer.*

# There's No Place Quite Like Syva . . .

## For Opportunities In The Healthcare Industry.

Syva, a leading immunodiagnostics company, is growing to meet the challenge of providing the healthcare industry with progressive new technologies. Look into these opportunities that we currently have available and accept the challenge.

### Senior Biochemist/Immunologist (Ph.D.)

In our cell culture laboratory, you'll develop monoclonal antibodies to a variety of "cell surface antigens"; plus be involved in the development of novel methodology and protocols, and the exploration of new immunochemical assay techniques. To qualify, you should have a Ph.D. in cellular immunology, plus several years of hybridoma technology experience, including a strong background in immunoregulation. An immunochemical, biochemical background is desirable.

### Sr. Cell Biologist (Ph.D.)

If you have a background in cell culture, immunochemistry, or protein modification, this may be the opportunity for you. You should have a Ph.D. to qualify, plus several years' post-doctorate experience, including bulk culture of mammalian cells/biochemical techniques/chromatography/electrophoresis.

### Research Biochemist (BS/MS)

In our Hybridoma Laboratory, you'll develop monoclonal antibodies to a variety of antigens. Your responsibilities will include immunization of animals, cell fusions, screening and evaluation of antibodies produced. You'll have the opportunity to develop and explore new immunochemical and enzymatic clinical assay methods. You'll need a BS/MS in Biochemistry, Cell Biology, Immunology, or related field to qualify, with careful lab technique and organization also necessary. You should be able to work well independently and have good communications skills. Cell culture experience is desired with hybridoma work experience an asset.

### Sr. Research Biochemist (Ph.D.)

The position requires a highly motivated individual with a Ph.D. and two or more years' post-doctoral training to be responsible for the basic R&D of new immunoassay methods. A strong background in biochemistry and immunochemistry is required. Experience in immobilized methods, affinity chromatography, hybridoma techniques and immunoassay techniques is desirable.

### Research Biochemist (BS/MS)

You will be responsible for the ongoing R&D program for new methods of enzyme immunoassay. You will work in a team-oriented environment and will be required to use various biochemical techniques, including protein and antibody purification, radio immunoassay, enzyme assays, column chromatography, electrophoresis, and enzyme immobilization. A BS in Biochemistry/Chemistry and three or more years' post-graduate/industrial lab experience required.

### Research Synthetic Chemist (BS/MS)

We're seeking an individual with a BS/MS plus two to four years of research experience in synthesis of organic compounds.

### Post-Doc/Visiting Scientist (Ph.D.)

You'll be involved in the synthesis of novel organic compounds for use in immunodiagnostics. To qualify, you'll need a Ph.D. in synthetic organic chemistry with up to two years of post-doctorate experience. Knowledge of biochemistry most helpful.

### Physical Scientist (Ph.D.)

We need a Research Physicist with a Ph.D. in experimental physics, physical chemistry or allied area with up to 5 years of experience in optical and electronic instrumentation.

Syva offers an attractive benefits package that includes medical and dental insurance. Please send your resume to: Human Resource Staffing, Syva Company, P.O. Box 10058, Palo Alto, CA 94303. We are committed to an equal opportunity hiring policy m/f/h.

**Syva / a Syntex company**



**No place like it.**

## POSITIONS OPEN

### UNIVERSITY OF TORONTO CHAIRMAN—DEPARTMENT OF IMMUNOLOGY

Applications are being received for the position of professor and chairman of the new Department of Immunology, University of Toronto. Candidates should have an M.D. or Ph.D. degree with an established record of achievement in research in this discipline, and proven administrative skills. Duties are to provide academic leadership in research and teaching, and to be responsible for overall departmental administration. Salary will be negotiated, and the position is to be filled no later than June 1984. Applications should be sent to: **Dr. D. W. Clarke, Associate Dean, Basic Sciences, Faculty of Medicine, University of Toronto, 1 King's College Circle, Toronto, Ontario, Canada M5S 1A8**, before 15 March 1983. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

### CHAIRPERSON DEPARTMENT OF BOTANY Curator/Professor

The Academy of Natural Sciences (ANSP) is seeking a distinguished Ph.D. systematist to provide leadership in developing the resources of an expanding Department of Botany. The needs are to: develop vigorous research programs in systematics and evolution; integrate management for the various herbaria; develop programs making maximum use of collection resources. The position will involve leading participation in the Plant Science Institute of the University of Pennsylvania, promoting programs involving other Philadelphia area botanical resources, and public outreach. The candidate must have a record of program development and of scholarly research publications appropriate for appointment as professor at the University of Pennsylvania. The salary will be competitive. Inquiries, nominations, and applications should be sent by 15 March 1983 to:

**George M. Davis**  
Chairman, Botany Search Committee  
Academy of Natural Sciences  
19th Street and the Parkway  
Philadelphia, Pa. 19103

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

### DEPARTMENT ADMINISTRATOR

The Department of Biochemistry, Brandeis University, has a current opening for department administrator. Responsibilities include overseeing the academic and research budget of 15 full-time faculty as well as the development of funding from both federal and private sources. The director will also supervise ancillary departmental services as well as act as liaison with other university administration and service departments. Requires a strong background in science, administrative experience, a knowledge of federal regulations, and excellent communication and problem-solving skills.

Please submit résumé and three letters of reference to: **Dr. Robert H. Abeles, Chairman, Department of Biochemistry, Brandeis University, Waltham, Mass. 02254.**

*An Equal Opportunity/Affirmative Action Employer*

The Department of Psychiatry and Human Behavior, University of California, Irvine, is seeking applicants for a position as an **ASSOCIATE/FULL PROFESSOR** to serve as **DIRECTOR OF THE PSYCHIATRIC RESEARCH UNIT** at the Long Beach Veterans' Administration Hospital. Duties will include: teaching of medical students and residents, clinical care, and research. Applicants should have 3 to 4 years of experience in clinical psychobiology. Demonstrated research experience in psycho-neuroendocrinology or psychopharmacology and national recognition are particularly sought. Applicant must have a clinical background in the evaluation and treatment of all major psychiatric disorders. Prefer candidates with a minimum of 5 years of experience in the administration of inpatient/outpatient psychiatric units. Applicant must have current California medical licensure. Interested parties should send curriculum vitae and three references to:

**Lawrence D. Sporty, M.D.**  
Clinical Professor and  
Vice Chair, Clinical Services  
University of California, Irvine Medical Center  
101 City Drive South  
Orange, California 92668

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

## POSITIONS OPEN

### MIT CHEMISTS

A Massachusetts Institute of Technology (MIT) Chemists Club is being formed to promote professional and social interactions between and among former and present members of the chemistry community at MIT. Membership is open to former and present students in the Chemistry Department, as well as to former and present department faculty, postdoctoral associates, research associates, and visiting scientists. Preliminary goals for the club include publication of a newsletter, presentation of alumni staffed career seminars for students and sponsorship of public lectures on chemical topics and of technical symposia by faculty and alumni at MIT.

Any former associates of the Chemistry Department who wish to receive information concerning Club activities should notify the organizing committee.

Suggestions for Club programs and activities are welcome, as would be names and addresses of any MIT chemists who might otherwise be missed.

**MIT Chemists Club**  
Organizing Committee  
c/o Professor James L. Kinsey  
Room 6-215, MIT  
Cambridge, Mass. 02139

### ECONOMIC BOTANISTS (TWO)

The New York Botanical Garden is seeking two **ECONOMIC BOTANISTS** for its newly formed Institute of Economic Botany. Applications are being taken for one senior scientist and a postdoctoral fellow. Research will be undertaken in the areas of temperate or tropical nonconventional economic food and/or energy plants, and candidates should possess expertise in this field. Consideration will also be given to applicants from fields other than botany who are working on any aspect of the utilization of underexploited food plants. Institute staff work through a multidisciplinary approach in a results-oriented program, and candidates are expected to develop their research programs as part of the coordinated institutional effort. Resources include a 4.5-million specimen herbarium, one of the finest botanical libraries in the country, experimental greenhouses and trial gardens, laboratories, an academic degree-granting program, and a plant exploration program in the Caribbean, Central and South America, Asia, and the Soviet Union.

Salary commensurate with experience.  
Send curriculum vitae, list of four references, sample publications, summary of most recent research activities, and a letter of application by 15 February 1983 to:

**Dr. Ghilleen T. Prance**  
Director, Institute of Economic Botany  
The New York Botanical Garden  
Bronx, New York 10458

*The Garden is an Equal Opportunity/Affirmative Action Employer.*

**FACULTY POSITIONS:** The Department of Neurological Surgery in the School of Medicine at the State University of New York (SUNY) at Stony Brook is seeking candidates to fill faculty positions in basic neurosurgical research. Opportunity to be involved in developing new research facility and to interact with other neuroscientists in Departments of Neurology and Neurobiology. Research background should include, but is not limited to, cerebral blood flow and CSP/physiologic studies; autoradiographic techniques and animal surgery are desirable. Rank and salary will be dependent upon qualifications. Submit curriculum vitae, bibliography, and succinct outline of research experience and planned research to: **Albert B. Butler, M.D., Chairman, Department of Neurological Surgery, Health Sciences Center, T12-082, SUNY Stony Brook, Stony Brook, N.Y. 11794.** *SUNY Stony Brook is an Equal Opportunity/Affirmative Action Employer. AK 474.*

**INVERTEBRATE ZOOLOGIST**—One year sabbatical replacement to teach invertebrate zoology, general zoology, an advanced seminar, and one or two other courses in the applicant's areas of expertise. Interest in invertebrate behavior, ecology and physiology especially appropriate. Curriculum vitae, letter of application, transcripts, and the names of three references to: **Search Committee, Biology, Bates College, Lewiston, Maine 04240**, by 1 February. *Bates College is an Equal Opportunity/Affirmative Action Institution with a primary commitment to quality liberal arts education, and limited but real support for research.*

## POSITIONS OPEN

### EUKARYOTIC MOLECULAR GENETICIST

The Department of Biology, University of California, Riverside, seeks an eukaryotic molecular geneticist for a tenure-track position starting 1 July 1983. Appointment will be at the assistant professor level. Preference will be given to a geneticist interested in the structure, evolution, and/or regulation of eukaryotic genomes. The successful applicant will be expected to develop a vigorous research program, supervise graduate students in master's and doctoral programs, and teach at both the undergraduate and graduate levels. Postdoctoral experience is highly desirable. Applicants should send curriculum vitae, a brief description of research and teaching goals, reprints of scientific papers, and at least three letters of reference to:

**Professor Vaughan Shoemaker, Chairman**  
Department of Biology  
University of California  
Riverside, California 92521

*The University of California is an Equal Opportunity/Affirmative Action Employer. Applications are invited from all qualified individuals.*

**EXPERIMENTAL NUTRITIONIST.** The Department of Nutrition, University of California, Davis, seeks applicants for an 11-month, tenure-track faculty position at an entry level commensurate with qualifications of the applicant. Priority is given to candidates applying at the assistant professor level. Starting date for the position is 1 September 1983. Research (50 percent): independent research in experimental nutrition with a strong physiological or biochemical basis with ultimate application to human nutrition; preferred research areas include vitamins, immune function, endocrine interrelationships or lipid metabolism emphasizing interrelationships between nutrition and metabolism at both the whole animal and cellular levels. Teaching (50 percent): participate in graduate and undergraduate level courses in areas that emphasize current concepts in metabolic regulation and basic nutrition and advise students in nutrition-related areas. A doctorate is required in nutrition or in a closely related field. Interested persons should send résumé, a summary of research and teaching objectives, selected reprints, official undergraduate and graduate transcripts (if applicant is within 5 years or less of postdoctorate), and names of three references to: **J. S. Stern, Department of Nutrition, University of California, Davis, Calif. 95616.** *The University of California is an Affirmative Action/Equal Opportunity Employer and welcomes applications from members of minority groups and women. Apply by 15 February 1983.*

**FACULTY POSITION—VISION SCIENCE** beginning in the 1983 academic year. Responsibilities include teaching didactic and laboratory courses emphasizing the sensory aspects of vision (functional properties of rods and cones, spectral sensitivity, spatial and temporal aspects of vision). Background in color vision is desirable. Opportunity exists to conduct individual and joint research. Please send curriculum vitae to: **Dr. John Carter, Faculty Search Committee, The New England College of Optometry, 424 Beacon Street, Boston, Mass. 02115.**

### THE HEBREW UNIVERSITY OF JERUSALEM FACULTY POSITION IN DEPARTMENT OF PHARMACOLOGY

The Department of Pharmacology at the Faculty of Medicine of the Hebrew University invites applications for a tenure-track faculty position in toxicology. Ph.D. or M.D. and postdoctoral training required. Candidate expected to develop independent research and teaching programs in toxicology for undergraduate and graduate students. Send curriculum vitae, list of publications, and names of three referees by 1 February 1983 to: **Search Committee, Pharmacology, P.O. Box 1172, Jerusalem, Israel.**

**MAMMARY GLAND BIOLOGY**, postdoctoral position available to study the role of cellular endomembranes in synthesis, modification, and secretion of the constituents of milk. Applicants with experience in nucleic acid isolation and in vitro translation are welcomed. Submit curriculum vitae to: **T. W. Keenan, Head, Department of Biochemistry, Virginia Polytechnic Institute, Blacksburg, Va. 24061.** *Virginia Tech is an Equal Opportunity/Affirmative Action Employer.*

**DIRECTOR OF A  
RESEARCH DEPARTMENT  
OF MICROBIOLOGY**

The Southwest Foundation for Research and Education is seeking an established scientist to lead the development of a microbiology department. Candidates should hold a Ph.D. or M.D. degree, have research achievements in microbiology, and have administrative experience.

Southwest Foundation is a privately endowed, independent biomedical research institution. It has extensive laboratory and animal care facilities for all types of animals, including nonhuman primates. Scientific staff members have close working relationships with the faculty of the nearby University of Texas Health Science Center.

Salary is competitive. A comprehensive benefits program is provided. Applications, including curriculum vitae and salary history, should be sent to:

Chairman, Search Committee  
Southwest Foundation  
for Research and Education  
P.O. Box 28147  
San Antonio, Texas 78284

*An Affirmative Action/  
Equal Opportunity Employer*

# Chief Environmental Scientist

Battelle Project Management Division's Office of Nuclear Waste Isolation (ONWI) is seeking a qualified professional for the position of *Chief Environmental Scientist*. This is a highly visible position in the Site Exploration Functional Office requiring immediate and important contributions and excellent communication skills. The requirements are for an environmental scientist/manager with experience in directing multidisciplinary groups of environmental scientists and socioeconomic specialists.

The candidate should possess a doctorate or equivalent combination of education and experience, and a record of proven leadership.

The successful candidate will offer a background that reflects ability to plan and implement environmental siting and licensing programs including experience in interacting with regulatory and licensing agencies. The candidate should have demonstrated expertise in the physical and environmental sciences and socioeconomics, with a minimum of 10 years of environmental siting and licensing experience, particularly with large energy related projects and nuclear-power facilities.

ONWI has a strategic role in the Department of Energy's National Waste Terminal Storage Program developing appropriate environmental analyses and assessments, and in the management of subcontractor activities leading to the siting and licensing of nuclear waste repositories.

The Site Exploration Functional Office includes active project-management teams of engineers, geologists, geochemists, hydrologists, environmental scientists and socioeconomic specialists working on a wide range of siting and licensing objectives.

We offer a comprehensive benefits package and an excellent salary commensurate with your background and experience. Send resume in confidence to:

**Box 328, Science Magazine**



**Battelle**

**Project Management Division  
Office of Nuclear Waste Isolation (ONWI)  
Columbus, Ohio  
an equal opportunity employer**

## NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

OPENING DATE: 12/15/82  
CLOSING DATE: 01/31/83

*(All applications must be postmarked  
before the closing date)*

### ASSOCIATE DIRECTOR FOR INTERNATIONAL RESEARCH AND DIRECTOR, JOHN E. FOGARTY INTERNATIONAL CENTER FOR ADVANCED STUDY IN THE HEALTH SCIENCES

The National Institutes of Health invites nominations and applications for the position of Director, John E. Fogarty International Center for Advanced Study in the Health Sciences (FIC). The Center provides the facility for the assembly of scientists and leaders in the biomedical, behavioral, and related fields for discussion, study, and research in the health sciences at an international level; conceives, designs, develops, and conducts studies on current and emerging international health issues; awards scholarships to outstanding individuals for the purpose of encouraging creative, speculative thought and contributions to advanced study; awards fellowships for collaborative research in the United States and abroad; facilitates and coordinates NIH activities and functions concerned generally with the health sciences at the international level; provides a central point for receiving, assisting, and/or briefing special foreign visitors to NIH; provides administrative support to the NIH Visiting Program; and provides interface between NIH and other agencies and international organizations.

This is a Civil Service position in the Senior Executive Service (SES), with an authorized salary range from \$56,945 to \$63,800 per annum (currently limited to \$58,500) depending on qualifications. Candidates may be eligible for Physicians Comparability Allowance up to \$10,000 per year. 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 SES, must serve a one-year probationary period.

The mandatory qualifications are: (1) meet the minimum educational requirements for Medical Officer, GS-602, or Health Scientist Administrator, GS-601 (or equivalent combination of experience and education), as defined in the U.S. Office of Personnel Management Handbook X-118, Qualification Standards for Positions under the General Schedule, which is available in Federal Personnel Offices and Federal Job Information Centers; and (2) have knowledge of research programs in the biomedical sciences and international health activities. In addition, candidates must meet the following managerial/executive qualifications: Demonstrated competence to assume leadership responsibilities in: (1) assuring that key national and agency goals, priorities, and values are considered in making program decisions; (2) establishing effective external communications by being a representative spokesperson for the organization, and maintaining working relationships within the organization and with outside key individuals and groups; (3) developing policy, directing and guiding programs and projects, including establishing short-term and long-term goals and priorities, and the structure and processes necessary to carry them out; (4) obtaining and allocating the fiscal and material resources necessary to support program or policy implementation; (5) developing processes and overseeing activities to assure that people are appropriately employed, effectively and efficiently utilized, and dealt with in a fair and equitable manner; and (6) developing activities and procedures to assure that program and policy are being executed, adjusted as necessary, and that the appropriate results are being achieved.

Candidates who meet the mandatory requirements will be further evaluated by the Search Committee on the following factors: communications and interpersonal skills, education; honors and awards; and the degree to which they exceed the minimally qualified level of the mandatory managerial/executive qualifications. Information on any of the above requirements may be obtained by calling Mrs. Helen C. Stafford, Executive Secretary, Search Committee for Director, FIC, at (301) 496-4197.

**Applications (Personal Qualifications Statement, SF-171) are to be sent to Ms. Sharon K. Posey, Personnel Officer, Fogarty International Center, Bldg. 38A, Room 604, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.**

*THE NATIONAL INSTITUTES OF HEALTH IS  
AN EQUAL OPPORTUNITY EMPLOYER*

## POSITIONS OPEN

### FACULTY POSITIONS IN MOLECULAR BIOLOGY

Applications are invited for tenure-track faculty positions at the assistant or associate professor level in the Department of Molecular Biology at the Northwestern University Medical and Dental Schools. Applicants should have a Ph.D. degree in molecular biology, biochemistry, genetics, or a related area or an M.D. or D.D.S. degree and also have several years of postdoctoral training. Candidates having research experience in eukaryotic cell regulation and development or prokaryotic or eukaryotic membrane structure and function are especially encouraged to apply. The successful applicants will be expected to establish a vigorous independent research program and to participate in the teaching of graduate, medical, and dental courses and in the training of graduate and postdoctoral students. Applicants should send complete curriculum vitae, a brief description of previous research and teaching interests (three to four pages), a bibliography and reprints of significant published work or preprints of manuscripts in press, and recommendations from at least three references by 31 January 1983 to:

**Dr. Robert H. Rownd, Chairman**  
Department of Molecular Biology  
Northwestern University Medical and Dental Schools  
303 East Chicago Avenue  
Chicago, Illinois 60611

*Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

**FT/NMR RESEARCH SPECTROSCOPIST (Ph.D.).** Supervision/maintenance/operator training/hardware-software development involving departmental NMR equipment (Nicolet Widebore 300-Multinuclear, Nicolet/Bruker 90-Multinuclear, JEOL 200FX-<sup>13</sup>C/<sup>1</sup>H, Varian EM 390-<sup>1</sup>H). Position also involves research collaboration with faculty in several departments, and could, for example, involve studies of biological/biochemical samples and rapid organometallic kinetics. Background in FT/NMR spectroscopy required. Salary range: \$26,616 to \$32,076 plus University of California benefits package. *The Department of Chemistry, University of California, Riverside, is an Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae and names and addresses of three references to: **Tilden Sprague, Staff Personnel Office, The University of California, Riverside, Calif. 92521.**

**INHALATION TOXICOLOGIST.** Microbiological Associates, a biomedical research firm with more than 30 years of experience specializing in health and environmental sciences, is seeking an inhalation toxicologist. This person is required for an expanding program using state-of-the-art equipment for nose-only exposure of rodents to a variety of dusts and aerosols. Position involves directing ongoing technical testing and research services for industrial and government contract work. Expertise in respiratory function and/or physiology with 3 to 5 years of experience preferred. Send curriculum vitae and names of three references to: **MICROBIOLOGICAL ASSOCIATES, Personnel Department, 5221 River Road, Bethesda, Md. 20816.** *An Equal Opportunity/Affirmative Action Employer.*

**MARINE MICROBIAL ECOLOGIST**—Associate professor for tenure-track position in research and graduate level teaching in marine microbial ecology. Appointment will be for applicant with five or more years of postdoctoral experience at grant-funded research. Ph.D. in oceanography or microbiology, exceptional competence in research, and strong potential for obtaining research funds required. Opportunities for cooperative research are excellent. Salary: \$30,000 to \$38,000. Send résumé and names of three references by 31 January 1983 to: **G. Ross Heath, Dean, School of Oceanography, Oregon State University, Corvallis, Oregon 97331.** *An Affirmative Action/Equal Opportunity Employer.*

**MICROBIOLOGIST.** Tenure-track position at assistant professor level starting August 1983. Ph.D. required; postdoctoral research experience desirable. Appointee will teach undergraduate course in general microbiology, offer graduate course in field of specialization, and be expected to develop a strong research program. Send curriculum vitae, a statement of research interests and needs, and names of three references by 15 February 1983 to: **Dr. J. W. Bennett, Chairman, Microbiology Search Committee, Department of Biology, Tulane University, New Orleans, Louisiana 70118.**

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

## POSITIONS OPEN

**INVERTEBRATE BIOLOGY**—Two tenure-track assistant professor positions will begin in August 1983. Applicants should have primary research and teaching competence in invertebrate biology. Preference will be given to research strengths which complement existing ones in the department in behavior, ecology, genetics, and physiology. Salary commensurate with experience. Responsibilities include participation in introductory course teaching program, and development of an advanced course in candidate's area of specialization. Send curriculum vitae, up to three reprints of published research, names and addresses of three references, and letter of application by 31 January 1983 to: **Dr. David C. Coleman, Chairman, Search Committee, Department of Zoology and Entomology, Colorado State University, Ft. Collins, Colo. 80523.** *An Equal Opportunity/Affirmative Action Employer. Equal Opportunity Office, 314 Student Services Building.*

### MICROBIAL GENETICIST TEXAS TECH UNIVERSITY

Search reopened for a tenure-track faculty position. Applicants should be capable of establishing a strong research program utilizing recent molecular biology-recombinant DNA technologies. Teaching duties are in introductory microbiology and microbial genetics with graduate teaching in field of expertise. Ability to direct master's and doctoral level research is required. Curriculum vitae, recent reprints, statement of research goals, and the names of three references should be sent to: **Dr. Caryl E. Heintz, Chairman, Search Committee, Department of Biological Sciences, Texas Tech University, Lubbock, Texas 79409.** *Texas Tech, An Affirmative Action/Equal Opportunity Employer,* is one of four major comprehensive state universities in Texas and has an enrollment of approximately 23,000 students. Lubbock, a city of about 200,000, is known for its pleasant climate.

### DEPARTMENT OF BIOLOGY Swarthmore College

A tenure-track position beginning September 1983 for a **MICROBIOLOGIST**, Ph.D., preferably with postdoctoral experience. We seek a candidate with broad experience in microbiology to teach general microbiology, virology, an advanced offering, and to participate in introductory biology. We prefer making the appointment at the assistant professor level. Interested persons should submit curriculum vitae, statement of research interests, three letters of recommendation, and transcripts by 1 February 1983 to:

**Dr. John B. Jenkins, Chairman**  
Department of Biology  
Swarthmore College  
Swarthmore, Pa. 19081

*Swarthmore College is an Equal Opportunity Employer.*

**MICROBIOLOGIST** with research emphasis in physiology. Assistant professor in Division of Microbiology; eligible for tenure review; Ph.D. required; commitment to undergraduate and graduate teaching and research, postdoctoral experience desired. Teaching duties include microbial physiology and pathogenic microbiology. Development of advanced specialty course and research program expected. Send curriculum vitae, reprints, statement of research program, and three letters of reference, to arrive no later than 14 January 1983, to: **Dr. L. R. Fox, Chairman, Department of Biological Sciences, Wichita State University, Wichita, Kan. 67208.** *An Equal Opportunity/Affirmative Action Employer.*

### PHYSIOLOGIST

Applicants are sought for a tenure-track position, rank related to qualifications, to begin September 1983; individuals with research interests in the cellular and molecular actions of hormones and other extracellular messengers will be given preference. Applicants should have current research support or clear potential for funding, and be able to interact with faculty in endocrinology, cellular and molecular biology, and neurobiology. The successful candidate is expected to teach cellular/organismal physiology in the undergraduate and graduate curriculum. Please submit curriculum vitae, reprints, and at least three letters of reference to: **Professor David Shepro, Chairman, Physiology Search Committee, Department of Biology, Boston University, 2 Cummington Street, Boston, Mass. 02215.** Closing date is 1 February 1983. *Boston University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

Tulane University School of Medicine has openings for two academically committed **NEUROLOGISTS**. Fellowship training in electromyography/neuromuscular disease and/or electroencephalography/epilepsy highly desirable. This is an expanding department with emphasis in clinical research. *Tulane is an Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae to:

**Joseph B. Green, M.D., Chairman**  
Department of Psychiatry and Neurology  
1430 Tulane Avenue  
New Orleans, Louisiana 70112

**NEUROSCIENTIST.** Hard money position available for research in neurophysiology/neurochemistry. Will be responsible for laboratory aspects of several departmental projects, including an investigation of the metabolic and ionic effects of drug induced ischemia in eurons and astrocytes. Salary commensurate with qualifications and experience. Send curriculum vitae and reprints to: **James E. Cottrell, Professor and Chairman, Department of Anesthesiology, Downstate Medical Center, Box 6, 450 Clarkson Avenue, Brooklyn, N.Y. 11203.** *Equal Opportunity/Affirmative Action Employer. DMC 184A.*

**PATHOGENIC MICROBIOLOGIST or TUMOR VIROLOGIST** to teach general microbiology, supervise graduate students (master's and Ph.D.), and maintain an active research program in area of specialty. Candidate must have demonstrated research ability in either of the above areas. Position will be at the level of assistant professor and salary will be competitive and commensurate with qualifications. Submit curriculum vitae, transcript of graduate work, three letters of recommendation, and statement of research interest to: **Chairperson, Search Committee, Department of Life Sciences, Indiana State University, Terre Haute, Ind. 47809,** no later than 7 February 1983. Position is to be filled no later than 1 September 1983. *Indiana State is an Equal Opportunity/Affirmative Action Employer.*

**PHYSICAL CHEMIST:** One-year sabbatical replacement to begin September 1983. Assistant professor level, for recent Ph.D. in physical chemistry. Teach undergraduate physical chemistry and laboratory, and accelerated general chemistry/quant with laboratory. Possibly direct undergraduate research and independent study. Application deadline: 15 February 1983. Send résumé, three letters of recommendation, transcripts, and description of teaching interests and philosophy to: **Gale Rhodes, Chemistry Department, Whitman College, Walla Walla, Wash. 99362.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITIONS**—Recent Ph.D.'s in molecular biology sought to study keratin gene regulation in human epithelial cells [see *Cell* 25, 627 (1981) and *Cell* 31 (December 1982)] and oncogene sequences and their expression in cultured keratinocytes and squamous carcinoma cells. Appointment as research fellow in Physiology and Biophysics, Sidney Farber Cancer Institute and Harvard Medical School. Send curriculum vitae, a description of research experience and interests, and the names of three references to: **Dr. James G. Rheinwald, SIDNEY FARBER CANCER INSTITUTE and Department of Physiology and Biophysics, HARVARD MEDICAL SCHOOL, 44 Binney Street, Boston, Mass. 02115.** *An Affirmative Action/Equal Opportunity Employer.*

The Program of Tropical Medicine and International Health of Harvard School of Public Health and Harvard Medical School invites applications for **TWO POSTDOCTORAL POSITIONS** in molecular biology applied to parasitic helminths. These appointments provide excellent opportunities to develop independent research in a multidisciplinary program.

Please send three references, curriculum vitae, and bibliography to: **Professor John R. David, Department of Tropical Public Health, Harvard School of Public Health, 665 Huntington Avenue, Boston, Mass. 02115.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately for a recent Ph.D. in biochemistry, molecular biology, or related discipline with experience in analytical techniques to work at Temple University School of Dentistry under the direction of Dr. Joseph J. Aleo. Background in tissue culture, connective tissue metabolism preferred. Please forward inquiries to: **Temple University Personnel Office, 1601 North Broad Street, Philadelphia, Pa. 19122.** *Equal Opportunity/Affirmative Action Employer.*



## AFOSR

## SCEEE

### *Summer Research Opportunities Faculty & Graduate Students 1983*

The USAF Summer Faculty Research Program (SFRP), sponsored by the Air Force Office of Scientific Research (AFOSR) and conducted by the Southeastern Center for Electrical Engineering Education (SCEEE), provides research opportunities for qualified faculty and graduate students of U.S. Colleges and Universities. These opportunities consist of ten week summer research periods at one of 20 USAF Laboratories/Centers throughout the U.S. with follow-on research opportunities being available through other AFOSR and SCEEE programs. Under exceptional circumstances the ten week research period may be during the regular academic year. Prerequisites for appointment: (1) U.S. Citizenship, (2) Faculty or graduate student status at an accredited U.S. College or University. All qualified applicants will receive consideration without regard to race, color, religion, sex, or national origin. Preference will be given to applicants having no previous research sponsored by the Air Force.

SCEEE Supports equal opportunity/affirmative action.  
Application Deadline: February 1, 1983

For Further Information Contact:

SCEEE Management Office  
1101 Massachusetts Ave.  
St. Cloud, FL 32769

OR CALL:  
(305) 892-6146

## **PUBLIC HEALTH SERVICE SMALL BUSINESS INNOVATIVE RESEARCH (SBIR) PROGRAM**

The Small Business Innovation Development Act of 1982 authorizes the Public Health Service (PHS) to implement a Small Business Innovative Research (SBIR) Program to promote technological innovation within the small business community, provide the small business sector with an increased role in federal R&D, and attract private capital to commercialize the results of federally funded research. PHS agencies/offices participating in the SBIR Program include the National Institutes of Health (NIH), the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA), the Centers for Disease Control (CDC), the Food and Drug Administration (FDA), the National Center for Health Services Research (NCHSR), and the Office of Adolescent Pregnancy Programs (OAPP), although NIH accounts for approximately 94% of the set-aside funds.

Under the SBIR Program, a "small business" is any organization that is independently owned and operated for profit, not dominant in the field in which it is operating, and has 500 or fewer employees.

The PHS wishes to identify small businesses that may have the R&D expertise to contribute to the missions of its programs and/or are interested in attending a PHS Small Business Conference to be held at NIH in early February 1983. For a copy of the appropriate Program Solicitation and/or information about the Conference, please contact the office below and specify the PHS agency/office of interest.

**Office of Grants Inquiries  
Division of Research Grants  
National Institutes of Health  
Westwood Building, Room 449  
Bethesda, Md. 20205**

## **ASSISTANT DIRECTOR, Microbiological Research**

Bristol-Myers, a respected leader in pharmaceutical research, has a key management position available which will have a major role in its Microbiological Research Program. The company offers an excellent compensation and benefits package in addition to an outstanding opportunity for professional growth.

The successful candidate should have a PhD in Microbiology, Biochemistry or related discipline, along with 5+ years of industrial experience in antibiotic evaluation. Proven ability to effectively manage is considered essential since this position will supervise 35 employees. A familiarity with automated assay equipment along with a sound understanding of microbial biochemistry and physiology is preferred.

If you are interested in a unique opportunity to demonstrate scientific creativity in a highly professional environment, please submit your resume, including salary requirements to: **Mr. Thomas Kegelman, Director of Personnel, Pharmaceutical Research & Development, BRISTOL-MYERS, 345 Park Avenue, New York, NY 10154.** An Equal Opportunity Employer, M/F.

## **BRISTOL-MYERS**

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## POSITIONS OPEN

**SEARCH REOPENED FOR A PLANT COMMUNITY AND ECOSYSTEM ECOLOGIST.** The Department of Biological Sciences, University of California, Santa Barbara, invites applications for an anticipated tenure-track position for appointment beginning either 1 July 1983 or 1 January 1984. While appointment will probably be at the assistant professor level, applications from more senior scientists conducting well-established, innovative, and significant research programs are also invited. Applicants must have a broad understanding of terrestrial communities and ecosystems and especially of the role of plants in these systems. Particularly desirable areas of expertise include, but are not limited to, nutrient cycling, productivity, succession, demography, interference (including competition), and plant/animal interactions. Development of a vigorous extramurally funded research program will be expected. Teaching duties will include graduate and undergraduate courses in plant community and ecosystem ecology and participation in the botanical portions of an introductory biology course. Applicants should send curriculum vitae, a statement of research interests, and the names of at least three individuals willing to provide references to: **The Chairman, Department of Biological Sciences, University of California, Santa Barbara, California 93106.** Applications must be postmarked no later than 15 February 1983. *University of California, Santa Barbara, is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL FELLOW.** The fellow will join an established group analyzing neural mechanisms of circadian rhythm regulation in mammals. The major research emphasis is on morphological studies employing a variety of techniques, including electron microscopy, the autoradiographic tracing method, retrograde transport methods, immunocytochemistry, fluorescence histochemistry, and 2-deoxyglucose autoradiography. Candidates should have a relevant Ph.D. and research training. Stipend is at NIH levels. Send curriculum vitae and names of three references to: **Dr. Robert Y. Moore, Department of Neurology, Health Sciences Center, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794.** *SUNY Stony Brook is an Equal Opportunity/Affirmative Action Employer. AK number 478.*

**POSTDOCTORAL POSITIONS—MASS SPECTROMETRY.** Positions available in early 1983 for research in Fourier Transform Mass Spectrometry, in mechanisms of ion-molecule reactions or in applications of desorption methods in MS/MS. Minimum salary: \$16,000 per annum. Send résumé and three references by 3 January (or until suitable candidates apply thereafter) to: **Michael L. Gross, Midwest Center for Mass Spectrometry, University of Nebraska-Lincoln, Lincoln, Neb. 68588-0304.** *Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE.** Applications are invited for a biochemist-immunochemist position which will be available in January 1983. The position requires a Ph.D. in either biochemistry or immunology and a knowledge of protein/antigen purification, monoclonal antibody methodology, and immunoassay development. Experience in at least two of these areas is essential. The salary is \$16,000 to \$20,000 negotiable, depending upon qualifications. The research involves the characterization of human colon tumor antigens and the development of clinically useful immunoassays. Please send curriculum vitae, a list of publications, and the names of three references to: **Dr. Lynn C. Yeoman, Department of Pharmacology, Baylor College of Medicine, Houston, Texas 77030.** *The College is an Equal Opportunity/Affirmative Action Employer.*

**TERRESTRIAL PLANT ECOLOGIST.** The Division of Biological Sciences of the University of Michigan invites applications for a tenure-track assistant professorship in the area of terrestrial plant ecology. The successful candidate will be expected to develop a field-oriented research program in which processes are studied at the population or community level. He or she will participate in the undergraduate and graduate programs of the division. Send a letter of application, curriculum vitae, reprints of selected research papers, and a statement of future research plans, and have three letters of recommendation sent by 31 January 1983 to: **Dr. Peter R. Grant, Chairman, Ecology Search Committee, Division of Biological Sciences, University of Michigan, Ann Arbor, Michigan 48109.** *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### POSTDOCTORAL MOLECULAR GENETICS

Battelle Columbus Laboratories, a world leader in contract research and development, has an immediate need for a postdoctoral candidate to work on development of novel mammalian genetic engineering vectors using a model system for the molecular genetics of chemical carcinogenesis. Experience in gene cloning/sequencing, animal cell culture, tumor virology, and/or microcomputers desirable.

The position is for a 1-year initial appointment, potentially renewable, with the possibility of a permanent position with Battelle's multidisciplinary industrial contract research operations in biotechnology. Salary range will be \$18,000 to \$24,000 per year. U.S. citizenship or permanent residency required. Interested individuals should send résumé with references to: **Richard C. Needles, Employment Department 0-3,**



**Battelle**

Columbus Laboratories

505 King Avenue

Columbus, Ohio 43201

*Equal Opportunity Employer*

**POSTDOCTORAL POSITION** available 1 February 1983 in cellular biochemistry. Research involves understanding the biochemical mechanism by which glucocorticosteroids inhibit the growth of virally transformed cells. Experience preferred in tissue culture, enzymology, and radiolabeling techniques. Send curriculum vitae and three letters of recommendation to: **Dr. Delano Young, Department of Chemistry, Boston University, 685 Commonwealth Avenue, Boston, Mass. 02215; telephone: 617-495-4021.**

A POSTDOCTORAL POSITION will be available soon for suitably qualified applicants interested in studying immunity to cancer. The research program of the Trudeau Institute involves the use of animal models of infectious diseases and cancer to analyze mechanisms of protective immunity at the physiological, cellular, and molecular levels. Applicants should have some training in immunobiology. The starting salary is \$14,500 and campus housing may be available. Send résumé to: **Dr. Robert J. North, Director, Trudeau Institute, Inc., P.O. Box 59, Saranac Lake, N.Y. 12983.**

*An Equal Opportunity Employer*

**POSTDOCTORAL RESEARCH POSITION** available to Ph.D. with experience in studying membrane-associated enzymes. Involves investigations on the hormonal control of fetal lung maturation in cell culture. Either a new Ph.D. or a more experienced investigator could be accommodated. Stipend, present MRC levels: \$17,000 for a new Ph.D. Please send curriculum vitae and references to: **Fred Possmayer, Biochemistry, University of Western Ontario, London, Ontario, Canada N6A 5A5.** *Preference given to Canadian applicants.*

### PROFESSOR OF MICROBIOLOGY AND MOLECULAR GENETICS

Applications are invited for a position of tenured Professor of Microbiology and Molecular Genetics with the Department of Microbiology and Molecular Genetics, Harvard Medical School, starting 1 July 1983. Applicant should provide a focus for research in the natural history of infectious disease, particularly bacterial pathogenesis. Research should be at the most innovative and basic level. The individual will participate in the teaching of this subject to medical and graduate students and fellows. The major qualification for the position should be excellence of scientific accomplishments.

Interested persons should submit: (i) curriculum vitae and (ii) statement of current teaching and research interests to:

**Dr. Bernard N. Fields**

**Chairman, Microbiology Search Committee  
Department of Microbiology and Molecular Genetics  
Harvard Medical School  
25 Shattuck Street  
Boston, Mass. 02115**

*An Affirmative Action/Equal Opportunity Employer*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available for recent Ph.D. immunochemist (immunologist) to devise immunoassays for measuring biologically active substances. Experience in purification of antigens, preparation and separation of antibodies, RIA, and enzyme immunoassay is highly desirable. Send curriculum vitae and names of three references to: **James P. Nolan, M.D., Chairman, Department of Medicine, State University of New York at Buffalo, School of Medicine, 462 Grider Street, Buffalo, N.Y. 14215.** *Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL RESEARCH ASSOCIATES.

Two positions available to study the immunobiology of macrophages in cellular immune disorders of the nervous system. Research experience in cellular immunology, cell biology, and immunocytochemistry desirable. Salary: \$15,000 to \$18,000. Each position initially for 1 year, renewable for 2 years. Send résumé and three reference letters to: **Dr. John Prineas, Department of Neurosciences, UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY—New Jersey Medical School, 100 Bergen Street, Newark, N.J. 07103.** *An Equal Opportunity/Affirmative Action Employer.*

### RESEARCH ASSOCIATE Division of Nutritional Sciences

The Division of Nutritional Sciences at Cornell University is searching for candidates for a position of research associate in the Cornell University Nutritional Surveillance Program.

The successful candidate is expected to develop concepts and identify research priorities, including a substantive review of the literature, for a project aimed at expanding knowledge of within-household factors influencing the nutritional status of mothers and their children in developing countries. This knowledge will contribute to the design of interventions and to the identification of suitable indicators for initiating and evaluating interventions. Other responsibilities of the position include identifying data sets useful for further relevant investigations in maternal and child nutrition as well as planning and carrying out these studies.

The qualifications expected of candidates for this position include a doctoral degree in nutrition, or in epidemiology or public health with a strong background in nutrition. Experience is required in the analysis of large data sets. Field experience in a developing country is highly desirable.

Interested candidates should submit curriculum vitae, publication list, and three letters of reference by 31 December 1982 to:

**Search Committee  
Cornell Nutritional Surveillance Program  
Cornell University  
145 Savage Hall  
Ithaca, New York 14853**

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

Arizona-Sonora Desert Museum is seeking a **RESEARCH SCIENTIST** with a focus on regional natural science. Successful candidate will be expected to conduct research compatible with the goals and objectives of the Museum and to work closely with staff to develop interpretive materials for the public. Will be expected to publish both popular and scientific articles resulting from completed research. Ph.D. recommended. Salary: \$18,000 to \$25,000. Send curriculum vitae, statement of research interest, complete salary history, and names, addresses, and telephone numbers of three individuals willing to provide references to: **Personnel Director, Application deadline is 1 February 1983.** Additional information concerning the Museum may be obtained by writing to: **Personnel Director, The Arizona-Sonora Desert Museum, Route 9, Box 900, Tucson, Arizona 85743.** *The Arizona-Sonora Desert Museum is an Equal Opportunity Employer.*

**VERTEBRATE PHYSIOLOGIST.** Applications are invited for a tenure-track position beginning September 1983 in the Department of Biological and Environmental Sciences at Georgia College. Ph.D. required. Successful applicant will be expected to teach vertebrate, comparative, human, and cell physiology as well as participate in the freshman and M.S. program. Send curriculum vitae, description of research interests, transcripts, and three letters of reference by 1 February 1983 to: **Dr. William P. Wall, Search Committee Chairman, Department of Biological and Environmental Sciences, Georgia College, Milledgeville, Georgia 31061.**

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\*At a 15% premium.

## SENIOR SCIENTIST ATHEROSCLEROSIS RESEARCH



Sandoz, Inc., a recognized leader in Pharmaceutical Research & Development currently has career opportunities in the Atherosclerosis Research Section for PhD's with experience in lipoprotein or arterial wall metabolism studies. You will join an established group of approximately 20 scientists with diversified training and expertise. The goal of the expanded research program is the design and development of therapeutic agents which alter lipoprotein metabolism or lipid transport.

The successful candidates should possess experience in biochemical systems related to lipoprotein metabolism and lipid transport studies for application in the design and implementation of research programs. Expertise in immunochemical methodology or the use of molecular biology systems would be desirable.

Located in Northern New Jersey, Sandoz offers a professional environment and an attractive salary and benefit package. Please send resume and salary requirements to:

Mrs. Judith O'Hagan Personnel Manager,  
Research & Development  
Sandoz, Inc. Route 10, East Hanover, NJ 07936  
Equal Opportunity Employer M/F

# Drug Metabolism

Smith Kline & French Laboratories, a leader in pharmaceutical research, invites applications from scientists to participate in a challenging new Drug Metabolism program, which will expand during the next several years and play an important role in drug discovery and development.

## SENIOR INVESTIGATOR - HUMAN PHARMACOKINETICS

The successful candidate will be responsible for the design and conduct of pharmacokinetic studies performed on SK&F developmental drugs and SK&F marketed products; will conduct research in the area of novel drug delivery systems and/or other areas of drug metabolism.

Candidates must have a PhD plus three or more years of post doctoral research experience in Drug Metabolism - Pharmacokinetics. Preference will be given to those candidates with research experience or education in all of the following:

- Pharmacokinetic and bioavailability studies in man including development and use of pharmacokinetic models
- Instrumental methods of analysis including HPLC, GC, GC-MS
- Familiarity with regulatory issues related to all aspects of human studies of drug metabolism and pharmacokinetics
- A proven record of technical supervision, excellent communication and interpersonal skills
- An outstanding record of scientific accomplishment and publications

We offer an excellent compensation and benefits package including an attractive relocation policy. Investigate our growth and your potential to grow with us by sending your C.V. stating position of interest and salary history in confidence to: C.J. Elder, SMITH KLINE & FRENCH LABORATORIES, a division of, SmithKline Beckman Corporation, 1512 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

## ASSOCIATE SENIOR INVESTIGATOR - ANALYTICAL CHEMISTRY

Will be responsible for the development of novel analytical methodology for drug and metabolic quantitation in pharmacokinetic studies; supervise the HPLC laboratory; analyze human and laboratory animal pharmacokinetic data; design and execute research in drug metabolism.

Candidates must have a PhD and:

- Strong background in bioanalytical chemistry (HPLC, GLC, GC-MS) including quantitative methods of development
- Two or more years post doctoral experience in HPLC methods development and human pharmacokinetic studies
- Proven research ability evidenced by outstanding scientific publications
- Proven record of technical supervision; excellent communication and interpersonal skills

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a SmithKline company

## POSITIONS OPEN

### POSTDOCTORAL ASSOCIATES and VISITING SCIENTISTS Ecosystems Research Center Cornell University

The Ecosystems Research Center (ERC), established in 1980 by the U.S. Environmental Protection Agency, has available postdoctoral, associate, and visiting scientist positions, effective immediately.

The goals of the ERC are the development of the ecosystem concepts necessary for the evaluation of stresses on ecosystems and the investigation of their applicability to environmental regulation. The principal approach is through the development of syntheses from existing long-term and other ecosystem studies, and comparisons across systems of responses to stress.

Applicants should possess Ph.D. and demonstrated ability in relevant areas. Terms of appointment are flexible. Interested individuals are invited to send letters of application and curriculum vitae to: **Simon Levin, Director, Ecosystems Research Center, 345 Corson Hall, Cornell University, Ithaca, N.Y. 14853.**

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

### THE DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY, UNIVERSITY OF WESTERN ONTARIO, LONDON, CANADA, IS SEEKING TWO REPRODUCTIVE SYSTEM SCIENTISTS.

- 1) A Ph.D. scientist to work with the Gynaecologic Oncology Research Group, one capable of carrying out independent research in the field of hormone dependent tumours.
- 2) A physician/investigator in reproductive endocrinology to work with the M.R.C. Group in Reproductive Biology.

Appropriate candidates will have academic appointments at the University of Western Ontario. Salary to be negotiated within University guidelines.

Interested persons should reply in confidence to: **Dr. Paul Harding, Chairman, Department of Obstetrics and Gynaecology, University of Western Ontario, 339 Windermere Road, London, Ontario, Canada N6A 5A5.** Please include curriculum vitae.

### The USDA Human Nutrition Research Center (HNRC) on Aging at Tufts University RESEARCH ASSOCIATE

To participate in experiments designed to assess bone's remodeling response to different load regimes in relation to age, nutrition, and hormonal status. The experiments will use an animal model to investigate the role of these variables in the development of senile and postmenopausal osteoporosis. An interest and previous experience in biomechanics, calcium metabolism, and/or methods for the assessment of bone remodeling are desirable.

M.A./M.S. required. The position may be filled up to the postdoctoral level and is funded in the first instance for a period of 12 months.

Please send a letter of interest and curriculum vitae by 7 January 1983 to:

**Thomas D. Sykes  
Tufts HNRC  
Personnel Office, Room 918  
711 Washington Street  
Boston, Mass. 02111**

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

### NATIONAL RESEARCH COUNCIL STAFF OFFICER

The Commission on Life Sciences is seeking a Ph.D. in the life sciences or M.D. to serve as staff to a committee studying defensive measures against mycotoxin agents. The individual should have a broad scientific background with at least 5 years of experience in a life science field, preferably with some specific knowledge of the effects and protection against the effects of mycotoxins on humans, lower animals, and the ecology. Demonstrated strong administrative and communication skills and ability to deal with complex, science/public policy issues are required. Please submit résumé immediately to:

**Dr. Alvin G. Lazen  
Executive Director, Commission on Life Sciences  
National Research Council  
2101 Constitution Avenue, NW  
Washington, D.C. 20418**  
*An Equal Opportunity Employer*

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH POSITION

An immediate opening for a postdoctoral fellow performing research on the regulation of fatty acid metabolism in *Escherichia coli* is available. A background in synthetic organic chemistry, enzymology, and immunotechnical methods is preferred. Send curriculum vitae and three references to: **Dr. William D. Nunn, Molecular Biology and Biochemistry, University of California, Irvine, California 92717.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

## PROGRAM

**THE MOUNT DESERT ISLAND (MDI) BIOLOGICAL LABORATORY**, Salsbury Cove, Maine, announces Friday, 14 January 1983, as the deadline for applications for research space during the summer season, 1 June to 30 September 1983. Facilities for 30 research groups are available. Applications for research space during the winter season, 1 October 1983 to 31 May 1984, may be submitted at any time. Facilities for six groups are available. For further information, write or telephone:

**Jonathan S. Gormley, Executive Secretary  
MDI Biological Laboratory  
Salsbury Cove, Maine 04672  
Telephone: 207-288-3605**

## ASSISTANTSHIPS

**RESEARCH OR TEACHING ASSISTANTSHIPS.** M.S. and Ph.D. program in biochemistry. Young and dynamic program with the largest graduate biochemistry enrollment in the Dallas-Fort Worth area. Stipends range from \$7200 to \$8400 annually to qualified individuals. For information, write: **Biochemistry GAC, Department of Biochemistry, North Texas State University, Denton, Texas 76203.** *North Texas State University is an Equal Opportunity/Affirmative Action Employer.*

## FELLOWSHIPS

### FELLOWSHIPS IN REPRODUCTIVE BIOLOGY NORTHWESTERN UNIVERSITY

Postdoctoral and predoctoral fellowships are available for outstanding students in reproductive biology. A diverse but cohesive program offers research in the biochemical, cellular, physiological, and behavioral aspects of reproduction. Participating faculty include: Erwin Goldberg (immunochemistry and reproductive biochemistry), Mary Hunzicker-Dunn (ovarian biochemistry), William Klein (receptors; CNS differentiation), Neena Schwartz (gonadal-pituitary endocrinology), and Fred Turek (photoperiodism and biological rhythms). Support is available through an NIH training grant. Send curriculum vitae and names of three references to: **Dr. Neena Schwartz, Department of Neurobiology and Physiology, Northwestern University, Evanston, Illinois 60201.**

*An Equal Opportunity Employer*

**POSTDOCTORAL FELLOWSHIP—DEVELOPMENTAL IMMUNOLOGY.** To work on the immunobiology and membrane biochemistry of differentiating lymphoid cells. Particular interest in the interaction of T cell vesicles and those shed from lymphoma systems with functional classes of B cells. Stipend commensurate with experience and within NIH guidelines. Send names of three references and curriculum vitae to: **Dr. Harold C. Miller, Department of Microbiology, Giltner Hall, Michigan State University, East Lansing, Mich. 48824-1101.** *An Affirmative Action/Equal Opportunity Institution.*

### POSTDOCTORAL FELLOWSHIPS

Recent Ph.D. with experience in several of these areas: protein purification, immunologic techniques, biological and artificial membranes, intracellular processing and/or cell culture for study on regulation of hepatic hemoproteins (including P450's). Curriculum vitae and three references to:

**Dr. U. Muller-Eberhard  
Room N-804  
Cornell University Medical Center  
525 East 68 Street  
New York, New York 10021  
Telephone: 212-472-6322**

## GRADUATE STUDY

**GRADUATE STUDY IN BIOCHEMISTRY** at Clemson University leading to M.S. and Ph.D. degrees. The Biochemistry Department, consisting of seven full-time faculty members, is housed in modern research facilities. Active areas of research investigation include physical biochemistry of proteins, enzymology, lipid biosynthesis and membrane structure, neuroamines, gene structure, and nucleic acid biochemistry. Graduate stipends of up to \$7000 are available to qualified students. Applications for admission should include GRE scores, undergraduate transcripts, and two letters of recommendation. *Females and minority students are encouraged to apply.* For more information, write: **Head, Department of Biochemistry, Clemson University, Clemson, S.C. 29631.** *Clemson University is an Affirmative Action/Equal Opportunity Employer.*

### GRADUATE STUDY IN BIOCHEMISTRY

**GRADUATE ASSISTANTSHIPS IN BIOCHEMISTRY** leading to the Ph.D. degree are available for the 1983-1984 academic year to qualified applicants. The department has a challenging academic and vigorous research program in a broad range of biochemical disciplines. Stipends for 12-month appointments begin at \$7000. Write: **Dr. William P. Kolb, Department of Biochemistry, The University of Texas Health Science Center at San Antonio, San Antonio, Texas 78284.** *An Equal Opportunity/Affirmative Action Employer.*

## SYMPOSIUM

### CONTEMPORARY PROBLEMS IN PLANT ANATOMY

**DUKE UNIVERSITY and THE UNIVERSITY  
OF NORTH CAROLINA AT CHAPEL HILL,  
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