

Slate Belt, Chilton County, Alabama"); and Atlantic and Gulf Coastal Plains (31 examples, from "Mesozoic and Cenozoic compressional faulting along the Coastal Plain margin, Fredericksburg, Virginia" to "The Bayou Lafourche delta, Mississippi River delta plain, Louisiana"). An index and a list of "topical cross-references" are included.

—K.L.

The "Discovery" of Sudden Infant Death Syndrome. Lessons in the Practice of Political Medicine. ABRAHAM B. BERGMAN. Praeger, New York, 1986. xiv, 239 pp. \$42.95.

This volume is a memoir, written by a former president of the National SIDS Foundation, of the campaign to obtain recognition of sudden infant death syndrome as a disease entity warranting a federally supported research effort. The book includes accounts of the experiences of parents of SIDS victims who became active in the campaign, efforts to enlist the support of such personages as Mary Lasker, Warren Magnuson, and Lola Redford, and attempts to utilize the media and penetrate federal bureaucracies. Written in an informal style, it also reports on uncertainties, frustrations, and irritations among the activists themselves. The author, who admittedly writes from an advocacy position and lays "no claim to scientific objectivity," views the book as "a cookbook for other neglected health problems or social causes." Readers who are interested in the SIDS campaign as a case study in the making of medical research policy might be interested in reading it in conjunction with two other accounts of concern with the problem: M. P. Johnson and K. Hufbauer, "Sudden infant death syndrome as a medical research problem since 1945" (*Social Problems* 30 (no. 1), 65 [1982]), and K. Hufbauer, "Federal funding and sudden infant death research, 1945-80" (*Social Studies of Science* 16, 61 [1981]).—K.L.

Perspectives in Behavior Genetics. JOHN L. FULLER and EDWARD C. SIMMEL, Eds. Erlbaum, Hillsdale, NJ, 1986. xii, 278 pp., illus. \$36.

The purpose of this volume, the editors write, is to meet "a need for people who have planned and executed long-term research programs [in behavior genetics] to summarize and comment on the results." In an opening chapter Fuller and Simmel trace the development of behavior genetics over the last quarter-century as evidenced by the number and character of publications in the field. The subsequent chapters report on the Colorado Family Reading Study (De Fries, Vogler, and Labuda), the genetics of audiogenic seizures in mice (Henry), the role of

heredity in visual preference and perceptual imprinting in Japanese quail (Kovach), classical conditioning experiments in two dipteran species (Ricker, Hirsch, Holliday, and Vargo), and genetic factors in human reactions to alcohol (Stabenau). The volume includes an author index and a brief subject index.—K.L.

Books Received

Condensed Matter Theories. Vol. 1. F. B. Malik, Ed. Plenum, New York, 1986. xii, 342 pp., illus. \$59.50. From a workshop, San Francisco, Aug. 1985.

Conduction of Heat in Solids. H. S. Carslaw and J. C. Jaeger. Clarendon (Oxford University Press), New York, 1986. x, 510 pp., illus. Paper, \$32.50. Reprint, 1959 edition.

Connective Tissue. Biological and Clinical Aspects. K. Kühn and T. Krieg, Eds. Karger, Basel, 1986. x, 486 pp., illus. \$194.50. Rheumatology, vol. 10.

Conscious and Unconscious Programs in the Brain. Benjamin Kissin. Plenum Medical, New York, 1986. xxii, 384 pp., illus. \$45. Psychobiology of Human Behavior, vol. 1.

Environmental Magnetism. Roy Thompson and Frank Oldfield. Allen and Unwin, Winchester, MA, 1986. xii, 227 pp., illus. \$50.

Enzyme Immunodiagnosis. Edouard Kurstak. Academic Press, Orlando, FL, 1986. xii, 235 pp., illus. \$34.95.

Free Radicals, Aging, and Degenerative Diseases. John E. Johnson, Jr. et al., Eds. Liss, New York, 1986. xvi, 588 pp., illus. \$140. Modern Aging Research, vol. 8.

A Functional Biology of Nematodes. David A. Wharton. Johns Hopkins University Press, Baltimore, 1986. x, 192 pp., illus. \$30.

Fundamental Astronomy and Solar System Dynamics. Invited Papers honoring Prof. Walter Fricke on the Occasion of His 70th Birthday. R. L. Duncombe, J. H. Lieske, and P. K. Seidelmann, Eds. Reidel, Dordrecht, 1985 (U.S. distributor, Kluwer, Norwell, MA). x, 349 pp., illus. \$47. From a meeting, Austin, TX, March 1985. Reprinted from *Celestial Mechanics*, vol. 37, no. 3.

H. G. Wells. Desperately Mortal. A Biography. David C. Smith. Yale University Press, New Haven, CT, 1986. xviii, 634 pp., illus. \$29.95.

High Technology Medicine. Benefits and Burdens. Bryan Jennett. 2nd ed. Oxford University Press, New York, 1986. xii, 317 pp., illus. Paper, \$14.95. Oxford Medical Publications.

Higher Learning. Derek Bok. Harvard University Press, Cambridge, MA, 1986. xii, 206 pp., illus. \$15.

The Hippocampus. Robert L. Isaacson and Karl H. Pribram, Eds. Plenum, New York, 1986. Vol. 3. xviii, 438 pp., illus. \$59.50. Vol. 4. xxiv, 374 pp., illus. \$57.50.

International Reference Ionosphere—Status 1985/86. K. Rawer and Y. V. Ramanamurty, Eds. Published for the Committee on Space Research by Pergamon, New York, 1986. vi, 131 pp., illus. Paper, \$52. Advances in Space Research, vol. 5, no. 10. From a workshop, Louvain-la-Neuve, Belgium, Oct. 1985.

Introduction to Optical Mineralogy. William D. Nesse. Oxford University Press, New York, 1986. x, 325 pp., illus., + pull-out chart. \$39.95.

Ion Formation from Organic Solids (IFOS III). Mass Spectrometry of Involatile Material. A. Benninghoven, Ed. Springer-Verlag, New York, 1986. x, 219 pp., illus. \$44.60. Springer Proceedings in Physics, vol. 9. From a conference, Münster, FRG, Sept. 1985.

Knowing Levels and Developmental Stages. Robert L. Campbell and Mark H. Bickhard. Karger, Basel, 1986. xii, 148 pp. \$24.50. Contributions to Human Development, vol. 16.

Lampbrush Chromosomes. H. G. Callan. Springer-Verlag, New York, 1986. x, 254 pp., illus. \$110. Molecular Biology Biochemistry and Biophysics, 36.

Land Clearing and Development in the Tropics. R. Lal, P. A. Sanchez, and R. W. Cummings, Jr., Eds. Balkema, Boston, 1986. xii, 450 pp., illus. \$60. From a conference, Ibadan, Nigeria, Nov. 1982.

The Laser Guidebook. Jeff Hecht. McGraw-Hill, New York, 1986. xii, 381 pp., illus. \$49.50.

Lead Toxicity. History and Environmental Impact. Richard Lansdown and William Yule, Eds. Johns Hopkins University Press, Baltimore, 1986. x, 286 pp., illus. \$35. Johns Hopkins Series in Environmental Toxicology.

Learning About Energy. David J. Rose. Plenum, New York, 1986. xxii, 506 pp., illus. \$59.50. Modern Perspectives in Energy.

The Lectins. Properties, Functions, and Applications in Biology and Medicine. Irvin J. Goldstein, Eds. Academic Press, Orlando, FL, 1986. xviii, 600 pp., illus. \$72.50. Molecular Biology.

Multiphase Chemical Reactors. Theory, Design, Scale-up. Agostino Gianetto and Peter L. Silveston, Eds. Hemisphere, New York, 1986. xiv, 682 pp., illus. \$110. Based on a course, Kitchener, Ontario, Oct. 1982.

Myocardial and Skeletal Muscle Bioenergetics. Nachman Brautbar, Ed. Plenum, New York, 1986. xiv, 678 pp., illus. \$95. Advances in Experimental Medicine and Biology, vol. 194. From a congress, Los Angeles, Feb. 1984.

Nuclear Data for Basic and Applied Science. Philip G. Young et al., Eds. Gordon and Breach, New York, 1986. 2 vols. lxxvii, 1744 pp., illus. \$380. From a conference, Santa Fe, NM, May 1985. Reprinted from *Radiation Effects*, vols. 92-96.

Origins of Life. Freeman Dyson. Cambridge University Press, New York, 1985. x, 81 pp., illus. \$7.95.

The Origins of Maya Art. Monumental Stone Sculpture of Kaminalyuj, Guatemala, and the Southern Pacific Coast. Lee Allen Parsons. Dumbarton Oaks Research Library and Collection, Washington, DC, 1986. x, 134 pp. + plates. Paper, \$30. Studies in Pre-Columbian Art and Archaeology, no. 28.

The Oxford Companion to Medicine. John Walton, Paul B. Beeson, and Ronald Bodley Scott, Eds. Oxford University Press, New York, 1986. 2 vols. xxviii, 1524 pp., illus. \$85.

Parapsychology. The Science of Psiology. Carroll B. Nash. Thomas, Springfield, IL, 1986. viii, 336 pp. Paper, \$29.75.

The Periodic Table of the Elements. F. J. Puddephatt and P. K. Monaghan. 2nd ed. Clarendon (Oxford University Press), New York, 1986. x, 102 pp., illus. \$27.50; paper, \$10.95. Oxford Chemistry Series, 32.

Protein Secretion and Export in Bacteria. Henry C. Wu and Phang C. Tai, Eds. Springer-Verlag, New York, 1986. x, 211 pp., illus. \$69. Current Topics in Microbiology and Immunology, 125.

The Semiotic Sphere. Thomas A. Sebeok and Jean Umiker-Sebeok, Eds. Plenum, New York, 1986. xiv, 647 pp., illus. \$85. Topics in Contemporary Semiotics.

Sewall Wright and Evolutionary Biology. William B. Provine. University of Chicago Press, Chicago, 1986. xvi, 545 pp., illus. \$30. Science and its Conceptual Foundations.

Stochastic Optimal Control. Theory and Application. Robert F. Stengel. Wiley-Interscience, New York, 1986. xvi, 638 pp., illus. \$54.95.

Strength of Inorganic Glass. Charles R. Kurkjian, Ed. Plenum, New York, 1985. xiv, 643 pp., illus. \$97.50. NATO Conference Series 6, vol. 11. From a workshop, Algarve, Portugal, March 1983.

Structure and Dynamics of Molecular Systems II. R. Dandel et al., Eds. Reidel, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). viii, 308 pp., illus. \$59.50. From a seminar, Paris, Oct. 1983-May 1985.

Studies on the Structure and Development of Vertebrates. Edwin S. Goodrich. University of Chicago Press, Chicago, 1986. xxiv, 837 pp., illus. Paper, \$30. Augmented reprint, 1930 ed.

Systems with Small Dissipation. V. B. Braginsky, V. P. Mitrofanov, and V. I. Panov. Kip S. Thorne and Cynthia Eller, Eds. University of Chicago Press, Chicago, 1985. xii, 145 pp., illus. \$28; paper, \$12. Translated from the Russian edition (Moscow, 1981) by Erast Gliner.

Technetium in the Environment. G. Desmet and C. Myttenaere, Eds. Elsevier, New York, 1986. xiv, 419 pp., illus. \$90.75. From a seminar, Cadarache, France, Oct. 1984.

Teeth. Simon Hillson. Cambridge University Press, New York, 1986. xx, 376 pp., illus. \$44.50. Cambridge Manuals in Archaeology.

Whales, Ice, and Men. The History of Whaling in the Western Arctic. John R. Bockstoe. Published in association with the New Bedford Whaling Museum, MA, by the University of Washington Press, Seattle, 1986. 400 pp., illus. \$29.95.

The Wild Mouse in Immunology. M. Potter, J. H. Nadeau, and M. P. Cancro, Eds. Springer-Verlag, New York, 1986. xvi, 395 pp., illus. \$67. Current Topics in Microbiology and Immunology, 127.

Products & Materials

Image Analysis System

SAVE is a scanning and vector analysis hardware and software system that can collect an image, identify objects of interest, delineate object boundaries, and produce a vector map of all objects in a scene. It operates on color or black-and-white images and creates maps and histograms of all geometric variables that describe objects in the image. SAVE delineates and vectorizes all objects in an image at a rate of 1000 objects per second. The system can receive images from a microscope-mounted camera, scanning electron microscope, computerized axial tomography scanner, solid-state camera, or any device that produces a picture. SAVE operates on DEC MICROVAX II computers. Everest Geotech. Circle 620.

Word Processing Package for Scientists

VUWRITER is a complete word processor with extra features for scientists. It has full character sets for Greek letters and scientific and Teletex symbols. The user may construct brackets and integral signs of arbitrary height. The on-screen overstrike capability allows complex characters to be built. VUWRITER can create boxes, reversed text, and shaded areas, and it can create character sets for any European language, including Russian. Existing Wordstar files may be processed. VUWRITER supports many printers, including laser printers. To operate, the program requires an IBM PC or a true compatible with 256 kilobytes of random access memory, MS-DOS 2.0 or later, a graphics card, and two floppy disk drives or a hard disk and one floppy disk drive. Elsevier-BIOSOFT. Circle 590.

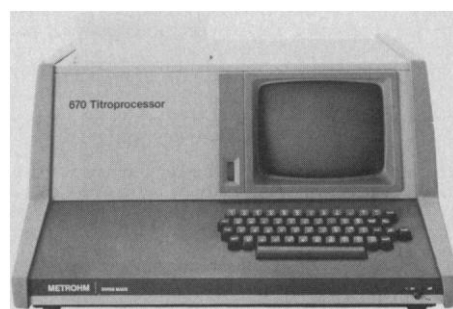
FFT Subroutine Library

PRIME FACTOR FFT is a Fast Fourier Transform Subroutine Library callable from any high-level language, including Turbo Pascal, Fortran, BASIC, C, or assembly language. The library includes the forward and inverse FFT for single- and double-

precision, floating point, complex number sets. The user may perform frequency analyses on data sets as small as 2 data points or as large as 65,520 data points. Written in assembly language to efficiently use the 8087-80287 math coprocessor, PRIME FACTOR FFT can calculate a 1008-point array in less than 2.5 seconds. The program has error levels as low as 3.3307×10^{-16} in double precision. PRIME FACTOR FFT operates on the IBM PC, XT, AT, or compatibles equipped with an 8087 math coprocessor. Alligator Transforms. Circle 607.

Programmable Titrator and Controller

The Metrohm 670 Titrator displays titration curves on its monitor in real time, allowing operator intervention when necessary. Programs and results also may be displayed on the monitor or printed with the built-in printer. The 670 stores up to 30 titration routines—5 preprogrammed and



25 programmed by the user. Each routine may include up to 4 individual titrations with 16 programmable mathematical formulas per routine. One sample changer with two lift stations or two sample changers with one lift station each are also programmable. The programming language of the 670 is BASIC, but it accepts plain English controls and commands. Brinkmann Instruments. Circle 589.

Genetic Information Software and Data Base

CD/Biotech is a software and data base package supplied on a read-only compact laser disk. The disk contains GenBank, the Protein Identification Resource, the Yale University Human Gene Map Library, a selection of biotechnology and biochemistry abstracts, DNA sequence manipulation software, and several scientific software packages in the public domain. CD/Biotech requires a standard CD-ROM reader and an IBM PC or compatible personal computer;

software provided with CD/Biotech makes the CD appear as a hard-disk drive with a large number of directories. The system will be updated and expanded with new sequence information and software twice a year. International Association for Scientific Computing. Circle 619.

X-Ray Diffraction Computer System

The D 500 PC is a fully automated x-ray diffraction system consisting of a D 500 diffractometer, a K 710 H x-ray generator, a DACO-MP microcomputer controller, an IBM PC AT computer, and Diffract AT software. Diffract AT is an interactive, menu-driven program that is simple to use and flexible enough to perform demanding diffraction tasks. It is very fast and has graphing capabilities. Siemens Energy & Automation, Inc. Circle 609.

Literature

PERSPECTIVE is a two- and three-dimensional graphic software package for personal computers that is described in two data sheets. Three/D/Graphics. Circle 571.

Lab Animal Health Report contains documentation on the health of strains of mice and rats. Taconic. Circle 572.

Solutions Without Programming describes several programs for a data acquisition and control system. Acrosystems. Circle 573.

Applications Note on Reflectance Measurements reviews three instrumental designs for measuring reflectance. Labsphere. Circle 574.

Preparing Physiological Samples for Amino Acid Analysis describes an ultrafiltration method for removing protein from plasma samples before amino acid analysis. Amicon Division of W. R. Grace. Circle 575.

Photodiodes is a 48-page catalog of silicon photoconductive detectors, photovoltaic detectors, detector-filter combination diodes, and custom photodiodes. EG&G Photon Devices. Circle 579.

SB-580 is a brochure that features isothermal gas chromatographs. GOW-MAC Instrument. Circle 581.

More Glycohemoglobin Confusion includes information on glycosylated serum protein assays. Isolab. Circle 600.

Phycobiliproteins as Fluorescence Tracers is a monograph about an immunofluorescence microscopy technique. Biomed. Circle 601.

Superflo Columns introduces a line of radial flow chromatography columns that can be used with any type of column packing. Sepragen. Circle 604.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

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

LINE CLASSIFIED ADVERTISING DEADLINES:
16 January issue (mailed 16 January): **2 January**
23 January issue (mailed 23 January): **9 January**
30 January issue (mailed 30 January): **16 January**
6 February issue (mailed 6 February): **23 January**

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Washington, DC 20005
Telephone: 202-326-6555

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

Blind ad replies should be addressed as follows:

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1333 H Street, NW
Washington, DC 20005

POSITIONS WANTED

Bacteriologist/Pharmacist—Two doctorate degrees in pharmacy (Middle East and Paris University). Two special certificates in bacteriology and parasitology (Paris). Fifteen years experience teaching, research, clinical work in bacteriology, School of Medicine Middle East. Job desired: bacteriological or pharmaceutical work; research, clinical, industrial, so forth. Box 221, SCIENCE. 12/19; 1/2, 9

Biologist, Ph.D. Academic training in genetics and statistics. Experience in cell biology, molecular biology, and computers seeks industrial position, south or west. Box 227, SCIENCE. 12/19; 1/2

Materials Scientist/Ceramic Engineer, M.Sc. Exp. composites, metal-ceramics, investment casting (ds and sc crystallization), refractories and materials characterization. Box 224, SCIENCE. 12/19; 1/2, 9

Molecular Geneticist (Ph.D. 1984.) Background in Fisheries and Agriculture. Proficient in practical applications of isozyme and Southern blot screening techniques. Some cloning experience. Interested in geneticist position in academic or research institute environment, USA or abroad. Box 226, SCIENCE. 12/19; 1/2

Physiologist/Biophysicist/Immunologist, Ph.D. 1967. Cardiovascular/GI physiology, circulation. Shock pathophysiology, therapy. Infection and endotoxemia. Heat stroke and sports medicine. Immunochimistry. Protein modification, immobilization. Muscle contraction. Leader of successful Anti-LPS antibody group. Currently senior academic position physiology/biochemistry. Seeking senior vet, medical or biology position. Box 228, SCIENCE. 12/19; 1/2

POSITIONS WANTED

Research Biotechnology. M.S. with industrial experience, desires challenging laboratory position. Laboratory experiences include molecular biology, recombinant DNA, fermentation scale-up, microbial strain and process development, and utilization of radioisotopes. Separations techniques include: LC, HPLC, agarose/polyacrylamide electrophoresis, ultrafiltration, and supercritical fluid extraction. Box 208, SCIENCE. X

Technical Writer, Ph.D. Twenty years of experience in research and writing for scientific, technical, and popular markets. Credits include fifteen books in three languages and articles in varied scientific and academic journals. Seeks freelance projects of all kinds, including manuals, software documentation, grants and proposals, library research, manuscript critiques and editing, ghostwriting, lectures, and speeches. Box 214, SCIENCE. 12/12, 19; 1/2

POSITIONS OPEN

ADVANCED ASSISTANT PROFESSORSHIP

The University of Iowa Department of Chemistry anticipates making an appointment at the advanced assistant professor level for an individual with established track records in research and teaching. The candidate's area of research is open to all fields of chemistry, including biochemistry. Applicants should submit curriculum vitae, a summary of research interests (including past and present research grant support), a statement of teaching accomplishments and interests, and arrange for three letters of recommendation. Applications from qualified women and minorities are strongly encouraged. Send application material to: **Dr. Leodis Davis, Professor and Chairman, Department of Chemistry, the University of Iowa, Iowa City, IA 52242.** Early application is encouraged. *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSORSHIPS

The Biochemistry and Molecular Biology Department of the Medical University of South Carolina has two tenure-track positions to be filled by 1 July 1987. A Ph.D. and at least 2 years of postdoctoral experience are required. Qualified individuals with research interests in the areas of physical biochemistry and molecular biology are invited to apply. The successful applicant is expected to establish an independent research program and to participate in the teaching activities of the department. The deadline for application is 15 February 1987. Letter of application, curriculum vitae, and the names of at least three references should be sent to: **Dr. Barry E. Ledford, Department of Biochemistry and Molecular Biology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.**

Equal Opportunity/Affirmative Action Employer

BROWN UNIVERSITY Assistant Professor, Biochemistry

A full-time, tenure-track appointment for an assistant professor is available as of 1 July 1987 in the Section of Biochemistry, Division of Biology and Medicine. We seek someone investigating biochemical mechanisms or biological phenomena at the molecular level. This person will be expected to develop an independent research program and participate in the teaching of an integrated biochemistry curriculum for undergraduate, graduate, and medical students. The section is part of the graduate program in molecular biology, cell biology, and biochemistry. The candidate should have a doctoral degree and at least 2 years of postdoctoral research experience.

Send curriculum vitae, a brief statement of research plans, and have three letters of recommendation forwarded no later than 1 February 1987 to:

Dr. Albert E. Dahlberg
Section of Biochemistry
Brown University, Box G—JWWL
Providence, RI 02912

Brown University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA (UC), SAN DIEGO

The Department of Psychology at the University of California, San Diego anticipates hiring assistant professors in tenure-track positions. It is expected that employment will begin in the 1987 to 1988 academic year. Although the department is interested in all outstanding candidates in experimental psychology, emphasis will be placed on the following areas: Cognitive science, physiological psychology and neuroscience, developmental psychology, and applied experimental/social psychology. Within each of these areas, we will search for excellence rather than specific area of interest. Candidate must have a Ph.D., preferably in experimental psychology emphasizing one of the above areas. Candidate must be able to conduct independent, publishable research and teach undergraduate and graduate classes in area of specialization. Salary commensurate with qualifications and based on UC pay scale. Please send curriculum vitae, reprints, and names of three referees. Complete applications must be received before 30 January 1987.

Please apply to relevant search committee(s):

Search Committee (Cognitive Science) and/or Search Committee (Physiological and Neurosciences) and/or

Search Committee (Developmental) and/or Search Committee (Applied Social and Experimental) Department of Psychology C-009 University of California, San Diego La Jolla, CA 92093

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

ASSISTANT PROFESSOR OF BIOCHEMISTRY.

A tenure-track position at the level of assistant professor is available in the Graduate Department of Biochemistry. We are seeking high quality applicants from all segments of the scientific community. Area of research interests is open. Curriculum vitae, description of research interests, and letters of recommendation should be sent to: **Dr. Christopher Miller, Chairman, Search Committee, Graduate Department of Biochemistry, Brandeis University, Waltham, MA 02254.** *Brandeis University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR— NEUROENDOCRINOLOGIST

THE DEPARTMENT OF BIOLOGICAL SCIENCES at the University of Wisconsin—Milwaukee announces a tenure-track position in NEUROENDOCRINOLOGY. We seek an individual with postdoctoral experience and research expertise in cellular or molecular aspects of neuroendocrine function. Research interests should complement those of existing faculty in physiology (for example, neuroendocrine regulation of behavior, reproduction, or cardiovascular function). In addition to establishing an active extramurally funded research program, the successful candidate is expected to teach an introductory anatomy and physiology course and a course in neurobiology to advanced undergraduate and graduate students.

Applicants must provide a curriculum vitae, recent reprints, a concise statement of research and teaching goals, and have three letters of recommendation sent to: **Chair, Search Committee for Neuroendocrinologist, Department of Biological Sciences, University of Wisconsin, P.O. Box 413, Milwaukee, WI 53201.** Closing date: 1 February 1987.

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

ASSISTANT PROFESSOR OF PSYCHOLOGY

The Colorado College Department of Psychology invites application for tenure-track assistant professor level position in experimental psychology beginning September 1987. Ph.D. and competence in memory and learning, and research design required. Applicant should have commitment to undergraduate education at a selective private liberal arts college. Reduced teaching load and start-up budget for first year. Send letter of application, résumé, graduate transcript, publication reprints (if available), and three letters of reference to: **Dr. Don Shearn, Chair, Department of Psychology, Colorado College, Colorado Springs, CO 80903.** Completed applications should be received by 15 February 1987. *Colorado College is an Equal Opportunity Employer and applications from women and minorities are encouraged.*

POSITIONS OPEN

AGRICULTURAL CHEMIST III MASS SPECTROSCOPIST CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE CHEMISTRY LABORATORY SERVICES

Applications are sought for permanent full-time positions located in Sacramento and Anaheim. Candidates should have a strong background in pesticide residue chemistry and mass spectroscopy, but others with related experience are encouraged to apply. An oral examination for these positions, with a final filing date of 31 January 1987, will be conducted during February 1987. Appointments are anticipated to begin during the first quarter of 1987. Interested applicants should contact **Dr. George R. Tichelaar, 3292 Meadowview Road, Sacramento, CA 95832. Telephone: 916-427-4595** for more information on the positions, a copy of the examination announcement, and an application form. *The State of California is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR EVOLUTIONARY BIOLOGY

The Department of Zoology of the University of Wisconsin-Madison invites applications for a tenure-track position at the rank of assistant professor. Candidates should have research interests centered on evolutionary mechanisms and hypotheses at the population, organismal or molecular level or a combination of these. Possible areas of specialization might include but are not limited to: (i) functional or developmental morphology, (ii) vertebrate macroevolution, (iii) modes of speciation, or (iv) evolutionary genetics. Emphasis will be placed on hiring an outstanding individual rather than on selecting the specific research specialization. Responsibilities will include teaching at both the graduate and undergraduate levels, supervision of graduate students and development of an independent research program. Applicants should submit a curriculum vitae, statement of research interests and the names of three references by 2 February 1987 to: **Seymour Abrahamson, Chairman, Department of Zoology, University of Wisconsin, Madison, WI 53706.**

The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer; applications from minority and women candidates, handicapped individuals and other qualified persons are encouraged.

ASSISTANT PROFESSOR OF PHYSIOLOGY

The Department of Physiology, Kirksville College of Osteopathic Medicine, is seeking an individual with a Ph.D. and postdoctoral experience in physiology for a tenure-track position. Responsibilities include teaching medical physiology and establishing an extramurally supported research program. Although applicants are not being selected from a specific research area, current research activities in the department include cardiovascular and cellular physiology. Send curriculum vitae, three references and a brief description of current research activity to: **Lex C. Towas, Ph.D., Assistant Dean/Basic Science, Kirksville College of Osteopathic Medicine, Kirksville, MO 63501. Deadline for receipt of application is 1 February 1987. The Kirksville College of Osteopathic Medicine is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT/ASSOCIATE PROFESSOR Department of Physiology School of Medicine Meharry Medical College

Applications are invited for a 12-month tenure-track position. The successful candidate will share responsibility for the teaching of cardiovascular physiology to medical and dental students. Candidates must have a relevant Ph.D. degree (or equivalent) with postdoctoral experience, the potential for developing a vigorous and production research program and the ability to obtain extramural funding.

Applicants should send curriculum vitae, description of research interest, and the names and addresses of three references to: **Dr. James G. Townsel, Ph.D., Professor and Chairman, Department of Physiology, Meharry Medical College, 1005 D. B. Todd Boulevard, Nashville, TN 37208.**

Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHYSIOLOGY.

Applications are invited for **tenure-track assistant professor positions.** Candidates with training in cellular physiology or biophysics are encouraged to apply; however, outstanding candidates in other areas of physiology will definitely be considered. Applicants should submit curriculum vitae, description of future research program and have three letters of reference sent to: **Dr. James T. Stull, Chairman, Department of Physiology, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9040. An Affirmative Action/Equal Opportunity Employer.**

The Ohio State University is seeking applications for a tenure-track position in veterinary clinical pharmacology at assistant or associate professor level. D.V.M. and/or Ph.D. required. Training, experience and interest in basic and clinical veterinary pharmacology preferred. Responsibilities include teaching, research, clinical service, developing independent research programs. Salary commensurate with experience. Submit curriculum vitae, letter of intent, names and addresses of three references by 20 February 1987 to: **Dr. Y. C. Lin, Chairman, Veterinary Physiology and Pharmacology, The Ohio State University, 1900 Coffey Road, Columbus, OH 43210. OSU is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT OR ASSOCIATE PROFESSOR OF WEED SCIENCE. Applications are invited for a tenure-track faculty position available 1 July 1987. The area of specialization is in weed science, involving a 70 percent effort in research and a 30 percent effort in teaching. The research assignment is to develop a basic program in weed science with a strong laboratory component. Areas of potential emphasis include herbicide metabolism and mode of action development of crop species for herbicide resistance and related areas. Applicants should send curriculum vitae, transcripts and names of three references to: **Dr. R. J. Wagenet, Department of Agronomy, 236 Emerson Hall, Cornell University, Ithaca, NY 14853. Application deadline is 1 March 1987.**

An Equal Opportunity/Affirmative Action Employer

ASSOCIATE PROFESSOR, tenure track, toxicology and pharmacology. Responsibilities: Maintenance of an active extramurally funded research program and participation in the graduate and undergraduate programs. Ph.D. in toxicology, pharmacology, or closely related discipline; demonstrate strong research record and excellence in teaching required. Preference given to candidates eligible for pharmacy licensure in New Mexico. Twelve-month appointment with starting date of 1 July 1987. Salary will be commensurate with experience and position will be filled contingent on funding. Deadline: 15 February 1987. Send letters, vitae, statement of career objectives, three references to: **Scott W. Burchiel, Chair, Toxicology Search Committee, University of New Mexico, College of Pharmacy, Albuquerque, NM 87131. Affirmative Action/Equal Opportunity Employer.**

FACULTY POSITION IN BIOCHEMISTRY AND MOLECULAR BIOLOGY MAYO CLINIC AND MAYO MEDICAL SCHOOL

Staff-level position in Department of Biochemistry and Molecular Biology. Outstanding molecular or developmental biologist with demonstrated expertise in either somatic cell or germ line gene transfer techniques preferred. Highly qualified individuals with other molecularly oriented research interests are also encouraged to apply. Appointment level and academic rank will be commensurate with qualifications. Mayo Clinic offers an outstanding research environment in a medical and academic setting. Send curriculum vitae, statement of research interests, and names of three references by 15 January 1987, to: **Dr. Michael J. Getz, Chairman, Search Committee, Department of Biochemistry and Molecular Biology, Mayo Clinic/Foundation, Rochester, MN 55905. Telephone: 507-284-2875. An Equal Opportunity/Affirmative Action Institution.**

POSITIONS OPEN

The Smith College Physics Department invites applications for a tenure-track position in experimental physics at the Assistant Professor level. The candidate should have a Ph.D., an interest in teaching, and research interests amenable to collaboration with undergraduates. Funds are available to establish a research program. *Located in western Massachusetts, Smith College is a leader in the education of women and has an outstanding record in the number of professional women physicists who are alumnae.* The Five College Consortium, comprised of Smith, Amherst, Mount Holyoke, and Hampshire Colleges and the University of Massachusetts provides a rich intellectual and cultural life for faculty and students, as well as additional collegial opportunities in teaching and research. A curriculum vitae, statement of teaching and research interests and experience, and three letters of reference should be sent to: **Professor Elizabeth Ivey, Chair, Department of Physics, Clark Science Center, Smith College, Northampton, MA 01063.** Applications should be received by 1 February 1987. *Smith College is an Equal Opportunity Employer.*

ASSISTANT FELLOW/ASSISTANT PROFESSOR—THE INSTITUTE OF BIOLOGICAL CHEMISTRY, WASHINGTON STATE UNIVERSITY, PULLMAN, is accepting applications for a permanent, tenure-track faculty position. A scientist with a Ph.D. in biochemistry, biology or a related discipline, with at least 2 years postdoctoral research experience or equivalent, an outstanding record of accomplishment, and exceptional research potential in an area of plant biochemistry or plant molecular biology is being sought. This faculty member will be expected to lead a vigorous and innovative research program and to participate in graduate education. The Institute provides an excellent environment and support for research. Send nominations or applications, including curriculum vitae, a short description of accomplishments, a statement of research interests and goals, and a list of three or more references, to: **Dr. Rodney Croteau, Director, Institute of Biological Chemistry, Washington State University, Pullman, WA 99164-6340, by 15 February 1987.** *Washington State University is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMIST. Applicants sought for a tenure-track position at the assistant professor level to begin August 1987. Ph.D. in biochemistry or chemistry required; Postdoctoral experience desirable and ability to teach clinical chemistry is preferred. Candidates will be expected to develop a vigorous research program involving undergraduates and M.S. students in an area which complements existing staff. A new \$24-million physical science building has been funded. Applicants are requested to send curriculum vitae, brief statement of research plans and equipment needs, and three letters of reference to: **Biochemistry Search Committee, Department of Chemistry, Central Michigan University, Mt. Pleasant, MI 48859.** Screening of applications will continue until position is filled. *CMU is an Equal Opportunity/Affirmative Action employer.*

BIOTECHNOLOGY DIRECTOR OF RESEARCH AND DEVELOPMENT

Excellent opportunity for Ph.D. immunologist or molecular biologist to coordinate R&D activities in development of diagnostic kits. Previous experience in ELISA, RIA, monoclonal antibodies, DNA-probes and 3 to 5 years of industrial experience. Research in a major animal disease preferred. Direct a distinctive team that has been first to the marketplace with new technology.

Send curriculum vitae to: **Corporate Human Resources Manager, TechAmerica Group, Inc., P.O. Box 1159, St. Joseph, MO 64502.**

PROJECT LEADER, RESEARCH AND DEVELOPMENT

Position open for Ph.D. or M.S., **Immunology or Molecular Biology.** Create research prototype diagnostic kit and direct project through development stage. Research in a major animal disease desirable. Experience with ELISA and monoclonal antibodies required. Join a team with proven track record.

Send curriculum vitae to: **Corporate Human Resources Manager, TechAmerica Group, Inc., P.O. Box 1159, St. Joseph, MO 64502.**

POSITIONS OPEN

ASSISTANT PROFESSOR: Psychobiology/Neuroscience Program in the Department of Psychology is seeking qualified candidates for a tenure-track, assistant professor position to begin August 1987. Candidates should have received their Ph.D. within the last 5 years, have an established publication record, and be qualified to teach courses at the undergraduate and graduate levels in basic neuroscience, behavioral neurochemistry (pharmacology), as well as own specialty area. Research interests should be in molecular or pharmacological mechanisms in the CNS at the systems level with special relevance to behavior. Excellent facilities and technical support available. Applicants should submit curriculum vitae and representative publications, and have sent three letters of recommendation to: **Search Committee, Psychobiology/Neuroscience Program, Department of Psychology, Florida State University, Tallahassee FL 32306-1051.** Applications completed before 12 February 1987 will be considered. *Florida State University is an Equal Opportunity Employer.*

THE DEPARTMENT OF BIOCHEMISTRY, DUKE UNIVERSITY MEDICAL CENTER invites applications for the position of **Assistant Professor** (tenure-track). The person will be expected to establish a strong independent research program and to teach both medical and graduate students. The field of interest is open, although some preference may be given to candidates interested in structural biochemistry or molecular aspects of cell biology. Send résumé, summary of research interest and three letters of reference to: **Robert L. Hill, Duke University Medical Center, Durham, NC 27710.** *Duke University is an Equal Opportunity/Affirmative Action Employer.*

The Department of Ophthalmology, University of Pittsburgh School of Medicine, invites applicants for a tenure-track **ASSISTANT PROFESSOR** position. The appointee is expected to develop a strong, creative research program on the study of diabetes and other metabolic and genetic diseases related to the eye, and will be expected to have experience with: (i) methods for studying insulin action and glucose metabolism in vitro in isolated cell systems; (ii) methods for assessing insulin action and glucose metabolism in vivo in normal and diabetic human subjects; (iii) methods for assessing insulin and somatostatin receptor binding in isolated cells; (iv) animal models of diabetes. Submit curriculum vitae, statement of research goals, and names of three references by 15 January 1987, to: **Richard A. Thoft, M.D., Professor and Chairman, Department of Ophthalmology, The Eye and Ear Institute of Pittsburgh, 203 Lothrop Street, Pittsburgh, PA 15213.**

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

BACTERIOLOGIST: Applications are invited for a tenure-track position, effective 1 July 1987, as **assistant professor or associate professor**, depending upon qualifications, in the Department of Microbiology and Immunology. Applicants should be bacteriologists and have a Ph.D. and postdoctoral training in microbial cell surfaces, the molecular basis of host-parasite relationships and/or biochemical aspects of microbial structure. Applicants must have demonstrated continuous ability to conduct and publish original, independent research. Address correspondence to: **Dr. N. R. Sinclair, Chairman, Department of Microbiology and Immunology, University of Western Ontario, London, Ontario, Canada N6A 5C1.** The deadline for applications is 1 March 1987. In accordance with Canadian Immigration requirements priority will be given to Canadian citizens and permanent residents of Canada. *The University of Western Ontario is an Equal Opportunity Employer.*

CHIEF OF ACADEMIC NEPHROLOGY UNIT, Dept. of Internal Medicine, The University of Texas Health Science Center at Dallas (UTHSCD). Rank: **Associate Professor or Professor.** Requirements: Faculty experience in nephrology; basic research experience with techniques of micropuncture and in vitro perfusion of isolated tubules for the purpose of characterizing active and passive transport systems in the kidney; clinical experience in management and supervision of dialysis, transplantation, and renal consultation, as well as in general internal medicine. Demonstrated academic leadership abilities. Send curriculum vitae and supporting documents to: **Donald W. Seldin, M.D., UTHSCD, 5323 Harry Hines Boulevard, Dallas, TX 75235-9030.** *UTHSCD is an Equal Opportunity Employer.*

POSITIONS OPEN

BIOCHEMIST—WILLIAMS COLLEGE has an anticipated opening for a **tenure-track position in biochemistry** for fall 1987 (Ph.D. required; postdoctoral experience preferred). Applicants should have a strong commitment to both teaching and research. Teaching assignments will encompass biochemistry courses and other courses in the chemistry curriculum consistent with the person's background and interests. A semester teaching load normally includes complete responsibility for one course with laboratory and supervision of senior research projects. Williams College is a highly selective, coeducational, liberal arts institution of approximately 160 faculty, 1950 undergraduates, and 25 to 35 chemistry majors each year, located in northwestern Massachusetts. The Chemistry Department is accredited by the ACS and has excellent facilities for teaching and research. Send résumé, undergraduate and graduate transcripts, description of research interests for undergraduates, and names of three references to: **Dr. James F. Skinner, Chairman, Department of Chemistry, Williams College, Williamstown, MA 01267,** by 15 January 1987. *Equal Opportunity/Affirmative Action Employer. We are especially interested in identifying minority and women candidates.*

BIOLOGY DEPARTMENT—Faculty Positions in Anatomy & Physiology—The Biology Department, Millersville University, invites applications for two tenure-track positions. Appointment is expected at the assistant professor level, but rank and salary are dependent upon the qualifications. Principal responsibility will be teaching an integrated anatomy and physiology course taken primarily by nursing students. The candidates should be willing to teach, on a rotating basis, general biology and specialty courses. An earned doctorate as well as demonstrated competence in teaching and research is required. Millersville University, located near Lancaster, PA, enrolls 7000 students, of whom 500 are biology majors. The successful candidates will work with 18 colleagues in a department that offers a variety of baccalaureate and master level programs. Send curriculum vitae, official transcripts, three letters of recommendation, and proof of teaching and research effectiveness to: **Anatomy and Physiology Search Committee, Department of Biology, Millersville University, Millersville, PA 17551.** Applications will be reviewed beginning 15 January 1987, and continue until the positions are filled. *Millersville University is an Equal Opportunity/Affirmative Action Employer.*

CHAIRPERSON

The Department of Biology, College of Arts and Sciences, The American University, Washington, DC, invites applications and nominations for the position of chairperson. The Department consists of ten faculty serving students and undergraduate master's degree programs. The successful applicant will have administrative experience and an established record of research and teaching. The chairperson is responsible for administering the department, and promoting faculty research and program development. The chairperson is also expected to continue his/her research activities. Appointment will be at the level of associate or full professor. Competitive salary based on qualifications and experience. Position begins summer 1987. To apply: send a curriculum vitae and the names of three professional references by 15 January 1987 to: **Doctor Ann A. Hagan, Chair, Search Committee, Department of Biology, The American University, Washington, DC 20016.** *An Equal Opportunity Employer/Affirmative Action University; minorities and women candidates are encouraged to apply.*

CHAIRPERSON OF BIOCHEMISTRY COLLEGE OF MEDICINE UNIVERSITY OF SOUTH FLORIDA

Applications are invited from candidates having a distinguished record of teaching and research, proven leadership and administrative ability. The successful candidate must have M.D. and/or Ph.D. degree. The candidate must have an excellent record for obtaining external funding, experience in medical and graduate education and postdoctoral training.

Applicants should send a complete curriculum vitae and names of three references no later than 6 February 1987 to: **Dr. Carleton H. Baker, Department of Physiology and Biophysics, College of Medicine, Box 8, University of South Florida, Tampa, FL 33612.**

The University of South Florida is an Affirmative Action Equal Opportunity Employer.

POSITIONS OPEN

BIOLOGIST: The Division of Science, Mathematics, and Engineering, University of South Carolina (USC) at Sumter, invites applications for a tenure-track position for fall 1987 for a broadly trained zoologist. Duties include teaching human anatomy and physiology for nursing students and the teaching of other freshman and sophomore courses emphasizing evolution, animal diversity, and ecology. A candidate with a demonstrated commitment to undergraduate education and a Ph.D. in biology is sought. To apply, send curriculum vitae, transcripts, and three letters of reference by 15 January 1987 to: **Dr. Bob Nerburn, Chairman of Science, Mathematics, and Engineering, University of South Carolina at Sumter, Sumter, SC 29150-2498.** *USC-Sumter is an Affirmative Action/Equal Opportunity Employer.*

CELL AND DEVELOPMENTAL BIOLOGISTS

The Biology Department, University of South Florida (USF), invites applications for two tenure-track positions at the **assistant professor** level. One position will be filled in the area of molecular aspects of developmental biology and the other in cell biology. Interactions with the interdepartmental USF Institute for Molecular Biology and Biotechnology will be encouraged. Candidates should have at least 2 years of postdoctoral experience and have the desire to develop long-term independent research programs. USF is the second largest institution in the state, with an enrollment of approximately 27,000 students. The Department of Biology has 34 faculty members and offers B.S., M.S., and Ph.D. degrees. Applications, including curriculum vitae, a statement of future research interests, and three letters of recommendation should be sent before 30 January 1987 to either the **Cell Biology or Developmental Biology Search Committee, Biology Department, University of South Florida, Tampa, FL 33620.** *USF is an Affirmative Action/Equal Opportunity Employer.*

CHAIRMAN DEPARTMENT OF ANATOMY MARSHALL UNIVERSITY SCHOOL OF MEDICINE

The Marshall University School of Medicine is inviting applications or nominations for the position of chairman, Department of Anatomy, available on or before 1 July 1987. Candidates must possess a Ph.D. and/or M.D. degree and have demonstrated experience in administration and excellence in research and teaching medical graduate students. Applicants or nominations should be received by 30 January 1987, and should include curriculum vitae and names with addresses of three references to:

**Dr. Gary O. Rankin
Anatomy Chairman Search Committee
Marshall University School of Medicine
Huntington, WV 25704-2901**

An Equal Opportunity/Affirmative Action Employer

CHAIRMAN, DEPARTMENT OF ANATOMY Philadelphia College of Osteopathic Medicine

The Philadelphia College of Osteopathic Medicine (PCOM) invites applications for the position of Professor and Chairman of the Department of Anatomy. We are seeking an individual with strong leadership abilities to direct the educational and research programs of the department. Broad opportunities exist at PCOM, which is a recognized leader in osteopathic education, research and clinical practice. In addition, the City of Philadelphia offers a wide variety of educational and cultural opportunities.

Applicants for the position should have a Ph.D. or D.O./Ph.D., and a proven record in teaching, administration and research. Applications will be accepted until 30 January 1987. Interested candidates should send their curriculum vitae and the names, addresses, and telephone numbers of three references to:

**Walter C. Prozialeck, Ph.D.
Chairman, Search Committee
Department of Physiology and Pharmacology
Philadelphia College of Osteopathic Medicine
4150 City Avenue
Philadelphia, PA 19131**

PCOM is an Equal Opportunity Employer that offers a competitive salary and benefits package.

BIOANALYTICAL CHEMIST

Norwich Eaton Pharmaceuticals, Inc., a Procter & Gamble Company, is seeking a Ph.D. or Post Doctoral level bioanalytical chemist to increase its current capabilities in bioanalytical science. The preferred candidate will have modern training and experience in both biochemical and analytical systems, with a preference for skills and experience in modern chromatographic and spectrometric systems applied to the analysis of drugs in biological fluids. Skills and interests in miniaturized analytical probes to allow real-time analysis of organ systems will also be very desirable.

Norwich Eaton is located in a beautiful rural location in Central New York State in the Syracuse-Binghamton-Utica triangle, 200 miles northwest of New York City. Norwich Eaton offers a stimulating environment for professional growth coupled with a competitive employment package including paid relocation, and company paid health, dental and retirement benefits. Some of Norwich Eaton Rx products include: Macro-dantin, Dantrium, Vivonex, Entex L.A. and Buprenex. C.V.'s and inquiries should be addressed to:

Nicholas W. Andrews
Personnel Representative
Norwich Eaton Pharmaceuticals, Inc.
A Procter & Gamble Company
17 Eaton Avenue
Norwich, NY 13815 U.S.A.

An Equal Opportunity Employer

NATIONAL INSTITUTES OF HEALTH NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

POST-DOCTORAL FELLOWSHIPS

Research Fellowships for individuals with a Ph.D. or equivalent experience in areas relating to pharmacokinetics, chemical metabolism, disposition and/or mechanisms or chemical toxicity will be available beginning October 1986. Research projects will involve work on known or potential environmental contaminants studied as part of the National Toxicology Program. Salary range \$17,000 to \$35,000 depending on relevant post-doctoral experience. Send letter describing research interests, curriculum vitae, plus names and addresses of three references to:

Johnny L. McLean
Personnel Office
National Institute of Environmental Health Sciences
P.O. Box 12233
Research Triangle Park, NC 27709
(919) 541-3316

An Equal Opportunity Employer

U.S. citizenship or eligibility for naturalization within 4 years of appointment is required.

Announcement

Availability of Request for Applications: RFA-PC-01-87

"STUDIES OF THE PATHOLOGY OF FOREST TREES AS PRODUCED BY AIR POLLUTANTS"

U.S. Environmental Protection Agency

Application Receipt Date: March 16, 1987

The Office of Exploratory Research, Office of Research and Development, U.S. Environmental Protection Agency, announces the availability of a request for applications (RFA) on the above program.

The office invites applications from educational institutions and non-profit research organizations to investigate the effects of air pollutants (ozone and hydrogen peroxide, for example) on the physiology and biochemistry of forest trees.

Requests for copies of the RFA should be addressed to:

Louis Swaby
U.S. Environmental Protection Agency (RD-675)
401 M Street, Southwest
Washington, DC 20460
202/382-7445

DEAN OF THE GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

The University of Texas Health Science Center at San Antonio invites applications and nominations for the position of Dean of the Graduate School of Biomedical Sciences.

The Dean will initiate and coordinate research development activities within the Health Science Center and serves as the primary representative of the academic interests of the Graduate School of Biomedical Sciences. In addition, this individual provides administrative leadership in recommending personnel actions, budgets and budgetary policy, and space and other physical needs in the basic science departments of the Health Science Center. In these capacities the Dean reports directly to the President of the Health Science Center.

The candidate must have a Ph.D. or equivalent degree and a continuing record of accomplishments in the biomedical sciences, including a commitment to graduate education and an established record of funded research. The candidate should have previous experience in teaching and administration, as well as in working with interdisciplinary programs and in identifying research funding opportunities. Strong interpersonal skills and the ability to exercise academic leadership are essential qualifications.

The University of Texas Health Science Center at San Antonio is one of four University of Texas Health Science Centers and includes the School of Allied Health Sciences, Graduate School of Biomedical Sciences, Dental School, Medical School and Nursing School. San Antonio is a rapidly developing city which is in the midst of an expansive growth in medical research and biotechnology, much of which is centered around the Health Science Center. The University of Texas Health Science Center at San Antonio is an Equal Opportunity/Affirmative Action Employer. The Search Committee welcomes inquiries from all prospective applicants. Letters of application should include a current curriculum vitae and the names of five references acquainted with the candidate's academic accomplishments. Nominations and applications should be sent prior to January 1, 1987 to:

Dr. Kenneth S. Kornman
Search Committee Chairman
Department of Periodontics
The University of Texas
Health Science Center at San Antonio
7703 Floyd Curl Drive
San Antonio, Texas 78284
(512) 691-7511

POSITIONS OPEN

CHAIRPERSON, DEPARTMENT OF PHARMACOLOGY AND THERAPEUTICS

The University of South Florida College of Medicine invites applications and nominations for the position of Chairperson, Department of Pharmacology and Therapeutics. The Department is responsible for teaching pharmacology to medical students, residents, and fellows and for maintaining a graduate program in pharmacology. The Chairperson must have a Ph.D. and/or M.D. degree, a distinguished record of scholarly academic and research achievements, a demonstrated dedication to teaching, and experience in administration. A vigorous capability for leadership is required. Applicants should send a letter of application summarizing their experience, curriculum vitae, and the names and addresses of three references on or before 1 February 1987 to:

Dr. H. N. Schnitzlein
Chairman, Search Committee
Department of Anatomy
University of South Florida College of Medicine
12901 North 30th Street, Box 6
Tampa, FL 33612

The University of South Florida is an Affirmative Action Equal Opportunity Institution.

CYTOGENETICIST—Position available for ASSISTANT DIRECTOR of Cytogenetics Laboratory, Ph.D. or M.D., Board-certified or 1987 Board-eligible. Vivigen has an opening for an assistant director for its high volume, high quality clinical cytogenetics laboratory. This position offers the opportunity to join the executive staff of a rapidly growing genetic diagnostic laboratory located in the beautiful city of Santa Fe, in the northern mountains of New Mexico. Vivigen provides competitive salaries and excellent benefits in an environment conducive for career development. Send salary history and references to:

Dr. Kathleen Richkind
Vivigen, Inc.
435 St. Michael's Drive
Santa Fe, NM 87501

DIRECTOR (Midwest Location)

Opportunity now exists for an experienced pharmaceutical scientist to head the R&D Department. Responsibilities include supervision of R&D Department activities with assignments spanning from developing new dosage form, biopharmaceutic/pharmacokinetic data, to filing ANDA's and NDA's.

Applicant must have Ph.D. or equivalent degree in pharmacy, biochemistry, or pharmaceutical sciences, with 3 to 5 years of experience in pharmaceutical R&D.

We offer competitive salary, benefits, and opportunity to make significant contribution to our organization. Please send résumé to: **Box 225, SCIENCE.**

ENVIRONMENTAL PLANT SCIENTIST

The Institute for Environmental Studies of the University of Illinois at Urbana-Champaign, in order to expand its capabilities in the plant sciences, announces a tenure-track appointment for an environmental scientist with a background in either (i) plant ecology or physiology or (ii) plant molecular biology or biochemistry. Appointment as an assistant professor is expected, although outstanding candidates at higher levels will be considered. A Ph.D. in an appropriate life science discipline is required.

Candidates will be expected to contribute to a multidisciplinary teaching (both graduate and undergraduate) and research program. Present faculty of the Institute take part in numerous research areas including mutagenesis, toxicology, chemical ecology, air and water chemistry, and so forth. Mutual acceptance by a degree-granting University of Illinois at Urbana-Champaign department such as agronomy, ecology-ethology-evolution, plant sciences or others may result in a joint appointment. Salary commensurate with qualifications. Send curriculum vitae, statement of research interests, and names of three references to: **Dr. Richard Larson, IES, 408 S. Goodwin, Urbana, IL 61801.** Position available 21 August 1987; for full consideration apply by 21 February 1987. Candidates may be called for interviews before the closing date. *The University of Illinois at Urbana-Champaign is an Affirmative Action-Equal Opportunity Employer.*

POSITIONS OPEN

CLINICAL PHARMACOLOGIST: Applications are invited for a 12-month, nontenure-track appointment in the area of clinical pharmacology. The candidate must have experience in cyclosporine research and familiarity with population pharmacokinetics. Knowledge of Bayesian forecasting methods necessary.

Please send curriculum vitae, letters of recommendation, and transcripts to:

Barry D. Kahan, Ph.D., M.D., Director
Immunology and Organ Transplantation
University of Texas Medical School
6431 Fannin Street
Houston, TX 77030
An Equal Opportunity Employer

DIRECTOR, MOLECULAR BIOLOGY

Henry Ford Hospital is currently seeking leadership for a new group to be established in molecular biology. The group would consist of four investigators, with the specific research fields not rigidly defined. Some possible areas are lymphocyte activation and differentiation, gene expression, oncogenes, lymphokines, growth factors, transplantation biology, immunology, and DNA probes. Our goal is to establish a high quality fundamental research program. The director would recruit three colleagues and provide overall direction for the program. Substantial support and space will be provided, and potential academic affiliations are feasible. The person we seek should be an acknowledged leading scientist, with a substantial publication record and history of peer-reviewed grant support.

Interested applicants should forward a curriculum vitae and the names of three references to: **Dr. Joseph D. Shore, Director of Research, Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, MI, 48202.**

CYTOGENETIC TECHNOLOGISTS—Experienced technologists needed for high volume private laboratory located in the mountains of northern New Mexico. These positions offer excellent salaries and benefits, and the chance to become part of a dynamic rapidly growing company through an employee stock purchase participation program. Send résumé and salary history to:

K. E. Richkind, Ph.D.
Vivigen, Inc.
435 St. Michael's Drive
Santa Fe, NM 87501
Telephone: 505-988-9744.

MICROBIOLOGY/GENETICS. The Department of Biological and Physical Sciences, Division of Arts and Sciences, invites applications for a tenure-track position, available August 1987, at the level of assistant professor. The responsibilities include: instruction, both lecture and laboratory, in a beginning microbiology course designed for nursing and allied health students, and upper-level microbiology and genetics courses for pre-professional and allied health students. Faculty activities include teaching, research, and service. Publication is expected. Desired qualifications include: an earned doctorate, and teaching experience in the above areas. Salary is competitive, with excellent fringe benefits package. Send résumé; names, addresses and telephone numbers of three references; and copies of all transcripts by 23 January 1987, to: **Dr. Robert R. Roales, Coordinator, Natural Sciences and Allied Health, Indiana University at Kokomo, 2300 South Washington Street, Kokomo, IN 46902.**

Indiana University is an Equal Opportunity/Affirmative Action Employer.

Two faculty positions (assistant professor) for candidates with at least two years postdoctoral experience are available for 1 July 1987 and 1 January 1988. Persons with research interests in smooth muscle, respiratory, membrane and/or neurophysiology are encouraged to apply. Applicants must have an outstanding publication record and demonstrate fundability.

Send inquiries along with curriculum vitae and names of three references to:

Russell L. Prewitt, Ph.D.
Chairman, Physiology Search Committee
Department of Physiology
Eastern Virginia Medical School
P.O. Box 1980
Norfolk, VA 23501-1980

Eastern Virginia Medical School is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ENVIRONMENTAL TOXICOLOGIST. Tenure-track position at the assistant professor level in the Institute for Environmental Studies, an interdisciplinary unit of the University of Illinois at Urbana-Champaign. Appointment at higher rank is possible for appropriately qualified applicants. Ph.D. degree and demonstrated potential for research productivity required. Emphasis on original research on the effects of environmental agents on human health. Applicants from all areas of environmental toxicology related to human health are sought though there is a special interest in the areas of behavioral, inhalation, or analytical toxicology. Responsibilities will include contributing to the ongoing research program in environmental toxicology, interacting with faculty and students in other colleges and departments, and teaching in the Environmental Toxicology Graduate Program. A joint appointment in another health-related department is anticipated. Salary commensurate with qualifications. Send curriculum vitae, brief description of research goals, and three letters of reference to: **Dr. Larry Hansen, Chairman, Toxicologist Search Committee, Institute for Environmental Studies, University of Illinois, 408 South Goodwin Avenue, Urbana, IL 61801.** Position available 21 August 1987. Closing date 1 March 1987 or until filled. Interviews may be conducted prior to the closing date; however, all applications received by that date will receive full consideration.

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

THE UNIVERSITY OF CALIFORNIA, SAN DIEGO, DEPARTMENT OF CHEMISTRY, invites applications for a faculty position in **EXPERIMENTAL PHYSICAL CHEMISTRY.** The appointment will be at the Assistant Professor level (\$29,800 to \$37,200). We are seeking candidates with a Ph.D. and a demonstrated ability for creative research and teaching at the undergraduate and graduate levels. Candidates should send a curriculum vitae, a list of publications, reprints of representative papers, a summary of research plans and names and addresses of three references to: **Chairman, Department of Chemistry, B-032, Attention: Physical Chemistry Search Committee, University of California, San Diego, La Jolla, CA 92093.** Prompt response is recommended but all applications received by 15 January 1987 will be given thorough consideration. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS BIOMOLECULAR STRUCTURE AND FUNCTION

THE PENNSYLVANIA STATE UNIVERSITY

Applications are invited for two tenure-track positions at any level as part of an expanded research concentration in the area of biomolecular structure and function. Candidates are being sought in each of the following areas: (i) protein crystal structure determination and (ii) macromolecular computer graphics/energy calculations. The university has made a major commitment in this area including laboratory space and equipment necessary for the individual research programs such as x-ray diffractometer including area detector, and computer graphics system. The positions will be available in either the Department of Chemistry, the Department of Molecular and Cell Biology, or as joint appointments in these departments. Joint affiliation with the newly formed Penn State Biotechnology Institute is also a possibility. Faculty already in the area include **Drs. S. J. Benkovic, G. A. Hamilton, W. DeW. Horrocks, Jr., K. A. Johnson, Juliette Lecomte, C. R. Matthews, D. I. Shalloway, and J. J. Villafranca.** Applicants should have the background, motivation, and ability to develop vigorous, productive research programs and to be excellent teachers. Reply to: **Search Committee for Biomolecular Structure and Function, Department of Chemistry, 152 Davey Laboratory, Box B2, University Park, PA 16802.** Please indicate the area for which you are applying. Include a detailed curriculum vitae, statement of research interests, and up to three recent representative reprints. In addition, the applicant should ask three individuals to send letters of reference directly to us. Review of applications will commence in January 1987. Deadline for receipt of applications is 1 March 1987, or until suitable candidates are identified.

An Equal Opportunity/Affirmative Action Employer.



**THE NATIONAL
RESEARCH COUNCIL
AND
THE NATIONAL
INSTITUTES OF HEALTH**

AGAIN ANNOUNCE A PROGRAM OF
**RESEARCH ASSOCIATESHIPS
IN
BIOTECHNOLOGY**



- ELIGIBILITY:** Doctoral degree with less than 5 years relevant postdoctoral research experience; U.S. citizen or permanent resident.
- LOCATION:** NIH Laboratories / Branches
- DURATION:** 1 year with possible renewal; 3 years maximum
- INITIAL STIPEND:** \$26,350 per annum
- APPLICATION DEADLINES:** January 15, April 15, August 15, 1987

FOR FURTHER INFORMATION PLEASE CONTACT:

ASSOCIATESHIP PROGRAMS, JH 608-NIH1
NATIONAL RESEARCH COUNCIL
2101 CONSTITUTION AVENUE, NW
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**PRINCIPAL SCIENTIST
ANALYTICAL CHEMISTRY**

Schering-Plough, a Fortune 200 Company, currently offers an outstanding opportunity for an analytical research chemist. You will be involved in the development of our Consumer product line including industry leaders such as COPPERTONE, SHADE, DR. SCHOLL FOOTCARE PRODUCTS, DIGEL and PAAS. Responsibilities will include analytical method development and coordination of stability—indicating assay validations in the research area.

Applicants must have a strong background in analytical chemistry demonstrated by a Ph.D. and 3-5 years pharmaceutical and/or biological method development experience. A strong organic chemistry background and analytical experience with chemically complex consumer products is strongly preferred.

We offer a competitive compensation and benefits package, as well as generous relocation assistance to an attractive sunbelt location.

For confidential consideration, please forward a resume with salary history to:

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**Plant
Scientist
Biology Department**

**BROOKHAVEN
NATIONAL LABORATORY**

A position is open for a scientist with Ph.D. or equivalent degree and recent postdoctoral experience. The successful candidate will develop and lead an active, independent research program in the biophysics, cellular, molecular or structural biology of plants. A complete curriculum vitae and the names of three references should be sent by January 16, 1987 to: Dr. Harold W. Siegelman, Biology Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., NY 11973. Equal Opportunity Employer m/f.



**BROOKHAVEN
NATIONAL LABORATORY**
ASSOCIATED UNIVERSITIES INC.

POSITIONS OPEN

ECOSYSTEM MODELER

A research faculty position is available at the **Savannah River Ecology Laboratory of the University of Georgia**. Applicants must have a Ph.D., publications, and be a U.S. citizen. Postdoctoral experience is preferred. Research emphasis will be on modeling wetland ecosystem processes. Faculty member will be expected to work on interdisciplinary projects related to southeastern freshwater wetlands. Knowledge and experience with computer programming and simulation models are necessary. Strong communication skills and ability to work collaboratively will be weighed heavily in evaluating candidates. Faculty rank and salary are negotiable. The deadline for application is 30 January 1987. Applicants should submit curriculum vitae, transcripts, selected papers, a letter of application stating research goals, and names, addresses, and telephone numbers of four references to: **Dr. R. R. Sharitz, Chairperson, Search Committee, Savannah River Ecology Laboratory, P.O. Drawer E, Aiken, SC 29801. Telephone: 803-725-2472. The University of Georgia is an Equal Opportunity/Affirmative Action Institution.**

NEW YORK UNIVERSITY, DEPARTMENT OF CHEMISTRY, invites applications for a tenure-track faculty position in bioorganic or biophysical chemistry at either a tenured or nontenured level, commencing September 1987. If suitable candidates are identified, it is possible that both a junior and senior level appointment will be made, as part of a major development in chemistry underway at the Washington Square campus of New York University, including expansion and improvement of the research facilities of the department. Applicants at the associate or full professor level should have a distinguished record of achievement in research. All applicants should have a Ph.D. in chemistry or biochemistry, should have a major commitment to conducting a vigorous and innovative research program, and to teaching courses at the graduate and undergraduate levels normally offered by a chemistry department in a major university. Applicants should submit as soon as possible their curriculum vitae, list of publications, a summary of past research accomplishments, an outline of present and proposed research interests, and should arrange for at least three letters of reference to be sent to: **Professor David I. Schuster, Chair, Faculty Search Committee, Department of Chemistry, New York University, New York, NY 10003**. Applications will be processed on arrival, and should be received by 15 February 1987, to assure full consideration. *New York University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN NEUROBIOLOGY

The Department of Biochemistry, Dartmouth Medical School, invites applications for a tenure-track position with appointment at the assistant professor level. Candidates should have two or more years of postdoctoral experience and a strong commitment to research. We seek an individual with primary research interests in neurobiology at the molecular/cellular level.

Please send curriculum vitae, a summary of research plans, and the names of three references to: **Search Committee, Department of Biochemistry, Dartmouth Medical School, Hanover, NH 03756. Dartmouth Medical School is an Equal Opportunity/Affirmative Action Employer.**

FISH BIOLOGIST. Tenure track, assistant professor position to begin 16 August 1987. Duties include courses in basic and applied fish biology, occasional participation in introductory biology, and advisement and shared coordination in the Fisheries and Wildlife Biology Program. Development of an independent research program, direction of graduate students and the ability to interact with national and state fisheries agencies are essential. Ph.D. required, postdoctoral experience desirable. Application deadline: 15 February 1987. Include curriculum vitae, transcripts, reprints, research plans, list of course teaching competence and preference, and three letters of recommendation sent to: **Dr. Albert J. Fivizzani, Chairman, Fish Biology Search Committee, Department of Biology, University of North Dakota (UND), Grand Forks, ND 58202-8238. UND is an Affirmative Action, Equal Opportunity Employer.**

POSITIONS OPEN

FACULTY POSITION IN IMMUNOLOGY OR VIROLOGY

The Department of Microbiology and Immunology of the **University of Oklahoma Health Sciences Center** invites applications for a tenure-track faculty position in any area of immunology or virology. Rank for each position will depend upon qualifications. Candidates with postdoctoral experience, as well as more senior scientists, will be considered. The applicants should have documented excellence in conducting independent research and be able to compete for extramural research support.

The position will provide excellent opportunities for conducting basic biomedical research in a department of eleven (11) faculty members with a strong emphasis on the molecular genetics and immunology of infectious agents. In addition, opportunities exist for interaction with twenty (20) adjunct faculty within a large medical complex. Ample start-up funds will be provided. Responsibilities will also include instruction of medical, dental and graduate students but this initially will be at a minimum.

Please send curriculum vitae, a brief statement of research interests, copies of representative publications, and the names of three references to:

**Dr. Medeleine Cunningham
Department of Microbiology & Immunology
University of Oklahoma Health Sciences Center
P.O. Box 26901
Oklahoma City, OK 73190**

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

The Biology Department of the **University of Scranton**, a Jesuit university in Northeast Pennsylvania, is seeking to fill a tenure-track position in vertebrate physiology beginning September 1987. Ph.D. required. Candidates are expected to instruct undergraduates in general biology and general physiology and to develop courses in speciality. Submit curriculum vitae and three letters of reference to: **Dr. Michael Carey, Chairman, Biology Department, University of Scranton, Scranton, PA 18510** by 1 February 1987. *Affirmative Action/Equal Opportunity Employer.*

HAZARDOUS WASTE SCIENTIST

Ten plus years experience in hazardous waste management, regulatory policy analysis, permitting of air pollution sources required. Must have technical/financial project management experience and B.S. in math, engineering or physical science and familiarity with hazardous waste guidelines and a.p. dispersion models used in source impact assessment. Prefer government consulting experience. Send résumé and salary requirements to: **Job number 14-P-87, Systems Applications, 101 Lucas Valley Road, San Rafael, CA 94903. Affirmative Action/Equal Opportunity Employer.**

IMMUNOLOGIST

The Department of Biology at **Loyola University of Chicago** seeks an immunologist for a tenure-track position at the assistant professor level beginning August 1987. Ph.D. and postdoctoral experience required. The candidate will develop an active research program, direct graduate students, and teach at graduate and undergraduate levels. Applicants should send curriculum vitae, statement of research interests, and list of at least three references by 31 January 1987 to: **Dr. Jeffrey Doering, Chairman, Biology Search Committee, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, IL 60626. Loyola University of Chicago is an Equal Opportunity Employer.**

THE STATE UNIVERSITY OF NEW YORK AT PURCHASE seeks LECTURER/ADVISOR to teach in college-wide interdisciplinary program "Revolutions in Western Thought." Duties include teaching and research in own field. Ph.D. and teaching experience required. Three-year renewable appointment to begin September 1987. Competitive salary and fringe benefits.

Send curriculum vitae and cover letter with names of three references by 15 January 1987 to:

**Richard A. Silver
Affirmative Action Officer
SUNY Purchase
Purchase, NY 10577**

Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

MOLECULAR BIOLOGY OF HUMAN CANCER

**University of Southern California (USC)
Comprehensive Cancer Center**

Postdoctoral and predoctoral positions are available immediately to study molecular, cellular, and immunological aspects of eukaryotic gene control. The program is situated in the newly constructed Norris Cancer Center which contains state of the art microchemical, microinjection, flow cytometry, pharmacological, cell culture and computer core facilities. Training faculty are: **R. Deans**, Molecular biology of B cell activation; **G. Denner**, Molecular and cellular immunology; **R.E.K. Fournier**, Tissue-specific gene expression; **P. Jones**, DNA methylation; **J. Landolph**, Molecular biology of chemical carcinogenesis; **A. Lee**, Mammalian gene expression; **M. McMillan**, Role of MHC complex; **R. Maxson**, Gene regulation during early development; **A. Mazumder**, Molecular biology of antitumor immune cells; **P. Vogt**, Oncogenes.

Interested individuals should submit current curriculum vitae together with the names of three references to: **Dr. Peter A. Jones, Director for Basic Science, University of Southern California Comprehensive Cancer Center, 2025 Zonal Avenue, Los Angeles, CA 90033. Affirmative Action/Equal Opportunity Employer.**

MOLECULAR POPULATION BIOLOGIST

Assistant professor, tenure-track position to begin August 1987. We seek an evolutionary biologist using molecular techniques to address population level questions. The successful candidate will develop graduate and undergraduate courses in their areas of expertise and contribute to introductory biology. Applicants must establish a vigorous research and graduate program. Ph.D. required; postdoctoral experience desirable. Send curriculum vitae, statement of teaching and research interests, transcripts, selected reprints and three letters of reference by 13 February 1987 to: **Dr. Margaret Gould Burke, EPSCoR Search Committee, Department of Biology, University of North Dakota, Grand Forks, ND 58202-8238. UND is an Affirmative Action/Equal Opportunity Employer.**

NEUROBIOLOGIST

The Section of Neurobiology and Behavior, Division of Biological Sciences, **Cornell University**, invites applications for a tenure-track position in integrative neurobiology at the assistant professor level. Available July 1988.

Research interests may include neural systems or cellular approaches to learning, developmental neurobiology, neurogenetics, sensory/motor integration, or neural mechanisms of behavior (neuroethology).

Applicants should send their curriculum vitae, selected reprints or preprints and a statement of research and teaching interests, and have three letters of recommendation sent to: **Search Committee, Section of Neurobiology and Behavior, Cornell University, Seeley Mudd Hall, Ithaca, New York 14853**. The Search Committee will begin screening applications 1 February 1987. *Cornell University is an Affirmative Action/Equal Opportunity Employer.*

NEUROSCIENTISTS

Exciting, new neuroscience biotechnology company seeks scientific director. Also recruiting scientists who can make a contribution to the success of the company in fields such as peptide chemistry, molecular neurobiology, pharmacology, behavioral pharmacology and immunology. Send curriculum vitae, list of publications, and references to:

**NEUREX
P.O. Box 60878
Palo Alto, CA 94306**

HAZLETON BIOTECHNOLOGIES COMPANY—MOLECULAR BIOLOGIST: Postdoctoral fellowship. Experience in protein purification and molecular biology techniques necessary for studies of peptide hormone receptors—structure and function. Applicants should send résumés to: **Hazleton Biotechnologies Company, 9200 Leesburg Pike, Vienna, VA 22180. Equal Opportunity Employer, M/F.**

Microbial Genetics

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking additional senior and junior staff to expand its current research programs in microbial genetics and recombinant DNA technology. These programs are aimed at developing novel therapeutic agents and understanding the biology and regulation of gene expression in microorganisms.

The Biological Process Sciences Department is recruiting for an outstanding senior scientist with a Ph.D in Microbiology, Molecular Biology, Biochemistry or equivalent and expertise in microbial genetics. Expertise in molecular biology with an emphasis on gene expression in heterologous systems is highly desirable. Positions are also available for outstanding junior scientists with B.S./M.S. in the above disciplines.

Excellent opportunities exist for innovative interdisciplinary research in our new and superbly equipped Research and Development Center in suburban Philadelphia near Valley Forge, Pennsylvania.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential review, please forward your C.V. and names of three references to: Robert F. Obst, R&D Employment Consultant, SmithKline Beckman Corporation, 1570 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

FLOW CYTOMETER OPERATOR

The Department of Immunology Research has an immediate opening for an experienced flow cytometer/cell sorter operator in a multi-user service facility. Duties include: (1) operation and maintenance of a FACS IV/PDP-II cell sorter and a FACS analyzer/consort 30 system; (2) interaction with investigators concerning experimental design and data analysis; and (3) implementation of new flow cytometry methods and technologies.

The candidate should have a B.S. or equivalent in Biology. Prior experience in operation of a flow cytometer with expertise in computer programming and the RSX operating system. Familiarity with other methods of cell separation is preferred.

Merck Sharp & Dohme Research Laboratories are located in Rahway, New Jersey approximately 20 miles south of New York City. Our salaries, benefits, and growth potential are excellent.

Interested candidates should submit their curriculum vitae and salary requirements to: **Ms. Alaina L. Love, Merck Sharp & Dohme Research Laboratories, P.O. Box 2000, R80M-TL1, Rahway, New Jersey 07065.**

Equal Opportunity Employer



Merck & Co., Inc.

Research Immunologist

A PhD level position is available within our Medical Products Department. This is an excellent opportunity for scientific and career development with a leader in drug research. You will conduct independent research programs in cellular immunology directed at improving the efficiency of selecting and producing clinically useful monoclonal antibodies. To qualify you should have a technical background in cellular immunology and experience in cellular analysis and flow cytometry with a doctorate degree in Immunology, Microbiology or Biochemistry.

You'll find a highly stimulating scientific environment in a modern research facility located near Wilmington, DE. We offer excellent compensation and benefits including relocation. Our Mid-Atlantic location offers an attractive lifestyle with easy access to a wide range of academic, cultural and recreational activities. Interested candidates should send their resumes with salary requirements and references to: K.L. Mays, Employee Relations Department, Room X50602, Du Pont Company, Wilmington, DE 19898.



U.S. Citizenship or Permanent VISA Required.
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BIOCHEMIST

Centocor Europe B.V., subsidiary of Centocor, Inc., a leading biotechnology company, is seeking qualified candidates to develop new methodology for large-scale purification of monoclonal antibodies and new methods of determining the immunologically active fraction of purified antibodies. Responsibilities of the position include evaluation of technical feasibility, review of progress and timely accomplishment of benchmarks.

Candidates should have a Ph.D. in biochemistry or a related field, two to four years related postdoctoral experience and a thorough practical knowledge of immunology and cell biology. They must also have demonstrated substantial technical productivity, creativity and rigor in experiment design, and extensive knowledge of the current literature. Experience in a biotechnology-oriented company and some knowledge of virology are desirable but not required. Candidates must be willing to relocate in Europe. Interested parties should contact:

**Dr. Sven Warnaar
Technical Director
Centocor Europe B.V.
P.O. Box 251
2300 AG Leiden
The Netherlands**



CENTOCOR

An Equal Opportunity Employer

NIH STAFF FELLOWSHIP/NIH VISITING FELLOWSHIP

The Developmental and Metabolic Neurology Branch, National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, Public Health Service, invites applications for NIH Staff Fellowship or NIH Visiting Fellowship position. This postdoctoral position is available to study regulation of genes following transfer into cultured cells and whole organisms using retroviral vectors and recombinant adenoviruses. The candidate will be expected to study regulation of human globin genes. Experience in one of the following areas is highly desirable: eukaryotic molecular biology, hemopoiesis or mouse embryology. For the NIH Staff Fellowship program, candidates must be U.S. citizens or resident aliens and must either have been awarded their doctoral degree in biology or a related science, or have been certified by a university as meeting all the requirements leading to such a doctorate. Candidates with less than 3 years of professional level post-doctoral research experience may be considered for entrance into the program as Staff Fellows. Senior Staff Fellowships may be considered for those having 3 to 7 years of professional level post-doctoral research experience. The starting salary range is \$16,000 to \$23,000 per year and is commensurate with experience. The initial appointment is for two years with additional extensions up to five years possible. For the NIH Visiting Fellow program, candidates may be resident or nonresident aliens, and must have a doctoral degree, or its equivalent, in a health science field whose relevant postgraduate experience does not exceed 3 years of experience at the time of their entrance on duty. The starting salary range is \$16,000 to \$18,000 per year and is commensurate with experience. The original appointment is for one year with renewals up to a maximum of 2 additional years possible.

The position is located in Bethesda, Maryland. For position information and qualifications requirements, candidates may call Mr. Wallace Holland, Personnel Management Specialist, on (301) 496-6334. Interested candidates should send a curriculum vitae, a brief statement of research interest and the names of three (3) references to:

Dr. Stefan Karlsson
IRP, DMNG, NINCDS
National Institutes of Health
9000 Rockville Pike
Bldg. 10, Rm. 3D04
Bethesda, MD 20892
(301) 496-3285

An Equal Opportunity Employer

HEAD BIOCHEMISTRY

Centocor Europe B.V., a subsidiary of Centocor, Inc., a leading biotechnology company, is seeking qualified candidates to conduct research in product characterization, product quality, purification and validation. Candidates must be able to interpret complex data, drawing from broad experience in immunology, biochemistry and cell biology. Extensive knowledge of current literature in immunology and monoclonal antibodies is essential. Responsibilities of the position, which reports to the Technical Director, include supervision of scientists investigating the effects of manipulating cell cultures and purification procedures, and of modifying antibodies, on the stability and performance of the final formulations.

Candidates should have a Ph.D. in immunology, biochemistry or cell biology, and a background in all three areas. They should also have strong management skills, at least two years of post doctoral experience and a willingness to relocate in Europe. Centocor encourages its employees to present their work in leading journals and at scientific meetings. Interested parties should contact:

Dr. Sven Warnaar
Technical Director
Centocor Europe B.V.
P.O. Box 251
2300 AG Leiden
The Netherlands



CENTOCOR

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Bioanalytical Research (BS/MS)

The Upjohn Company, a world leader in research and development of pharmaceuticals, located in Kalamazoo, Michigan, has an immediate opening for a BS/MS biochemist or analytical chemist to conduct bioanalytical research in drug metabolism. Primary responsibilities include the development and validation of analytical methodology for drugs and their metabolites in biological fluids, and the development and application of new technologies relevant to bioanalytical research.

Successful candidates will have training/experience in analytical chemistry, biochemistry, medicinal chemistry, or related disciplines. Experience in bioanalytical techniques, instrumental analysis (HPLC, GC, GC-MS), laboratory animal procedures, and radiochemical methods is highly desirable.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a rich mix of cultural, educational and recreational pursuits including numerous lakes and a four-season climate. Upjohn offers the opportunity for career growth, a competitive salary commensurate with experience, a comprehensive benefits program and relocation assistance. For confidential consideration, please call from outside of Michigan toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you immediately. Please refer to ad number 19948-A when calling.



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BIOLOGY CHAIRPERSON

The Department of Biology, State University of New York (SUNY), College at Fredonia, invites applications for a chairperson. Specialty is open; candidates with expertise in developmental biology and genetics are especially encouraged to apply. Qualifications include a Ph.D., a commitment to undergraduate instruction and research, an ability to provide vigorous leadership, and a history of securing extramural funding. Rank and salary will be commensurate with experience.

The college has a student population of about 5,000 undergraduates and is located near Lake Erie, 40 miles from Buffalo. The department has 10 faculty and approximately 250 undergraduate majors in Biology, Medical Technology, and Recombinant Gene Technology. Masters degrees are offered in Biology and Biology Education.

Applications should include a curriculum vitae, a statement of educational philosophy and professional goals, and names of at least four references. Send applications to **Dr. Thomas Storch, Chairperson Search Committee, Department of Biology, SUNY College at Fredonia, Fredonia, New York 14063. Telephone: 716-673-3374.** Application deadline is February 15, 1987.

SUNY College at Fredonia is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

FREDONIA

State University of New York
College at Fredonia



DIRECTOR

INSTITUTE FOR ADVANCED MANUFACTURING THE UNIVERSITY OF TEXAS AT EL PASO

The University of Texas at El Paso invites applications and nominations for the position of Director of its Institute for Advanced Manufacturing. The Director is the chief administrative officer of this new institute and reports to the Vice President for Academic Affairs. The University of Texas at El Paso is an institution of 14,000 students serving the multicultural population of West Texas and the Southwest and offers degree programs at all levels.

Qualifications for the position include appropriate academic and professional credentials, demonstrated experience in management positions, knowledge or experience in the applications of modern manufacturing technology, and demonstrated ability to work effectively with funding agencies, industry, faculty, students, staff and external constituencies.

The successful candidate will play a major role in the formative phase of this institute. The position provides the opportunity to direct planning, fund raising, construction of facilities, and staffing of the institute. The role of this institute includes basic and applied research, development and problem solving, applications of computer technology, technology transfer, and engineering and business services.

Nominations and applications must be postmarked no later than January 30, 1987. Candidates should send a resume and the names, addresses, and telephone numbers of at least four references to:

Jack Bristol, Chairman
Search and Screening Committee for the Director
Office of the Vice President for Academic Affairs
The University of Texas at El Paso
El Paso, Texas 79968-0501

Women and minorities are encouraged to apply. The University is an EEO/AA employer.

Radiopharmaceutical Scientist

Merck Sharp & Dohme Research Laboratories, a worldwide leader in pharmaceutical research, has an immediate opening for a Radiopharmaceutical Scientist with sound health physics background for this creative and multi-discipline research organization.

This position requires a Ph.D. degree or equivalent in Biochemistry/Chemistry/Molecular Biology with strong background experience in radiation hygiene and radiosynthesis. The position is located at the Merck Sharp & Dohme Research Laboratories, West Point, Pennsylvania, 25 miles northwest of metropolitan Philadelphia.

Salary, benefits and career potential are excellent. Send resume and salary requirements to: **Susan Rhue Jenkins, Merck & Co., Inc., Sumneytown Pike, West Point, PA 19486.**

Equal Opportunity Employer



Merck & Co., Inc.

Post-Doctoral Investigator (2 years)

Available immediately. Research on the localization, function and regulation of marine dinoflagellate toxins, especially saxitoxin. Applicants should have training in immunocytochemistry and/or biochemistry; experience with polyamines a plus. Send curriculum vitae and names and addresses of 3 references to:

**Personnel Manager
Box 54P**



**WOODS HOLE
OCEANOGRAPHIC
INSTITUTION**

Woods Hole, MA 02543

An equal opportunity employer M/F/H/V

DIRECTOR OF THE CANCER CENTER

Northwestern University

The University seeks to replace the Director of its Cancer Center. The Center occupies approximately 27,000 nsf of research space in the Health Sciences Building located adjacent to the Northwestern University Medical School and has an annual operating budget of approximately \$1,475,000, including NCI Core Grant support. The Center has developed strong research and training programs in tumor biology, and coordinates multidisciplinary clinical programs in cancer diagnosis and therapy.

The Center Director has authority for the Center's budget, space, appointments, and programs. Professional staff support is provided by Deputy or Associate Directors for Basic Sciences, Clinical Sciences, Biometry, and Graduate Education. Candidates for the directorship may hold an M.D. and/or Ph.D. degree(s), and should have acquired a national reputation for research excellence in tumor biology. Administrative experience is desirable, and the candidate should be qualified to hold a tenured professorship in the Medical School.

Send curriculum vitae and the names of three references by February 1, 1987 to:

Dr. Donald Nutter
Senior Associate Dean



**Northwestern University
Medical School**
303 East Chicago Avenue
Chicago, Illinois 60611

The University is an equal opportunity employer.

Senior Scientist

Cardiovascular Research Section

CIBA-GEIGY Corporation, a world leader in the field of cardiovascular research, has an immediate opportunity for a Sr. Scientist to join the Hemodynamics Group of the Cardiovascular Research Section located at our Pharmaceutical Division headquarters in Summit, New Jersey.

Qualified applicants should possess a Ph.D. in physiology or pharmacology, with a minimum of 2 years' post-doctoral experience in cardiovascular research. The ideal candidate will have a strong background in cardiac/coronary physiology, and will provide expertise in conscious and anesthetized animal models of myocardial infarction and ischemia. You will have the opportunity to supervise a laboratory involved in the characterization and evaluation of novel cardioactive drugs, utilizing state-of-the-art instrumentation. In addition, you will be a primary participant in a multi-disciplinary drug discovery program and will work creatively with other biologists, medicinal chemists and clinical investigators.

CIBA-GEIGY's Pharmaceuticals Division provides a research environment which encourages collaboration and innovation. We offer an excellent salary and benefits package and the resources and commitment of a multibillion dollar, multinational organization actively involved in research. For prompt and confidential consideration, please forward a resume with salary history and requirements, to: Mr. Stephen Mitchell, Dept. 348, The Pharmaceuticals Division, CIBA-GEIGY Corporation, 556 Morris Avenue, Summit, NJ 07901. We are an equal opportunity employer m/f/h/v.

Science Serving Mankind

CIBA-GEIGY

POSITIONS OPEN

CONNECTICUT—Microbiology/Periodontology. Full-time tenure-track position available in the **Department of Periodontology**. Responsibilities include research and predoctoral, postdoctoral and graduate teaching. Qualifications include a Ph.D. degree in microbiology, biochemistry or related discipline, postdoctoral experience, and the ability to develop a productive, independent research program relevant to periodontal microbiology and successfully compete for research funds. Dental degree and advanced training in periodontology desirable but not required. Salary and academic rank commensurate with training and experience. Send inquiries and curriculum vitae to: **Dr. Clarence L. Trummel, Head, Department of Periodontology, University of Connecticut Health Center, Farmington, CT 06032.**
An Affirmative Action/Equal Opportunity Employer. M/W/H.

MICROBIOLOGIST. Assistant professor tenure-track position for microbial geneticist with expertise in microbial technology. Ph.D. and postdoctoral experience required. Position is part of faculty expansion program and carries an adjunct appointment in Department of Biology (see ad this issue). Application, curriculum vitae, and three letters of recommendation, should be sent by 2 February 1987 to: **Dr. Joseph Sobek, Department of Microbiology, University of Southwestern Louisiana, Lafayette, LA 70504-41007.** *Affirmative Action/Equal Opportunity Employer.*

NEUROPSYCHOLOGIST FACULTY POSITION

The Division of Medical Psychology, Department of Psychiatry, of Duke University Medical Center is recruiting a neuropsychologist with both clinical and research interests in Alzheimer's disease and dementia. This person needs to be a trained clinical neuropsychologist and preferably a diplomate in clinical neuropsychology from the American Board of Professional Psychology. The person also needs to have an active research program in an aspect of brain-behavior relationships pertinent to dementia that serves to guide his/her clinical assessment and/or rehabilitation activities. This person will be expected to engage in neuropsychological clinical and research activities and to collaborate with clinicians and researchers from other biomedical disciplines in the study and care of patients seen in the Alzheimer's Center. Furthermore, there are opportunities for collaboration with the faculty and programs of the Center for the Study of Aging and Human Development, the Departments of Psychiatry and Radiology, and an emerging program in Neurosciences.

Rank and salary are commensurate with qualifications. Applicants should send a letter outlining their clinical and research interest, curriculum vitae, and three letters of reference to: **Robert J. Thompson, Jr., Ph.D., Professor and Head, Division of Medical Psychology, P.O. Box 3362, Duke University Medical Center, Durham, NC 27710.** *Duke University is an Equal Opportunity Employer.*

The Metropolitan Mosquito Control District (MMCD) of Minneapolis-St. Paul, MN requests statements of qualifications (RFQ) from organizations capable of carrying out non-target impact studies. Areas of expertise must include one or more of the following:

- 1) Acute and chronic laboratory non-target impact testing
- 2) Comparative analysis of treated/untreated existing field sites
- 3) Experimental field testing

One or several contracts may be let for work commencing in March 1987. RFQ due date is 12 January 1987. For a copy of the RFQ, please call or write: **Daniel D. Bennek, MMCD, 2380 Wycliff, St. Paul, MN 55114.** Telephone: 612-645-9149.

Applications are invited for a **postdoctoral fellow** to establish and characterize specific human T cell clones. Experience in cellular immunology and human MHC desirable. The salary range is \$20,000 to \$24,000 per annum. The position is available immediately with a possible long-term appointment. Contact: **Dr. Arthur Vandenbark, Immunology Research ISIS, VA Medical Center, Portland, OR 97201; telephone: 503-222-9221, extension 2519.**

POSITIONS OPEN

MOLECULAR BIOLOGY/IMMUNOLOGY

The Cellular Immunobiology Unit, Comprehensive Cancer Center, and Department of Microbiology invite applications for a tenure-earning faculty position as an assistant professor. We are seeking an individual with a strong background in genomic and cDNA cloning who will develop a strong, independent research program and interact with other members of the unit interested in normal and abnormal development of lymphoid and myeloid cells.

These units, among the most well funded in the nation, provide a stimulating scientific environment and administer several NIH Institutional Fellowship programs that are available to provide stipend support for predoctoral and postdoctoral students.

The basic science departments of the University of Alabama at Birmingham Medical Center continue to recruit outstanding faculty with strong research programs in biochemistry, cellular biology and physiology, immunology, animal virology, and other areas. A particular strength of the institution is the close cooperation between clinical and basic science researchers in areas such as cancer biology, arthritis and rheumatoid diseases, immunodeficiency disorders, bacterial and viral diseases, oral biology, and muscular-skeletal disorders.

Applicants should submit curriculum vitae, a statement of research plans, and the names of three people from whom letters of recommendation can be requested. Applications should be sent to: **Dr. Max Cooper, Chairman, Molecular Biology/Immunology Search Committee, Cellular Immunobiology Unit, University of Alabama at Birmingham, Birmingham, AL 35294.**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION

Available immediately, for research on mechanisms of obesity, diabetes and metabolism. Send résumé to: **Dr. Barbara Hansen, Obesity and Metabolism Research Laboratory, RM 600 MSTF, 10 South Pine, Baltimore, MD 21201.**

POSTDOCTORAL POSITION available to study the neuroendocrine mechanisms that govern the developmental pattern of hypothalamic GnRH secretion and puberty in the rhesus monkey. Apply with curriculum vitae and names of three references to: **Dr. Tony M. Plant, University of Pittsburgh, Department of Physiology, 616 Scaife Hall, Pittsburgh, PA 15261.**

POSTDOCTORAL POSITION available for a biochemist, chemist, or cell biologist to study specific proteases in biological and medical research using a newly developed technique. Send résumé and three letters of recommendation to: **Professor C. W. Wu, Department of Pharmacological Sciences, State University of New York at Stony Brook, Stony Brook, NY 11794.** *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK number 301.*

POSTDOCTORAL POSITION available July 1987 for a molecular biologist interested in neurobiology. This laboratory is trying to clone the genes for presynaptic proteins whose functions can be investigated using *Xenopus* oocytes. Candidates should send an outline of research interests, a résumé, and names of three references to: **Dr. Cameron Gundersen, Jerry Lewis Neuromuscular Research Center, University of California, Los Angeles (UCLA), Los Angeles, CA 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION to study mutation at the molecular level. Experience in site-directed mutagenesis, RNA analysis, and other recombinant DNA techniques is desirable. Computer skills will also be helpful. Please send curriculum vitae and the names of references to: **Dr. Peter Stambrook, Department of Anatomy and Cell Biology, University of Cincinnati Medical Center, Cincinnati, OH 45267-0521.**

POSTDOCTORAL POSITIONS: Research involves biochemical and electrophysiological studies of the role of phosphoinositide metabolism in phototransduction. Biochemist position available immediately, physiologist position September 1987. Send curriculum vitae and three letters of reference to: **Personnel Office, Marine Biological Laboratory, Woods Hole, MA 02543.**

POSITIONS OPEN

PALEOBIOLOGIST

Applications are invited for an **Assistant Curator in the Department of Geology, Field Museum of Natural History**. Twelve-month, career track, full-time appointment with research and curatorial responsibilities. Applicants must have a Ph.D. and broad evolutionary interests with primary research emphasis in fossil mammals. Position includes curation of world-class fossil mammal collection. Other duties may include some participation in exhibition functions.

Send curriculum vitae, description of current and future research program, reprints of publications, and the names and addresses (including telephone numbers) of three references by 28 February 1987 to: **Dr. Edward J. Olsen, Chairman, Search Committee, Department of Geology, Field Museum of Natural History, Roosevelt Road and Lake Shore Drive, Chicago, IL 60605-2496.**

PLANT CELL BIOLOGIST UNIVERSITY OF CALIFORNIA, IRVINE

The Department of Developmental and Cell Biology at the University of California, Irvine, is seeking a plant cell biologist with strong molecular or biochemical leanings. Preference will be given to individuals examining basic questions in cell biology which are unique to, or best studied in plants, such as chloroplast or mitochondrial development, cell wall formation, and plant-microorganism interactions. Individuals whose approach to these problems involves an investigation of the mechanism of gene expression, or utilizes the techniques of plant somatic cell genetics are especially encouraged to apply. The successful applicant will be expected to develop a vigorous research program, to participate in an ongoing, broad-based cell biology graduate training program, and to teach at the undergraduate level. Appointment will be at the assistant professor level (tenure-track). Applicants should submit curriculum vitae, reprints of published papers, a description of their current research and anticipated future research directions, and request that letters of recommendation be sent to: **Chair, Plant Cell Biology Search Committee, Department of Developmental and Cell Biology, University of California, Irvine, CA 92717.** Closing date for receipt of applications is 15 January 1987. *The University of California, Irvine, is an Equal Opportunity, Affirmative Action Employer.*

POSTDOCTORAL POSITION available in the Department of Medicine, Harvard Medical School, for a recent Ph.D. to study the control of blood cell differentiation. Current work focuses on the molecular biology and biochemistry of erythropoietin and its mechanism of action. Experience with molecular biological and protein biochemical techniques preferred. Send curriculum vitae, statement of research interests, and three letters of reference to: **Dr. Arthur Sytkowski, New England Deaconess Hospital, 185 Pilgrim Road, Boston, MA 02215.**

POSTDOCTORAL POSITION available to study the behavioral pharmacology of the opioids with an emphasis on learning and memory. Applicants with a Ph.D. in pharmacology, physiology, or psychology are sought. Candidates should send curriculum vitae, a brief statement of research experience, and the names of three references to: **Dr. J. M. Moerschbaecher, Department of Pharmacology and Experimental Therapeutics, Louisiana State University Medical Center (LSUMC), 1901 Perdido Street, New Orleans, LA 70112-1393.** *LSUMC is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS available immediately in the Hematology/Oncology Unit, Louisiana State University Medical Center, for biochemists and/or cell biologists to study coated vesicle formation and receptor-mediated endocytosis in erythroid and leukemic cells, including control of transmembrane iron and heme transport, phosphatidylinositol turnover and protein kinases, as well as molecular biology of iron transport proteins.

Interested applicants should send curriculum vitae and three letters of recommendation to: **Dr. Jonathan Glass, Louisiana State University Medical Center—Shreveport, Department of Medicine, Section of Hematology/Oncology, P.O. Box 33932, Shreveport, LA 71130-3932.**

Affirmative Action/Equal Opportunity Employer

SHOWA UNIVERSITY RESEARCH INSTITUTE FOR BIOMEDICINE

Three established scientists are sought to serve as program directors in:

- 1) **Cancer Biology and Genetics:** Application of molecular genetics to the study of abnormal growth and development; role of oncogenes, growth factors, extra- and intracellular matrix, resistance genes in malignancy.
- 2) **Regulation of Gene Expression:** molecular characterization of cis- and trans- effects in the regulation of gene expression, influences of foreign environment (for example in transgenic mice) on specific gene expression, developmental control of gene activation.
- 3) **Molecular Immunogenetics:** identification of regulatory factors that influence specific immune function, structure and characterization of mechanisms that control expression of molecules associated with B and T cell lineages, developmental stage-specific regulation of genes involved with immune function.

Preference will be given to those programs that are directly involved with or seek to resolve basic issues in human disease.

Showa University Research Institute is unique in its affiliation with a major Japanese Medical University. The Institute is based in a new facility with excellent individual laboratory and office space and centralized services. Its central location within the rapidly growing Tampa Bay area is most attractive. Investigators are allowed complete freedom to pursue research goals and while generous program support is provided, scientists are expected to secure extramural funding. Both postdoctoral and predoctoral opportunities exist. Ranks will be commensurate with experience and research accomplishments. Salary, fringe benefits and start-up support are excellent.

These are senior positions and candidates are requested to submit a brief description of their presently active research and a current research support statement. Send Curriculum Vitae and a list of publications to: **Chairman, Search Committee, Showa University Research Institute for Biomedicine, 10900 Roosevelt Boulevard, St. Petersburg, Florida 33702.**

A not-for-profit organization/equal opportunity employer.

DENMARK University of Aarhus

FULL PROFESSOR IN PLANT ECOLOGY

The Botanical Institute, University of Aarhus, Denmark, invites applications for a tenured senior-level position in plant ecology (full professor) to be filled August 1, 1987 or later.

The institute wants to strengthen research in the physiological ecology of those macrophytes adapted to the interface zone between land and water. Applicants should have extensive research expertise in this or related areas.

The successful candidate is expected to develop a dynamic research programme with new and creative initiatives within the field of physiological ecology of aquatic macrophytes. Possible research areas include carbon- or nitrogen-metabolism, photosynthate partitioning and translocation, growth and development, and stress physiology. The candidate is expected to interact and collaborate with other faculty members in plant ecology.

Responsibilities will include participation in the integrated teaching programme in biology. This involves both graduates, undergraduates and the development of new teaching programmes.

Each applicant should submit a detailed curriculum vitae, graduate transcripts, documentation of teaching experience, and three copies of scientific papers or other publications to be considered in the evaluation. A statement of professional goals and research interests should be included. Letters of reference marked: 211 - 12 should be sent directly to the University of Aarhus.

According to Danish ministerial regulation, the selection committee's written evaluation of the applicants is sent to all the applicants.

Applications should be addressed to The Queen of Denmark and sent to Aarhus Universitet, Ndr. Ringgade 1, DK-8000 Aarhus C, Denmark, and marked: 211 - 12. The deadline for the receipt of all application material is February 2, 1987, at twelve o'clock.

For further information on salary, research, teaching duties, laboratory facilities and staff please write or telex to: **The Chairman of The Botanical Institute, 68 Nordlandsvej, DK-8240 Risskov, Denmark.** Telex 647 67 aausci dk.

Professor/Chairperson Department of Biochemistry

Applications are invited from candidates with Ph.D. or M.D. degree for the position of Chair of the Department of Biochemistry, State University of New York, Stony Brook. The successful candidate will be expected to recruit new faculty and to provide strong leadership to a research oriented department with particular emphasis in molecular biology and related disciplines. The candidate should be a recognized leader in biochemical research.

Applications should include curriculum vitae and the names of three references. Nominations are invited. Submit by February 1, 1987 to Dr. Simon Pilakis, Chair, Search Committee, Department Molecular Physiology and Biophysics, Basic Sciences Tower, T-6, Room 140, SUNY Stony Brook, Stony Brook, NY 11794-8661.

SUNY Stony Brook is an affirmative action/equal opportunity educator and employer. AK#287-B.

DIRECTOR,

Cancer Hospital & Research Institute

The Ohio State University invites applications and nominations for the position of Director of The Ohio State University Cancer Hospital and Research Institute. The program will be housed in a 200,000 square foot, 12-story, 160-bed facility to be completed in 1987. The Director will administer, direct and coordinate all activities of this institute.

The Director is responsible for development and execution of a complete cancer program; maintains close working relations with departmental chairpersons in all academic matters, is responsible for all medical and research staffing of the facility. The Director reports to the Vice President for Health Services.

Qualifications for this position include an outstanding record of research and scholarly achievements. The candidate should be currently engaged in research. It is preferred that the candidate be an M.D. or Ph.D. The candidate must qualify for a tenured appointment in one of the academic departments of the University. The candidate should have demonstrated ability in obtaining research and contract funds; be knowledgeable in procedures to attract public and private funds; show clear evidence of national recognition and have demonstrated experience in an academic health center.

Position is available July 1, 1987. Salary is negotiable and commensurate with background and experience. Nominations and letters of application, curriculum vitae, and names, addresses and telephone numbers of 3 references are required. The search committee will begin reading dossiers immediately and will continue until a candidate is selected.

The Ohio State University is an equal opportunity/affirmative action employer. Qualified women and minorities are encouraged to apply. Applications and nominations should be addressed to:



The Ohio State University

Ronald Glaser, Ph.D.
Chair, Search Committee
5066 Graves Hall
333 W. 10th Ave.
Columbus, Ohio 43210

POSITIONS OPEN

POSTDOCTORAL POSITION available January 1987. To study molecular biology and enzymology of the regulation of choline acetyltransferase. Ph.D. in biochemistry or molecular biology preferred. Competitive salary commensurate with experience. Send résumé and references to: **Dr. L. B. Hersh, Department of Biochemistry, University of Texas Health Science Center, 5323 Harry Hines Boulevard, Dallas, TX 75235. Equal Opportunity University.**

POSTDOCTORAL POSITION available summer 1987 for an individual with training in cell biology, molecular biology, biochemistry or related areas. Studies focus on structure and function of basement membranes and extracellular matrix proteins. U.S. citizens and permanent residents, please send curriculum vitae and names of three references to: **Dr. Eva Engvall, La Jolla Cancer Research Foundation, 10901 North Torrey Pines Road, La Jolla, CA 92037. Equal Opportunity Employer.**

A **POSTDOCTORAL POSITION** is available immediately in the area of cereal transformation, using *Agrobacterium*-mediated and naked-DNA transfer with regenerating callus cultures. Candidates should have experience with plant tissue culture and/or recombinant DNA. Experience in plant transformation, vector construction, or plant gene isolation would also be desirable, but candidates with demonstrated excellence in other areas (of plant physiology and biochemistry) will also be considered. Three-year position with salary range \$18,000 to \$25,000 per year, depending on qualifications.

Please send curriculum vitae, publications list, and names of three references to: **Dr. I. Altosaar, University of Ottawa, Dept. of Biochemistry, 40 Somerset Street East, Ottawa, Ontario, K1N 9B4, Canada; telephone 613-564-2953/564-5866.**

POSTDOCTORAL POSITIONS

Immediate openings to join a research program investigating hormone-receptor-G protein mediated transmembrane signaling in cardiac and vascular tissue with an emphasis on the effects of angiotensin peptides. A candidate should have a Ph.D. or M.D. The Weis Center for Research in Cardiovascular Disease is a new and developing program under the leadership of **Howard E. Morgan, M.D.**

Salary commensurate with NIH guideline. Send curriculum vitae and three references to: **Kenneth M. Baker, M.D., Weis Center for Research, (26-00) Geisinger Clinic, Danville, PA 17822. Equal Opportunity Employer. M/F/H/V.**

LA TROBE UNIVERSITY MELBOURNE AUSTRALIA

SCHOOL OF BIOLOGICAL SCIENCES POSTDOCTORAL POSITION IN GENETICS AND HUMAN VARIATION

A 3-year postdoctoral position is available to participate in an ARGS-funded project on marsupial and monotreme genome evolution. The aim of this project is to compare DNA sequences, gene arrangements, and mechanisms of gene expression in monotremes, marsupials and placental mammals, in order to understand the organization, function and evolution of the mammalian genome.

A recent Ph.D. graduate with a background in genetics and interests in applying the techniques of cell and molecular biology to mammalian genetics and evolution is sought. Since a large part of the project concerns constructing marsupial DNA libraries, cloning, mapping and sequencing marsupial genes and studying the control of their expression, some experience in nucleic acid technology would be an advantage; however, graduates with a strong interest in mammalian genetics, and experience in other areas of genetics or biochemistry, are encouraged to apply.

The position is funded by the Australian Government National Research Fellowship Scheme and should be taken up no later than 30 April 1987. For further information please contact: **Dr. J. M. Graves, 478-3122, Ext. 2589 or Dr. M. Westerman, 478-3122, Ext. 2260. Closing Date: 30 January 1987. Reference Number A0/998/000. Salary: A\$24,013 to A\$27,507.**

Applications (marked confidential) including reference number, names of three referees and curriculum vitae should be forwarded to: **The Staff Officer, La Trobe University, Bundoora, Victoria, Australia, 3083. Equal Opportunity is University Policy.**

POSITIONS OPEN

POSTDOCTORAL POSITION AT THE DEPARTMENT OF IMMUNOLOGY OF THE RESEARCH INSTITUTE OF SCRIPPS CLINIC, LA JOLLA, CA. To study the expression of the genes of the human major histocompatibility complex. The project involves the analysis of cloned genes, DNA-mediated gene transfers and development of additional HLA reagents. The position requires Ph.D. in the area of microbiology or biochemistry and experience with recombinant DNA techniques is desirable. Interested persons should apply to: **Dr. Rakesh Srivastava, Department of Human Genetics, 333 Cedar Street, Yale Medical School, New Haven, CT 06510, or to Dr. Per A. Peterson, Department of Immunology, IMM-1, Research Institute of Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, CA 92037.**

POSTDOCTORAL POSITION (NIH training grant) available immediately—investigate phosphoinositide-protein kinase C changes in hepatocytes/cells of lymphoreticular system in chronic endotoxemia/sepsis. Need highly motivated individual trained in lipid biochemistry. Minimum of 2 years of experience. Send curriculum vitae and names of three references to: **Dr. Judy A. Spitzer, Department of Physiology, Louisiana State University Medical Center, 1901 Perdido Street, New Orleans, LA 70112. LSUMC is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION—HUMAN MOLECULAR GENETICS. Position available to clone and characterize human DNA repair genes. Recent graduates with a Ph.D. or M.D. and experience in recombinant DNA techniques are favored, but individuals with strong credentials in other areas are encouraged to apply. Salary dependent on qualifications. Please submit curriculum vitae, selected reprints, and names of three references to: **Steve S. Sommer, M.D., Ph.D., Department of Biochemistry and Molecular Biology, Mayo Clinic/Foundation School of Medicine, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.**

POSTDOCTORAL POSITION IN IMMUNOLOGY

The position is now open for 2 to 3 years to study the immune regulation by receptor (idiotype)-specific T cells and antibodies and the repertoires of complementary lymphocyte clones. Ph.D. in biological sciences is required. Starting salary range: \$19,000 to 19,800. Send curriculum vitae and references to: **Dr. Jan Cerny, Professor, c/o Microbiology Department, Route J-19, The University of Texas Medical Branch, Galveston, TX 77550. Telephone: 409-761-4904. Women and minorities are encouraged to apply. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN MOLECULAR PHARMACOLOGY. New position available to examine molecular and biochemical determinants of resistance to fluoropyrimidine anti-metabolites in human colonic cell lines. Primary focus is on the structure and expression of thymidylate synthase, its gene, and its messenger RNA. A Ph.D. in molecular biology, biochemistry, or pharmacology is required. Experience with cell culture techniques is helpful. Send curriculum vitae along with names of three references to: **Dr. Franklin G. Berger, Department of Biology, University of South Carolina, Columbia, SC 29208. An Equal Opportunity/Affirmative Action Employer.**

TWO POSTDOCTORAL POSITIONS available immediately in molecular parasitology.

Study of gene expression in schistosome parasites using available cloned gene banks and defined serum reagents to identify and characterize antigens important in immunity. Experience in molecular genetics required. Contact: **Dr. Philip T. Loverde, Department of Microbiology, 203 Sherman Hall, State University of New York, Buffalo, NY 14214.**

Study idiotype network in schistosomiasis with the development of an idiotope vaccine as a goal. Experience in immunology essential, hybridoma and protein purification experience desired. Contact: **Dr. H. Kohler, Department of Molecular Immunology, Roswell Park Memorial Institute, Buffalo, NY 14263. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS, one available immediately, one 1 April 1987, to study structure, function and genetics of mammalian proto-oncogenes. Focus is on transcriptional regulation and alterations of coding regions leading to oncogenic activation of *c-onc's*. Candidates should be highly motivated, with experience in molecular biology and biochemistry. Send curriculum vitae and three letters of reference to: **Alan Y. Sakaguchi, Ph.D., Department of Cellular and Structural Biology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284. An Equal Opportunity/Affirmative Action Employer.**

PARASITOLOGIST: The Department of Immunology and Infectious Diseases of The Johns Hopkins University invites applications for a tenure-track faculty position at the assistant or associate professor level. Candidates should have an M.D. or Ph.D., or both, with at least two years of postdoctoral experience in molecular, cellular, or ecological research on parasitic diseases. Interested individuals should send a curriculum vitae, names and addresses of three referees, and a brief description of their current and future research by 16 January 1987 to: **Parasitology Search Committee, c/o Dr. Noel R. Rose, Chairman, Department of Immunology and Infectious Diseases, Johns Hopkins University School of Hygiene and Public Health, 615 N. Wolfe Street, Baltimore, MD 21205, USA. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS Eukaryotic Protein Processing Protein Chemistry

Openings for two Ph.D.'s with proven skill in protein chemistry, enzymology, and cell biology to study the biosynthesis and regulation of proteases involved in eukaryotic protein processing. Successful applicant(s) will join an active team consisting of four yeast molecular biologists, cell biologist, and cellular immunologist in state-of-the-art laboratory with facilities for molecular biology, peptide/oligo synthesis, and protein sequence analysis. Available July 1987. Call or write: **Dr. John A. Smith, Department of Molecular Biology, Massachusetts General Hospital, Boston, MA 02114; Telephone: 617-726-5954.**

POSTDOCTORAL CLINICAL IMMUNOLOGIST. Postdoctoral physician with at least 1 year of postdoctoral research training to participate in a clinical and basic research program in human retrovirology, including leukemia and AIDS. Willing to work in a multidisciplinary group of immunologists, cell biologists and biochemists. A 50% commitment to laboratory research required. Salary negotiable. Send resume to: **J. C. Klock, MD, Scientific Director, Medical Research Institute, Institute of Cancer Research, 2200 Webster Street, San Francisco, CA 94115. Equal Opportunity Employer.**

RESEARCH ASSOCIATE to participate in studies of cellular regulation of IgA synthesis in murine and human Peyer's patches. Requires experience in cellular immunology, isolation of lymphoid and accessory cell populations, cell cloning and hybridoma technology, and general immunochemical techniques. Will be expected to initiate studies on effector cell activities at mucosal sites. Position available now to Ph.D. with 1-2 years of postdoctoral experience. Starting salary will be \$22,800. Send curriculum vitae and three letters of reference by 15 February 1987, to: **Dr. J. R. McGhee, Department of Microbiology, University of Alabama at Birmingham, University Station, Birmingham, Alabama 35294. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH POSITION IN DIABETES AND CARDIOVASCULAR DISEASE—The Lankenau Medical Research Center, jointly with the Department of Biochemistry and Biophysics and the Diabetes Center of the School of Medicine of the University of Pennsylvania, seeks a research scientist with an M.D. or a Ph.D. degree to conduct research in cellular metabolism with emphasis in Diabetes and Cardiovascular Disease. The candidate should have an independent funded research program and must be willing to interact with staff scientists of both institutions. Modern laboratory facilities and supplemental funds for equipment, supplies and salaries would be provided by the Lankenau Medical Research Center. Participation in graduate and post graduate education programs is possible. Applicants should submit their curriculum vitae and the names of three references to: **Michael S. Connor, Assistant Vice President-Personnel, The Lankenau Medical Research Center, Lancaster Avenue west of City Line, Philadelphia, PA 19151. Equal Opportunity Employer.**

**FACULTY POSITIONS IN
ECOLOGICAL AND EVOLUTIONARY
BIOLOGY AT THE
UNIVERSITY OF CALIFORNIA,
BERKELEY**

1. ANIMAL POPULATION ECOLOGIST

The Department of Zoology invites applications for a faculty position at the Assistant or Associate Professor level (pending final budgetary approval), beginning with the 1987-88 academic year. Research areas of particular interest to us are demographic, social, and genetic structures of populations, life-history evolution, the ecology and coevolution of species interactions, and foraging ecology. Teaching responsibilities will include an undergraduate course in animal ecology, and an advanced course in an area of specialization. Applicants should send a curriculum vitae, including a statement of research and teaching objectives, reprints and the names and addresses of at least three references to: CHAIRMAN, ECOLOGY SEARCH COMMITTEE, Department of Zoology, University of California, Berkeley, CA 94720.

2. PLANT POPULATION BIOLOGIST

The Department of Botany invites applications for a tenure-track Assistant Professor position (pending final budgetary approval), beginning with the 1987-88 academic year. The research interests of the candidate should be in experimental plant population ecology/biology emphasizing life history and demography. Teaching at all levels (undergraduate and graduate) may be anticipated, including a contribution to general biology or botany. Applicants should send a curriculum vitae, statement of research and teaching objectives, relevant reprints and manuscripts, and names and addresses of three references to: CHAIRMAN, POPULATION BIOLOGIST SEARCH COMMITTEE, Department of Botany, University of California, Berkeley, CA 94720.

3. PHYSIOLOGICAL PLANT ECOLOGIST

The Department of Botany invites applications for a faculty appointment at the associate or full professor level (pending final budgetary approval), beginning with the 1987-88 academic year. The research interests of the candidate should be in ecology and evolutionary biology; a broad base in ecology is essential. Research interests need not be limited to vascular plants. Teaching at all levels (undergraduate and graduate) may be anticipated, including a contribution to general biology or botany. Applicants should send a curriculum vitae, statement of research and teaching objectives, relevant reprints and manuscripts, and names and addresses of three references to: CHAIRMAN, ECOLOGIST SEARCH COMMITTEE, Department of Botany, University of California, Berkeley, CA 94720.

As part of the reorganization of Biological Sciences at Berkeley, it is anticipated that these positions will soon be incorporated into a new Department of Integrative Biology.

CLOSING DATE FOR RECEIPT OF APPLICATIONS:
January 15, 1987.

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



آغا خان یونیورسٹی

THE AGA KHAN UNIVERSITY

Faculty of Health Sciences

Medical College

The Aga Khan Medical College is now in its fourth year of operation. Its affiliated Aga Khan University Hospital has well equipped teaching and service laboratories and will have 721 beds when fully operational. Our undergraduate curriculum in Medicine is intended towards integration of basic and clinical sciences.

Applications are invited from candidates who meet the requirements for the position of:

ASSISTANT PROFESSOR, PHARMACOLOGY

Candidates applying for this position must have a Ph.D or equivalent qualification with at least 2 years Post-doctoral teaching/research experience. Candidates having experience of teaching in a Medical College will be given preference. The successful candidate will be required to participate in on-going research programmes and will be encouraged to initiate their own research activities. Those intending to pursue a career in Pakistan will be preferred.

Salary and benefits will be offered commensurate with qualifications, experience and level of responsibility. Applications should include detailed résumé, bibliography and names of at least three referees familiar with recent work history. Reply to the Personnel Director, The Aga Khan University, P.O. Box 3500, Stadium Road, Karachi-5, Pakistan.

Clinical Research (Biometrics Department) offers an opportunity for an

ANALYST-PROGRAMMER

for data base applications

This position is in our Corporate Headquarters in Switzerland and includes responsibilities for:

- planning, developing and operating of integrated information systems within Clinical Research Department
- design and maintenance, in collaboration with end users, of the data dictionary
- giving assistance to end users having complex retrieval requirements.

These information systems make use of DEC-VAX computers together with relational data base systems and statistical and other evaluation systems.

The successful candidate will have good experience in technical and scientific application programming using relational data bases; he or she should be interested in solving medical research problems and should be capable of working on complex problems either independently or in a team. Excellent verbal and written communication skills and good knowledge of English are essential. Experience in artificial intelligence applications or development of expert systems would be advantageous.

SANDOZ

Sandoz Ltd., Personnel Department, Ref. 8676
Attn.: Mr. J. Brunner
CH-4002 Basel / Switzerland

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately. Molecular biology of plasmid F maintenance in *Escherichia coli*. Studies involve (i) molecular dissection of origin of replication structure and function; (ii) interaction of multiple plasmid origins; (iii) control of initiator protein expression and interaction with host cell initiator protein and (iv) strong physiological parallels in control of F plasmid and host chromosome replication. NCI-supported position open only to U.S. citizens or persons holding resident immigrant status. Contact: **Dr. Bruce C. Kline, Department of Biochemistry and Molecular Biology, Mayo Graduate School of Medicine, Mayo Clinic, Rochester, Minnesota 55905. An Equal Opportunity/Affirmative Action Institution.**

A POSTDOCTORAL POSITION—MICROBIAL ECOLOGY/MOLECULAR BIOLOGY is available immediately for studies of the molecular and genetic bases for bacterial growth and survival in soils. Emphasis being placed on gram-negative heterotrophs. A Ph.D. in soil microbiology/microbial ecology with experience or interest in molecular biology is desirable.

Stuart B. Levy
Department of Molecular Biology and Microbiology
Tufts University School of Medicine
136 Harrison Ave., Boston, MA 02111

Tufts University is an Affirmative Action, Equal Opportunity Employer.

POSTDOCTORAL POSITION Mount Sinai Medical School New York, N.Y.

A 2-year postdoctoral position is currently available to study T cell responses directed toward IgG2a allotypes. This project involves the production of long-term T cell lines and the use of recombinant DNA techniques for the construction of target cell populations. Structure/function studies will localize determinants recognized by Class I- and Class II-restricted T cells and investigate the possible relationship between T_H and CTL tolerance. Applicants should send a curriculum vitae and names of three references to: **Dr. Elizabeth K. Bikoff, Department of Obstetrics, Gynecology, and Reproductive Science, Annenberg 20-88, Mount Sinai Medical School, One Gustave L. Levy Place, New York, N.Y. 10029.**

POSTDOCTORAL POSITIONS: Assistant Research Scientist (nontenure-track faculty) to study mutagenesis of modified genes introduced into differentiated human cells. Second position to study molecular genetics of human disease. Experience in molecular genetics, mutagenesis and/or cell culture an advantage. Send vitae with names of three references to: **Dr. Jay A. Tischfield, Anatomy/Cell and Molecular Biology, Medical College of Georgia, Augusta, GA 30912. Equal Opportunity Employer/Affirmative Action Position.**

RESEARCH ASSOCIATE POSITION FOR BIOCHEMIST/ENZYMOLOGIST. Postdoctoral position for research into the biochemistry of trace element metabolism in legumes and *Rhizobium*. Ph.D. required with training in biochemistry, enzymology, and tracer methods. Closing date: 25 January 1987. Salary \$19,000 to \$21,000 per year. Forward curriculum vitae, two letters of reference to: **Harold J. Evans, Laboratory for Nitrogen Fixation Research, Oregon State University, Corvallis, OR 97331. Oregon State University is an Equal Opportunity/Affirmative Action Employer and complies with the Rehabilitation Act of 1973.**

POSTDOCTORAL POSITION available immediately for investigations on the mechanism of regulation of actomyosin ATPase of striated and smooth muscle and mechanisms in cell motility. Send curriculum vitae and references to:

Dr. E. W. Taylor
Department of Molecular Genetics and Cell Biology
University of Chicago
920 East 58 Street
Chicago, IL 60637

POSTDOCTORAL POSITION available immediately for research on the interaction of *Pseudomonas aeruginosa* with pulmonary and humoral host defenses, particularly in regard to patients with cystic fibrosis. Excellent microbiological and immunobiochemical background required. Send curriculum vitae and three letters of recommendation to: **Dr. Neal L. Schiller, Division of Biomedical Sciences, University of California, Riverside, CA 92521-0121. The University of California is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE AT

YALE UNIVERSITY AND VASSAR COLLEGE

We are seeking an individual to participate in and coordinate a project on the relationship between pregnancy and lactation and body fat regulation. Individual will work jointly with **Judith Rodin, Ph.D.** at Yale and **M. R. C. Greenwood, Ph.D.** at Vassar. Experience in human nutrition, metabolism, and behavior desired. M.D. or Ph.D. required. Project will include developing methods for fatness assessment, psychophysical testing and metabolic measures. Good background in statistical and computer analysis and excellent interpersonal skills an asset. Individual should plan to reside in or around New Haven, CT. Project will require travel between sites.

Send letter of application, curriculum vitae and three letters of reference to:

Ms. Deborah Whitney-Saltiel, MPH
Health and Behavior Network Coordinator
Yale University
Department of Psychology
P.O. Box 11A Yale Station
New Haven, CT 06520
Telephone: 203-432-4614

POSTDOCTORAL POSITION. Exciting opportunity to investigate control mechanisms in proteinase metabolism. Studying control of plasminogen activator metabolism using biochemical and molecular biological techniques. Looking for postdoctorate with experience in molecular biology, including Northern blotting, in situ hybridization, sub-cloning, cell culture and enzymology. Also opportunity to clone gene for important human mast cell enzyme. Substantial interaction with molecular biology program at University encouraged. Reply to:

Gerald S. Lazarus, M.D.
Department of Dermatology
University of Pennsylvania
229 Medical Education Building
36th and Hamilton Walk
Philadelphia, PA 19104-6065

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

POSTDOCTORAL RESEARCH ASSOCIATE AND LECTURER position available 1 March 1987, at **Northeastern University's Marine Science Center.** Ph.D. in biology, zoology, or botany, with research interests in organismic biology. Some teaching in area of specialization. Salary negotiable. Send curriculum vitae, brief description of research and teaching interests and three letters of recommendation to: **Kenneth P. Sebens, Director; MSMSC: East Point; Nahant, MA 01908. Northeastern is an Equal Opportunity/Affirmative Action, Title IX University.**

POSTDOCTORAL RESEARCH ASSOCIATE position available to study regulation of contractile protein function in skeletal and cardiac muscle, using combined biochemical and mechanical techniques with skinned fiber preparations. Individuals with appropriate background in physiology or biochemistry should send curriculum vitae and names of three references to: **Franklin Fuchs, Ph.D., Department of Physiology, University of Pittsburgh, School of Medicine, 645A Scaife Hall, Pittsburgh, PA 15261.**

POSTDOCTORAL RESEARCH ASSOCIATE—A postdoctoral position to study the mechanism of interaction of pyrrolizidine alkaloids with nucleophilic biological substrates is available. Mass spectrometry will be used extensively. A Ph.D. in organic, physical organic chemistry, or biochemistry is required. Previous research experience in mass spectrometry is essential and experience with chromatographic systems and separation, isolation and purification of oligonucleotides is highly desirable. Salary range \$19,000 to \$21,000 depending on experience and qualifications. Send curriculum vitae and three letters of recommendation by 30 January 1987 to: **Dr. Max Deinzer, Department of Agricultural Chemistry, Oregon State University, Corvallis, OR 97331. Oregon State University is an Affirmative Action/Equal Opportunity Employer and Complies with Section 504 of the Rehabilitation Act of 1973.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS

Two postdoctoral positions are available immediately. One position is to isolate new DNA markers to eventually clone the cystic fibrosis gene. The second position is for the molecular analysis of the chromosome 3p deletion in small cell lung cancer. Candidates should be highly motivated, with experience in molecular biology. Applicants should send curriculum vitae and names of three references to: **Dr. Susan L. Naylor, Department of Cellular and Structural Biology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284.**

Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATES.

Two positions are available immediately to study the mechanisms of action of serum proteins and their receptors in hemostasis and in iron transport. Studies will include cDNA cloning and sequencing, and characterization and isolation of protein functional domains using monoclonal antibodies and HPLC. Applicants should hold a Ph.D. degree in biochemistry or molecular biology. Experience in protein chemistry, recombinant DNA or immunochemistry would be useful but is not required. Salary to \$25,000 depending on qualifications. Interested persons should send a curriculum vitae and list of references to: **Dr. William T. Morgan, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center, 1901 Perdido Street, New Orleans, LA 70112. An Equal Opportunity, Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately for studies on cellular biology of brain dopaminergic neurons and related growth factors. Background in neurobiology, cell biology, molecular biology or biochemistry desired. Send curriculum vitae and names of three references to: **Dr. F. Hefti, Department of Neurology, University of Miami, P.O. Box 016960, Miami, FL 33101.**

POSTDOCTORAL/RESEARCH ASSOCIATE position available in the Department of Biochemistry to study neuropeptide precursor processing enzymes. Investigations will elucidate the role of these processing enzymes in the control of peptide neurotransmitter and peptide hormone biosynthesis. Enzyme characterization and regulation studies will utilize methods in protein/peptide chemistry, cell culture, immunochemistry, and molecular biology. Ph.D. in neuroscience, biochemistry, or pharmacology desired. Send curriculum vitae, description of research experience, and names of three references to: **Dr. Vivian Y. H. Hook, c/o Civilian Personnel, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814.**

POSTDOCTORAL RESEARCHER. Postdoctoral position to study effects of chronic alcohol consumption on activation of industrial pollutants to mutagens/carcinogens. Position available immediately. Expertise in microsomal mediated MFO, Ames-testing, protein purification desired. This is a 3-year NIH-supported position. Send curriculum vitae, letters of recommendation to: **Dr. Gary Winston, Louisiana State University Institute for Environmental Studies, 42 Atkinson Hall, Baton Rouge, LA 70803. LSU is an Equal Opportunity Employer.**

POSTDOCTORAL/RESEARCH SCIENTIST

The University of California, Los Angeles (UCLA), School of Medicine, Tissue Typing Laboratory, is recruiting an immunologist at the postdoctoral or assistant researcher level. Position will be determined by applicant's experience and training. Candidates with a Ph.D. or M.D., with appropriate research experience, are eligible to apply. Areas of research include transplantation immunology and tumor immunology. Experience with flow cytometry analysis is preferred. Applicants should submit curriculum vitae, bibliography, and names of references to: **Dr. Paul I. Terasaki, UCLA Tissue Typing Laboratory, 1000 Veteran Avenue, Los Angeles, CA 90024. UCLA and its affiliated institutions are Equal Opportunity and Affirmative Action Employers.**



NUCLEAR MEDICINE INSTRUMENTATION SPECIALIST

The Division of Life Sciences of the International Atomic Energy Agency invites applications for a Nuclear Medicine Instrumentation Specialist. The Post involves selection, use, quality control and maintenance of nuclear medicine and related instruments.

The candidate should have an advanced degree in physics, medical physics or electronic engineering. Knowledge and experience with problems of maintenance of equipment in developing countries is considered desirable. Fluency in English, French, Russian or Spanish is essential.

Initial contract three years with a possibility of extension for another 2 years. Duty station: Vienna, Austria. Total annual emoluments approximately US\$ 38 900.-. Additional allowances if married. Travel and removal expenses paid. Installation and Repatriation grants. Six weeks annual leave.

Send application with an indication of your nationality under VN 86/087 to the Division of Personnel, International Atomic Energy Agency, P.O. Box 100, A-1400 Vienna, Austria.

SCIENTIFIC EXCHANGES

NAS Scientific Exchange Program with the U.S.S.R. and Eastern Europe

The National Academy of Sciences (NAS) invites applications from American scientists who wish to make visits beginning during the period September 1, 1987 through December 31, 1988 to the U.S.S.R., Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia. Long-term research visits of 3 to 12 months duration are encouraged, particularly if contact with colleagues in the other country has already been established. The minimum length of visits is 1 month in one country.

Applicants must be U.S. citizens and have a doctoral degree or its equivalent by June 1987 in physics; chemistry; mathematics and computer sciences; earth, atmospheric, and oceanographic sciences; agricultural, forestry, fishery, and plant sciences; biological and medical sciences; environmental sciences; engineering; archaeology and anthropology; geography; or psychology. Also included are science and technology policy studies and other aspects of the economic and social sciences that involve quantitative analysis. Other scientific disciplines not explicitly mentioned will be considered on a case-by-case basis. Necessary expenses will be met by the NAS and the foreign academy, including reimbursement for long-term visitors for salary lost up to a predetermined maximum and expenses for accompanying family members for visits exceeding 5 months.

Requests for applications should reach the National Academy of Sciences not later than February 13, 1987. Applications must be postmarked by February 28, 1987. Address application requests to:

National Academy of Sciences
Office of International Affairs
Soviet and East European Affairs (JH-218)
2101 Constitution Avenue, NW
Washington, D.C. 20418
Telephone: (202) 334-2644

The Naval Research Laboratory Laboratory for Computational Physics

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DUTIES:

Conducts theoretical/numerical investigations of supersonic fluid and gas dynamics and the physical processes involved in explosions. Provides support for experimental research into high-explosive and nuclear airblast effects and oversees/supervises computational modelling efforts.

QUALIFICATIONS:

A PhD Degree is highly desirable; a degree in Physics, Chemistry, or Engineering (Aerospace, Mechanical, etc.) is acceptable provided the applicant demonstrates experience in developing computational models for performing detailed numerical simulations of supersonic gasdynamic and hydrodynamic phenomena including fluid dynamics of solid propellant combustion, chemical explosions/reactive systems, airblast, and transport phenomena in multiple spatial dimensions.

To apply, submit a resume or SF-171 prior to 31 December 1986 to:

NAVAL RESEARCH LABORATORY

Civilian Personnel Division • Attention: 44-003.13.1:BC (S)
4555 Overlook Avenue, S.W. • Washington, D.C. 20375-5000

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Medical College

The Aga Khan Medical College is now in its fourth year of operation. Its affiliated Aga Khan University Hospital has well equipped teaching and service laboratories and will have 721 beds when fully operational. Our undergraduate curriculum in Medicine is intended towards integration of basic and clinical sciences.

Applications are invited from candidates who meet the requirements for the position of:

ASSISTANT PROFESSOR, DEPARTMENT OF BIOCHEMISTRY

Candidates applying for this position must have a Ph.D or equivalent qualification with at least 2 years Post-doctoral teaching/research experience. Candidates having experience of teaching in a Medical College, or involved in medical research will be given preference. The successful candidate will be required to participate in on-going research programmes and will be encouraged to initiate their own research activities. Those intending to pursue a career in Pakistan will be preferred.

Salary and benefits will be offered commensurate with qualifications, experience and level of responsibility. Applications should include detailed résumé, bibliography and names of at least three referees familiar with recent work history. Reply to the Personnel Director, The Aga Khan University, P.O. Box 3500, Stadium Road, Karachi-5, Pakistan.

**Digestive Diseases Branch
Division of Intramural Research
National Institute of Diabetes and
Digestive and Kidney Diseases
National Institutes of Health
Public Health Service**

POSTDOCTORAL POSITION is available immediately to study the cellular basis of action of gastrointestinal peptides using dispersed cell systems from various gastrointestinal tissues. Experience with receptors or stimulus-secretion coupling is desirable. Candidate must be a U.S. citizen or permanent resident. Salary will range from \$20,000 to \$23,000. Send curriculum vitae, statement of research interests and three letters of reference to:

**Dr. Jerry D. Gardner
Digestive Diseases Branch
National Institutes of Health
Bldg. 10, Room 9C-103
Bethesda, MD 20892**

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TOXICOLOGIST

The ICAIR group of Life Systems, Inc., is a leader in the application of toxicology to resolve environmental health issues for Federal/State Governments and industry. As a member of the ICAIR team you have the opportunity to contribute technical expertise and insight across a broad spectrum of non-laboratory activities providing diverse assignments involving today's most important toxicological issues. Our small company environment focuses on team work and complements this idea by encouraging professional development and allowing your ideas to influence career growth and impact company decisions. Our expanding contract base has created this career opportunity for an individual possessing the qualities presented below.

Our position requires an appropriate Ph.D. and eight plus years of relevant experience. Your work will focus on the metabolism and human health effects of pesticides and other chemicals. You will be required to plan and perform non-laboratory evaluations of fundamental toxicological issues, environmental health effects assessments, risk assessments and write criteria documents. Excellent verbal and written communication skills as well as the desire to work in a team environment are essential for success. Quantitative risk assessment experience is a plus.

In addition to providing you with challenging assignments, we recognize and reward the professional judgement and productivity responsible for our continuing success. Our compensation package is well above industry average and matches the level of challenge and responsibility we offer. Fringe benefits (including relocation) can be customized to meet your particular needs. Our need is urgent and we are in a position to respond quickly to your submittal. For confidential consideration send your CV and salary requirements to our Manager, Recruitment at:

ICAIR

Life Systems, Inc.

24755 Highpoint Road
Beachwood, OH 44122

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Ph.D. PHARMACOLOGIST/ BIOCHEMIST

Norwich Eaton Pharmaceuticals, Inc., a wholly-owned subsidiary of the Procter & Gamble Company, is seeking a Research Scientist to fill a position in product development.

Applicant should have a Ph.D. degree in Pharmacology, Biochemistry or other appropriate field, with 0-2 years of PostDoctoral experience. Requirements include a good understanding of mechanisms that govern the action/toxicity/metabolism of drugs and related IN VITRO and IN VIVO techniques for the evaluation of these mechanisms. Specific responsibilities will include designing, developing, & executing studies designed (1) to elucidate the pharmacology & biochemistry of novel muscle relaxants, and (2) to develop an understanding of the mechanism of drug action and toxicity.

Norwich Eaton is located in a beautiful rural location, 200 miles northwest of New York City. Besides offering a stimulating environment for professional growth, the Company provides a competitive employment package including paid relocation, and company-paid health, dental, and retirement benefits. Some of Norwich Eaton Rx products include Macrodantin, Dantrium, Vivonex, Entex LA and Buprenex. Resumes and inquiries should be addressed to:

**Nicholas W. Andrews
Personnel Representative
Norwich Eaton Pharmaceuticals, Inc.
A Procter & Gamble Company
17 Eaton Avenue
Norwich, NY 13815 U.S.A.**

An Equal Opportunity Employer

TOP MANAGERIAL POSITION IN PHARMACEUTICAL RESEARCH

As Management Consultants we are interested in establishing contact with experienced research managers.

For one of our clients, a major international chemical/pharmaceutical company, we are looking for the future head of a large research organisation based in German-speaking Europe, covering all fields from drug design to chemistry, biology and clinical research.

More important than a track record in either chemical, pharmacological or medical research is the qualification to plan complex R & D activities into the future, to maximise the given potential by adapting conception and organisation to a constantly changing technological and socio-political environment, and to understand, motivate and direct a large staff of experienced researchers.

This challenging position gives the right man/woman the possibility to contribute, within a solid management team, to the further development of a highly reputable and successful company.

Required background: a degree in medicine, pharmacology, molecular biology or chemistry; academic and/or industrial research experience, preferably but not mandatory in the fields of immunology or dermatology, fluency in English and German. Extremely interesting conditions can be arranged for the right person.

Should you be interested in a preliminary exchange of information, please contact

**Nino Ascher
Managing Partner
TASA International AG
Dufourstrasse 101
CH-8034 Zurich/Switzerland
Tel. 01-251.49.66.**

Complete professional discretion is, of course, guaranteed.



**JOINT FAO/IAEA DIVISION OF ISOTOPE AND RADIATION APPLICATIONS
OF ATOMIC ENERGY FOR FOOD AND AGRICULTURAL DEVELOPMENT
VIENNA/SEIBERSDORF, AUSTRIA**

AGROCHEMICALS UNIT HEAD

A scientist with a university degree in organic or pesticide chemistry and at least 6 years' experience in isotope applications, e.g. in pesticide metabolism or environmental fate research, is required to assist the Director of the Joint FAO/IAEA Division in carrying out a programme of assisting Member States in the safe and effective use of pesticides.

Duties include acting as research leader and Agrochemicals Unit Head with responsibility for supervision of personnel, training, procurement and maintenance of equipment. Other duties include evaluation of technical assistance requests, fellowship applicants, research contract proposals; serving on scientific/technical missions and representing the FAO/IAEA in relevant scientific technical meetings; assuming responsibility for scientific/technical aspects of planning and executing training courses and seminars and lecturing and securing competent instructors; assisting in preparing scientific programmes for meetings or conferences and serving as scientific secretary and editing or supervising editing of reports from such meetings.

Administrative experience is an asset. The candidate must be fluent in the working language English or in French, Russian or Spanish.

Initial contract three years, total annual emoluments approximately US\$ 38 900.-. Additional allowances if married. Travel and removal expenses paid. Installation and Repatriation grants. Six weeks annual leave.

Send application with an indication of your nationality under VN 86/082 to the Division of Personnel, International Atomic Energy Agency, P.O. Box 100, A-1400 Vienna, Austria.

**INTERNATIONAL BOARD FOR PLANT GENETIC RESOURCES
of the
Consultative Group on International Agricultural Research**

In accordance with its new mandate to develop research activities, the IBPGR proposes to appoint a **HEAD OF RESEARCH**.

The post requires a scientist of recognized international repute with the ability to direct research in the following areas: diversity of crop species and their relatives; studies on the evaluation of germplasm; monitoring of genetic integrity of conserved samples; and aspects of seed physiology and *in vitro* culture related to conservation. The Head of Research will be supported by a small team of specialists who will initiate and coordinate priority research conducted under contract in appropriate centres of expertise, and he/she will be responsible to the Director, Prof. J.T. Williams.

The post will involve substantial travel and will be based at IBPGR Headquarters in Rome. The initial contract will be for 2 years with a possibility of renewal.

Salary will be commensurate with age and experience, comparable with usual international scales. In addition dependents allowances and education grants are available and a contributory pension scheme applies to this post.

Further details are available on request. Applicants should write in confidence as soon as possible to the Director, IBPGR at *either*

**IBPGR Headquarters
Food and Agriculture Organization of
the United Nations (FAO)
Via delle Terme di Caracalla
00100 Rome, ITALY**

or

**IBPGR
FAO Liaison Office for North America
1001 22nd Street N.W., Suite 300
Washington, D.C. 20437
U.S.A.**



OPPORTUNITIES IN BIOTECHNOLOGY

The Research Division of W.R. Grace & Co., a top Fortune 100 company and the world's largest specialty chemical company, has exceptional opportunities in its expanding biotechnology research programs for Ph.D. and B.S./M.S. degreed scientists in Fermentation Research, Microbiology, Molecular Biology, and Biochemistry.

Senior Research Microbiologist: Design and optimize fermentation processes for the production of enzymes, biologically active proteins and other products using laboratory fermentors at the 1-30L scale. This position requires a Ph.D. in the Biological Sciences with at least three years of postdoctoral experience in fermentation research and development, preferably using computer-based process controls and instrumentation.

Molecular Biologists: Conduct research in the application of recombinant DNA, microbial genetics and biochemistry for the production of therapeutic, pharmacologic or biocatalytic proteins. Positions are open at the B.S./M.S. and Ph.D. degree levels for individuals with experience in the construction of recombinant plasmids and the expression of cloned DNA sequences at the protein level.

Biochemists: Carry out research on the use of enzymes and microbial systems for the synthesis of specialty and

fine chemicals. These positions require B.S., M.S., or Ph.D. degrees in the Biological Sciences and 0-2 years experience in areas such as enzymology, protein biochemistry or enzyme/whole immobilization technology.

Projects will be multidisciplinary collaborative efforts which require scientists with a high degree of self-motivation, excellent communication skills and the ability to work as part of a large team.

We can offer you a competitive salary and an outstanding benefits program. Our research facility is located in the picturesque, planned community of Columbia, Maryland, midway between Baltimore and Washington, D.C. If you are interested in a rewarding and growth-oriented career, please send your confidential resume to:

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POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for study of prolactin effects on hypothalamic neuroendocrine function. Position supported by NIH Training Grant. Send curriculum vitae and names of three references to: **Dr. Michael Selmanoff, Department of Physiology, University of Maryland, School of Medicine, 660 West Redwood Street, Baltimore, MD 21201.**

POSTDOCTORAL TRAINING IN ECOLOGY AND EVOLUTIONARY BIOLOGY

Postdoctoral positions are available for ecological and evolutionary research in the Department of Biology at the University of Rochester. Faculty available for training include:

Andrew P. Dobson—Host-parasite population biology and coevolution; conservation biology.
Thomas H. Eickbush—Evolution of multigene families and protein superfamilies.
Martin A. Gorovsky—Molecular evolution of the ciliate genome; evolution of histone and tubulin genes.
John Jaenike—Ecology and behavior of mycophagous *Drosophila*.
Uzi Nur—Evolutionary cytogenetics and chromosomal evolution.
Robert K. Selander—Genetic structure and population genetics of bacteria.
John H. Werren—Ecological and evolutionary genetics of insects; behavioral ecology.
Chung-I Wu—Theories of molecular evolution and meiotic drive.

Applications should state the faculty member(s) with whom the candidate wishes to work and should include curriculum vitae, references, and summary of research interests. Send applications to:

**Ecology and Evolutionary Biology
 Postdoctoral Training Program
 Department of Biology
 University of Rochester
 Rochester, New York 14627**

The University of Rochester is an Affirmative Action, Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATES. University of California at San Francisco (UCSF)/Genentech, Inc. Applications are invited for positions in protein crystallography and molecular modeling. Candidates should have a Ph.D. in a field associated with either crystallography or application of computer graphics to protein structure. Projects will involve structure analysis of genetically engineered proteins using primarily neutron and x-ray crystallography. There will be an opportunity for candidates to learn molecular biology techniques. Appointment will be in the Department of Pharmaceutical Chemistry (UCSF) with a substantial portion of the research done in the Structure Biology Department at Genentech. Salary will be commensurate with experience. Applicants should send their curriculum vitae and the names of three references to: **Dr. Anthony Kossiakoff, Genentech, Inc., 460 Point San Bruno Boulevard, South San Francisco, CA 94080.** *The University of California is an Affirmative Action Employer.*

POSTDOCTORAL RESEARCH BIOCHEMIST. Position available immediately to study the interaction of acetylcholinesterase and acetylcholine receptor with anticholinesterase compounds. Experience in protein purification and characterization preferred. Please send résumé, statement of interest, and names of references to: **Dr. J. T. Yang, University of California, San Francisco (UCSF) Cardiovascular Research Institute, Box 0524, San Francisco, CA 94143.** *UCSF is an Affirmative Action/Equal Opportunity Employer.*

The California Space Institute of Scripps Institution of Oceanography (SIO) invites applications for postgraduate (postdoctoral) researchers in the area of developing programs in telerobotics and image processing applicable to space operations and oceanography. The applicants must have relevant Ph.D.'s or equivalent degrees. Experience in image processing and/or robotics. Salary range is \$24,972 to \$27,360, commensurate with experience. Applicants should submit résumé including names and addresses of at least three references to: **Dr. James Arnold, California Space Institute, A-021, La Jolla, CA 92093,** by 23 January 1987. *The University of California at San Diego is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available to work on cloning human DNA repair genes and purify DNA repair enzymes from various species. Experience in recombinant DNA and/or enzymology is essential. Send applications to: **Dr. Aziz Sancar, Department of Biochemistry, University of North Carolina, Chapel Hill, NC 27514.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available 1/87 or later to study the regulation of protein expression and the molecular structure of the SCRAPIE agent. Applicants should have experience in molecular biology with emphasis on cloning techniques and in vitro expression systems. Position is funded for 2 years and may be extended. Salary \$18,000 to \$23,000. Send curriculum vitae and three references to: **Dr. Paul E. Bendheim 718-494-5211, or Dr. David C. Bolton 718-494-5187, NYS Institute for Basic Research, 1050 Forest Hill Road, Staten Island, NY 10314.**

PROTEIN BIOCHEMIST. Tenure-track position at the assistant professor level, beginning August 1987, to develop an active research program in protein biochemistry and teach graduate and undergraduate courses. Ph.D. and postdoctoral experience required. Salary range: \$26,000 to \$30,000 per 9 months. Send a statement of current research pursuits and future research goals, curriculum vitae and reprints if available, and have three letters of recommendation sent separately to: **Dr. Robert F. Weaver, Department of Biochemistry, University of Kansas, Lawrence, KS 66045.** Closing date: 15 February 1987. *An Equal Opportunity/Affirmative Action Employer.*

PROTEIN CHEMIST

The Procter & Gamble Company's Miami Valley Laboratories has an entry level staff position for a Ph.D. with training in protein chemistry. Candidates should have experience in modern techniques of protein and peptide purification and characterization. Experience in amino acid analysis and peptide sequencing would be beneficial. Send résumé and publication list to: **Dr. T. J. Logan, Manager, Ph.D. Recruiting, Protein Chemist Position, The Procter & Gamble Company, P.O. Box 39175, Cincinnati, OH 45247.** U.S. citizen or permanent resident visa only. *An Equal Opportunity Employer.*

DEPARTMENT OF ZOOLOGY UNIVERSITY OF TENNESSEE, KNOXVILLE

QUANTITATIVE GENETICIST. Tenure-track position at the Assistant Professor level, starting 1 September 1987. Candidates must be engaged in modern applications of quantitative genetic techniques; those involved in research in behavioral genetics are particularly encouraged to apply. Postdoctoral experience is expected. The successful candidate also will be expected to maintain a record of significant research and teaching accomplishments and to interact with a faculty with diverse, interdisciplinary research interests. Submit a curriculum vitae, description of research activities, and have at least three letters of reference sent by 15 February 1987 to: **Dr. Gary F. McCracken, Genetics Search Committee, Department of Zoology, University of Tennessee, Knoxville, TN 37996-0810.** *The University of Tennessee is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH AND ANIMAL FACILITIES MANAGER: Long Island Jewish Medical Center is seeking an individual to manage and provide leadership in supervising and developing core research facilities including an animal research laboratory. Candidates should possess a Ph.D. and a strong background in research involving vertebrate animal models. This position carries major responsibility for administering the medical center's research facilities including direct oversight of the animal research facility. Self-directed research and collaboration with other investigations are essential to the position. Applicant should show productivity in refereed journals, teaching, and research and qualify for an academic appointment in the medical center's affiliated medical school. All interested candidates should send curriculum vitae to: **Elaine Murtha, Employment Manager, Department RA, Long Island Jewish Medical Center, New Hyde Park, NY 11042.** *An Equal Opportunity Employer.*

POSITIONS OPEN

PROTEIN CHEMIST

An opportunity is available for a biochemist with experience in protein structure studies. Candidate must have a doctoral degree in biochemistry and a minimum of 5 years of experience in the field of protein chemistry. Must be accomplished in the preparation of proteins and peptides by modern HPLC methods and the analysis of their composition and primary sequence. Must be experienced in the use of gas phase sequencer. Must be experienced in the use of computers to predict structure. Position is located in the Division of Medical Genetics, Department of Pediatrics, University of Southern California at Childrens Hospital of Los Angeles. Joint appointment in biochemistry is available. Excellent opportunities are available for collaboration and extension of interests to challenging cell biologic questions of protein translocation and membrane integration. Salary, academic rank, and tenure status are determined by experience and record of productivity. Send curriculum vitae, representative publications, statement of research interests, and names of three references to: **John A. Barranger, M.D., Ph.D., Head, Division of Human Genetics, Childrens Hospital of Los Angeles, 4650 Sunset Boulevard, Los Angeles, CA 90027.** *Childrens Hospital of Los Angeles and the University of Southern California are Affirmative Action Employers.*

RESEARCH ASSISTANT/ASSOCIATE TO BE MANAGER Tissue Culture Facility Molecular Biology Center Wayne State University

The Molecular Biology Center at Wayne State University invites applications from qualified candidates with M.S. or Ph.D. degrees for a position as research assistant/associate to operate and manage a core facility for cell and tissue culture of plants, insects and amphibians. Candidates should be familiar with cell and tissue culture including microinjection techniques and be willing to maintain and operate various instruments used by molecular biologists and tissue culture scientists.

The molecular biology center is an interdisciplinary program involving several departments at Wayne State and is designed to foster molecular biology research. Salary is commensurate with experience. Interested applicants should send their applications with curriculum vitae and names of three references to: **Dr. V. Hari, Department of Biological Sciences, Wayne State University, Detroit, MI 48202.**

Wayne State University is an Equal Opportunity/Affirmative Action Employer and actively seeks applications from women and minority groups.

RESEARCH ASSOCIATES. Two positions are available in bioanalytical research. One position (senior research associate) involves research in the general area of molecular luminescence including chemical studies using a novel fluorescence detected circular dichroism spectrometer. Some background in electronics and computers is desirable. The second position (research associate) involves characterization of bacteria using multidimensional luminescence techniques. Strong background in immunoassay and enzymatic analysis is preferred. Salary for both positions is competitive. Send curriculum vitae and names of three references to:

**Professor Isiah M. Warner
 Department of Chemistry
 Emory University
 Atlanta, Georgia 30322**

Applications from women and minority groups are encouraged. Emory University is an Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSOCIATE III, NUCLEAR THEORY, Department of Physics, Iowa State University: Candidate must have a Ph.D. in theoretical physics. Research in the investigation of quark effects in various nuclear phenomena. Development and application of relativistic field theoretic methods in the study of strong interaction physics. Project appointment through 30 April 1988. Minimum starting salary \$22,611. Renewal subject to availability of funding. Send letter of application with résumé and have three letters of recommendation sent to: **The Iowa Department of Job Service, 330 Main Street, P.O. Box 410, Ames, IA 50010.** All correspondence should refer to Job Order number 1622610. Closing date for applications is 15 January 1987 or later until the position is filled. *Iowa State University is an Equal Opportunity/Affirmative Action Employer.*

DEAN, INFORMATION STUDIES DREXEL UNIVERSITY

The trustees of Drexel University are seeking a **Dean** for the College of Information Studies to begin Summer, 1987. The position is a 12-month faculty appointment with tenure. **The College**, nearly 100 years old, is considered among the strongest and most progressive such schools in the world. Educational programs include a professional M.S. degree with specializations in information science, library science, and information systems; a Ph.D. degree with specializations in management, communication, and information systems; an advanced (post-M.S.) certificate; and a B.S. degree in information systems. The College awards about 95 M.S. degrees, 2 or 3 Ph.D.s, and several advanced certificates annually. The B.S. degree, which requires 5 years of study and employment, will be awarded to the first full class of about 40 students in 1989. **The faculty** provide leadership in the information field through their significant research and publications. They currently number 14, augmented by adjunct faculty and teaching assistants. Eight faculty are tenured. **The successful candidate** must have appropriate academic credentials and experience in teaching and in research, and must have demonstrated successful administration and leadership of creative people. **As a primary requirement, the dean administers the College's educational programs.** In addition, he or she must advocate vigorously for the College both inside and outside the University; lead the development of future-oriented education and research programs; and actively recruit new faculty to support the College's evolution. It is critical that he or she must be able to represent effectively the established and emerging aspects of the College, including library and information services, information science, information management, and information systems. **Inquiries and nominations are welcomed.** To apply, please send letter of application, curriculum vitae, and names of three references, by February 1, 1987, to Belver C. Griffith; Chair, Dean Search Committee; College of Information Studies; Drexel University; Philadelphia, PA 19104.

Drexel University invites applications from
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BIOLOGY FACULTY POSITIONS

The Department of Biology at the University of Southwestern Louisiana (USL) invites applications for FIVE tenure-track faculty positions in support of a developing doctoral program in Environmental and Evolutionary Biology. New faculty will be expected to participate in undergraduate and graduate instruction, direct graduate student research and develop a recognized research program competitive for extramural funding.

USL is a fast-growing university with the second largest full-time enrollment in the state. USL is located in Lafayette, a city of 90,000 which is the administrative hub for the offshore petroleum industry and the cultural center for Acadiana. Lafayette boasts a mild climate and access to a broad variety of terrestrial and aquatic ecosystems.

The USL administration is committed to excellence in undergraduate and graduate education and research. The present search is part of an effort to further develop a nationally recognized program in Evolutionary and Environmental Biology. The biology faculty currently numbers 22 with research ranging from molecular to ecosystem studies. The Biology Department is housed in a newly renovated building with an excellent array of research instrumentation. The Department maintains close ties with specialized campus research centers such as the Electron Microscopy Center, the Primate Research Center, the Center for Crustacean Research, and the Center for Research Instrumentation. Exceptionally strong computing facilities are available on campus. USL is affiliated with the Louisiana Universities Marine Consortium (LUMCON) which operates a marine laboratory and research vessels on the Gulf Coast about 100 miles southeast of Lafayette.

At present, we are seeking exceptionally qualified individuals with research and teaching interests in any of the following areas:

Biomechanics/morphometrics—expertise in modeling morphological systems emphasizing either form-function or evolutionary relationships. Excellent image-analysis, computing and CAD/CAM facilities available.

Population genetics—theory and/or empirical work in natural populations to complement existing strengths in evolutionary biology and systematics.

Environmental Toxicology—mechanisms associated with stress from toxic materials at the biochemical, cellular, organismal or ecosystem level of research. Individuals with interests in wildlife ecology are especially encouraged to apply.

Plant Physiology—research program centered on environmental aspects of plant growth, development, and productivity.

Physiology of Aquatic Animals—environmental/organismic emphasis with some expertise in regulatory mechanisms at the molecular and cellular level.

Plant Evolution—innovative approach to the study of vascular plant evolution using theoretical, experimental or comparative methods.

Microbial Genetics—expertise in microbial technology with research emphasis on evolution of prokaryotic and/or eukaryotic microorganisms to complement existing strengths in environmental and evolutionary studies. Primary appointment will be in the Department of Microbiology with adjunct appointment in the Department of Biology.

To apply, send curriculum vitae, concise statement of research goals, and names of at least three individuals from whom letters of recommendation may be obtained. Review of applications will begin on February 2, 1987 and continue until positions are filled. Direct application to: **Faculty Development Search Committee, Department of Biology, The University of Southwestern Louisiana, Lafayette, LA 70504-2451.** AA/EOE

Plan Now to Attend!

SECOND INTERNATIONAL CONFERENCE ON ANTICARCINOGENESIS AND RADIATION PROTECTION

March 9-12, 1987
National Bureau of Standards

Conference Chairman: Peter A. Cerutti, M.D. Ph.D.

SESSION I.

Kinetics and Mechanisms of Radical Scavenging, Radioprotection and Anticarcinogenesis (W.A. Pryor), **W.A. Pryor**—The role of free radicals in carcinogenesis, **M.G. Simic**—Electron vs H-atom transfer in chemical repair, **J.A. Raleigh**—Antioxidants and the free radical model of radiation damage

SESSION II.

Protectors in Radiation and Chemotherapy (E.J. Hall and G.E. Adams), **G.E. Adams**—Mechanisms of inducing differential radioprotection in tissues, **J.E. Biaglow**—Role of thiols in radiation response, **A. Meister**—Effects of modulation of glutathione levels and metabolism, **J. Denekamp**—Radioprotection in vivo: Cellular heterogeneity and fractionation, **E.J. Hall**—Radon-induced transformation

Workshop I and II (M.G. Simic)

S.M. Hecht—DNA strand scission by activated bleomycin group antibiotics, **J.F. Ward**—Radiation vs. chemical damage to DNA, **J.K. Reddy**—Peroxisome proliferation and carcinogenesis, **W. Lands**—Amplification of tissue peroxides in diseases, **N.I. Krinsky**—Mechanisms of inactivation of oxygen species by carotenoids, **L. Packer**—The vitamin E mystery

SESSION III.

Membrane Effects and Lipid Peroxidation (L.J. Marnett), **N.A. Porter**—Lipid peroxidation and prostaglandin biosynthesis, **L.J. Marnett**—Generation and reactions of peroxy radicals by lipid hydroperoxides: Targets for anticarcinogen action, **B.D. Goldstein**—Role of inflammatory cells in carcinogenesis, **K.V. Honn**—The arachidonic acid cascade and the effects of anticarcinogens

SESSION IV.

Antipromotion and Negative Autocrine Growth Regulation (P.A. Cerutti), **T.J. Slaga**—The possible involvement of free radicals in skin tumor progression, **N.H. Colburn**—Genes involved in tumor promotion and anti-promotion, **H.L. Moses**—Growth inhibitors and autocrine growth regulation, **M.B. Sporn**—Autocrine regulation of cell growth

Workshop III and IV (S.H. Yuspa)

W.J. Kozumbo—Clastogenic factors, **I. Emerit**—Clastogenic factors, a link between chronic inflammation and carcinogenesis, **E. Farber/A.K. Ghoshal**—Choline, antioxidants and liver cancer, **S.H. Yuspa**—Tumor promotion: A problem of differential responses of normal and neoplastic cells to trophic stimuli, **F. Marks**—Negative autocrine growth regulation in skin: The epidermal chalones, **T.W. Kensler**—Oxidant stress and tumor promotion

SESSION V.

Genetic Changes in Carcinogenesis (C.C. Harris), **A. Balmain**—Molecular genetic changes during multistage chemical carcinogenesis, **M. Barbacid**—Activation of oncogenes by chemicals, **H. zur Hausen**—Viruses as carcinogens and anticarcinogens, **R. Newbold**—A genetic basis for carcinogen-induced cellular immortality in malignant transformation, **C.C. Harris**—Human cell carcinogenesis

SESSION VI.

Processing of Genetic Damage in Carcinogenesis (A.B. Pardee), **A.B. Pardee**—Pharmacological interference with DNA repair, **B.N. Ames**—Spontaneous oxidative DNA damage in carcinogenesis and aging, **B. Demple**—Genotoxic oxidation in E. coli and yeast: protection and DNA repair, **L. Samson**—Suppression of human DNA alkylation repair defects by E. coli DNA repair genes, **D. Crawford**—Pro-oxidant genes

Workshop V and VI (T. Lindahl)

N.A. Berger—Metabolic protective mechanisms, **T. Lindahl**—Enzymatic repair of oxidative damage, **J.D. Minna**—Role of oncogenes in human lung cancer, **N.E. Fusenig**—Oncogenes and malignant transformation of human keratinocytes, **E.J. Stanbridge**—Genetic regulation of tumorigenic expression in human cell hybrids, **J.L. Redpath**—Radiation induced oncogenic transformation of human cell hybrids

SESSION VII.

Biological Response Modifiers (I.J. Fidler and J.E. Talmadge), **J.E. Talmadge**—Preclinical studies on recombinant cytokines for the treatment of metastatic disease, **E.C. Borden**—Clinical studies using recombinant lymphokines, **I.J. Fidler**—Systemic activation of macrophages by liposomes containing immunomodulators, **G. Lopez-Berestein**—Prospects for the clinical application of liposomes, as drug carriers for antifungal and antineoplastic agents, **D.L. Longo**—Clinical trials using monoclonal antibodies for the treatment of cancer

SESSION VIII.

Chemoprevention (C.H. Hennekens), **L. Wattenberg**—Antioxidants as anticarcinogens, **C. Borek**—Chemoprevention of ozone transformation in vitro, **A.R. Kennedy**—Protease inhibitors as anticarcinogens, **C.H. Hennekens**—Randomized trial of beta-carotene in cancer chemoprevention among U.S. physicians, **F.K. Gey**—Cancer mortality as related to plasma levels of antioxidant vitamins, **G.S. Omenn**—Cancer chemoprevention in high-risk populations with Vitamin A and beta-carotene

CONTRIBUTED PAPERS

SPECIAL SESSION: Nutrition and Anticarcinogenesis
GENERAL POSTER SESSION

For further program information, contact:

Michael G. Simic, Ph.D., D. Sc.,
or
Janet N. Hauber
Room C205, Bldg. 245
National Bureau of Standards
Gaithersburg, Maryland 20899
(301) 975-5558

For registration or general information, contact:

Kathy C. Stang, (301) 975-4513

PLAN NOW TO ATTEND

4th International
Congress on

OXYGEN RADICALS

June 27 - July 3, 1987
University of San Diego, La Jolla, CA

The conference will deal with free radical processes and peroxidized products in chemistry, food technology, nutrition, biology, pharmacology, and medicine. The energetics, kinetics, and mechanisms of simple model systems will be applied to complex biochemical processes and clinical medicine.

Contributed papers for oral presentation must be submitted by May 1, 1987 for consideration.

Industries and institutions are invited to publicize their research activities related to this field in a technical digest, that will be part of the conference package.

Conference Committee:

Michael G. Simic, Ph.D., D.Sc., Chairman; **Clemens von Sonntag**, Ph.D., Co-Chairman; **Alexander Hollaender**, Ph.D., Honorary Chairman; and **John F. Ward**, Ph.D., Host Chairman

For further Program Information, contact:

M. G. Simic, Bldg. 245, Room C205, National Bureau of Standards, Gaithersburg, MD 20899 (301) 975-5558.

For further Registration information, contact:

Kathy C. Stang, A353 Physics Building, National Bureau of Standards, Gaithersburg, MD 20899 (301) 975-4513.

CALL FOR PAPERS IN

Plenary Sessions

(Invited Presentations)

1 Kinetics, Energetics and Mechanisms of Oxygen Radicals (K.-D. Asmus)

S.E. Stein: Phenoxyl radicals: thermochemistry and kinetics

C. von Sonntag: Peroxyl radicals in aqueous media

B. Bielski: Superoxide radical in aqueous media

A.A. Frimer: Superoxide chemistry in non-aqueous media

J.A. Scaiano: Alkoxy radicals

S.V. Jovanovic: Redox properties of oxy and antioxidant radicals

R.L. Willson: Purine metabolites as antioxidants

2 Peroxidation and Antioxidants (W.A. Pryor)

E.P. Stadtman: Implication of protein oxidation in protein turnover, aging and oxygen toxicity

K.J.A. Davies: Proteolytic systems as a secondary defense against free-radical damage

E.N. Frankel: Hydroperoxidation of unsaturated fatty esters

K.U. Ingold: Vitamin E

W. Bors: Plant antioxidants

E. Niki: Inhibition of peroxidation of membranes

3 Detection and Biochemistry of Oxy Radicals and Peroxidized Products (H. Sies)

B. Chance: Biochemistry of oxygen

R. Mason: Spin trapping superoxide and hydroxyl radicals: fact or fancy?

D. Jamieson: Hyperbaric oxygen

J. R. Kanofsky: The detection of singlet oxygen in biochemical systems using 1268 nm chemiluminescence

H. Sies: Low-level chemiluminescence in intact cells and organs

B.W. Ames: The measurement of oxidants and oxidative damage in humans

J.E. Biaglow: Cellular protection against damage by hydroperoxide: role of glutathione

A.P. Schaap: Detection of singlet molecular oxygen in aqueous systems. HPD-chemiluminescence cancer therapy

4 Generation of oxy radicals, oxienzymes and antioxidants (I. Fridovich)

W.E.M. Lands: ω -3 fatty acids require more hydroperoxide during peroxide activation of eicosanoid biosynthesis by fatty acid oxygenase

M.J. Coon: Involvement of P-450 in reactions of oxy and peroxy radicals

L. Flohe: Se-peroxidase

H.M. Steinman: Superoxide dismutases

W.F. Beyer: Catalases—with and without Heme

S. Aust: Iron and autoxidation

R.A. Floyd: Oxygen radical mediated damage to brain tissue

5 Free Radicals in Pharmacology (I.H. Goldberg)

D.M. Ziegler: Mechanisms for the generation of oxygen radicals by drugs

D. Schulte-Frohlinde: Oxygen effects in strand break formation of DNA

I.H. Goldberg: Antineoplastic drugs

M.T. Smith: Mechanisms of paraquat and MPP⁺ cytotoxicity

6 Oxidative Processes in Medicine (P. Ward)

P.A. Ward: Oxyradicals in the inflammatory process

B.M. Babior: Generation of oxy radicals by phagocytes

J.E. Repine: Oxygen metabolite mediated lung injury

D.N. Granger: Role of oxidants in ischemia-reperfusion

R.J. Soberman: Leucotrienes

Sessions on Oxidative and

Antioxidative Processes (Contributed Papers)

1. Food 2. Arthritis 3. Eye 4. Nerves 5. Pharmacology

6. Medicine 7. Chemiluminescence 8. Aging

9. Mechanisms 10. Detection and Measurement

11. Generation of Oxy Radicals 12. Proteins,

Lipoproteins 13. Lipids, Membranes 14. S, Se Systems

15. Halogenated Systems 16. Risk Assessment

17. Vitamin E (membrane and free radical reactions)

POSITIONS OPEN

RESEARCH ASSISTANT or senior research technologist position available immediately for ongoing work in developmental neuroendocrinology. Significant laboratory experience required, preferably including tissue culture and radioimmunoassay. Send résumé to: **Dr. Leona Cuttler, Pediatric Endocrinology Section, Wyler Children's Hospital, The University of Chicago, 5841 South Maryland Avenue (Box 118), Chicago, IL 60637.**

RESEARCH ASSOCIATE in synthetic organic chemistry. The candidate must have: (i) completed the total synthesis of a natural product containing four or more stereogenic centers, (ii) proven ability (as evidenced by at least one publication) to synthesize natural products containing four or more stereogenic centers, (iii) proven ability (as evidenced by at least one publication) to use reactive intermediates in total synthesis, and (iv) be willing to work with radioactive compounds. Ph.D. in organic chemistry. Salary: \$20,000 per year; 40 hours/week. Send résumés to: **Job Service of Iowa, 330 Main Street, P.O. Box 410, Ames, IA 50010, number 1622615.**

U.S. DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

Research Chemist, U.S. Dairy Forage Research Center, Madison, Wisconsin. ARS is seeking a scientist to conduct research on chemistry of the plant cell wall as it affects utilization of the lignocellulosic portion of forages by dairy cows. The assignment is in collaboration with other Center scientists, especially plant physiologists and ruminant nutritionists.

Ph.D. in chemistry or closely related field desired. Knowledge of analytical chemistry and biochemistry required. Candidates must be U.S. citizens. Salary is commensurate with experience (\$26,831 to \$37,599). For information on the research program and/or position, contact: **Dr. Charles Kiddy at 608-263-2030.** For information on application procedures/forms, contact: **Janie Carr at 301-344-2756.** Applications in response to this announcement should be marked 6N019.

Applications must be received by 16 January 1987. Mailing Address: **USDA, Agricultural Research Service, Personnel Operations Branch, North Central Section, Room 123, Building 003, BARC-W, Beltsville, MD 20705.** An Equal Opportunity Employer.

RESEARCH SCIENTIST: We are seeking a research scientist to join our expanding pulmonary research laboratory at **Long Island Jewish Medical Center**, a major teaching affiliate of SUNY at Stony Brook. The successful candidate will have a Ph.D. in a basic medical science and a productive record of independent investigation in the area of lung inflammation and repair. We offer a professional work environment, guaranteed salary commensurate with experience, a comprehensive benefits package and an academic appointment. Interested candidates should submit curriculum vitae and three letters of reference to: **Michael Belenko, M.D., Division of Pulmonary and Critical Care Medicine, Long Island Jewish Medical Center, New Hyde Park, NY 11042.** An Equal Opportunity Employer.

RESEARCH SCIENTIST 3

Salary: \$13.10 to \$18.72 per hour

Position involves the study of the hormonal regulation of larval cuticular melanization in the tobacco hornworm, concentrating on the regulation of two key epidermal enzymes, a phenol oxidase and dopa decarboxylase, at both cellular and molecular levels.

Requires Ph.D. in insect endocrinology plus 5 years' experience to include: (i) insect tissue culture; (ii) skill in insect microsurgery, including allatectomy and removal of perivisceral organs; (iii) biochemical expertise including enzyme assays and purification, gel electrophoresis, protein and DNA extractions, use of nucleic acid hybridization techniques; and (iv) experience using immunological techniques including radioimmunoassay, immunoelectrophoresis and antibody preparation.

Submit résumé by 23 January 1987 to: **Employment Security Department, ES Division, Attention: AEC number 45830, Olympia, WA 98504.** Equal Opportunity Employer.

POSITIONS OPEN

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

RESEARCH ASSOCIATE/ POSTDOCTORAL FELLOW

The Molecular Biology Department of the Institute for Basic Research is seeking a research associate at the Ph.D. level to participate in ongoing research on the regulation of expression of proteins involved in the slow viruses and Alzheimer's diseases. We are particularly interested in the expression of the PrP gene and the proteins found in the amyloid plaques of Alzheimer's patients. The successful candidate should have experience with molecular cloning, DNA sequencing, the construction of expression vectors, and DNA transfection assays. He/she will be expected to participate in grant writing. Salary range—\$23,000 to \$32,000, depending on experience. Please send curriculum vitae and three references to:

**Dr. Nikos Robakis
Molecular Biology Department
New York State Institute for Basic Research
1050 Forest Hill Road
Staten Island, NY 10314**



SENIOR PROGRAM OFFICER NATIONAL RESEARCH COUNCIL OFFICE OF INTERNATIONAL AFFAIRS

The NRC Board on Science and Technology for International Development (BOSTID) is seeking a Senior Program Officer to undertake staff responsibility for programs in the area of tropical forestry. BOSTID supports active research projects in developing countries and publishes a series of monographs on tropical trees. The incumbent will spend half time managing a research grant program with fifteen grantees at present, with responsibility for grantee recruitment and assistance and monitoring of ongoing projects. For the other half time, the incumbent will prepare monographs on selected species by compiling information about their biology and uses, identifying knowledgeable scientists and establishing ad hoc panels for the studies, drafting sections of the reports, and editing panelists' contributions.

This position requires a Ph.D. or equivalent in botany or forestry; 4 years of research and administrative experience relative to developing countries, including familiarity with current forestry research and biological diversity problems in the Third World. Demonstrated ability to work effectively with U.S. and international experts, including developing country scientists. French or Spanish language capability desirable; overseas travel required.

Forward résumé and salary requirements to: **Position number 220.152, National Research Council, 2101 Constitution Avenue, NW, Washington, DC 20418.** An Equal Opportunity Employer.

TUMOR IMMUNOLOGY: National Cancer Institute (NCI), National Institutes of Health (NIH), Public Health Service is seeking applicants to join a research group involved in the generation and utilization of novel monoclonal antibodies directed against human tumor antigens. Group is also involved in the generation and utilization of recombinant immunoglobulins and anti-idiotypic monoclonals, and tumor-antigen characterization. Applicants should have a Ph.D. or M.D. or extensive experience with a strong background in one or more of the following: immunochemistry, glycoprotein chemistry, hybridoma technology, and cell-mediated immunity. Salary commensurate with experience. Send curriculum vitae, bibliography, and names of references to: **Dr. Jeffrey Scholm, NCI/NIH, Building 10, Room 8B07, 9000 Rockville Pike, Bethesda, MD 20892.** U.S. citizenship and/or permanent residency required, depending upon type of appointment. An Equal Opportunity Employer.

POSITIONS OPEN

RESEARCH SCIENTIST, 40 hours per week, \$30,000 per year. Duties include conducting analytical and experimental research in areas of high voltage insulation technology and dielectric materials. Prepare progress reports and technical publications related to research projects. Plan and prepare proposals for future projects in areas of electrical power and energy systems. Analyze the performance of various specialized high voltage testing equipment and develop computer models. Supervise and direct senior level and graduate students in research courses. Lecture courses in electrical engineering for undergraduate and graduate students. Must have Ph.D. in major field of electrical engineering with power systems, high voltage insulation. Two years of studying electrical engineering in area of power systems, four years of research and study in high voltage insulation, two years of teaching assistant work in power systems. Knowledge of continuing systems modeling program. Must have knowledge of impulse generator, high voltage power supplies, IBM 370. Job site Los Angeles. Send this ad and résumé to **Job No. MLU 10091, P.O. Box 9560, Sacramento, California 95823-0560 not later than 3 January 1987.**

UTAH STATE UNIVERSITY invites applications for **TWO TENURE-TRACK POSITIONS** available fall 1987.

Associate or full professor with distinguished research accomplishments in physical organic chemistry and commitment to quality teaching who will strengthen department. Send résumé and outline of research by 30 March 1987 to: **E. A. McCullough, Jr., Chr., Physical Organic Search Committee.** Inquiries will be kept confidential.

Uniquely qualified associate professor or assistant professor with exceptional promise in research and teaching at undergraduate and graduate level. The position emphasizes research on molecules of biological and/or environmental importance. Preferred expertise: (i) spectroscopy, (ii) molecular studies of nucleic acid function, (iii) in situ analytical techniques. Send résumé, summary of research plans, three letters of recommendation by 15 February 1987 to: **J. T. Spence, Chairman, Search Committee, Department of Chemistry and Biochemistry, Utah State University, Logan, UT 84322-0300.** Equal Opportunity Employer/Affirmative Action.

THE UNIVERSITY OF TEXAS AT AUSTIN ASTRONOMY DEPARTMENT

Invites Applications for The Vaughan Centennial Chair in Astronomy

The Department of Astronomy is seeking a **senior observational astronomer** to fill an endowed chair. This position is available as early as 1 September 1987, will be tenured at the full-professor level and will have earnings from its endowment available for research purposes.

The successful candidate will have a major influence on the future course of the department and McDonald Observatory. We seek primarily an optical observer with a record of major research accomplishments. Experience with instrumentation is desirable but not necessary.

Interested persons should contact: **J. Craig Wheeler, Chairman, Astronomy Department, University of Texas at Austin, Austin, TX 78712.**

The University of Texas at Austin is an Equal Opportunity Employer with an Affirmative Action Program. We encourage and welcome applications from all qualified persons regardless of sex, race, creed, national origin, or non-disqualifying handicap.

VISUAL SCIENCE. FACULTY POSITION (rank open): to develop and support a vision research program and teach in some of the following areas: geometric optics, ocular anatomy, or visual psychophysics. O.D. and/or Ph.D. in vision science, preferably, with interest in clinically relevant research. **POSTDOCTORAL FELLOW:** to join established interdisciplinary group in basic and applied mechanisms of vision. Available immediately. Send curriculum vitae, statement of research goals, and three letters of recommendation by 15 February 1987 to: **Dr. Jerry L. Christensen, Dean, School of Optometry, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121.** University of Missouri-St. Louis is an Affirmative Action/Equal Opportunity Employer.

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NBS ANNOUNCES POSTDOCTORAL RESEARCH AWARDS for PH.D. Scientists and Engineers

Postdoctoral Research Associateship awards are offered on a competitive basis to postdoctoral scientists and engineers of unusual ability in the fields of:

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- materials science • analytical & physical chemistry
- fire research • building technology
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- electronics, electrical, manufacturing & chemical engineering
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The National Bureau of Standards in cooperation with the National Research Council will offer approximately 40 competitive research awards in 1987 for independent scientific research. The program is open to U.S. citizens who have held the Ph.D. degree no more than five years at the time of application. Awardees are offered temporary civil service appointments for a two year period. Appointments will be made at the first step of grade GS-11, \$27,172 in 1987; somewhat higher salaries will be available for engineers and metallurgists. Relocation reimbursement, retirement benefits, and health and life insurance are also provided.

For further information and application materials please write to:

Associateship Programs (JH608 / NBS1)

NATIONAL RESEARCH COUNCIL

2101 Constitution Avenue, N.W.

Washington, D.C. 20418

**1987 Deadline for application is
January 15**

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For further information, telephone Ed. Keller, Recruitment Advertising Manager, or Donna Rivera, Production Manager at *SCIENCE*: 212-730-1050, or write to: *SCIENCE*, 1515 Broadway, NY, NY 10036.

CURRENT DISTRIBUTION 160,000

POSITIONS OPEN

RESEARCH ENGINEER 3

Salary: \$2880 to \$3149/month

Analyze and predict forces on coastal structures and their motion, with emphasis on analysis of drift motion of moored floating structures and multidirectional seas. Includes development of special purpose microprocessor-based electronic data systems, a microcomputer-based Pavement Management System (PMS) and a fully automated Computerized Pavement Survey Unit (CPSU), interfacing the CPSU to the PMS.

Requires Ph.D. in civil engineering, including specific course work/research in coastal hydraulics, floating structures and their drift motion, and mathematical and numerical modeling; and 3 years' research engineering experience involving development and installation of instrumentation for coastal and hydraulic structures and experience using radio frequency or comparable telemetry products. Required experience must include 3 years' experience using FORTRAN and RCA 1805/INTEL 8088/8086 assembly languages, and 1 year of experience using the REVELATION programming environment.

Submit résumé by 23 January 1987 to: **Employment Security Dept., ES Division, Attention: AEC number 45829, Olympia, WA 98504. Equal Opportunity Employer.**

GRADUATE STUDY

GRADUATE STUDY IN ANALYTICAL NEUROCHEMISTRY. Graduate assistantships are available for research in bioanalytical chemistry, with special emphasis in the development and application of modern methods of neurochemical analysis. Areas of research include computer modeling of neurotransmitter chemistry, in vivo voltammetric, HPLC and GC/MS methods, and applications to the chemistry and pharmacology of behavior. Opportunities exist for students to conduct interdisciplinary research in the Departments of Psychology and Chemistry. Research assistantships at the Centers for Disease Control involving neurochemistry and the environment are also available. Interested students with backgrounds in chemistry, biology, or psychology should contact: **Dr. Joseph B. Justice, Department of Chemistry, Emory University, Atlanta, GA 30322. Telephone: 404-727-6585. Emory University is an Equal Opportunity Employer.**

GRADUATE TRAINING

GRADUATE TRAINING IN BIOMEDICAL SCIENCES WITH SPECIALIZATION IN MICROBIOLOGY. The Microbiology and Immunology Department at the University of South Carolina Medical School has research assistantships available for qualified candidates wishing to pursue a Ph.D. degree. Areas of specialization include cell biology, molecular virology, viral and bacterial pathogenesis, analytical microbiology, and immunology. For more information contact: **The Graduate Director, Department of Microbiology and Immunology, University of South Carolina School of Medicine, Columbia, SC 29208. The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.**

GRADUATE TRAINING PROGRAM IN EXPERIMENTAL PATHOLOGY

The Experimental Pathology Program at the University of California, San Diego, has graduate fellowships available in September 1987. This interdepartmental program places a particular emphasis on understanding the molecular mechanisms of human disease. Research areas include viral carcinogenesis and oncogenic proteins (G. Walter; J. Lipsick), molecular basis of retinoblastoma (W.-H. Lee), virus-induced autoimmune disease (R. Fujinami), neuropathology of the AIDS virus (C. Wiley), differentiation of African trypanosomes (C. Davis), and cardiovascular disease (C. Bloor). This Ph.D. program is open to students with a bachelor's degree who wish to enter medical research without becoming physicians, and also to those with an M.D. Further information and application forms available from: **Dr. J. Lipsick, Department of Pathology M-012, University of California San Diego, La Jolla, California 92093.**

GRADUATE PROGRAM

JOINT GRADUATE PROGRAM IN TOXICOLOGY RUTGERS UNIVERSITY ROBERT WOOD JOHNSON MEDICAL SCHOOL

We are conducting a national search for scholars who wish to earn the M.S. and/or Ph.D. in toxicology. Our internationally recognized faculty will provide an opportunity for you to conduct research in cellular/molecular toxicology, immunotoxicology, hepatotoxicology, carcinogenesis, inhalation/respiratory toxicology, neurotoxicology, environmental and aquatic toxicology, and metabolism of environmental chemicals. We strive to couple the results of basic toxicology research with health risk assessment. We have available graduate teaching or research assistantships which include tuition and stipends, which for the most highly qualified candidates will be in the range of \$10,000. For further information please contact: **Dr. Robert Snyder, Director, Joint Graduate Program in Toxicology, Rutgers University, P.O. Box 789, Piscataway, NJ 08854. Telephone: 201-932-3720.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS are available in light and electron optical and spectroscopic training in cardiovascular research. Candidates will receive training and participate in research conducted on cardiac, vascular smooth and skeletal muscle, and blood platelets with methods including electron probe x-ray microanalysis, x-ray mapping, electron energy loss spectroscopy, energy-filtered imaging, scanning confocal and conventional light microscopy, image processing, and the use of fluorescent indicators. Members of training faculty are:

Dr. Stephen M. Baylor, Dr. Britton Chance, Dr. Gordon W. Ellis, Dr. Clara Franzini-Armstrong, Dr. John S. Leigh, Jr., Dr. Martin Morad, Dr. John M. Murray, Dr. Lee D. Peachey, Dr. Brian M. Salzberg, Dr. Joseph Sanger, Dr. Henry Shuman, Dr. Andrew P. Somlyo, Dr. Avril V. Somlyo.

Applications should be sent to:

**A. P. Somlyo, M.D., Director,
Pennsylvania Muscle Institute
University of Pennsylvania
The School of Medicine
B42 Anatomy-Chemistry Building
Philadelphia, PA 19104-6083**

Candidates with doctorate degrees in biological sciences or physics and having some previous experience with any of these methods are given preference, but applications will also be considered from individuals with a strong biological background and requiring training with imaging methods. U.S. citizens and permanent residents only are eligible for appointments at the NIH postdoctoral fellowship level. The beginning stipend ranges from \$15,996 to \$30,000, based on the years of relevant experience. *Equal Opportunity Employer.*

FELLOWSHIPS IN REPRODUCTIVE BIOLOGY NORTHWESTERN UNIVERSITY

Postdoctoral and predoctoral fellowships are available in reproductive biology for outstanding students. A diverse but cohesive program offers research in the biochemical, cellular, physiological and behavioral aspects of reproduction. Participating faculty include: **Erwin Goldberg** (immunochimistry and reproductive biochemistry), **Mary Hunzicker-Dunn** (ovarian protein kinase: adenyl cyclase), **William Klein** (receptors; CNS differentiation), **Andrew LaBarbera** (mechanism of gonadotropin action), **Jon Levine** (neuroendocrinology), **Neena Schwartz** (gonadal-pituitary endocrinology), **Joseph Takashashi** (circadian rhythms and photoreception), and **Fred Turek** (photoperiodism and biological rhythms). Send curriculum vitae and names of three references to: **Dr. Neena Schwartz, Department of Neurobiology & Physiology, Northwestern University, Evanston, IL 60201.**

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available immediately for research using monoclonal antibodies to study smooth muscle differentiation in vitro and in vivo, in the context of the study of human atherosclerosis, using cell culture, bio- and immunochemical and immunocytochemical techniques. Applicants should send curriculum vitae with three references to: **Dr. Allen M. Gown, Department of Pathology SM-30, University of Washington, Seattle, WA 98195. An Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIPS IN THE DEPARTMENT OF ANATOMY AND NEUROBIOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

Several positions for research in individual laboratories in the department are available for candidates who have demonstrated exceptional research promise at the predoctoral or postdoctoral level. The emphasis of research in the department is in the areas of neuroanatomy, neurophysiology, and molecular biology. Outstanding applicants will be invited for seminar presentations. The faculty of the department and their research interests are:

Dr. Robert Blanks: Eye movement control.
Dr. Lyle Dearden: Growth in cartilage.
Dr. James Fallon: Chemical neuroanatomy.
Dr. Chris Gall: Chemical neuroanatomy, neural plasticity in development.
Dr. Roland Giolli: Visuomotor system.
Dr. Steward Hendry: Immunocytochemistry.
Dr. Paul Isackson: Molecular neurobiology.
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Dr. Leonard Kitzes: Auditory anatomy and physiology.
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Dr. Richard Robertson: Organization of the forebrain.
Dr. John Swett: Spinal cord and peripheral nervous system.

Applications or inquiries for additional information should be sent to: **Dr. Edward G. Jones, Department of Anatomy and Neurobiology, University of California, Med Surge II, Room 364, Irvine, CA 92717. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIPS AND RESEARCH ASSOCIATESHIPS are anticipated to be available in the Faculty of Medicine, University of Manitoba, over the next 6 months in various areas of medical research including molecular biology, neurosciences, cardiac sciences, hepatorenal sciences, immunology and human genetics. Both women and men are encouraged to apply. In accordance with Canadian Immigration requirements, priority will be given to qualified Canadian citizens and permanent residents of Canada. Application with a curriculum vitae or inquiries should be forwarded to: **Dr. F. Stevens, Associate Dean (Research), A108-753 McDermott Avenue, Winnipeg, Manitoba, CANADA R3E 0W3.**

FELLOWSHIPS FOR RESEARCH AND TRAINING IN ECOLOGY UNIVERSITY OF MICHIGAN BIOLOGICAL STATION 16 June to 19 August 1987

Advanced undergraduate or graduate students and researchers with a Ph.D. may apply for fellowships in the Naturalist-Ecologist Training Program at the Biological Station in northern Michigan. All participants conduct independent ecological studies. Students enroll in one course of their choice and in another, Methods of Ecological Research. The latter emphasizes through hands-on experience the fundamentals of experimental design, data management, statistical analyses, and communication of findings. Researchers concentrate on field-based studies, but must be willing to advise and interact with students in the Program. Awards for students cover tuition for both courses (ten graduate credits), fees, room and board. Postdoctoral researchers receive a stipend of \$2600, funds for equipment or supplies, fees, room and board, and an allowance for up to two dependents. For details and an application form, contact: **Dr. Mary J. Whitmore, University of Michigan Biological Station, Pellston, MI 49769.** The deadline for application is 28 February 1987. Consideration of materials will begin on 1 January 1987.

POSITION ANNOUNCEMENTS

University of Missouri-Columbia

The Colleges of Agriculture and Veterinary Medicine seek candidates for three tenure track faculty positions in an Infectious Diseases Group. This Group is part of the Food for the 21st Century Program, an interdisciplinary campus-wide long-range research program in food and agriculture targeted for eminence at the University of Missouri-Columbia, and will focus on respiratory and enteric diseases of cattle and swine. Increasing host resistance to infectious disease is the goal. These new faculty will focus on the molecular and cellular biology of infectious disease and interact with other scientists in molecular biology, microbiology, biochemistry, physiology, pathology, genetics, nutrition and epidemiology to develop improved strategies for the prevention of infectious diseases of livestock.

All three positions are primarily research appointments. Some professional, advanced undergraduate, or graduate level teaching is required. Funds for technical assistance, equipment, and initial operations are included. Salaries will be based on qualifications and experience. Opportunities for collaboration with basic science departments to conduct interdisciplinary research are excellent. These positions are:

PROFESSOR OF VETERINARY MICROBIOLOGY

QUALIFICATIONS: Applicants should have a D.V.M./Ph.D. or Ph.D. in an area germane to achievement of program goals. A desire and ability to conduct fundamental studies directed toward the prevention of infectious diseases of livestock is essential. The successful candidate for this position will have an established research record including sustained external research funding, national recognition in his/her specialty and credentials acceptable for tenure. Experienced faculty in mid-career with a broad perspective of host/microbe interaction who meet these qualifications are urged to apply.

RESPONSIBILITIES: Provide expertise and leadership for the Infectious Diseases Group of the Food for the 21st Century Program. Research contribution will be the development of a project that applies advanced biotechnology procedures to gain an improved understanding of factors that affect host resistance to infectious respiratory and/or enteric diseases of livestock.

APPLICATIONS: Applications will be accepted until January 15, 1987 or until a suitable candidate is recruited. Applicants should send their curriculum vitae, a comprehensive statement of career goals and research interests, and names of three references who may be contacted to: Dr. Bruce Rosenquist, Department of Veterinary Microbiology, College of Veterinary Medicine, University of Missouri, Columbia, MO 65211.

ASSISTANT/ASSOCIATE PROFESSOR OF VETERINARY MICROBIOLOGY OR VETERINARY PATHOLOGY

QUALIFICATIONS: Applicants should have a D.V.M./Ph.D. or Ph.D. in microbiology, pathology, biochemistry, molecular biology or other suitable discipline and have experience in the techniques of modern biotechnology (i.e. recombinant DNA procedures, immunobiology, protein chemistry, molecular genetics, etc.).

RESPONSIBILITIES: Development of a project that applies advanced biotechnology procedures to gain an improved understanding of factors that affect host resistance to infectious respiratory or enteric diseases of livestock. The successful candidate will be expected to seek supplemental external funding.

APPLICATIONS: Applications will be accepted until February 15, 1987 or until a suitable candidate is recruited. Applicants should send their curriculum vitae, a statement of career goals and interests, and names of three references who may be contacted to: Dr. Bruce Rosenquist, Department of Veterinary Microbiology, College of Veterinary Medicine, University of Missouri, Columbia, MO 65211.

ASSISTANT PROFESSOR OF ANIMAL SCIENCE

QUALIFICATIONS: A Ph.D. scientist with a desire and ability to conduct fundamental studies directed toward the prevention of infectious enteric diseases of livestock. Preference will be given to candidates with postdoctoral research experience in one or more of the following areas: protein biochemistry, immunology, digestive physiology, or microbiology.

RESPONSIBILITIES: Development of a project that applies advanced biotechnology procedures to gain an improved understanding of factors that affect host resistance to infectious enteric diseases of livestock. Collaboration with Animal Science Faculty in enteric disease-nutrition interaction research is essential. The successful candidate will be expected to seek supplemental external funding.

APPLICATIONS: Applications will be accepted until February 15, 1987 or until an acceptable applicant is recruited. Applicants should submit resume including relevant experience, publication list and persons that may be contacted for letters of reference to: Dr. T.L. Veum, Department of Animal Sciences, 110 Animal Sciences Center, University of Missouri, Columbia, MO 65211.

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