

dynamics and its possible role in the late Pleistocene ice sheet oscillations is new and a substantial contribution. I found the chapters on this subject the most interesting.

In view of the difficulties of writing a book on this subject, the authors' presentation of their important and substantial research on the vital role of the cryosphere in the earth's climate is reasonably successful. I suspect that it is more likely to be of use to a climate modeler in understanding ice sheets than to a glaciologist in understanding the earth's climate, so in a sense it is a one-way bridge. For the student of modeling it could indeed provide a useful source for an advanced graduate or seminar course.

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Astrophysical Plasmas

Magnetic Reconnection in Space and Laboratory Plasmas. EDWARD W. HONES, JR., Ed. American Geophysical Union, Washington, D.C., 1984. xii, 386 pp., illus. \$33. Geophysical Monograph Series, 30. From a conference, Los Alamos, N.M., Oct. 1983.

It has been over 30 years since magnetic reconnection was first proposed as the acceleration mechanism responsible for plasma energization in both the solar flare and the terrestrial aurora. Initially reconnection was greeted by some members of the scientific community with a great deal of skepticism. However, in the intervening years it has come to occupy a preeminent position in our understanding of the dynamical behavior of astrophysical plasmas. It has also been discovered to be one of the major sources of plasma instability in magnetic containment devices such as the tokamak.

This volume is an impressive collection of more than 50 papers presented at a Chapman Conference. The book provides both a good review of the basics of magnetic reconnection and a broad survey of some of the more exciting and recent observations and developments.

Basically, reconnection involves the flow of plasma in topologically complex magnetic field configurations that usually involve magnetic null regions. It is the breakdown of ideal magnetohydrodynamics at these null regions (or their topological equivalents) that allows the vast amounts of magnetic energy typical-

ly stored in an astrophysical plasma to be efficiently converted into kinetic and thermal energy.

Unfortunately, the mathematical theory of the reconnection process is extremely difficult to formulate, and analytical solutions are available only in highly idealized cases. It is this inherent mathematical intractability that has been, and continues to be to some extent, the source of much controversy.

In many ways the history of magnetic reconnection parallels that of plate tectonics. Both concepts were treated with much suspicion when they were first proposed, primarily because simple theoretical arguments were quickly expounded to show why the concepts were not viable. In the case of magnetic reconnection it was thought that astrophysical plasmas lacked the electrical resistivity necessary to provide the diffusion of the magnetic field that produces reconnection. However, the accumulation of observational evidence eventually forced a reevaluation of the theoretical objections to both concepts.

As with plate tectonics, part of the appeal of magnetic reconnection is its ability to account for a very wide range of phenomena with a single, unifying principle. The book shows just how diverse these phenomena can be, for it contains in-depth discussions of magnetic reconnection in solar flares, coronal heating, comet tails, the terrestrial day-side magnetosphere, the geomagnetic tail, the Jovian magnetosphere, laboratory fusion machines, and various assorted galactic and extra-galactic objects. In addition there are sections on basic theory, recent computational results, and future directions and unanswered questions.

Transcripts of the question-and-answer periods following each presentation have been edited and have had references added where appropriate to make them comprehensible to those who did not attend the meeting. The inclusion of the transcripts is valuable, for they give the reader an idea of the major controversies existing at the present time.

Although one usually thinks of conference proceedings as being of interest only to specialists, I think this volume deserves to be considered by a wider audience. The papers (which have been refereed) are well written and articulate, and they are intended to be understandable to nonspecialists.

T. G. FORBES

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Books Received

Angiogenesis. F. Hammersen and O. Hudlicka, Eds. Karger, Basel, 1984. vi, 90 pp., illus. Paper, \$36. Progress in Applied Microcirculation, vol. 4. From a meeting, Birmingham, England, April 1983.

Annual Review of Sociology. Vol. 10. Ralph H. Turner and James F. Short, Jr., Eds. Annual Reviews, Palo Alto, Calif., 1984. xii, 523 pp. \$27.

Applied Fluid Dynamics Handbook. Robert D. Blevins. Van Nostrand Reinhold, New York, 1984. xii, 558 pp., illus. \$49.50.

Central Asia. Palaeolithic Beginnings to the Iron Age. Philip L. Kohl, with H.-P. Francfort and J.-C. Gardin. Editions Recherche sur les Civilisations, Paris, 1984. 313 pp., illus. Paper, 190 F. Synthèse, No. 14.

The Central Science. Essays on the Uses of Chemistry. George B. Kauffman and H. Harry Szmant, Eds. Texas Christian University Press, Fort Worth, 1984. xviii, 181 pp., illus. \$15. Based on a symposium, Anaheim, Calif., March 1978.

The Cerebellum and Neural Control. Masao Ito. Raven, New York, 1984. xviii, 580 pp., illus. \$75.

Chemical Processing of Synthetic Fibers and Blends. Keshav V. Datye and A. A. Vaidya. Wiley-Interscience, New York, 1984. xviii, 565 pp., illus. \$80.

Marine Fishes. Chemical Composition and Processing Properties. V. P. Bykov, Ed. Balkema, Rotterdam, 1984 (U.S. distributor, P.O. Box 230, Accord, Mass.). xii, 322 pp., illus. \$18.50. Russian Translations Series, 7. Translated from the Russian edition (Moscow, 1972).

Mathematical Methods for Wave Phenomena. Norman Bleistein. Academic Press, Orlando, Fla., 1984. xvi, 343 pp., illus. \$55. Computer Science and Applied Mathematics.

Mayan Cryptocount Numerations. Thomas P. Penrose. Liberty Bell Associates, Franklin Park, N.J., 1984. viii, 45 pp., illus. \$20.

Mechanical Properties, Performance, and Failure Modes of Coatings. T. Robert Shives and Marshall B. Peterson, Eds. Cambridge University Press, New York, 1984. viii, 226 pp., illus. \$42.50. From a meeting, Gaithersburg, Md., May 1983.

Methods of Biochemical Analysis. Vol. 30. David Glick, Ed. Interscience (Wiley), New York, 1984. x, 377 pp., illus. \$49.50.

The Neurobiology of Zinc. C. J. Frederickson, G. A. Howell, and E. J. Kasarskis, Eds. Liss, New York, 1984. Two volumes. Part A, Physiochemistry, Anatomy, and Techniques. xiv, 390 pp., illus. \$58. Part B, Deficiency, Toxicity, and Pathology. xiv, 345 pp., illus. \$54. Neurology and Neurobiology, vol. 11. From a symposium, Boston, Nov. 1983.

Neurophysiological Approaches to Higher Brain Functions. Edward V. Evarts, Yoshikazu Shinoda, and Steven P. Wise. Wiley, New York, 1984. x, 198 pp., illus. \$39.95. The Neurosciences Institute Publications Series.

The Neuroses and Personality Disorders. Gerald F. M. Russell and Lionel Hersov, Eds. Cambridge University Press, New York, 1984. xviii, 500 pp. \$69.50; paper, \$29.95. Handbook of Psychiatry, vol. 4.

Neutron Radiative Capture. B. J. Allen *et al.* Pergamon, New York, 1984. xiv, 270 pp., illus. \$65. Neutron Physics and Nuclear Data in Science and Technology, vol. 3.

Neutron Transmutation Doping of Semiconductor Materials. Robert D. Larrabee, Ed. Plenum, New York, 1984. xiv, 336 pp., illus. \$75. From a conference, Gaithersburg, Md., June 1982.

No-Fault Parenting. Helen Neville and Mona Halaby. Facts On File, New York, 1984. xxii, 460 pp., illus. \$18.95.

Spectrometric Techniques. Vol. 3. George A. Vanasse, Ed. Academic Press, Orlando, Fla., 1983. xii, 334 pp., illus. \$53.

Striga. Biology and Control. E. S. Ayensu *et al.*, Eds. ICSU Press, Paris, and International Research Development Centre, Ottawa, 1984. viii, 216 pp., illus. Paper, \$25. From a workshop, Dakar, Senegal, Nov. 1983.

Los Terremotos en Venezuela y Su Origen. Carlos Schubert. Cuadernos Lagoven (Petroleos de Venezuela), Caracas, Venezuela, 1984. 72 pp., illus. Paper.

Theory of Correspondence. Including Applications to Mathematical Economics. Erwin Klein and Anthony C. Thompson. Wiley-Interscience, New York, 1984. xiv, 257 pp. \$39.95. Canadian Mathematical Society Series of Monographs and Advanced Texts.

Three Degrees above Zero. Bell Labs in the Information Age. Jeremy Bernstein. Scribner, New York, 1984. xiv, 241 pp. + plates. \$17.95.

The Three Worlds. Culture and World Development. Peter Worsley. University of Chicago Press, Chicago, 1984. xiv, 409 pp. \$28; paper, \$12.95.

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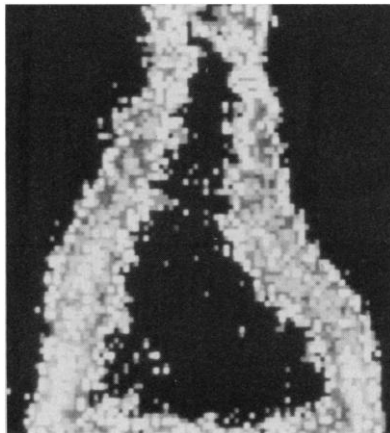
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Biochemist/Computer Programmer: Seeks entry level industrial position. B.S. chemistry. Four years of Biochemistry graduate work. Knows Fortran, Pascal, Assembly, C., and APL. Will relocate; prefers New England/New York/New Jersey. Available January 1985. J. Gaston, 2514-A West 12th, Austin, TX 78703. 12/14, 21

Physiology and Pharmacology. Ph.D., 1976; clinical research since 1976; Seeking private sector research and development career. Interdisciplinary neurosciences; anesthesiology; pulmonary, neonatal, hyperbaric medicine; neurosurgery; optical biophysics; toxicology; oxygen. Box 294, SCIENCE. X

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Candidate should have a Ph.D. in physiology or biochemistry. The individual is expected to supervise the andrology portion of an in vitro fertilization program. Applicants should have demonstrated excellence and productivity in andrology research and is expected to develop a research program in this area. The individual selected for the position will also receive an academic appointment in the appropriate clinical and/or basic science department(s) at Harvard Medical School. Send curriculum vitae and names of three references to: **Melvin L. Taymor, M.D., Director, Division of Reproductive Endocrinology, Department of Obstetrics and Gynecology, Beth Israel Hospital, 330 Brookline Avenue, Boston, Mass. 02215.**

DIRECTOR, IN VITRO FERTILIZATION (IVF) CULTURE LABORATORY

Candidate should have a Ph.D. in reproductive biology or related discipline and experience with human in vitro fertilization. The director is expected to provide scientific and administrative leadership for the embryo culture laboratory. This involves coordinating the efforts of an assistant embryologist and from one to three technicians as well as training clinical fellows and IVF workshop participants in the embryological aspects of human IVF. Applicants should have demonstrated excellence and productivity in research and is expected to develop a research program in aspects of embryology or reproductive endocrinology. The individual selected for this position will also receive an academic appointment in the appropriate clinical and/or basic science department(s) at Harvard Medical School. Send curriculum vitae and names of three references to: **Melvin L. Taymor, M.D., Director, Division of Reproductive Endocrinology, Department of Obstetrics and Gynecology, Beth Israel Hospital, 330 Brookline Avenue, Boston, Mass. 02215.**

GYN-ENDOCRINE TECHNICIAN

B.S. in biological sciences with experience in handling mammalian eggs and sperm to work in human in vitro fertilization program. Starting salary: \$16,600. Send résumé to: **Melvin L. Taymor, M.D., Director, Division of Reproductive Endocrinology, Department of Obstetrics and Gynecology, Beth Israel Hospital, 330 Brookline Avenue, Boston, Mass. 02215.**

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Dr. L. Raymond Fox, Chairman
Department of Biological Sciences
Wichita State University
Wichita, Kan. 67208

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Applications are invited for a tenure-track position in the Department of Anatomy, University of North Dakota School of Medicine. Applicants must have a Ph.D., M.D., or equivalent with at least two years of postdoctoral training and research experience in cell biology, molecular biology, structural biology, biochemistry, or related areas. The successful applicant will be expected to carry on a vigorous research program and demonstrate excellence in his/her respective field. Faculty members are expected to obtain extramural support for their research activities. Applicants should be able to demonstrate excellence in teaching histology and developmental anatomy to medical students and contribute substantially to the departmental graduate program. Send curriculum vitae, descriptions of research and teaching experience, and at least three letters of reference by 15 February 1985 to: **Dr. Edward C. Carlson, Chairman, Department of Anatomy, University of North Dakota School of Medicine, Grand Forks, North Dakota 58202. The University of North Dakota is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.**

ASSISTANT PROFESSOR—BIOCHEMISTRY

A full-time, tenure-track appointment is available as of 1 July 1985 in the Section of Biochemistry, Division of Biology and Medicine, Brown University. The Section is responsible for an integrated biochemistry curriculum for undergraduate, graduate, and medical students, and is part of a graduate program in molecular and cell biology. The candidate should have a doctoral degree and at least 2 years of additional research experience. The successful candidate will have responsibilities for teaching and advising students, and will be expected to establish an independent research program. We seek someone investigating mechanisms of hormonal regulation in animal cells.

Send curriculum vitae, a brief statement of research plans, and three current representative reprints, and have three letters of recommendation forwarded no later than 1 February 1985 to:

Dr. Albert E. Dahlberg
Section of Biochemistry
Brown University, Box G—JWWL
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POSITIONS OPEN

ANATOMIST: The Department of Cell Biology and Anatomy, The Johns Hopkins University School of Medicine, invites applications for a junior faculty position, beginning July 1985, with teaching responsibility in human gross anatomy and active research in mammalian functional anatomy and evolution. Cell biologists and neuroanatomists will not be considered. Ph.D. or M.D. is required and previous teaching experience in human anatomy is desirable. Send curriculum vitae and names of three references by 1 February 1985 to: **Dr. Alan Walker, Professor, Department of Cell Biology and Anatomy, The Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, Maryland 21205.** Applications will be considered without regard to race, religion, sex, or national origin. The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

ANIMAL OR MICROBIAL ECOLOGY

The Department of Biology, University of Oregon, solicits applications for an experimental ecologist at the assistant professor level, with possibility of tenure. Priority will be given to candidates with sound research publications and demonstrated ability to obtain research support. Postdoctoral experience is essential. Responsibilities include performing research and teaching both graduate and undergraduate students. Applicants should provide curriculum vitae, a bibliography, a statement of research interests, copies of publications, and the names of at least three references. Send applications to: **Ecology Search Committee, Department of Biology, University of Oregon, Eugene, Ore. 97403.** The deadline for receipt of applications is 1 February 1985. The University of Oregon is an Affirmative Action/Equal Opportunity Employer/Institution.

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Please forward letters of inquiry, curriculum vitae/bibliography, and the names of three references from whom recommendations can be solicited no later than 31 January 1985 to:

Dr. Thomas C. Vanaman
Chairman, Search Committee
Department of Biochemistry
University of Kentucky
MS613 Medical Center
Lexington, Ky. 40536-0084
Telephone: 606-233-5549

Salary range is equivalent to and competitive with other institutions and will depend on prior experience. Position is available immediately but no later than 1 July 1985. An Equal Opportunity/Affirmative Action Employer.

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The Division of Biology at Kansas State University has a tenure-track position available at the assistant professor level, effective 1 September 1985. Applications are invited from investigators with postdoctoral experience in ANY AREAS OF CELL, MOLECULAR, AND DEVELOPMENTAL BIOLOGY. The division has a strong program in biological research, excellent facilities, an NIH training grant, and a distinguished faculty with several millions of dollars in extramural research grants. The successful candidate will be expected to establish a vigorous and creative research program and to participate in graduate and undergraduate instruction. Applicants should apply by 11 January 1985 and submit curriculum vitae, three letters of reference, and a brief description of future research plans to:

Dr. Terry C. Johnson, Director
Division of Biology
Ackert Hall
Kansas State University
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POSITIONS OPEN

ASSISTANT PROFESSOR. Applications are invited for a tenure-track position in molecular biology with an emphasis in development. The appointee will take part in a freshman majors course and develop courses in area of expertise. Ph.D. strongly preferred. Send application, including résumé, summary of research interest, transcripts, and three letters of reference before 11 January 1985 to: **Dr. R. J. Ellis, Chair, Department of Biology, Bucknell University, Lewisburg, Pa. 17837.** An Affirmative Action/Equal Opportunity Employer.

The Biology Department of the University of San Diego, a Catholic university with 3200 undergraduate students, offers a bachelor's degree program. It is soliciting applications for **TWO TENURE-TRACK POSITIONS** at the **ASSISTANT PROFESSOR** level effective 1 September 1985. Applicants should hold the Ph.D. degree and be qualified in one or more of the following areas: genetics and population biology, cell physiology, and histology. A background in marine studies is desirable; undergraduate teaching experience is required. Curriculum vitae, including a statement of research objectives and teaching philosophy, transcripts of college courses, and names of three references should be submitted before 31 January 1985 to: **Dr. Cole Manes, Chair, Department of Biology, University of San Diego, Alcalá Park, San Diego, Calif. 92110.**

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The Department of Genetics at Harvard Medical School is seeking to fill a position at the assistant professor level for September 1985. Research laboratories will be located in the Department of Molecular Biology at Massachusetts General Hospital in Boston. Major research funding, including postdoctoral support, will be available through the Department of Molecular Biology. The Department of Genetics is building a strong graduate Ph.D. program and is engaged in teaching genetics to both graduate and medical students. Although no specific research areas will be excluded a priori, we are especially interested in candidates who are conducting research in plant molecular biology or developmental genetics. Applicants should have a strong background in molecular genetics research including significant postdoctoral training.

Applicants should submit, prior to 1 February 1985, curriculum vitae, reprints, statement of research interests, and letters from at least three references to: **Dr. Howard H. Goodman, Chief, Department of Molecular Biology, Massachusetts General Hospital, Boston, Massachusetts 02114.**

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ASSISTANT OR ASSOCIATE PROFESSOR IN PHARMACOLOGY/TOXICOLOGY (Molecular/Cellular Basis of Drug Action)

A tenure-track faculty position in the above mentioned area is available immediately in the Department of Pharmacology and Toxicology at the University of Mississippi Medical Center in Jackson. Preference will be given to those working the areas of cDNA, genomic cloning, steroid and peptide hormone processing, receptor linked intracellular events, and analytical drug metabolism. Persons interested in the molecular/cellular level from all areas of pharmacology and toxicology are invited to apply. Rank is at assistant or associate professor level depending on experience. Candidates must have formal training in pharmacology, at least 2 years of postdoctoral experience, and a record of research accomplishment. On the senior faculty level, and candidates should have a record of peer reviewed grants, research publications, and participation in teaching. On the assistant professor level, the candidates should be committed to developing a strong, independent, fundable research program. This faculty member is expected to participate in medical, dental and graduate teaching in one of the above areas. Complete curriculum vitae, including a brief statement of research interests, and complete addresses for three references should be sent to: **Dr. I. K. Ho, Professor and Chairman, Department of Pharmacology and Toxicology, University of Mississippi Medical Center, 2500 North State Street, Jackson, Mississippi 39216-4505.** Equal Opportunity Employer, M/F/H/V.

POSITIONS OPEN

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MICROBIOLOGY—Infectious Disease, tenure-track position available 1 July 1985, Ph.D., M.D. or D.D.S. with research and teaching experience in infectious diseases, preferably related to the oral cavity. Candidate will be responsible for teaching infectious diseases to medical, dental, and graduate students and is expected to pursue independent research in infectious diseases at the molecular level. Interested candidate should send curriculum vitae, names of three references, and a brief statement of research interest by 1 February 1985 to: **Dr. Gary R. Pearson, Professor and Chairman of Microbiology, Georgetown University Schools of Medicine and Dentistry, 3900 Reservoir Road, NW, Washington, D.C. 20007.**

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ASSISTANT PROFESSOR. Ph.D. or M.D. degree with several years of postdoctoral experience in the area of cancer cell/molecular biology. Specific areas of research may include growth transforming factors, oncogenes, DNA repair in eukaryotes, gene expression as related to differentiation, and so forth. The salary is negotiable and competitive. Selection will be based upon research experience, ability to develop an independent program which would attract grant support, and willingness to interact collaboratively with others in cell biology, carcinogenesis, nutrition, and/or virology. Submit curriculum vitae, three letters of recommendation, and a brief summary of your future research plans to: **Dr. Edward Bresnick, Eppley Institute for Research in Cancer, University of Nebraska Medical Center, Omaha, Nebraska 68105.** Affirmative Action/Equal Opportunity Employer.

ASSISTANT OR ASSOCIATE PROFESSOR OF BOTANY OR RANGE SCIENCE—Applications are invited for a permanent faculty position available 1 September 1985. Applicants should have Ph.D., teaching experience, publications, and must have ability and strong commitment to teach introductory biology courses. Preference will be given to applicants trained in genetics (engineering, population, or ecological), range plant physiology, or plant physiology. A vigorous research program will be required. The candidate selected must be willing to conform to the behavioral standards of the University (specifics will be provided on request). Applications must be received by 15 February 1985. Send curriculum vitae, graduate and undergraduate transcripts, and three letters of recommendation to: **Search Committee, Department of Botany and Range Science, Brigham Young University, Provo, Utah 84602.** Brigham Young University is an Equal Opportunity/Affirmative Action Employer.

ASSOCIATE PROFESSOR, PEDIATRICS AND MICROBIOLOGY/IMMUNOLOGY. Ph.D. microbiologist to perform independent and collaborative research, supervise Pediatric Infectious Disease Division Laboratories, and teach under possible joint appointment. Must have minimum of five years of documented experience with monoclonal antibody production, recombinant DNA technology, and mycoplasma. Contact: **Wallace A. Clyde, Jr., M.D., Department of Pediatrics, University of North Carolina, Chapel Hill, N.C. 27514.** Deadline: 15 January 1985. Women and minorities are encouraged to voluntarily identify themselves. The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.

CHAIRMAN, DEPARTMENT OF PHYSIOLOGY. Kirksville College of Osteopathic Medicine invites applications and nominations for the position of chairman, available after 1 July 1985. Applications will be accepted through 31 January 1985.

Qualifications include: Ph.D. or equivalent degree in physiology or related basic science discipline; a sincere commitment to excellence in medical education; established research program; success in attracting extramural funding; previous administrative experience desired; leadership ability.

Prospective applicants should submit a letter, current curriculum vitae, and the names of three professional references. Applications, nominations, or requests for additional information should be submitted to:

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Associate Dean for Academic Affairs
Kirksville College of Osteopathic Medicine
Kirksville, Mo. 63501

Kirksville College of Osteopathic Medicine is an Affirmative Action/Equal Opportunity Employer.

DIRECTOR BODEGA MARINE LABORATORY

Applications are invited for the directorship of the Bodega Marine Laboratory, a major research facility of the University of California, administered by the Davis campus. The Director is the leader and administrative head of a center for research and instruction in marine biology and related sciences operated on a 326-acre site at Bodega Bay. Bodega Marine Laboratory (BML) operates as an open facility to serve research and training needs of University of California faculty and graduate students. Research at BML is both basic and applied. Current research emphasizes population and organismal biology, including population genetics, intertidal ecology, population interactions, population dynamics, insect ecology, marine taxonomy, developmental biology, nutrition, endocrinology, and physiology; aquaculture; and virology and environmental pollution. BML provides facilities and support for courses and instruction which serve undergraduate and graduate curricula of the University of California.

The Director must promote a laboratory climate hospitable to the strengthening of current research programs and provide leadership in the development of new programs in such areas as ecology, genetics of marine organisms, invertebrate development and cell biology, fisheries, and geology. The Director must qualify for appointment at the tenure level of the professorial series. Academic rank and salary will be commensurate with qualifications. Applicants submit a curriculum vitae and names of 3 references to Chancellor's Office, University of California, Davis, 95616. Applications should be submitted by January 31, 1985 to receive full consideration, however, the position will remain open until filled.

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

Infectious Diseases

Enzymology/ Pharmacokinetics



An equal opportunity employer

The Department of Immunology and Infectious Diseases at Pfizer Central Research is seeking an individual with a Ph.D. in a biological science and at least two years of post-doctoral training. You will be part of a multidisciplinary project team involved in the development of contemporary approaches to the control of infectious diseases. Focus will be on providing conceptual and specific research insights at the interface of enzymology and pharmacokinetics. Experience in animal pharmacokinetics and the assay of bioactive compounds and metabolites in biological fluids using HPLC and microbiological assay techniques is desirable. Duties will include setting up a laboratory, supervising technologists and contributing to planning of projects and the advancement of product candidates.

This position offers an excellent opportunity for professional recognition and career growth. Publication of important findings will be encouraged. We also offer a competitive compensation, benefit and relocation package and the opportunity to live in an attractive Connecticut shore community. Please send resume and brief description of research interest to: Jerry K. Larson, Ph.D., Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

UNIVERSITY OF MISSOURI- ST. LOUIS SCHOOL OF OPTOMETRY FACULTY POSITIONS



The University of Missouri-St. Louis School of Optometry is seeking two faculty members, with Ph.D. degrees, or O.D./Ph.D. degrees, working in areas of vision science. Specific responsibilities could include teaching courses in some of the following areas: visual psychophysics, visual neurophysiology, binocular vision, gross anatomy, or neuroanatomy. Applicants should be active researchers. Evidence of scholarly research activities, in the form of published articles in refereed journals and papers presented at professional meetings will be heavily weighted, as well as evidence of teaching ability. The persons selected will be expected to develop new research proposals and to obtain support for new or continuing research activities. Post-doctoral research experience is desirable.

Rank and salary will be commensurate with experience. The dates of appointment are negotiable. Letters of application with current resumes, including the names of three references, should be submitted no later than February 15, 1985 to:

Dr. Jerry L. Christensen
Dean, School of Optometry
University of Missouri-St. Louis
8001 Natural Bridge Road
St. Louis, Missouri 63121

*The University of Missouri is an equal employment and
education opportunity institution.*

COLLEGE FACULTY SUMMER RESEARCH OPPORTUNITIES NATIONAL INSTITUTES OF HEALTH (NIH)

The Intramural Research Division of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases (NIADDK) is seeking highly qualified college or university faculty who have an interest in doing laboratory research at the Institutes during the summer of 1985. The NIADDK is one of the eleven institutes comprising the National Institutes of Health. The NIH commitment to full-time research, its academic environment, its state of art instrumentation, and its extensive interaction among the 2500 doctoral-level scientists constitute a biomedical environment that is unequalled anywhere.

The NIADDK offers unique research opportunities in a broad range of exciting areas of biomedical research:

gene expression
nucleic acid and chromatin structure
molecular genetics and recombinant
DNA
DNA and RNA replication
membrane biology/cell organelles
transport phenomena
hormones
enzymology
receptors

development and differentiation
protein structure and function
biophysics
mathematical biology
chemistry (all branches)
pharmacology
immunology
molecular mechanisms of disease
intercellular communication
neurobiology

The Institute seeks applications from well trained scientists who have published in the recent past, but have been carrying teaching loads incompatible with research. Selected candidates will work in close collaboration with senior scientists at the Institute. To apply please send a curriculum vitae, bibliography, names of several references and a short statement of research interests to: Summer Scholar Program, Dr. Jesse Roth, Rm 9N222, Building 10, NIADDK, NIH, Bethesda, MD 20205. Further information about the program may be obtained by writing to Dr. Roth.

The NIH is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ANIMAL BEHAVIOR: Villanova University. Assistant professor, tenure-track position in 13-member Psychology Department. Teach introductory, research methods, and comparative psychology at undergraduate level and special topics in area of interest at graduate level; direct theses in rigorous, experimentally-oriented M.S. program. We seek evidence of commitment to excellence in teaching and capacity to develop active research program. Ph.D. in psychology with concentration in some area of animal behavior required. Salary competitive. Position commences September 1985. Forward curriculum vitae and brief cover letter outlining your interests in teaching and research to: **Chairperson, Animal Behavior Search Committee, Department of Psychology, Villanova University, Villanova, Pa. 19085.** Villanova University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR, BIOCHEMISTRY/MOLECULAR BIOLOGY

The Department of Biochemistry and Biophysics at Iowa State University anticipates availability of a tenure-track assistant professorship in **MOLECULAR BIOLOGY** or related areas, starting fall 1985. Candidates must have a record of research productivity and interest in teaching graduate and undergraduate students. This is an excellent opportunity to develop a strong independent research program in the growing molecular biology and biotechnology research community at Iowa State University. Applications, which should include a résumé, bibliography, and brief description of research plans, must be received by 7 January 1985. Arrange to have three letters of reference sent to: **Dr. Jack Horowitz, Chairman, Faculty Recruitment Committee, Department of Biochemistry and Biophysics, Iowa State University, Ames, Iowa 50011.**

Assistant Professor, GENETICS AND EVOLUTION. The Department of Zoology, Connecticut College, invites applications for this tenure-track position, which will be available August 1985. Connecticut College is a private liberal arts coeducational institution on the Connecticut coast. Teaching responsibilities include introductory biology and advanced undergraduate courses. Ph.D. degree, excellence in teaching, and a strong research program suitable to an undergraduate liberal arts school are required. Applicants should submit résumé (including explicit statement of research plans), and should have three references sent to: **John F. Kent, Chairman, Department of Zoology, P.O. Box 1476, Connecticut College, New London, Conn. 06320.** Closing date for applications: 15 January 1985. Connecticut College is an Equal Opportunity Employer.

Assistant Professor, MOLECULAR BIOLOGY. The Department of Zoology, Connecticut College, invites applications for this tenure-track position, which will be available August 1985. Connecticut College is a private liberal arts coeducational institution on the Connecticut coast. Teaching responsibilities include introductory biology and advanced undergraduate courses. Ph.D. degree, excellence in teaching, and a strong research program suitable to an undergraduate liberal arts school are required. Applicants should submit résumé (including explicit statement of research plans), and should have three references sent to: **John F. Kent, Chairman, Department of Zoology, P.O. Box 1476, Connecticut College, New London, Conn. 06320.** Closing date for applications is 15 January 1985. Connecticut College is an Equal Opportunity Employer.

CHEMICAL ENGINEERING, WEST VIRGINIA UNIVERSITY. We are seeking faculty candidates for a tenure-track faculty position for the 1985-1986 academic year. We are especially interested in candidates with research interests in biochemical separations. We will also consider applicants from closely related fields such as applied microbiology or biochemistry if they are capable of participating in our undergraduate and graduate instructional programs. The candidates must have an earned Ph.D. Candidates should have a strong commitment to research, scholarly and professional activity, as well as undergraduate and graduate education. While we prefer to make the appointment at the assistant professor level, we will consider exceptionally well-qualified candidates at a higher rank. Please send a résumé and a list of at least three references or nominations by 1 March 1985 to: **Dr. Joseph D. Henry, Jr., Professor and Chairman, Department of Chemical Engineering, P.O. Box 6101, West Virginia University, Morgantown, West Virginia 26506-6101.** West Virginia University is an Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR—MOLECULAR BIOLOGY. The Biology Department of Mills College invites applications for a tenure-track position from persons with a strong background in molecular biology. Teaching responsibilities include immunology, neurobiology, developmental biology, cell biology, and part of general biology. Doctorate required. Preference given to applicants with demonstrated success in college level teaching. Mills College is a liberal arts college for women located in the San Francisco Bay area. Position available 1 July 1985. Send curriculum vitae and three letters of reference by 1 February to: **Dr. Karen C. Swearingen, Biology Department, Mills College, Oakland, Calif. 94613.** An Equal Opportunity Employer. Women and minorities are encouraged to apply.

ASSISTANT PROFESSOR—OCCUPATIONAL HEALTH AND SAFETY. Applications are being accepted for a nontenure-track faculty position to begin June 1985. The faculty member will participate in graduate teaching and research in occupational health and safety and will provide services to the university in developing and maintaining health and safety programs for the campus. An earned doctorate is required. Submit curriculum vitae, areas of teaching and research interests, and names of three persons for personal recommendations no later than 31 January 1984 to: **Dr. Charles E. Feigley, Chairman of Search Committee, Department of Environmental Health Sciences, Benson Room 306, University of South Carolina, Columbia, S.C. 29208.** The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.

BACTERIOLOGISTS—ASSISTANT OR ASSOCIATE PROFESSORS

The Department of Veterinary Microbiology and Parasitology in the College of Veterinary Medicine at Texas A&M University has two vacancies for assistant or associate professors in the area of bacteriology. These are full-time, tenure-track positions.

Applications will be considered from individuals with the Ph.D. degree. Possession of the D.V.M. degree and certification by the ACVM are desirable. The successful candidates will have proven teaching and research abilities.

Rank and salary will be negotiable and competitive.

Applications will be accepted until 31 January 1985 or until the position is filled. Applicants should submit curriculum vitae and three letters of references to:

**Dr. I. R. Tizard
Professor and Head
Department of Veterinary Microbiology
and Parasitology
College of Veterinary Medicine
Texas A&M University
College Station, Texas 77843**

Texas A&M University is an Equal Opportunity/Affirmative Action Employer and is committed to provide equal opportunity for all persons seeking employment without regard to an individual's race, color, religion, sex, age, national origin, or non-job related physical or mental handicap.

BIOCHEMIST

ASSISTANT PROFESSOR: Tenure-track position available 1 July 1985. The Biology Department at Hamilton College seeks a biochemist to teach Microbiology and General Biochemistry. Candidates should have postdoctoral experience with a demonstrated research accomplishment in the area of cell biology. Applicants should have a strong interest in liberal arts education and an active research program that will involve students. Applications should be received by 14 January 1985 and include curriculum vitae, transcripts, and the names of three references. Send résumé to: **Professor Tom Brady, Chairman, Biology Department, Hamilton College, Clinton, N.Y. 13323.**

Hamilton College is an Equal Opportunity Employer. Women and members of minority groups are strongly encouraged to apply.

CLINICAL NUTRITION POSITION UNIVERSITY OF CHICAGO CLINICAL NUTRITION RESEARCH UNIT

Seeking Ph.D. with experience in human nutrition investigation to perform and coordinate clinical studies in Nutrition Center and Nutrition Support Service. Contact: **Dr. Irwin Rosenberg or Dr. Michael Sitrin, Clinical Nutrition Research Center, Box 223, University of Chicago, 5841 South Maryland, Chicago, Illinois 60637.** Telephone: 312-962-6741.

POSITIONS OPEN

CELLULAR OR DEVELOPMENTAL BIOLOGIST

The Department of Molecular and Cellular Biology at the National Jewish Hospital/National Asthma Center invites applications for a full-time research position at the level of assistant or associate professor. The department consists of nine faculty members whose interests range over various aspects of molecular biology, biochemistry and cell physiology; all hold concurrent faculty positions at the University of Colorado Health Sciences Center. We particularly encourage candidates interested in the molecular basis of development in eukaryotic cells including the control of gene expression or the role of membranes and cytoskeleton. Applicants should submit a brief statement of present and future research interests, curriculum vitae with bibliography and representative reprints, and the names of three persons whom we may contact for letters of reference to: **Dr. F. M. Harold, Search Committee, MCB, National Jewish Hospital/National Asthma Center, 3800 East Colfax Avenue, Denver, Colorado 80206.** Application deadline: 28 February 1985. An Affirmative Action/Equal Opportunity Employer.

CELLULAR IMMUNOLOGIST: Hepatitis Branch, Division of Viral Diseases, Centers for Disease Control (CDC), Atlanta, Georgia. Applicants should have a Ph.D. with at least 2 years of postdoctoral experience. The successful candidate will plan, direct, manage, and supervise research involving cellular immunopathogenic events associated with viral hepatitis. A background in molecular biology would be helpful, but not required. The position carries a GS grade of GS-12/13 (salary range of \$30,549 to \$36,327) depending on qualifications and experience. A fringe benefit package is supplemented to the base salary. Interested individuals should send complete curriculum vitae, including the names of three individuals who may be contacted as references, by 28 December 1984 to:

**Personnel Management
Attention: William Hudson
Centers for Disease Control
Atlanta, Georgia 30333
Telephone: 404-329-3615**

CDC is an Affirmative Action/Equal Opportunity Employer.

CHAIR OF BIOLOGICAL SCIENCES. The University of Denver is the major private University in the Rocky Mountain region. The Department of Biological Sciences is an active, growing department housed in a new research facility. The department seeks a recognized scholar in biological science to serve as the chair of the department. The successful applicant will have and maintain an active externally funded research program of high quality and will participate in the undergraduate and graduate teaching program. The department chair will be expected to direct and implement the department's development program and to obtain funds from foundations and industrial sources for general departmental development. Applicants should send a letter of applications, their curriculum vitae, and the names of five references to: **Dr. Steven P. Berg, Search Committee, Department of Biological Sciences, University of Denver, Denver, Colorado 80208.** Although there is no deadline, review of applications will begin 1 February 1985. Nominations are welcome. An Equal Opportunity/Affirmative Action Employer.

Help wanted: CLINICAL TECHNOLOGIST (VIROLOGY).

Send résumé to: **Employment Security Department, Attention: AEC Coordinator, Employment Service Division M/S KG-11, Olympia, Washington 98504.**

Refer to Job Order No. 888705

Job description: Responsible for advanced diagnostic virology, with wide range of cell lines involved in isolating human viral pathogens, especially respiratory and human herpes viruses; responsible for immuno-fluorescence testing; hemagglutination, complement fixation; immuno-sorbent methods; reading cytopathic effect and testing for Epstein-Barr virus infections independently.

Requirements: Master of science degree with major in virology; 5 years of experience in the field.

Salary: \$1,737 per month; time and one-half for overtime.

Position offers: Prevailing working conditions, 5 days per week, 8 a.m. to 5 p.m.; job in Seattle area.

On-The-Job Training Not Offered
Equal Opportunity Employer

PH.D PHYSICAL CHEMISTRY

or

PH.D BIO-MEDICAL ENGINEERING

Research Specialist with a Ph.D in Physical Chemistry, or Bio-Medical Engineering or equivalent and with five (5) years experience in Bio-Medical materials including membrane design and evaluation for clinical applications as well as experimental and theoretical membrane mass transport analysis. The position also requires the knowledge and skills necessary to develop and characterize new non-linear elastomeric materials for cardiovascular implants applications.

Salary \$50,000 per year plus fringe benefits. Send resume to:

Ms Pat Brennan
MD#84-25
390 N. Robert Street
St. Paul, Minnesota 55101

An Equal Opportunity Employer M/F/H/V

MANAGER BIOEVALUATION RESEARCH

Stauffer Chemical Company, a Fortune 500 diversified chemical company, seeks a Scientist/Manager to direct agricultural chemicals Bioevaluation, Screening and Research.

The successful candidate will have:

- **Ph.D. in Weed Science, Plant Physiology or Biochemistry**
- **A record of significant accomplishments**
- **Ability to lead technical staff and diverse programs**
- **5-10 years relevant managerial experience**
- **Technical and managerial creativeness**
- **A thorough knowledge of entomology, plant pathology, biotechnology, seeds, herbicide antidotes and extenders and nematocides**

This challenging position is located at the Mountain View Research Center near San Francisco, California and reports to the Assistant Director. It offers a competitive salary, visibility and the opportunity for growth and recognition.

Write in confidence to:



Dr. Elliot Bergman
Assistant Director, Western Research Center
Stauffer Chemical Company
1200 South 47th Street
Richmond, CA 94804

An Equal Opportunity Employer M/F

NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Biotic Systems and Resources is seeking a qualified candidate for the position of Program Director, Population Biology and Physiological Ecology. The incumbent to this position will administer a program for basic research grant support, including advising applicants, reviewing proposals and other administrative duties. The position will be filled on a rotational or temporary basis for one or two years and is excepted from the competitive civil service. The per annum salary ranges from \$40,000 to \$66,400. Normally, the candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF Circular 167, Rotator Program. Otherwise, salaries for temporary employees are set at NSF's GG/GH schedule (equivalent to GS schedule). Candidates should have a Ph.D. in population biology and physiological ecology or equivalent research experience. In addition six to eight years of successful scientific research experience beyond the Ph.D. is required. **Applicants should refer to Announcement Number EX 85-3 S, when submitting resumes (including current salary) to the National Science Foundation, Personnel Administration Branch, Rm. 212, 1800 G St., NW, Washington, D.C. 20550. For further information call 202/357-7840. Hearing impaired individuals should call 202/357-7492. NSF is an Equal Opportunity Employer.**

CARDIOVASCULAR PHARMACOLOGIST

Sterling-Winthrop Research Institute, the research center of Sterling Drug Inc., announces an opening for a Senior Research Biologist in its cardiovascular pharmacology research unit.

The successful candidate will have a PhD in pharmacology or cell biology and at least 2 years of relevant experience in the area of biochemical and molecular cardiology. Specialized experience in enzymology, purification and characterization of proteins is highly desirable. Candidates should also demonstrate a record of publication indicating the ability to undertake independent and creative research.

We offer an attractive salary and benefits package with the opportunity for professional growth. The Institute is located near Albany, New York which is a major center of summer and winter recreational activities.

Send curriculum vitae and salary requirements in confidence to:

William F. Sheldon, Employee Relations Administrator



**STERLING-WINTHROP
RESEARCH INSTITUTE**

A Division of Sterling Drug Inc.
Columbia Turnpike, Rensselaer, NY 12144
Equal Opportunity Employer M/F/H

POSITIONS OPEN

BIOLOGY: Plant ecologist, visiting assistant professor, 2-year term. Teach population biology and plant biology in team-taught introductory biology course, advanced plant ecology, botany, bio-statistics, human ecology for non-science majors, and direct students' research. Personal research expected. Ph.D. required. The College of Wooster is an independent liberal arts institution with a tradition of excellence in undergraduate education. *Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae, three references, and transcript to: **Department of Biology, College of Wooster, Wooster, Ohio 44691**, by 1 February 1985.

CLINICAL PHARMACOLOGIST. Tenure-track/tenured position in the Department of Physiology/Pharmacology available 1 July 1985. We seek a person to serve as course director for a basic course in pharmacology (second year dental students) and to coordinate the teaching of clinical pharmacology to third and fourth year students. Candidates will be expected to develop an externally funded research program and participate in the training of Ph.D. and postdoctoral students. The application deadline is 1 February 1985. Please address all inquiries and curriculum vitae, including at least three references, to: **Dr. Benjamin F. Hammond, Chair of the Pharmacology Search Committee, University of Pennsylvania, School of Dental Medicine, 4001 Spruce Street, Philadelphia, Pennsylvania 19104.** *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

COLLECTIONS MANAGER—University and Jepson Herbaria, University of California, Berkeley. The primary duties are to manage the plant collections, facilities, and nonacademic personnel and to administer the daily operations of a collection of approximately 1.5 million specimens. Graduation from college with a major in botany and 6 years of directly related experience in curatorial work, including 2 years in a supervisory capacity, or an equivalent combination of education and experience, and knowledge and abilities essential to the successful performance of the duties assigned to the position are required. Master's degree in botany with a specialization in plant taxonomy preferred. Please send a résumé or curriculum vitae, a letter describing your background and qualifications, and names and addresses of three persons who will serve as references by 15 January 1985 to: **Dr. Thomas Duncan, Director, University Herbarium, University of California, Berkeley, Calif. 94720.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

CURATOR I (BOTANY)

Direct and carry out organizational work of the cryptogamic herbarium and associated laboratories of the Milwaukee Public Museum. Must have interest in and knowledge of flora of the Midwest and the continental United States. Requires a bachelor's degree in the biological sciences and 2 years of experience working with bryophytes and curation of other lower plants. Education emphasis should be on plant science with some background in biochemistry. A master's degree in botany with specialization in the systematic study of bryophytes is preferred. Part-time experience is prorated. Computer experience is desirable. Annual salary range: \$17,247 to \$19,353. Opportunity for promotion to curator II. Competitive employee benefits. Request application from:

**MILWAUKEE COUNTY
DEPARTMENT OF HUMAN RESOURCES
901 North 9 Street
Milwaukee, Wis. 53233
Equal Opportunity Employer**

DEVELOPMENTAL BIOLOGIST: Tenure-track position in anatomy at the rank of assistant professor available 1 July 1985. Candidates should have at least 2 years of postdoctoral experience. Responsibilities include the teaching of medical students, preferably in gross anatomy, and of graduate students in anatomy, as well as the development of an independent, funded research program. Opportunities for collaborative research within the department include pattern formation in developing and regenerating amphibian limbs and mammalian spinal cord development. Interested candidates should send curriculum vitae, statement of research goals, list of three references, and representative reprints to: **Dr. Shirley Ann Gilmore, Professor and Chairman, Department of Anatomy (#510), University of Arkansas for Medical Sciences, 4301 West Markham, Little Rock, Ark. 72205**, by 15 January 1985. *Equal Opportunity/Affirmative Action Employer*

POSITIONS OPEN

University of Michigan Medical School Office of Research Computing (ORC)

The University of Michigan is seeking qualified applicants for the position of **COORDINATOR** of the Medical School Office of Research Computing. Duties include providing leadership in the development and implementation of research computing systems within the School with heavy emphasis on imaging. Applicants should possess considerable experience in the development of complex applications including computer imaging. Administrative experience is necessary. M.S. or Ph.D. preferred. Experience in medical research desirable. Experience in an academic setting is required. Excellent fringe benefit package including immediate vestment in TIAA/CREF and 5 weeks of annual vacation. Submit résumé to: **Andrew Perez, Employment Representative, Department of Human Resources, The University of Michigan Medical Center, N18A07, 300 North Ingalls, Box 50, Ann Arbor, Mich. 48109.** *A nondiscriminatory, Affirmative Action Employer*

DEVELOPMENTAL CNS PHARMACOLOGY/TOXICOLOGY

POSTDOCTORAL/RESEARCH ASSOCIATE positions (two to three) to be available within 1 to 4 months to study neuropsychopharmacology and neurobehavioral toxicology of exposure to drugs, drug withdrawal or undernutrition during development. The successful candidate should have training or evidence of expertise (relevant publications or submitted manuscripts) in either developmental psychobiology, psychoneuroendocrinology or neurochemistry. He/she will join a laboratory group which is studying effects of early manipulation (perinatal) upon neurobehavioral function later in life. Experimental methods to be employed include computer-controlled environments for the assessment of cognitive and operant behavioral effects of drugs and neurotoxins, HPLC analyses of brain tissue or brain perfusate, sensitivity to hyperthermia-induced convulsions and reactivity of the neuroendocrine axis to stress. Send curriculum vitae and the names of three references to: **S. B. Sparber, Ph.D., University of Minnesota Medical School, Department of Pharmacology, 3-260 Millard Hall, 435 Delaware Street, SE, Minneapolis, Minnesota 55455.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

ECOLOGIST with research interests in wetlands nutrient cycling. The 12-month, tenure-track appointment will include teaching two graduate or advanced undergraduate courses per year in field of specialization and establishing an extramurally funded research program. Applicants should send curriculum vitae and a brief statement of research plans, and have three letters of recommendation sent to: **Dr. Jennifer Richards, Department of Biological Sciences, Florida International University, Miami, Florida 33199**, before 15 February 1985. *The State University System of Florida/Equal Opportunity Employer.*

ENVIRONMENTAL HEALTH SPECIALIST/TOXICOLOGIST. Baltimore area environmental consulting firm invites applications for an entry level environmental health position on a risk assessment team. The successful candidate will possess a recent M.S. or M.P.H. in human/mammalian toxicology or environmental health, zero to 2 years of experience, familiarity with chemical carcinogenesis, mutagenesis and pharmacodynamics. Excellent written, oral communication, and math skills are required.

Send résumé with salary history to: **Carol Moser, EA Engineering, Science and Technology, Inc., 15 Loveton Circle, Sparks, Maryland 21152.**

Equal Opportunity Employer

EXECUTIVE VICE PRESIDENT (CHIEF ACADEMIC OFFICER)—New Mexico State University (NMSU). The executive vice president is the chief academic officer of the university and is the chief administrative officer in the absence of the president. Requires an earned doctorate or the equivalent, significant experience in administration, teaching, and research, and requires a capacity to exert outstanding academic leadership.

NMSU is the land-grant university and has a total annual budget of \$178 million. Send letter of application along with a detailed professional curriculum vitae. Position available 1 July 1985. Reply to: **Richard T. Wells, Chairman of the Search Committee, Box 3AA, Las Cruces, N.M. 88003.** Deadline for applications: 11 January 1985. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

DIRECTOR, INFECTIOUS DISEASES DIVISION, DEPARTMENT OF MEDICINE HARVARD MEDICAL SCHOOL BRIGHAM AND WOMEN'S HOSPITAL

Appointee should have strong scientific credentials in a basic science related to infectious diseases, show promise of substantial future accomplishments, and be capable of providing leadership to the clinical and teaching programs. He/she should be of sufficient stature to qualify for an associate or full professorship at the Harvard Medical School. Candidates are invited to submit an up-to-date curriculum vitae and bibliography to: **Dr. Eugene Braunwald, Chairman of the Search Committee, Brigham and Women's Hospital, 75 Francis Street, Boston, Massachusetts 02115.**

The Harvard Medical School and the Brigham and Women's Hospital are Equal Opportunity/Affirmative Action Employers and qualified women and minority candidates are encouraged to apply.

ECOLOGIST AND PLANT MOLECULAR BIOLOGIST

FORDHAM UNIVERSITY. Department of Biological Sciences, invites applications for two tenure-track positions beginning September 1985. A plant molecular biologist is being sought at the assistant or associate professor level. Applicants should have a Ph.D. in molecular biology, biochemistry, or related area, and at least several years of postdoctoral experience. The successful applicant will be expected to obtain extramural funds, develop a productive research program, and participate in teaching.

Applications are also invited for the position of director of the Louis Calder Conservation and Ecology Study Center located in lower Westchester County. Applicants should have an earned doctorate in ecology or related field, a well-recognized record in published research, and at least 5 years of management experience in organizing and implementing research programs. Special attention will be given, but not limited, to applicants with a background in environmental toxicology. The position will be offered at the professorial or associate level depending upon experience. The successful candidate will be expected to develop a productive research program, secure extramural funding, and teach.

Both positions provide a possibility to collaborate with the New York Botanical Garden.

Applications, including curriculum vitae, reprints of selected research papers, names of three referees, and a statement of future research plans should be sent by 15 January 1985 to: **Dr. Howard Rothstein, Chairman, Department of Biological Sciences, Fordham University, Bronx, New York 10458.** *An Equal Opportunity/Affirmative Action Employer*

EXPERIMENTAL PSYCHOLOGIST

Applications are invited for a new appointment in the Department which is open to those who have active research interests in some aspect of the psychology of perception. The facilities which are available are excellent, as is the support which the University provides for active research programmes.

Salary ranges for 1985-1986 will be: assistant professor: \$26,398 to \$38,002; associate professor: \$32,729 to \$52,242; professor: \$41,167 to \$64,374.

Applications, which should include curriculum vitae, the names of three referees, and reprints of recent publications, should be sent to:

**Dr. Henry James
Department of Psychology
Mount Allison University
Sackville, New Brunswick, Canada E0A 3C0**

Closing date for receipt of applications is 31 January 1985.

FACULTY POSITION—Fisheries Biology. Assistant professor, tenure-track, 12-month. Beginning fall 1985. Ph.D. required, 60 percent research, 40 percent extension. Research on warmwater sports fisheries of small impoundments. Extension programs in freshwater fisheries and aquaculture will require preparation of educational materials and cooperative work with county agents and natural resource agencies through the North Carolina Agricultural Extension Service. Open until 1 February 1985, or until filled. *Minorities encouraged.* Send résumé and three letters of reference to: **Dr. Richard L. Noble, Chairman, Search Committee, Department of Zoology, Campus Box 7617, North Carolina State University, Raleigh, North Carolina 27695.** *North Carolina State University is an Equal Opportunity/Affirmative Action Employer.*

EXPERIMENTAL PSYCHOLOGIST BS/MS

Through 60 consecutive years of growth, Ayerst Laboratories, subsidiary of Fortune 100 American Home Products, has maintained its commitment to research as the basis for increasing volume.

Today, more than ever, we view research as the key to the future, the cornerstone for enhancing our strong position. To accommodate greatly expanded research activity, we have opened a state-of-the-art facility in Princeton, New Jersey.

We are currently seeking an Experimental Psychologist. The successful candidate should possess a BS/MS degree in Experimental Psychology (operant conditioning, physiological psychology) and experience with the behavior of non-human primates. Related but not essential experience in electrophysiological techniques (EEG, evoked potentials or single cell recording) is highly desirable. Knowledge in the areas of CNS pharmacology, computer programming, and neuroscience would be helpful.

Ayerst offers excellent starting salaries and benefits package together with ultra-modern facilities in a beautiful New Jersey setting. Interested candidates should send their resume indicating current salary earnings to:

Ayerst®

Personnel Manager

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RESEARCH, INC.**

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CN 8000, Dept. EP Princeton, NJ 08540
An equal opportunity employer M/F/H

BIOCHEMIST/ PHYSICAL CHEMIST

Space Science Laboratory
NASA Marshall Space Flight Center
Huntsville, Alabama 35812

The Space Science Laboratory invites applicants for research positions in its ongoing theoretical and experimental research program in macromolecular crystal growth for protein structure and in separation science, including electrophoresis, isoelectric focusing, and phase partitioning. The laboratory has state-of-the-art facilities and is actively developing microgravity experiments to be flown on the Space Shuttle.

Candidates must have a research background in one or more of the above fields with a strong interest in separation science or protein crystal growth. The incumbent will have the opportunity to select research goals and to develop experiments for future space missions.

Salary will range from \$30,549 to \$36,327 depending on experience. Forward resumes to the following address not later than February 28, 1985.

Dr. Robert J. Naumann

or

Dr. Robert S. Snyder

ES71

NASA Marshall Space Flight Center

Huntsville, AL 35812

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The Howard Hughes Medical Institute

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announce

A New Program for Research Opportunities for Medical Students

HHMI-NIH Research Scholars can spend 9-12 months in one of the 1,000 research laboratories located at the NATIONAL INSTITUTES OF HEALTH, Bethesda, MD.

Salary, fringe benefits and travel will be provided.

Further information and applications forms may be obtained by writing to the
Howard Hughes Medical Institute, P.O. Box 330837, Coconut Grove, FL 33133

POSITIONS OPEN

DETECTOR DEVELOPMENT SCIENTIST

The SPACE SCIENCES LABORATORY of the UNIVERSITY OF CALIFORNIA AT BERKELEY has an opening for a STAFF RESEARCH ASSOCIATE IV for a period of 2 years, with a possible extension for two additional years.

The major emphasis of the position will be on innovative research in the development of EUV detector systems including photocathodes and filters on the Extreme Ultraviolet Explorer satellite project. Requires the development and use of computer models, followed by experimental test, evaluation, and analysis of results. Supervisory position.

Applicants must have the equivalent of a B.A. in physics or physical chemistry plus 4 years of related experience. Master's degree in physics preferred. Experience with development of detector systems, UV and/or x-ray technology, computer programming, and design of laboratory test equipment required.

To be considered, a detailed résumé must be received by 25 January 1985. Mail to:

Personnel Office, Box 10-415-44
2539 Channing Way
University of California
Berkeley, Calif. 94720

May send duplicate résumé to: Dr. Oswald Siegmund, Space Sciences Laboratory, University of California, Berkeley, Calif. 94720.

An Equal Opportunity/Affirmative Action Employer

The University of Maryland (UM), Asian and European Divisions, seeks FACULTY FOR UNDERGRADUATE SCIENCE COURSES on U.S. military bases overseas. Requirements include the Ph.D. or two M.A.'s, recent college teaching experience, U.S. citizenship, and competence to teach in two of the following fields: astronomy, biology, chemistry, geology, mathematics, and physics. Renewable annual appointments begin in August 1985. Frequent travel and the cost of schooling make these positions difficult for those with children. Send résumé to: Dr. Lois A. Mohr, The UM University College, College Park, Md. 20742. Affirmative Action/Equal Opportunity Employer.

The Institute of Neuroscience and the Biology Department at the University of Oregon seek a NEW FACULTY MEMBER. Extensive opportunities exist for scientific interaction with molecular biologists, chemists, and psychologists both within and outside the Institute. A concurrent search is being made for a neurochemist. The major criteria for selection will be promise of an outstanding research career and potential for productive interaction with colleagues. We anticipate filling this position at the assistant professor level, although more senior candidates will be considered. Interested persons should forward curriculum vitae, a statement of research interests, and at least three letters of recommendation to: Neuroscience Search, Institute of Neuroscience, University of Oregon, Eugene, Ore. 97403. Closing date is 1 February 1985. The University of Oregon is an Affirmative Action/Equal Opportunity Employer.

The Department of Biomedical Engineering, Duke University, is inviting applications for a FACULTY POSITION that will be available in September 1985. Academic rank is open. A Ph.D. or equivalent academic degree is required. Applicants should be interested in teaching at both the undergraduate and graduate levels. A major criterion for appointment will be the applicant's potential for developing an excellent research program in some area of biomedical engineering. Applicants should send a résumé and names of three references to:

James H. McElhaney, Chairman
Department of Biomedical Engineering
Duke University
Durham, North Carolina 27706

Duke University is an Equal Opportunity/Affirmative Action Employer.

The University of Oregon, Department of Biology, is seeking a SENIOR-LEVEL SCIENTIST (FULL PROFESSOR) as part of an expansion in cell biology. Applicants must have proven ability in research, graduate research training, and undergraduate teaching. Applicants should send a statement of research plans, curriculum vitae, and names (with addresses) of three references to: F. W. Stahl, Biology Search Committee, Institute of Molecular Biology, University of Oregon, Eugene, Ore. 97403. Closing date is 15 January 1985. The University of Oregon is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITIONS CELL AND MOLECULAR NEUROSCIENCE DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS THE UNIVERSITY OF IOWA COLLEGE OF MEDICINE

We invite applications from individuals with a strong record of innovative research in the areas of molecular, cellular, or genetic neuroscience. We are particularly interested in individuals using current strategies of cell and molecular biology to study the development, regulation, and function of neurotransmitters and neuropeptides. Please send curriculum vitae, description of research plans, and the names of three references to: Dr. Peter A. Getting, Department of Physiology and Biophysics, The University of Iowa, Iowa City, Iowa 52242.

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

FACULTY POSITIONS IN BIOCHEMISTRY TENURE TRACK

A strong record of research achievement and the ability to develop an independent research program and funding is required. The department has a medical, dental, and graduate school teaching program in which all members of the faculty participate. Qualified individuals should send their curriculum vitae, a statement of research plans and of teaching interest, and three letters of reference by 1 February 1985 to:

Dr. Gary Brooker, Chairman
Department of Biochemistry
Schools of Medicine and Dentistry
Georgetown University Medical Center
3900 Reservoir Road, NW
Washington, D.C. 20007

An Equal Opportunity/Affirmative Action Employer

FACULTY POSITIONS University of Utah School of Medicine

Research Ph.D. at the assistant professor level who has expertise with in vitro immunologic and receptor assays and who is capable of becoming an independent investigator is needed for basic and clinical research program in reproductive and tumor immunology. For further information send letter and curriculum vitae to:

James R. Scott, M.D.
Professor and Chairman
Department of Obstetrics and Gynecology
University of Utah School of Medicine
50 North Medical Drive
Salt Lake City, Utah 84132

Applications must be postmarked by 15 January 1985. Applications submitted after the deadline may be considered if no qualified candidates have applied by the deadline.

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

DIVISION HEAD FOR HEMATOLOGY/ONCOLOGY

The Department of Pediatrics, University of Washington/Children's Orthopedic Hospital, Seattle, Washington, is recruiting for a director of its Hematology Division. The division has an active clinical, research, and teaching program with the University of Washington, the Children's Orthopedic Hospital, and the Fred Hutchinson Research Center. Candidates must have strong academic credentials.

Interested candidates should send curriculum vitae to: C. Ronald Scott, M.D., Hematology Search Committee, Department of Pediatrics, RD-20, University of Washington, Seattle, Wash. 98195.

The University of Washington/Children's Orthopedic Hospital is an Affirmative Action/Equal Opportunity Employer.

IMMUNOLOGIST

The Department of Pathology at the Hubert H. Humphrey Cancer Research Center of Boston University School of Medicine invites applications at the assistant or associate professor level for a researcher working on basic problems in immunology or immunopathology. Candidates should send a curriculum vitae, a statement of research interests, and three letters of recommendation by 1 February 1985 to: Director, Hubert H. Humphrey Cancer Research Center, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118. Boston University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

HEALTH COMPUTER SCIENTIST

The College of Pharmacy and the School of Nursing jointly seek a full-time faculty person at the rank of assistant professor in the area of health computer science. The successful candidate will be expected to teach relevant graduate and undergraduate courses, provide consultation to faculty and students, and to develop an independent scholarly research program. This is a tenure-track position available immediately. Minimum qualifications include an earned doctorate and experience in health-related computing. Desired qualifications include experience in teaching computer applications and evidence of independent scholarly activity. Salary commensurate with experience. Materials will be accepted until 1 March 1985. Inquiries to: A. Marilyn Sime, Ph.D., Chair, Search Committee for Health Computer Scientist, University of Minnesota School of Nursing, 308 Harvard Street, SE, Minneapolis, Minn. 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages application from women and minorities.

National Institutes of Health National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) Immunochemist

An IMMUNOCHEMIST POSTDOCTORAL RESEARCH position is available to study the membrane and cytoplasmic antigens of glioma-derived tissue culture lines. The presence of the antigenic proteins, their induction by differentiation agents, and their characterization are to be studied. A background in tissue culture and cell biology, as well as gel electrophoresis, is desirable.

Collaboration with other immunologists, molecular biologists, and tumor biochemists is essential. Immunochemistry laboratory facilities are available, as well as microcinematography, fluorescent microscopy, quantitative morphometrics, image analysis and processing, and SEM-EDX (microanalysis), to study the antigenic characteristics of brain tumors.

This position will be in the Surgical Neurology Branch, NINCDS, National Institutes for Health, Public Health Service. Salary range for this staff fellowship position is \$27,000 to \$35,467 per year, commensurate with experience. Send curriculum vitae and three references to: Janet E. Follin, Personnel Department, NINCDS, National Institutes of Health, 9000 Rockville Pike, Building 31, Room 8A23, Bethesda, Md. 20205. NIH is an Equal Opportunity Employer. (For more information, telephone: Ms. Follin on 301-496-6334.)

IMMUNOLOGIST, Ph.D. Tenure-track assistant professor position available in September 1985. To teach graduate immunology and undergraduate microbiology and introductory biology; knowledge of tissue culture and radioisotopic methodology essential; research program expected. Send curriculum vitae and have three letters of recommendation forwarded to: Dr. Aura Star, Search Committee, Department of Biology, Trenton State College at Hillwood Lakes, Trenton, N.J. 08625. Closing date: 25 January 1985.

SCIENCE JOURNALIST

The News and Comment staff of *Science* has an opening for an experienced journalist with a strong interest in science, technology, and public policy. News and Comment covers a broad range of subjects, including biomedical research, arms control, the Defense Department, the federal regulatory agencies, White House science policy, and all aspects of university- and industry-based research.

Requirements include a sound general knowledge of science, 3 to 5 years of experience in weekly or daily reporting, and a demonstrated capacity to write analytical news copy.

Applicants should submit a résumé, not more than three clips, and a letter of interest to:

Carolyn Pruitt
AAAS
1515 Massachusetts Avenue, NW
Washington, D.C. 20005

Salary commensurate with experience. We regret we cannot accept telephone inquiries.

Equal Opportunity Employer

Associate Senior Investigator/ Drug Metabolism

The Drug Metabolism Department of Smith Kline & French Laboratories is seeking an outstanding scientist interested in designing and conducting studies to elucidate the metabolism and pharmacokinetics of metal-containing drugs. The successful candidate will have:

- Ph.D. and 2-5 years of relevant experience (postdoctoral experience included).
- Experience studying the metabolism, disposition, and pharmacokinetics of metals and/or foreign chemicals.
- Experience in analytical techniques including, (but not limited to) HPLC, GLC, radiochemical analysis, and AA spectroscopy.
- Proven scientific skills as evidenced by an outstanding publications record.
- Excellent interpersonal and communication skills.

Located near Valley Forge, the Department will be moving into a new state-of-the-art research facility minutes away from its present location. We offer an outstanding compensation, benefits, and relocation package as well as opportunities for personal and professional growth.

Please forward your resume with list of publications to George P. Kissell, Jr., Sr. Employment Consultant, Smith Kline & French Laboratories, 1598 Spring Garden Street, Philadelphia, PA 19101.

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DEAN OF SCIENCE CLARKSON UNIVERSITY

Clarkson University invites applications and nominations for the position of Dean of Science. Clarkson is a privately endowed university located in northern New York State with programs in engineering, science and management. Clarkson University is the home of the world famous Institute of Colloid and Surface Science (established in 1965). The School of Science is comprised of the Departments of Biology, Chemistry, Mathematics and Computer Science, and Physics. There are about 560 undergraduate students enrolled in science programs and there are approximately 75 graduate students enrolled in M.S. and Ph.D. programs. There are approximately 55 tenure track faculty positions in the School of Science.

Candidates should have an outstanding record of teaching and research. The Dean will be expected to provide leadership in bringing both the undergraduate and graduate programs to increasingly higher levels of excellence. In this regard a major effort will be devoted to the continued expansion of research and to the recruitment of distinguished faculty.

Please send nominations and applications to

Dr. Janos H. Fendler
Dean of Science Search Committee
Clarkson University
Potsdam, New York 13676

to arrive not later than March 1, 1985. Applications should include curriculum vitae and the names and addresses of several references. EO/AE.

Biochemistry/ Microbiology



An equal opportunity employer

The Department of Immunology and Infectious Diseases at Pfizer Central Research is seeking two individuals with a Ph.D. in a biological science and at least two years of post-doctoral training. You will be part of a multidisciplinary project team involved in the development of contemporary approaches to control infectious diseases and discover new antibiotics. Experience in one or more of the following areas is desirable: membrane biochemistry and bacterial transport mechanisms, iron acquisition, host-microbe interactions at mucous membrane surfaces, identification and characterization of membrane receptors on eucaryotic and pro-eucaryotic cells, or specific aspects of bacterial metabolism. Although participation in the ongoing projects is expected, the successful candidates will be encouraged to develop new areas of research compatible with established objectives.

These positions offer an excellent opportunity for professional recognition and career growth. Publication of important findings will be encouraged. We also offer a competitive compensation, benefit and relocation package and the opportunity to live in an attractive Connecticut shore community. Please send resume and brief description of research interest to Jerry K. Larson, Ph.D., Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

SENIOR EXECUTIVE SERVICE SUPERINTENDENT CONDENSED MATTER AND RADIATION SCIENCES DIVISION

NAVAL RESEARCH LABORATORY
\$59,223 to \$69,900

DUTIES: As Head of a Division of approximately 129 scientific, technical and support personnel, plans and directs a broad program of basic and applied research on the fundamental properties of materials and interactions of various types of radiation with matter. Areas of particular interest are studies of the metallic beams and the survivability of military equipment in various radiation fields such as satellites in space or in hostile radiation environments. Research must be coordinated with other Navy, Department of Defense and industrial laboratories and universities.

TO APPLY: Interested applicants should contact Mr. Michael Argerbright at (202) 767-3030 (call collect) to obtain application forms and information on procedures for applying.

All applications must be postmarked by 15 January 1985.

NAVAL RESEARCH LABORATORY

Civilian Personnel Office

Code: 1811/RF: 60-002-11.1: (S)

4555 Overlook Avenue, S.W., Washington, D.C. 20375-5000

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POSITIONS OPEN

FACULTY POSITION IN BIOLOGY THE UNIVERSITY OF MICHIGAN

The Museum of Zoology and Division of Biological Sciences of the University of Michigan invite applications for a joint tenure-track appointment as an assistant curator of birds and assistant professor of biological sciences, beginning as early as 1 July 1985. The appointee must have a Ph.D. prior to beginning duties, a demonstrated commitment to research in systematic and evolutionary studies of birds or mollusks and to biological instruction, and the training to serve as a curator of a major ornithological or malacological research collection. Applications are particularly sought from qualified individuals working in ecological genetics, molecular systematics, behavior, functional morphology, or developmental biology within a systematic context. Three letters of recommendation, curriculum vitae, and copies of publications should be sent before 28 January 1985 to: **Chairman, Search Committee, Museum of Zoology, University of Michigan, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer.

Available 1 January 1985. **INSTRUCTOR—ASSISTANT PROFESSOR:** depending on qualifications, for cellular immunologist in medical school located on Southeast coast. Many cultural and recreational advantages. Send replies and three letters of reference to:

H. Hugh Fudenberg, M.D.
Professor and Chairman
Medical University of South Carolina
Department of Basic and Clinical
Immunology and Microbiology
171 Ashley Avenue
Charleston, S.C. 29425
An Equal Opportunity Employer

MARINE ALGAL PHYSIOLOGIST: Botany and Marine Studies. Tenure-track position starting 1 August 1985 for research and teaching in algal physiology. Joint appointment in the Department of Botany and Plant Pathology and the Center for Marine Studies with emphasis on a strong research program. Desired areas of research interest include biochemistry, physiology or physiological ecology of macroalgae. Requirements: Ph.D.; enthusiasm for teaching and research. Send curriculum vitae, transcripts, and arrange for three letters of recommendation by 25 January 1985 to: **Dr. R. L. Vadas, Department of Botany and Plant Pathology, University of Maine, Orono, Maine 04469.**

An Equal Opportunity/Affirmative Action Employer

MOLECULAR BIOLOGIST wanted to establish independent program and to interact with cell biology group interested in hematopoietic stem cell proliferation and differentiation, growth and suppressor factors. Tenured and nontenured track appointments available depending upon credentials and experience. If interested please send curriculum vitae to

R. Hoffman, M.D.
Chief, Hematology/Oncology Section
Department of Medicine
Indiana University School of Medicine
Room 379 Clinical Building
541 Clinical Drive
Indianapolis, Indiana 46223

Indiana University is an Equal Opportunity/Affirmative Action Educator, Employer, and Contractor, M/F.

MOLECULAR BIOLOGIST

The Department of Biological Science, California State University, Fullerton, invites applications for one or two tenure-track faculty appointments (preferably at the assistant professor level) in **MOLECULAR BIOLOGY** to begin fall 1985. Qualifications include a Ph.D. and appropriate research experience. Candidates with interests in any aspect of molecular biology are encouraged to apply; however, we are interested in filling one position with a prokaryotic molecular biologist experienced in gene manipulation. Successful candidates will be expected to participate in undergraduate and graduate teaching. Applicants should submit a curriculum vitae, representative reprints, and brief statements of teaching experience and research interests and plans; additionally, three letters of recommendation should be forwarded separately to: **Dr. Marvin J. Rosenberg, Chair, Search Committee, Department of Biological Science, California State University, Fullerton, Calif. 92634.** Deadline for applications is 31 January 1985. *The University is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minority candidates.*

POSITIONS OPEN

MARINE FISHERIES BIOLOGIST. Tenure-track, 12-month position, assistant professor level in marine fisheries biology. Preference given to candidates versed in population dynamics and research programs relevant to issues in marine fisheries. Teach undergraduate and graduate course in animal population dynamics and possibly graduate course in estuarine ecology or related field. Résumé, letter of application, and three reference letters should be sent to: **Wallace Klusmann, Head, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, Texas 77843-2258.** *An Equal Opportunity Employer.* Selection will not be made prior to 31 December 1984.

M.D. based in United Kingdom to supervise the conduct of clinical trials of radioimmunoimaging and therapy of patients with melanoma and other malignancies using monoclonal antibody conjugates directed to tumor associated antigens. Completion of residency in internal medicine and demonstrated expertise in the supervision of the conduct of clinical trials required. Excellent opportunity for bright, hardworking, self-motivated physician with interest and skill in clinical research. Generous salary and benefits. Send curriculum vitae and references to: **Director of Personnel, 2910 Seventh Street, Berkeley, Calif. 94710.**

MICROBIOLOGY/MICROBIAL GENETICS

Indiana University of Pennsylvania (IUP) invites applications for an assistant professor in the Biology Department to teach introductory courses in microbiology and genetics beginning September 1985. Commitment to quality teaching and research is essential. Ph.D. in microbiology or microbial genetics required. Deadline for applications is 15 March 1985. Send letters of application, résumé, transcripts, statement of research interests, and three letters of recommendation to: **Dr. F. W. Liegey, Biology Department, IUP, Indiana, Pa. 15705.**

IUP is an Affirmative Action/Equal Opportunity Employer.

MICROBIOLOGIST. The Department of Biology at Memphis State University is accepting applications for an anticipated tenure-track position at the assistant professor level available August 1985. A Ph.D. is required and postdoctoral experience is desirable. The area of microbiological research is open; however, investigators with an emphasis in microbial physiology will be given preference. The successful candidate will develop a strong research program and seek external support. Teaching duties include developing a graduate microbial physiology course and participation in the microbiology curriculum at the undergraduate and graduate levels. Memphis State University is a state-supported, urban university with more than 20,000 students. The Biology Department offers the B.S., M.S., and Ph.D. degrees. Applicants should send a letter of application, curriculum vitae, transcripts, three letters of recommendation, and a statement of research interests by 15 February 1985 to: **Dr. Lewis Coons, Chairman, Microbiology Search Committee, Department of Biology, Memphis State University, Memphis, Tenn. 38152.** *Memphis State University is an Equal Opportunity University.*

MOLECULAR BIOLOGIST/MOLECULAR GENETICIST. Term appointment (3 to 4 years) at the assistant professor level in an eight-member undergraduate biology department. Begins 1 July 1985, pending final authorization. Appointee will develop a course in specialty area and participate in other courses such as genetics, biochemistry, microbiology or introductory cell biology. Substantial commitment to research (involving undergraduates) expected. Experience in plant biology desirable. Send résumé, graduate and undergraduate transcripts, and letters from three referees by 20 January to: **Dr. Carl Pike, Department of Biology, Franklin and Marshall College, Lancaster, Pa. 17604.** *An Equal Opportunity Employer.*

PATHOPHYSIOLOGY OF SICKLE CELL ANEMIA

Applicant should have experience in protein chemistry, measurement enzyme reactions, mitochondrial respiration; Ph.D. in biochemistry or physiology, or M.S. with 3-plus years of experience. Useful: ability to measure blood p50; knowledge of clinical hematology; ability to interact with patients and house officers. Starting salary: \$18,000 to \$20,000 per year, plus benefits. Send résumé to: **Samuel Charache, M.D., Johns Hopkins Hospital, Baltimore, Md. 21205.** *Equal Opportunity Employer.*

POSITIONS OPEN

MOLECULAR GENETICIST

ASSISTANT PROFESSOR: Tenure-track position available, 1 July 1985. The Biology Department at Hamilton College seeks a molecular geneticist to teach general genetics and molecular genetics. The candidate should have postdoctoral experience with a demonstrated research accomplishment in plant, animal, or microbial genetics, possibly employing recombinant DNA technology. Newly renovated facilities for both teaching and research will be available to the successful candidate. Applicants should have a strong interest in liberal arts education and an active research program that will involve students. Applications should be received by 7 January 1985 and include curriculum vitae, transcripts, and the names of three references. Send résumé to: **Professor Tom Brady, Chairman, Biology Department, Hamilton College, Clinton, N.Y. 13323.**

Hamilton College is an Equal Opportunity Employer. Women and members of minority groups are strongly encouraged to apply.

NEUROIMMUNOLOGIST

Assistant or associate professorship in a Department of Pathology exists at a leading New York City medical school for a person to work on localization of immunologic factors in nervous tissue, of relevance to multiple sclerosis. M.D. or Ph.D. with training in neurology and lymphocyte biology. Salary: \$40,500. Send résumé to: **New York State Department of Labor, 2 World Trade Center, Room 5175, New York, New York 10047.** Attention: JMK4. *An Equal Opportunity Employer.*

NMR AND BIOCHEMISTRY POSTDOCTORATES. A number of postdoctoral positions for NMR spectroscopists and/or biochemists are available for projects exploring the application of NMR spectroscopy to the treatment and management of cancer. Three projects involve in vivo NMR spectroscopy. These include monitoring the effects of chemotherapeutic agents and x-radiation on tumors and detecting anthracycline-induced cardiotoxicity. A fourth project is directed at elucidating the molecular mechanism of the interaction of the anticancer agent bleomycin with metals and nucleic acids. Instruments include a 400 MHz wide bore spectrometer, a 4.7-T, 30-cm bore imaging spectrometer system, and a 2-T whole body imaging spectrometer system. Write and send letters of recommendation to: **J. D. Glickson, Department of Radiology, The Johns Hopkins School of Medicine, Traylor 311, Baltimore, Md. 21205.** *Equal Opportunity/Affirmative Action Employer.*

The Department of Botany, Iowa State University, invites applications for a tenure-track position at the assistant or associate professor level. This position for a **PLANT ECOLOGIST** begins 21 Aug 1985, and carries a minimum salary of \$23,000. The person filling this position is expected to develop a strong research program in physiological plant ecology. Teaching responsibilities will include an undergraduate ecology course and a graduate course in physiological plant ecology as well as participation in seminars in the graduate ecology program. Preference will be given to those with an established research record in physiological plant ecology, whose research interests complement those of other members of the department. Curriculum vitae, statement of research and teaching interests, reprints of publications, and three letters of reference should be sent to: **Dr. R. C. Coolbaugh, Chairman, Botany Department, Iowa State University, Ames, Iowa State University, Ames, Iowa 50011,** by 1 February. *An Equal Opportunity/Affirmative Action Employer.*

The Department of Botany, Iowa State University, invites applications for a tenure-track position at the assistant or associate professor level. This position for a **PLANT SYSTEMATIST** begins on 21 August 1985, and has a minimum salary of \$23,000. All areas of vascular plant systematics will be considered. The person will be expected to develop a strong research program in the area of his/her interests and specialization. Teaching responsibilities initially will include participation in introductory biology and one or more courses in systematics. Applicants must have a Ph.D. Curriculum vitae, statement of research and teaching interests, reprints of publications, and names, addresses, and telephone numbers of at least three references should be sent to: **Dr. R. C. Coolbaugh, Chairman, Department of Botany, Iowa State University, Ames, Iowa 50011,** by 1 February. *An Equal Opportunity/Affirmative Action Employer.*

**LEADER
MASS SPECTROMETRY GROUP
LABORATORY OF MOLECULAR BIOPHYSICS
NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES
NATIONAL INSTITUTES OF HEALTH**

The Laboratory of Molecular Biophysics, National Institute of Environmental Health Sciences has an opening for Leader of the Mass Spectrometry Group. The Group has broad research interests in the application of mass spectrometry and related techniques to environmental health studies, in addition to providing a service to other scientists in the Institute. Current research areas include: the analysis of peptides and oligonucleotides by Tandem Mass Spectrometry; profiling and quantification of endogenous and exogenous compounds using highly selective detection techniques; application of secondary ion mass spectrometry to surface analysis; development and application of combined liquid chromatography-mass spectrometry (LC-MS) to the analysis of pesticides, drug metabolites and other samples of biological origin; and application of Tandem Mass Spectrometry in gas phase ion chemistry. Instruments available include VG ZAB4F Tandem Double-Focusing Mass Spectrometer, VG ZAB2F and 7070E Sector Instruments; Finnigan 3200 and VG 12-250 Quadrupoles; Nuclide Triple Quadrupole.

Duties of the Group Leader include the supervision of independent and collaborative research programs and of the analytical service provided to Institute scientists. Minimum educational requirements are a four year course of study in an accredited college or university leading to a Bachelor's degree with major study in chemistry, physics, physical chemistry or a related discipline and a doctorate in the specialty area. Applicants must have a demonstrable record of research achievement in the application of mass spectrometry to biochemical, pharmacological, toxicological or environmental problems. Some experience in research program planning and implementation is desirable.

This is a Civil Service Career-Conditional Appointment under the Merit Pay System at the GS-14/15 level with a salary range \$42,928 to \$65,642, depending on the qualifications of the applicant selected. Benefits include Civil Service Retirement/Social Security, Life and Health Insurance. This is a supervisory position and may require the incumbent to serve a one year probationary period. U.S. citizenship is required. Submit application package for Physical Sciences Positions (available at all Federal Job Information Centers and Federal Personnel Offices), curriculum vitae, and names of three references by December 31, 1984 to:

Mr. Bruce Wiggins, Code: HN-V2K(1)
National Institutes of Environmental Health Sciences
P.O. Box 12233
Research Triangle Park, N.C. 27709
(919) 541-3317

NIH is an Equal Opportunity Employer

Assistant Director- Drug Metabolism

The Drug Metabolism Department of Smith Kline & French Laboratories is seeking an individual interested in managing and directing studies of the disposition and pharmacokinetics of drugs in the discovery and development. The successful candidate will report to the Director of Drug Metabolism and implement a program of research to support and enhance the drug discovery and development program.

To be considered, applicants must possess all of the following requirements:

- Ph.D. in Drug Metabolism, Pharmacology, Biochemistry, or Pharmaceutics.
- 5-10 years experience in drug metabolism, pharmacokinetics, and drug disposition.
- Proven scientific skills as evidenced by an outstanding publications record.
- Excellent written and oral communications skills.
- Experience supervising a multidisciplinary group of scientists.

Located near Valley Forge, the Department will be moving into a new state-of-the-art R&D complex minutes away from its present location. In addition to an outstanding compensation, benefits, and relocation package, we offer the opportunity for personal and professional growth.

Please forward your resume and list of publications to George P. Kissell, Jr., Sr. Employment Consultant, Smith Kline & French Laboratories, 1598 Spring Garden Street, Philadelphia, PA 19101.

SK&F
A SmithKline Beckman Company

Would you like to live in the Boston/Cambridge area and work adjacent to the MIT Campus? American Science and Engineering, Inc., is seeking individuals who enjoy physics and who wish to work in an industrial R&D environment. AS&E has been a world leader in the development of high resolution X-ray and gamma-ray imaging systems for space research, medical diagnostics, security inspection and defense related non-destructive testing for twenty-five years. AS&E scientists have made significant contributions to X-ray astronomy and solar physics including the discovery of the first non-solar celestial X-ray source. Our inventions have included the first practical X-ray telescope, the fourth generation CT scanner and the first film-safe X-ray inspection systems. Openings exist in the areas of diagnostic radiology and industrial computed tomography.

■ Experimental Physicists

There are opportunities to participate in the development of new techniques and applications of computer tomography and digital, diagnostic radiology. Research and development efforts involve new concepts in X-ray deflection, X-ray scanning and new biomedical and industrial applications.

Candidates will work with other physicists and our EE, ME and software personnel. We require physicists with strong aptitude in supervising and carrying out an entire experiment involving electronics, mechanics, physics and software.

These positions require a Ph.D. in experimental physics, medical physics or observational astronomy and a background in photon detection or particle counting. Familiarity with computer controlled instrumentation or digital image processing would be helpful. Post-doctoral experience is desirable, but not required for these positions. The ability to write coherent scientific papers and technical proposals is mandatory.

Qualified candidates should call or send resume to John Loughlin, 1-800-225-1608.

AS&E is an Affirmative Action/Equal Opportunity Employer located in Cambridge, Massachusetts.

AS&E

**American Science and Engineering, Inc.
Fort Washington
Cambridge, Massachusetts 02139**

POSITIONS OPEN

PALEOBIOLOGIST, UNIVERSITY OF CALIFORNIA, LOS ANGELES, EARTH AND SPACE SCIENCES. Faculty appointment effective academic year 1985-1986, with interests in one or more of the following areas: (i) **paleontology** (any subdiscipline, including biostratigraphy); (ii) **processes of biologic evolution**; (iii) **development of ecosystems** during geologic time; and (iv) **biochemical evolution**. Depending on the candidate's interests, joint appointment between the Department of Earth and Space Sciences, the Center for the Study of Evolution and Origin of Life (of the Institute of Geophysics and Planetary Physics), and/or other academic departments may be considered. The position is open to exceptionally well-qualified candidates of any academic rank or level of postdoctoral experience. The prime criteria for selection will be outstanding intellectual ability, expertise in the relevant scientific disciplines, and excellence in research and teaching. To apply, please forward your curriculum vitae, a listing of three or more references (with telephone numbers), and a one-page description of your background and experience in the relevant problem areas, before 15 February 1985 to: **Chair, Paleobiology Search Committee, Department of Earth and September Sciences, University of California, Los Angeles, Los Angeles, California 90024.** Applicants should request that three reference letters be sent directly to the search committee. *The University of California is an Equal Opportunity Employer; qualified women and/or members of minorities are especially invited to apply for this position.*

POSTDOCTORAL FELLOW POSITION available immediately to study angiotensin/renin gene expression in the rat central nervous system. Previous experience in molecular biology desirable but not necessary. Send curriculum vitae with names of three references to: **Kevin R. Lynch, Department of Pharmacology, University of Virginia Medical Center, Charlottesville, Virginia 22908.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW to conduct research involving antigen purification and monoclonal antibody production for avian infections bursal disease virus (IBVD) and isolation of capsid proteins. Requires Ph.D. in veterinary medicine or medical microbiology. Salary: \$16,810 per year. Apply in person or by résumé to: **Georgia Department of Labor, 788 Prince Avenue, Athens, Ga. 30613.** Control Number GA 5030967.

POSTDOCTORAL POSITION available 1 January 1985 for research with Professor R. Sokal on spatial analysis of variation in human populations. Ph.D.'s trained in relevant areas of biology, physical anthropology, or geography with strong quantitative and computing backgrounds should send resume and three letters of reference to: **Dr. F. Rohlf, Department of Ecology and Evolution, State University of New York (SUNY), Stony Brook, Stony Brook, N.Y. 11794.** *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.* AK Number 303-84.

POSTDOCTORAL POSITION available immediately to study cellular aspects of oocyte growth. Studies involve protein purification, antibody preparation, and immunocytochemistry. Experience with these techniques desirable. Send curriculum vitae and names of three references to: **Dr. Kelly Selman, Department of Anatomy, University of Florida, College of Medicine, Box J-235 JHMHC, Gainesville, Fla. 32610.**

POSTDOCTORAL POSITIONS available for studies in various aspects of cancer research in the Center in Molecular Toxicology through the Departments of Biochemistry, Chemistry, Pharmacology, and Pathology. Areas of investigation include synthetic chemistry related to toxic chemicals, isolation and characterization of natural products, mechanistic bioorganic chemistry, chemistry of heavy metal antitoxes, DNA-carcinogen physical interactions, enzymology and regulation of animal and human cytochrome P-450, cloning of genes coding for DNA repair enzymes, cytochromes P-450, and chromatin proteins, the basis of metal carcinogenesis, chromatin function, hepatocarcinogenesis, eicosanoids, regulation of glutathione metabolism, and developmental mass spectrometry. Salaries negotiable. Applicants should submit curriculum vitae and three letters of recommendation to: **Dr. F. P. Guengerich, Center in Molecular Toxicology and Department of Biochemistry, Vanderbilt University School of Medicine, Nashville, Tenn. 37232.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to join a research team working on the molecular genetics of growth control in *Drosophila*. Ph.D. required, preferably in genetics, molecular biology, or developmental biology. Experience in *Drosophila* molecular genetics desirable.

Please submit curriculum vitae, statement of research interests, and the names of three individuals willing to write letters of recommendation to:

**Dr. Peter J. Bryant
Developmental Biology Center
University of California, Irvine
Irvine, Calif. 92717**

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

POSTDOCTORAL POSITION

Available for 1 to 3 years starting 1 July 1985. Areas of research include high altitude physiology, control of respiration (neurophysiology and sleep), vascular smooth muscle physiology and pharmacology, microcirculation, collateral ventilation, and control of the pulmonary circulation. Send curriculum vitae to: **Wiltz W. Wagner, Jr., Cardiovascular Pulmonary Laboratory, Box B-133, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, Colo. 80262.** *We are an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS available immediately to study Ig gene, T-cell receptor gene and *myc* oncogene translocation with retroviral vector and transgenic mouse system. A strong background in one of the following areas is required: molecular biology, animal virology, or molecular immunology. Send curriculum vitae and names of three references to: **Hitoshi Sankano, Ph.D., Department of Microbiology and Immunology, University of California, Berkeley, Calif. 94720.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION CELLULAR AND MOLECULAR BIOLOGY

Research in membrane and extracellular matrix biology to study the role of proteoglycans in membrane trafficking and cellular interactions with the extracellular matrix. Candidates should have some prior research experience in extracellular matrix, glycoprotein, or membrane biochemistry or in molecular biology. Send curriculum vitae and names of three references to:

**Dr. Marilyn Gist Farquhar
Department of Cell Biology
Yale University School of Medicine
P.O. Box 333
New Haven, Connecticut 06510**

Yale University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available 1 January 1985 or later for work on the biochemistry and molecular biology of blood coagulation. Experience in enzymology, recombinant DNA technology, protein separations, and immunochemistry helpful but not essential. Send curriculum vitae and names of three references to: **Dr. William Konigsberg, Department of Molecular Biophysics and Biochemistry, Yale University, P.O. Box 333, New Haven, Conn. 06510.**

POSTDOCTORAL POSITION available immediately to study active-site residues of r-glutamyl-transferase. Recent Ph.D. in biochemistry or chemistry with experience in the isolation and characterization of proteins/enzymes. Starting salary: \$16,000 per year. Two-year position. Send résumé, brief summary of research experience, and two letters of reference to: **G. P. Sachdev, College of Pharmacy, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Okla. 73190.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION for Ph.D. in biochemistry or related area to extract, assay, and purify plant and plant tissue culture enzymes involved in the production of antimetabolites. Salary: \$17,000 plus fringe benefits. Effective 15 January 1985 for 1 year and possible extension for second year. Send résumé and three letters of reference by 10 January 1985 to: **Dr. E. John Staba, College of Pharmacy, University of Minnesota, Minneapolis, Minn. 55455.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

The Department of Physical Medicine and Rehabilitation, University of Michigan Medical School, invites applications for **TWO PSYCHIATRIC POSITIONS** from Board-certified or -eligible **PSYCHIATRISTS**. These positions include case management, outpatient clinics, resident and medical student teaching, EMG, and consultation programs. Research opportunities are also available. Previous work experience in an academic institution desirable. Salary and academic appointment appropriate to experience and training. Positions available July 1985. Send curriculum vitae to: **Theodore M. Cole, M.D., Chairman, Department of Physical Medicine and Rehabilitation, E3118 University Hospitals, 1405 East Ann Street, Ann Arbor, Mich. 48109-0010.** *The University of Michigan is a nondiscriminatory, Affirmative Action Employer.*

POSTDOCTORAL POSITIONS IN HUMAN GENETICS

Postdoctoral research positions available in human molecular genetics of lysosomal enzyme disorders. Research focuses on the molecular and genetic dissection of the inherited disorders: mucopolidoses (I-cell disease and pseudo-Hurler polydystrophy), aryl-sulfatase deficiency disorders, and the sialidosis and galactosialidosis disorders. Background must include biochemistry, molecular genetics, recombinant DNA technology, or gene cloning.

Send curriculum vitae, a short description of research plans, and names of three references to: **Dr. Thomas B. Shows, Department of Human Genetics, Roswell Park Memorial Institute (RPMI), New York State Department of Health, 666 Elm Street, Buffalo, New York 14263.** *RPMI is a comprehensive cancer center and an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN IMMUNOTOXICOLOGY

Postdoctoral position in immunotoxicology for 2 years (\$15,000 per year minimum) available immediately to study seafood-related toxins. Candidates should have strong background in immunology. Experience in natural products chemistry and animal bioassays helpful but not mandatory. The individual selected will provide assistance in our 5-year study to detoxify purified marine toxins, produce antitoxin and develop immunoassays for identification of contaminated fish. Send curriculum vitae to: **Dr. Thomas B. Higerd, Department of Basic and Clinical Immunology and Microbiology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, South Carolina 29425.**

POSTDOCTORAL POSITION: Immediate opening for a recent Ph.D. in biochemistry with a strong background in purification and characterization of proteins and enzymology. Work involves studies on the protease and protease inhibitors responsible for the activation of phenol oxidases in insects. Salary competitive. Send résumé and names of three references by 11 January 1985 to: **Dr. M. Sugumaran, Department of Biology, University of Massachusetts, Boston, Mass. 02125.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY available immediately to work on site-specific mutagenesis of prokaryotic and eukaryotic genes. Applicants should have experience in cloning and gene expression. Send curriculum vitae and names of two references to:

**Virginia Commonwealth University
Dr. Verne Schirch
Professor of Biochemistry
Box 614, MCV Station
Richmond, Virginia 23298**

The Department of Biochemistry, University of Texas Health Science Center at Dallas (UTHSCD), invites applications from qualified individuals who wish to pursue **PREGRADUATE OR POSTGRADUATE STUDIES** related to the fundamental chemistry of biological processes. Major areas of emphasis include cell and developmental biology, endocrinology, enzymology, molecular genetics, biochemical pharmacology, and neurobiochemistry. Appointees will be supported by state and federal funds or the Robert A. Welch Foundation Fellowship. Postdoctoral candidates should make application prior to 1 March 1985 by sending curriculum vitae. Predoctoral candidates should request application form from: **Chairman, Graduate Studies Committee in Biochemistry, UTHSCD, 5323 Harry Hines Boulevard, Dallas, Texas 75235.** *An Equal Opportunity/Affirmative Action University.*

**SOUTHERN ILLINOIS
UNIVERSITY (SIU)
SCHOOL OF MEDICINE
SPRINGFIELD, ILLINOIS**

An expanding program of the Department of Psychiatry has created a nontenure-track **FACULTY POSITION** at the rank of assistant professor. Under the general administrative supervision of the chairman, this position will: participate primarily in research and teaching; collaborate with other faculty in research; conduct an actual research program in the area of biochemical pharmacology; seek external funds to support his/her research efforts; publish in his/her area of interest after appropriate development; be responsible for assisting with teaching in the area of his/her expertise in pharmacology in the undergraduate medical education and psychiatric residency training program; and may teach graduate courses in pharmacology and may assist in supervising graduate students in pharmacology as appropriate. Interested applicants must meet the following **minimum** requirements: (i) A Ph.D. in one of the following fields: neurochemical pharmacology, biochemistry, neurochemistry, or similar field; (ii) two years of experience in an equivalent or related occupation (research assistant in neurochemistry); and (iii) experience in a research laboratory. The following qualifications for this position are **desirable**: (i) training and publications in the neurochemistry of neurotransmitters, of neurotransmitter receptors, in CNS peptide chemistry; and (ii) additional publications. Interested applicants should submit curriculum vitae to: **Robert E. Becker, M.D., Professor and Chairman, Department of Psychiatry, SIU School of Medicine, P.O. Box 3926, Springfield, Illinois 62708.** Closing date is 14 January 1985 or until filled. *SIU is an Affirmative Action/Equal Opportunity Employer.* SIU operates on a 12-month year from 1 July to 30 June.

**DIRECTOR
VANDERBILT INSTITUTE FOR
PUBLIC POLICY STUDIES**

We are seeking applications and nominations for the Director of the Vanderbilt Institute for Public Policy Studies. This free-standing unit on the Vanderbilt campus has over the past decade played an increasingly important role in the life of the university. It has been a center for distinguished faculty research, much of which transcends traditional disciplinary boundaries, and it has been a catalyst for linking the best university research and teaching to the needs of private and public institutions seeking to deal effectively with important national and local problems. Funding for the Institute comes from a regular university allocation, from foundations, and from grants and contracts from various federal and local agencies. The Director of the Institute will teach part-time and will have a tenured academic appointment in a school or department of the university. The Director reports directly to the Provost of the University.

The Director must be a strong academic leader with a distinguished record of research and a proven ability to attract specific and general funding. The Director must have the leadership skills to play a major role in the expansion of high quality applied research and teaching throughout the university. The Director must have the imagination and administrative skill to create highly visible linkages between outstanding university researchers and important policy-makers. This is a challenging job requiring an unusual combination of talents.

Please forward resumes with cover letter (including the names of references) and/or nominations as soon as possible and no later than March 1, 1985. Applications from women and minority group members are especially encouraged.



Professor Daniel H. Saks, Chair
VIPPS Search Committee
Institute for Public Policy Studies
Vanderbilt University
1208 18th Avenue South
Nashville, TN 37212

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Candidates must be degreed (advanced degrees preferred) and have at least 2 years directly related experience.

We offer advanced laboratory environments, excellent salaries and generous benefits. Our expanding facility is just minutes South of San Francisco...just 30 minutes North of Stanford University. For immediate consideration, please send your resume to Donna Clark, Director, Human Resources, Genencor, 180 Kimball Way, So. San Francisco, CA 94080. An equal opportunity employer.

GENENCOR

HOFFMANN-LA ROCHE

Hoffmann-La Roche, a leader in the pharmaceutical industry, has two career opportunities available. One will direct the Dermatology Section of Pharmacology and the other will initiate a basic research program in Eukaryotic Molecular Biology.

Preclinical Dermatology

We seek a creative scientist to direct an expanded, multidisciplinary, preclinical research group in the discovery of dermatological drugs. This position carries the responsibility of innovative research, in vitro and in vivo model development, structure/activity relationship determinations, drug screening, formulations and toxicology evaluation. Qualifications include a PhD, dermatopharmacology expertise, productive scientific history and a demonstrated capability to coordinate and manage complex programs. (Respond position KC).

Eukaryotic Molecular Biology

The Department of Molecular Genetics seeks a Sr. Scientist who will be responsible for a basic research program in eukaryotic molecular biology and participate in research projects using recombinant DNA technology. The department conducts basic and applied research on prokaryotic and eukaryotic gene expression, lymphokines, oncogenes, growth factors and other problems of pharmaceutical importance. Qualifications include a PhD in eukaryotic molecular biology and a minimum of two years postdoctoral training. Experience with cDNA cloning or high level eukaryotic expression vectors desirable. (Respond position AS).

Roche offers an outstanding compensation package and an environment that encourages professional growth. Please send resume including present salary and indicating position of choice to: **Eleanor M. Malone, Professional Employment & Staffing Specialist,**



**HOFFMANN-
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Nutley, NJ 07110

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POSITIONS OPEN

PHYSIOLOGY

Assistant professor to teach medical students, undergraduate, and graduate students. Ph.D. with at least 2 years of postdoctoral experience. Faculty are expected to develop an independent research program; opportunities also exist for collaborative research in a number of areas of research on systems, organs or tissues. There are restrictions on the area of research required of candidates. Send curriculum vitae, statement of research plans and interests, and the names of three referees to: **Dr. A. R. Lind, Professor and Chairman, Department of Physiology, St. Louis University Medical School, 1402 South Grand Boulevard, St. Louis, Mo. 63104.** *St. Louis University is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Position available 1 July 1985 studying the control of secretory functions of human monocytes in vitro. Current emphasis is on complement stimulated arachidonic acid metabolism. Send curriculum vitae and names of two references to: **Dr. Bruce Rutherford, Department of Oral Biology, University of Connecticut Health Center, Farmington, Conn. 06032.** *Affirmative Action/Equal Opportunity Employer, M/W/H.*

POSTDOCTORAL RESEARCH ASSOCIATE available in **MOLECULAR BIOLOGY.** Individuals with Ph.D. are invited to apply to the Department of Biology at the University of North Carolina at Chapel Hill for a position with one of our faculty in molecular biology and biotechnology. The department has recently expanded its resources in molecular biology and is engaged in the following research: chromosome mechanics and molecular and developmental genetics in bacteria, yeast and fungal systems, bacterial plant pathogens, *Drosophila*, *Xenopus*, and maize. For further information, write to: **Research Associate Search, Department of Biology, Coker Hall 010A, University of North Carolina, Chapel Hill, North Carolina 27514.** *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION for recent Ph.D. available immediately to study mammalian cell mutagenesis and DNA damage using multicell spheroids and FACS. Must have strong background in eukaryotic mutagenesis/DNA damage assays. Starting salary: C\$18,000. Send curriculum vitae and three letters of reference to: **Dr. Peggy L. Olive, British Columbia Cancer Research Centre, 601 W. 10th Avenue, Vancouver, British Columbia, Canada V5Z 1L3.**

A POSTDOCTORAL POSITION IN MOLECULAR VIROLOGY is available to study viral gene expression in retrovirus diseases of sheep and goats. Research involves functional mapping of viral genes by molecular cloning and hybrid selection procedures and the use of specific genetic probes to study homology between retrovirus genomes and gene expression in cell culture and animals. Familiarity with gene cloning technology is necessary. Funding for this position is from an NIH training grant; applicants must be U.S. citizens or permanent residents. To apply, please submit curriculum vitae and three letters of recommendation to: **Dr. W. P. Cheevers, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, Washington 99164-7040.** *This university is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH on the binding of anticancer drugs to target proteins. Various aspects of the ongoing program involve the use of stopped-flow spectrophotometry and fluorimetry, ¹³C NMR, HPLC, computerized graphics, EPR and flow cytometry and there will be opportunity for training in a number of these techniques. Candidates should have a Ph.D. or M.D. with graduate experience in biochemistry (including enzymology) or in medicinal chemistry and an interest in biochemical pharmacology of anticancer drugs. The position will be available 1 January. Send curriculum vitae and the name of three references to: **Dr. Raymond L. Blakley, Division of Biochemical and Clinical Pharmacology, St. Jude Children's Research Hospital, Box 318, Memphis, Tenn. 38101.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE

Available immediately for Ph.D. or M.D. interested in the sterilizing and mutagenic effects of cancer chemotherapy/radiotherapy on male reproductive potential. Investigator can pursue projects ranging from basic studies on animal systems to clinical studies of the effects observed on treated patients. Salary range: \$19,000 to \$30,000. Send curriculum vitae, names and telephone numbers of references, and statement of research interests to: **Dr. Marvin Meistrich, Experimental Radiotherapy—Box 66, University of Texas, M. D. Anderson Hospital & Tumor Institute, Houston, Texas 77030.**

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately to study molecular mechanisms of ion transport across epithelial plasma membranes. Research experience with membrane protein isolation or with reconstitution of transport in proteoliposomes preferred. Position offered for up to 4 years at starting annual salary of \$15,000 to \$25,000, depending on qualifications. Potential for extension as non-tenure-track faculty member. Send curriculum vitae and three letters of recommendation to:

Dr. Peter S. Aronson
Department of Physiology
Yale University School of Medicine
P.O. Box 3333
New Haven, Conn. 06510

POSTDOCTORAL RESEARCH ASSOCIATE positions available. One position is available immediately to investigate the excitatory actions of amino acids in the hippocampal slice. Experience with electrophysiological techniques is required. Second position will be available in May 1985 to study animal models of limbic epilepsy. Experience with in vivo electrophysiological recording techniques and/or autoradiographic methods is desirable. Send curriculum vitae and at least two references to: **Dr. J. Victor Nadler, Department of Pharmacology, Duke University Medical Center, Box 3813, Durham, N.C. 27710.** *Duke University is an Affirmative Action/Equal Opportunity Employer.*

University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine

We are recruiting for six tenure-track (or tenured) faculty positions for 1985-86 at levels of assistant to full professor in basic and collaborative clinical research. Applicants for assistant professor (tenure-track) should have productive postdoctoral training and show promise of developing a vigorous research program. Applicants for associate professor or professor (tenure-track or tenured) should demonstrate an excellent record of productivity and research support.

Basic Science Division

ANATOMY: Histologist. Histology teaching experience/interests. Teaching responsibility in team-taught histology course for first year students. Preference given to candidates using immunological methods to study mammalian CNS organization and/or development, but other research areas will be considered.

BIOCHEMISTRY: Molecular Biologist. Nucleic acid biochemistry and recombinant DNA techniques desirable. Experienced medical school faculty person with transferable grants seeking higher rank preferred.

MICROBIOLOGY: Immunologist/Molecular Biologist/Monoclonal antibody experience. Specialized field of interest open. FACS 420 Cell Counter/Sorter facility available.

Submit applications by 1/18/85, accompanied by curriculum vitae, selected reprints, statement of research experience and plans, and names of three or more references, to: **Dr. Matthew Freund, Associate Dean for Research and Biomedical Sciences, UMDNJ-SOM, 401 Haddon Ave., Camden, NJ 08103. (609) 757-7845/7844.** Please specify position applied for.

Research Division

(Collaborative Basic and Clinical Research)

MEDICINE: Physiologist/Cardiovascular preferred. Renal, Pulmonary, GI will be considered. Biomedical engineering/engineering computer/image-analysis experience/interest preferred.

PATHOLOGY: Pharmacologist/Toxicologist/Biochemist. Experience/interest in controlled substances and/or alcohol metabolism and abuse in man or animal models required.

PATHOLOGY: Cancer Researcher/Immunologist/Biochemist. Interest in the area of cell/tissue culture preferred. FACS 420 Cell Counter/Sorter facility available. Monoclonal antibody experience advantageous.

University of Medicine and Dentistry of New Jersey

UMDNJ is an Affirmative Action/Equal Opportunity Employer M/F/V/H

Anticipated Vacancy Scientific Program Advisor

Psychology/Neuroscience

The Air Force Office of Scientific Research, Air Force Systems Command, located at Bolling Air Force Base, Washington, DC, invites applications from faculty members interested in a rotation assignment in the Directorate of Life Sciences under the auspices of the Intergovernmental Personnel Act. During this assignment, which could last one or two years, the individual would provide advice on existing research programs and explore potential areas for new activity. To be eligible for participation, individuals must be U.S. citizens currently serving as full-time faculty members of U.S. institutions of higher education, have an earned PhD, and have solid record of research and publications, preferably in an area of experimental psychology such as perception or cognitive science. Applications will also be considered from individuals in neuroscience or psychophysiology and broad interests in brain and behavior. Arrangements could be made for individuals who wish to continue research or work on science policy issues part-time during this period. For further information contact:

Dr. R. K. Dismukes
Director of Life Sciences,
AFOSR/NL
Bolling AFB DC 20332
Telephone: (202) 767-4278

Major Amos L. Otis
AFOSR/XOT
Bolling AFB DC 20332
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VACANCY ANNOUNCEMENT U.S. ENVIRONMENTAL PROTECTION AGENCY DIRECTOR, TOXICOLOGY AND MICROBIOLOGY DIVISION

The Environmental Protection Agency invites applications for the position of Director, Toxicology and Microbiology Division, Health Effects Research Laboratory. This is a Civil Service position located in Cincinnati, Ohio, with an annual salary at the GS-15 level (presently \$50,495 to \$65,642).

The Toxicology and Microbiology Division performs studies to identify, characterize and quantify harmful effects that may result from exposure to biological or chemical agents found primarily in source water environments. Appropriate animal models and in vitro test systems are utilized to identify overt or potential toxic effects of pollutants in water media. Ingestion, dermal and multiple routes of exposure are used to determine toxic effects, quantify absorption, distribution, mobilization, biotransformation, and excretion. Shorter term, predictive toxicologic tests are developed and compared. Microbiologic pathogens in the environment are identified and studied by the appropriate disciplinary methodology, that is, bacteriology, virology, parasitology, and/or immunology.

The candidate must have the following proven scientific and managerial qualifications:

Must possess a doctorate in a biomedical science with demonstrated capabilities in environmental health, preferably toxicology. At least 5 years proven experience as evidenced by publications in the open literature and peer recognition by scientific community. High level of scientific stature with both national and international recognition as expert in toxicology.

Proven ability in technical and managerial management of a large multidisciplinary research organization. Position involves a full range of managerial and supervisory responsibilities such as program direction, planning, organization, coordination of budget, and personnel management and involves establishment of goals, general work schedules, and development of research plans and procedures.

Further information about the position and qualification requirements may be obtained by contacting: **The Office of Personnel Management, Dayton Area Office, 200 West 2 Street, Dayton, Ohio 45402.** Inquiries to the Office of Personnel Management should be postmarked no later than 11 January 1985.

An Equal Opportunity Employer

POSTDOCTORAL FELLOWS

On behalf of SCOPE (Scientific Committee on Problems of the Environment) I.C.S.U., the U.S. National Committee for SCOPE invites applications from U.S. citizens for postdoctoral fellowships with two SCOPE projects:

1) ECOLOGY OF BIOLOGICAL INVASIONS; working with Professor Harold A. Mooney in the Department of Biological Sciences, Stanford University to synthesize and further develop results of several international workshops. A Ph.D. in ecology and an interest in global ecology and international scientific endeavors are required.

2) BIOGEOCHEMICAL CYCLE OF CARBON IN OCEANS; working with Professor B. Bolin in the Department of Meteorology, University of Stockholm, Sweden on the role of the oceans in the global carbon cycle as studied by the simultaneous use of steady state models and transient tracers. A Ph.D. in geophysical or geochemical sciences or mathematics and a general knowledge of mathematics, physical chemicals, and biological processes in the oceans; and experience with computer models are desired qualifications.

One fellow will be appointed in each project for a period of one year. Funds are available for travel and relocation expenses. Stipends will be comparable with those generally awarded at each university.

Applicants should send a resume, a brief two page statement of interests and qualifications, and arrange for three letters of reference to be sent to:

U.S. National Committee for SCOPE
Environmental Studies Board
National Academy of Sciences
2101 Constitution Ave., N.W.
Washington, D.C. 20418

Deadline for receipt of all materials is February 15, 1985. Decisions will be made prior to April 30, 1985 and appointments will commence as soon thereafter as is practical for the fellows.

An Equal Opportunity/Affirmative Action Employer. We encourage applications from minority candidates and women.

BIOMEDICAL RESEARCH OPPORTUNITIES NATIONAL INSTITUTES OF HEALTH (NIH)

The Intramural Research Division of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases (NIADDK) has many active research programs in major areas of current biomedical research. These programs are directed by leading principal investigators. Within these programs there are non-tenured, post-doctoral positions (Visiting Fellowships) for highly qualified Foreign Nationals who must be non U.S. Citizens. Applicants must have completed 0 to 36 months of post-doctoral work prior to beginning the fellowship. For further information send inquiries, indicating your interest in the specific areas listed below, to: Recruitment Program, VF-85, Dr. Jesse Roth, Director of Intramural Research, NIADDK, National Institutes of Health, Bldg. 10, Room 9N222, Bethesda, MD. 20025.

gene expression	neurobiology
nucleic acid and	development and
chromatin structure	differentiation
molecular genetics	protein structure and function
and recombinant DNA	chemistry (all branches)
DNA and RNA	biophysics
replication	mathematical biology
membrane biology/cell	pharmacology
organelles	immunology
transport phenomena	molecular mechanisms of
hormones	disease
receptors	intercellular communication
enzymology	

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE: Position available immediately to study neural and non-neural cyclic AMP-dependent protein kinases. Experience in enzymology, protein purification, fluorescence, chemical modification is desirable but not required. Annual salary is \$16,000. Send curriculum vitae, bibliography, and names of three references to the following: **Robert Roskoski, Jr., Department of Biochemistry, Louisiana State University Medical Center, 1100 Florida Avenue, New Orleans, La. 70119.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATES—IMMEDIATE AND FUTURE POSITIONS. Basic studies on parathyroid gland biosynthesis and secretion. Experience in glycoprotein/protein processing, membrane chemistry/fusion or intracellular packaging/transport desirable; 2- to 3-year initial appointment; salary: \$20,000 plus. Send curriculum vitae to: **D. V. Cohn, Ph.D., Biochemistry, Health Sciences Center, University of Louisville, Louisville, Ky. 40292.** Telephone: 502-588-7507.

POSTDOCTORAL RESEARCH FELLOW

Available immediately. Primary research interest is in analyzing cellular proteins by 2-D electrophoresis and HPLC for the detection of genetic variants and of alterations in neoplastic cells. *The University of Michigan is an Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae to: **Dr. S. M. Hanash, Department of Pediatrics, F6515 Mott Children's Hospital, University of Michigan Medical School, Ann Arbor, Michigan 48109.**

POSTDOCTORAL RESEARCH ASSOCIATE in biochemistry and molecular biology of enzymes involved in lipid metabolism. Send curriculum vitae and a list of references to: **P. E. Kolattukudy, Institute of Biological Chemistry, Washington State University, Pullman, Wash. 99164-6340,** by 15 January 1985.

POSTDOCTORAL RESEARCH ASSOCIATE position available for 3 years to investigate the relationship between synaptic transmission and energy metabolism at the ultrastructural level in the central nervous system. Background in autoradiography and/or neuroanatomical techniques desirable. Send curriculum vitae and references to: **Dr. Paul Yarowsky, University of Maryland Medical School, 660 West Redwood Street, Baltimore, Md. 21201.**

RESEARCH ASSOCIATE III (anticipated) position available 1 January 1985. Organic synthesis, purification, and analysis of oligonucleotides using automated DNA synthesizer and HPLC. Candidate must have a B.S. or a higher degree in chemistry or biochemistry. Experiences in organic synthesis, chromatography, and NMR analysis are preferred. Send résumé and three letters of recommendation to: **Dr. Simon H. Chang or Dr. Jesse M. Jaynes, Department of Biochemistry, Louisiana State University, Baton Rouge, La. 70803; phone: 504-388-5147.** Louisiana State University is an Equal Opportunity Employer.

STATE UNIVERSITY AT BUFFALO BIOLOGICAL SCIENCES SENIOR FACULTY POSITION

FULL PROFESSOR POSITION—We are seeking nominations, including self-nominations, for candidates to fill a tenured full professorship which will be open during 1985–1986. Our goal is to hire a senior person who will be able to provide leadership to other newly hired faculty (as well as interact with other members of our faculty) who will be working in areas utilizing modern genetic and molecular approaches to the study of one of the following areas: (i) the immune system, (ii) development, (iii) gene transcription, or (iv) neural biology.

Successful candidates will be expected to be working in the forefront of their field with a strong well-funded research program and be able to demonstrate a commitment to both undergraduate and graduate teaching.

Excellent competitive salary, laboratory space, and equipment are available.

Send nominations to: **Dr. Darrell Doyle, Chairman, Department of Biological Sciences, State University of New York at Buffalo, Buffalo, N.Y. 14260.** Application deadline is 1 March 1985.

State University of New York is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

QUANTITATIVE FISHERIES MANAGEMENT. Research Associate/Adjunct Faculty Position to do research on adaptive control and parameter estimation for fisheries management. Applicant should have strong background in mathematical statistics and dynamics system modeling, and some experience with renewable resource problems. Preference will be given to individuals interested in working cooperatively with government resource managers and fishing industry representatives. Submit résumé and three letters of reference to: **Dr. Carl J. Walters, Institute of Animal Resource Ecology, University of British Columbia, Vancouver, British Columbia, Canada V6T 1W5.**

RESEARCH ASSOCIATE/INSTRUCTOR position available for a recent Ph.D. graduate in neuropharmacology/neuroscience. Successful candidate should have experience in the techniques of (i) microinjection of drugs into brain sites and/or the intrathecal space of rodents, and (ii) analgesic testing paradigms. Familiarity with neurochemical methods for opioid and monoaminergic neuronal systems, as well as multiple opiate receptors is desirable. Individual must be willing to participate with an interdisciplinary team studying the pharmacology of supraspinal and spinal mechanisms involved in antinociceptive drug action. Send curriculum vitae, statement of research interests to: **David J. Smith, Ph.D., Professor of Anesthesiology and Pharmacology, Department of Anesthesiology, West Virginia University Medical Center, Morgantown, West Virginia 26506.** Deadline for submitting applications is 15 January 1985. *West Virginia University is an Affirmative Action/Equal Opportunity Employer.*

McMASTER UNIVERSITY, Department of Biology. Research Associate, Plant Ecology. Applications are invited for an appointment in a research group led by Dr. K. A. Kershaw. Candidates should have research experience in higher plant physiological ecology particularly relating to mineral nutrition and growth. The successful candidate will be responsible for developing a research programme on the interaction of aluminum toxicity with seed germination and early seedling establishment. This is a multidisciplinary programme with input from Dr. J. Kramer, geology, on the specific speciation and complexing of aluminum under closely defined experimental conditions. Initially the appointment is for 1 year commencing 1 January 1985, but funding is available for at least one more year. The commencing salary will be in the range of \$23,000 to \$25,000 per annum, plus fringe benefits. Applications should be directed to: **Dr. K. A. Kershaw, McMaster University, Department of Biology, 1280 Main Street West, Hamilton, Ontario, Canada L8S 4K1; telephone: 416-525-9140, extension 4265.** In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

RESEARCH SCIENTIST (ASSOCIATE)—Perform carcinogenesis studies involving radiation and chemical carcinogens with established cell lines, human and animal tissue samples; present data, prepare and submit research papers and review articles, supervise laboratory technicians; 40 hours/5 days; \$25,000 per year. Ph.D. in pathology or radiation biology plus 1 year of experience or 2 years of graduate research experience in the field required. Submit résumés to: **College of Physicians and Surgeons of Columbia University, Department of Radiology, 630 West 168 Street, New York, N.Y. 10032, attention: Michaela J. Deleagianis.**

NASA/GODDARD SPACE FLIGHT CENTER

The Earth and Space Sciences Directorate is seeking a highly qualified and motivated **RESEARCH SCIENTIST** to manage a broad program of basic and applied research devoted to understanding processes occurring on the surface of the earth as they involve the biosphere, soils, and land-air interactions. Salary range (\$50,495 to \$65,642), depending on qualifications and experience. All candidates must possess professional experience or graduate education in an appropriate field of engineering, physical science, or mathematics with documented experience in research to include publications in scientific or technical journals. In addition, candidates must demonstrate proof of having managed research programs and projects. At least 1 year of the required experience must be at a level of difficulty comparable to the GS-14 level in the federal service. Candidates should contact: **Michael Parrish, NASA/Goddard Space Flight Center, Personnel Division, Code 225-MP, Greenbelt, Maryland 20771; telephone: 301-344-7918.** U.S. citizenship is required.

Equal Opportunity Employer

POSITIONS OPEN

RESEARCH ASSOCIATE

Position available immediately to study the regulation of kidney receptors for parathyroid hormone, the adenylate cyclase and 250H-vitamin D-1-hydroxylase systems by estradiol and parathyroid hormone. Applicants should have the Ph.D. in a biological science. Experience in the methodology used for hormone receptor studies and/or cell culture will be advantageous. Salary commensurate with experience. Send curriculum vitae with names and addresses of three references by 15 January 1984 to: **Leonard R. Forte, Ph.D., Department of Pharmacology, School of Medicine, University of Missouri, Columbia, Mo. 65212.** An Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSISTANT

Full-time position. M.S. or B.S. in scientific discipline such as immunology, virology, cell biology, or microbiology. Tissue culture experience required. Will sample, reagent, tissue culture media preparation, tissue culture maintenance, performance of cryogenic techniques for bone marrow preservation and maintenance of sample inventory. Please contact: **Childrens Hospital of Orange County, 1109 West LaVeta Avenue, Orange, Calif. 92668.**

SENSATION AND PERCEPTION

The Department of Psychology at the University of Illinois invites applications for an assistant professor position. We are seeking an individual with demonstrated potential to develop a program of independent research into basic mechanisms of sensation and perception. Candidates using either neurobiological or psychophysical approaches in their research will be considered. Teaching duties consist of undergraduate and graduate courses spanning biological and psychological aspects of sensation and perception. This is currently a 4-year, non tenure position, with the possibility of becoming tenure-track. Salary is negotiable. Applicants should submit curriculum vitae, reprints, and a statement of research interests, and arrange to have three letters of recommendation sent to: **Dr. Joseph G. Malpeli, Department of Psychology, University of Illinois, 603 East Daniel Street, Champaign, Ill. 61820.** Applications received by 15 January 1985 will be given full consideration. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

VISION RESEARCHERS: Department of Visual Sciences, School of Optometry, Indiana University, Bloomington, Ind. 47405, anticipates funding for a tenure-track **ASSISTANT PROFESSOR**, beginning fall 1985, who has research and teaching expertise in the psychophysics of spatial, form, or motion perception. *Indiana University is an Equal Opportunity Employer.* Send curriculum vitae and three letters of recommendation (by 31 January 1985) to: **Dr. S. Lee Guth, Chairman.**

WEED SCIENTIST. The Department of Botany, University of California, Davis, invites applications for a faculty position in **WEED SCIENCE** at the assistant professor level. The appointment is 75 percent in the Agricultural Experiment Station, College of Agriculture and Environmental Sciences, for research and 25 percent in the College of Letters and Science for teaching. Candidates must have demonstrated a potential for excellence in research and teaching. The research may be in any area of weed science such as: weed biology, stress physiology, herbicide physiology, plant or cell structure-function relationships mediated by herbicides, or herbicide-plant-soil interactions. The successful applicant will also be expected to integrate basic research interests into the applied area of management of herbaceous and woody weeds in chaparral, forest, and range lands. Candidates should be prepared to participate in undergraduate or graduate courses in weed science, integrated pest management, or botany, to direct graduate student research, and to participate in advising activities. The Ph.D. degree is required at the time of appointment. Applicants must demonstrate or have demonstrated a commitment to work in the area of weed science. Applicants should submit curriculum vitae, list of publications, graduate and undergraduate transcripts, statement of future research directions in weed science, teaching background and objectives, and the names and addresses of at least three references to: **Dr. David E. Bayer, Chair of the Search Committee, Botany Department, University of California, Davis, California 95616.** Closing date for applications is 1 March 1985. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

RESEARCH SCIENTISTS POST-DOCTORAL SCIENTISTS RESEARCH ASSISTANTS

Advanced Genetic Sciences, Inc., a rapidly growing R&D company in Agricultural Biotechnology located in the San Francisco Bay Area is seeking candidates for its new Plant Cell Biology Laboratory.

- Ph.D.'s to work in basic and applied Plant Cell and Tissue Culture programs using **Cell Fusion, DNA Transformation and Clonal Selection in Cultured Cells.**
- Ph.D.'s with experience in Molecular Biology to work on **chloroplast transformation.**
- Research Assistants with BS or MS and experience in Plant Cell Culture or Molecular Biology.

Please send a resume, three letters of reference and academic transcripts to:

Dr. Pal Maliga
Director of Cell Biology
Advanced Genetic Sciences
6701 San Pablo Avenue
Oakland, CA 94608



ADVANCED GENETIC
SCIENCES

POSTDOCTORAL POSITION DRUG METABOLISM

A postdoctoral position is immediately available to study conjugation mechanisms (Phase II metabolism) by **in vivo** and **in vitro** techniques.

The successful candidate:

- **will work in an intellectually stimulating environment**
- **will continue and expand promising research projects**
- **should have a Ph.D. in Biochemistry**
- **should be familiar with the concepts and techniques of drug metabolism**
- **should have a working knowledge of chromatographic and isolation methods.**

This position is with Wyeth Laboratories, a leading pharmaceutical company located in Radnor, Pennsylvania, an attractive Philadelphia suburb. Qualified candidates should forward their resumes with complete salary history in strict confidence to **Personnel, Wyeth Laboratories, P.O. Box 8299, Philadelphia, PA 19101.**

Wyeth Laboratories, Inc.



Equal Opportunity Employer, M/F/H

Postdoctoral Scientist in Separation Biochemistry

As part of our expanding R&D activities in biotechnology, the Department of Natural Products Pharmacology is seeking an outstanding scientist to undertake studies aimed at quantitating and separating nucleic acid contaminants from protein preparations. The successful candidate will be expected to conduct innovative and thorough investigations which will lead to significant publications in leading journals. Collaborations with scientists in other departments and the scientific community at large, working on related problems will be encouraged.

The successful candidate will:

- Explore methods for separating proteins and contaminating nucleic acids using affinity chromatography or other techniques.
- Immobilize ligands to solid chromatography supports by covalent binding or other procedures.
- Develop methods for the detection of low levels of nucleic acid contaminants.

Candidates are required to have:

- A Ph. D. in biochemistry or molecular biology with research interests in modern approaches to separation science.
- Experience in the development of affinity-based separation systems.
- Experience in the isolation and purification of proteins and/or nucleic acids.
- Working knowledge of standard microbiological techniques and a good foundation in organic chemistry.
- Familiarity with radioisotopes.

Smith Kline and French Laboratories, located in suburban Philadelphia, offers an excellent benefits and compensation program including an attractive relocation package. For confidential consideration, send your C.V. and names of three references to: Mr. Walter B. Flagg, **SmithKline Beckman Corporation, 1586 Spring Garden Street, Philadelphia, PA 19101.** We are an equal opportunity employer, M/F/H/V.

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GRADUATE STUDY

PREDOCTORAL AND POSTDOCTORAL TRAINING IN HUMAN CANCER BIOLOGY AT THE UNIVERSITY OF WISCONSIN

Applications are invited for graduate study toward the M.S. and Ph.D. degrees and for postdoctoral traineeships in human cancer biology. Financial assistance will be awarded on a competitive basis. Postdoctoral traineeships are restricted to U.S. citizens and those with permanent U.S. residence visas.

For information, write:

Chairman, Graduate Steering Committee
Department of Human Oncology
K4/310 Clinical Sciences Center
600 Highland Avenue
Madison, Wis. 53792

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

FELLOWSHIPS

NUTRITION FELLOWSHIPS. Cornell University's Division of Nutritional Sciences has been granted several fellowships to enable outstanding candidates to undertake doctoral programs in nutritional biochemistry and human nutrition. Fellowships provide an annual stipend of \$15,000; tuition will be waived. Persons with a strong background in biological sciences and a degree in medicine, nursing, nutrition, biochemistry, or microbiology are encouraged to apply. Write: **Dr. Lemuel Wright, Graduate Field of Nutrition, Cornell University, 145 Savage Hall, Ithaca, N.Y. 14853.** *An Equal Opportunity/Affirmative Action Employer.*

PREDOCTORAL FELLOWSHIPS IN BIOMEDICAL AND PHYSICAL SCIENCES

Physics	Physiology	Molecular Cell Biology
Anatomy	Biochemistry	Computer Sciences
Biology	Oral Biology	Biophysical Sciences
Genetics	Pharmacology	Biomathematics
Chemistry	Biostatistics	Physiological Optics
Pathology	Neurosciences	Biomedical Engineering

Virology Immunology Medical Psychology
Well-funded faculty with diverse interests. Good postgraduation placement record. Above average stipends include payment of tuition. Contact: **The Graduate School (A), University of Alabama at Birmingham, Birmingham, Ala. 35294; telephone 205-934-8227.** *Equal Opportunity/Affirmative Action Institution.*

POSTDOCTORAL FELLOWSHIP

A postdoctoral fellow in cerebellar physiology is being sought by the Division of Neurobiology at the Barrow Neurological Institute. Applicants should have completed the M.D. or Ph.D. degree, have experience with single unit recording, and training in quantitative data processing and computer science. Studies will be focused in various aspects of cerebellar physiology. If interested, send curriculum vitae, three references, and graduate school transcript to: **James R. Bloedel, Chairman, Division of Neurobiology, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, 350 West Thomas Road, Phoenix, Arizona 85013-4496.**

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NIH POSTDOCTORAL FELLOWSHIP involves state-of-the-art mass spectrometric methods for measurement of peptides and prostaglandins. Techniques include FAB, collision activated dissociation, linked-field scanning, selected ion monitoring, computer methodology, LC-MS (off-line, on-line), and stable isotope derivatives. Send résumé to: **D. M. Desiderio, University of Tennessee Center for the Health Sciences, 956 Court Avenue, Room 2A09, Memphis, Tennessee 38163.**

NIH POSTDOCTORAL FELLOWSHIP involves development and use of radioreceptor assay of endogenous peptides in gradient HPLC fractions (brain, tooth, CSF extracts), animal surgery, subcellular fractionation, and receptor type characterization. Send résumé to: **D. M. Desiderio, University of Tennessee Center for the Health Sciences, 956 Court Avenue, Room 2A09, Memphis, Tennessee 38163.**

NIH POSTDOCTORAL FELLOWSHIP involves use of commercial radioimmunoassay kits for measurement of endogenous neuropeptides in HPLC fractions of biological extracts (brain, CSF, tooth). Send résumé to: **D. M. Desiderio, University of Tennessee Center for the Health Sciences, 956 Court Avenue, Room 2A09, Memphis, Tennessee 38163.**

FELLOWSHIPS

DREXEL FELLOWSHIPS IN BIOMEDICAL ENGINEERING AND SCIENCE

These are supported by the Calhoun Endowment. Students can specialize in the following areas: bioinstrumentation; biomedical imaging and signal processing; biomedical science, biomaterials; biomedical systems and control; cardiovascular dynamics; biomedical computer applications; diagnostic ultrasound; heart assist devices; and sensors. Each fellowship provides a minimum of \$8500 tax-free stipend for a 12-month appointment plus waiver of tuition and fees beginning fall 1985. Deadline for application: 15 February 1985. For application and information about this and other financial support, write: **Dr. Dov Jaron, Director, Biomedical Engineering and Science Institute, Drexel University, Philadelphia, Pennsylvania 19104.**

PREDOCTORAL FELLOWSHIPS IN HEALTH PHYSICS. The Health Physics Society has a limited number of fellowships in health physics. Applicants must be full-time students and specify the institution to be attended. Deadline for receipt of applications is 25 February 1985. Awards will be announced 25 March 1985. For information and application forms, write: **Dr. Kenneth L. Mossman, Graduate Program in Radiation Science, Georgetown University Medical Center, Washington, D.C. 20007.**

NIH POSTDOCTORAL FELLOWSHIP in immunology to study the role of macrophages in the pathogenesis of nononcogenic retrovirus infections. Prefer strong background in analysis of macrophage functions, including IL 1 production, and/or cellular consequences of retrovirus infection. Opportunities to work with an interdisciplinary group on retrovirus induced animal models of human disease. Since funding is an NIH fellowship, applicants must be U.S. citizens or permanent residents. To apply, please submit curriculum vitae and three letters of recommendation to: **Dr. Keith L. Banks, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, Washington 99164-7040.** *This university is an Affirmative Action/Equal Opportunity Employer.*

LUCILLE P. MARKEY PREDOCTORAL FELLOWSHIPS \$9,000 to \$12,000 plus tuition and fees

Two fellowships are available in 1985 in the Department of Pharmacology at the University of Miami School of Medicine, for Ph.D. studies in the following fields: membrane biology and biophysics; muscle biology; cardiovascular pharmacology; neuropharmacology; cell activation and cellular control systems; hormone receptors and ion channels; and anesthetics. Applications are sought from highly qualified individuals with backgrounds in the physical, biological, or engineering sciences. Stipend dependent on qualifications. In reply, send undergraduate records, GRE scores, and a letter giving your scientific interests, and arrange for three letters of recommendation.

Write to: **Dr. A. H. Caswell, P.O. Box 016189, Miami, FL 33101. Telephone: 305-547-6643.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIP IN NEUROBIOLOGY

The Center For Neurobiological Sciences at the University of Florida invites applications for a 2-year postdoctoral fellowship (NIMH Training Grant) to be activated prior to 1 July 1985. A completed Ph.D. and U.S. citizenship or permanent resident status is required. Potential faculty sponsors span a broad range of research interests in the neurosciences. Applicants will be sent a list of potential faculty sponsors and a brief description of their research interests. Prior to 1 February 1985, send curriculum vitae, three letters of reference, and a brief (one- to two-page) description of research and training goals and interests to: **Don W. Walker, Ph.D., Chairman, Postdoctoral Committee, Center for Neurobiological Sciences, University of Florida, Box J-244 JHMHC, Gainesville, Fla. 32610.** *Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY FELLOWSHIPS (\$10,700 to \$12,500 for 12 months)

Predocutorial awards established for outstanding students in the biological sciences. Department emphasizes evolutionary and environmental biology, from the molecular to the community levels of organization. Fellowship award includes 12-month stipend of \$8,000, waiver of fees and tuition, and paid University housing. No teaching duties. Contact: **Graduate Coordinator, Department of Biology, University of Southwestern Louisiana, Lafayette, La. 70504.**

SCIENTIFIC EXCHANGES

NAS SCIENTIFIC EXCHANGE PROGRAMS WITH USSR AND EASTERN EUROPE

Applications are invited from American scientists who wish to make professional visits in the USSR, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia, between January and December 1986. Applicants must be U.S. citizens and have a doctoral degree or comparable research training and experience in the natural, biomedical, or social and behavioral sciences by the time of visit. Deadline for requesting applications is 15 February 1985. Please contact:

National Academy of Sciences
Section on USSR and Eastern Europe
2101 Constitution Avenue, N.W.
Washington, D.C. 20418
Telephone: 202-334-2644

PROGRAM

GRADUATE PROGRAM MARINE BIOLOGY IN CHARLESTON, SOUTH CAROLINA

The Charleston Higher Education Consortium (CHEC) announces the availability of a unique graduate program in marine biology. The M.S. degree is bestowed by the College of Charleston and the Ph.D. degree is bestowed by the Medical University of South Carolina. A faculty of over 50 representing the College of Charleston, the Citadel, the South Carolina Marine Resources Research Institute, and the Medical University of South Carolina is involved. Students are provided space at modern, well-equipped facilities overlooking Charleston Harbor. Emphasis is placed on modern marine ecology, systematics, fisheries, mariculture, and marine biomedical disciplines, for example, developmental biology, biochemistry, physiology, neurobiology, immunology, parasitology, and pathology. Teaching assistantships and predoctoral fellowships are available on a competitive basis. For additional information, contact: **Dr. Thomas C. Cheng, Director, CHEC Marine Biology Graduate Program, P.O. Box 12559 (Ft. Johnson), Charleston, South Carolina 29412.** Telephone: 803-795-7490.

COLLEGE OF GRADUATE STUDIES, MEDICAL UNIVERSITY OF SOUTH CAROLINA, offers PROGRAMS leading to Ph.D. and M.D./Ph.D. degrees in anatomy, biochemistry, biometry, basic and clinical immunology and microbiology, molecular and cellular biology and pathobiology, pathology, pharmaceutical sciences, pharmacology, and physiology. Stipends of \$9000 available to highly qualified students. Contact: **Dean, College of Graduate Studies, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S.C. 29425.**

JOINT GRADUATE PROGRAM IN TOXICOLOGY RUTGERS UNIVERSITY/ UMDNJ-RUTGERS MEDICAL SCHOOL

The program is conducting a national search for M.S. and/or Ph.D. candidates in toxicology. You are invited to study at a center where basic mechanisms of action, application of applied techniques and risk assessments are emphasized in a well-rounded interdisciplinary curriculum. More than 40 faculty direct research in cellular/molecular toxicology, immunotoxicology, hepatotoxicology, carcinogenesis, inhalation/respiratory toxicology, behavioral and neurotoxicology, environmental and aquatic toxicology, and drug metabolism. Assistantships and predoctoral fellowships are available on a competitive basis. Contact: **Dr. Robert Snyder, Director, Graduate Program in Toxicology, Rutgers University, P.O. 789, Piscataway, N.J. 08854.** Telephone: 201-932-3720.

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THE U.S. ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND IS ACCEPTING PROPOSALS FOR RESEARCH IN DRUG DEVELOPMENT AGAINST VIRAL DISEASES OF MILITARY IMPORTANCE (BIOLOGICAL TESTING)

(DAMD17-85-R-0009)

There is a need for compounds which are useful as prophylactic or therapeutic drugs against viral diseases of military importance. Drug development program emphasis is on the development of prophylaxis or therapy for U.S. Military personnel considered to be at risk of exposure to natural infections and/or altered microorganisms. In order to evaluate such drugs, appropriate tests must be performed.

a. Primary testing of compounds for antiviral efficacy *in vitro*. At a minimum, screening must include representative viruses from the flavi-, alpha-, bunya-, arena-, pox-, and adenoviridae. Approximately 1500 compounds are expected to be tested annually. Models must be appropriate for the major pathogens of these families and should consider available rodent models.

b. Primary testing of compounds and immunopotentiators for antiviral efficacy in rodent models, to include preliminary assessment of acute toxicity. At a minimum, an alpha-, bunya-, and arenavirus must be included in the antiviral screen. Approximately 200 compounds are expected to be tested annually at the primary level by oral and/or parenteral routes of administration.

c. Secondary testing of compounds found active in primary testing, to include estimation of therapeutic index, dose modification factor, optimal dosage regimen, route and schedule dependency, duration of effect, utility in combination with other drugs and influence of formulation. Approximately 24 compounds per year are expected to require limited secondary testing and two-to-five per year may require extensive secondary testing to include determination of dose-response relationships, and assessment in non-rodent species.

d. The objective of primary and secondary testing is to characterize a candidate's antimicrobial activity to guide synthesis of analogs, and to guide selection of compounds for formal preclinical development. Capability to perform preclinical toxicological and pharmacological testing to meet regulatory requirements is not being solicited.

Proposals may be submitted for one or more of the above topics or a specific portion of one topic. A proposer may submit separate proposals on different topics or different proposals on the same topic.

In accordance with the Federal Acquisition Regulation (FAR) any contracts awarded under this solicitation may be of any type or combination of types which will promote the best interests of the Government. It is anticipated that multiple-year, incrementally-funded, level-of-effort type, cost reimbursement contracts will be awarded. Each increment will be approximately 12 months. Duration of the contract should be commensurate with the proposed scope of work but in no case shall exceed five years.

PROPOSAL PREPARATION INSTRUCTIONS AND REQUIREMENTS

Research proposals shall include a table of contents and should cover the points cited below, insofar as they are applicable. TECHNICAL AND COST PROPOSALS SHALL BE SEPARATE DOCUMENTS. THE TECHNICAL PROPOSAL SHALL NOT CONTAIN COST DATA.

TECHNICAL PROPOSAL CONTENT

a. *Name and Address of Organization.* At least one copy must carry the original signatures of an official authorized to legally bind the organization.

b. *Title and Description of Proposed Research.* Submit a detailed description of the research objectives including a specific scope of work. The description will also include a chemical/biological rationale for a specific list of target structures, and completed description of the procedure to be employed including control and validation methods.

c. *Research Involving Human Subjects.* No research involving human subjects will be considered.

d. *Research Involving Animals.* Acknowledgement that conduct and report of the studies shall adhere to the "Guide for the Care and Use of Laboratory Animals" (NIH 78-23, 1978) must be included. Submit a detailed listing of the types and numbers of animals required.

e. *Personnel.* Qualifications of the principal investigator and other senior professional personnel and the time each will devote to the research. Level of effort data shall be expressed in man-hours. This breakdown is necessary for any proposed subcontractor or consultant also. This information, to the extent that it is information about an individual, is subject to the requirements of the Privacy Act of 1974 (5 USC 552(a)). The principal purpose and routine use of the information are for the evaluation of the qualifications of those persons who will perform the research. Disclosure of the information is voluntary, but failure to provide such will prevent evaluation of the proposal. Related organizational experience in the research area may also be described.

f. *Facilities and Equipment Available.* Also, specify types of equipment to be purchased.

BUSINESS PROPOSAL CONTENT

g. An estimate of the total research project cost with a breakdown of funds by category (direct labor cost, indirect cost, property or equipment cost, travel cost, publication cost, consultant cost, other direct costs, fee or profit) by year must accompany each proposal and must be submitted on SF 1411 with complete supporting information.

Every effort will be made to protect the confidentiality of the proposal and any evaluations. The submitter may mark the proposal with a legend such as that provided in FAR 52.215-12. Proposals containing a more restrictive legend shall not be considered.

Unnecessarily elaborate brochures or presentations beyond that sufficient to present a complete and effective proposal are not desired.

Any proposal received after the exact time specified for submission of proposals will not be considered unless the circumstances described in FAR 52.215-10 apply.

CONSIDERATIONS

Source of Drugs. Drugs to be tested will be furnished by the Department of Antiviral Studies, U.S. Army Medical Research Institute of Infectious Diseases.

Biocontainment. Use of certain microorganisms as test models will require facilities designed for high level microbiological containment (Class 3) in compliance with published guidelines:

Center for Disease Control, 1976. Classification of etiologic agents on the basis of hazard, 4th ed. Office of Biosafety, Center for Disease Control, Atlanta, Ga.

Subcommittee on Arbovirus Laboratory Safety of the American Committee on Arthropod-borne Viruses. 1980. Laboratory safety for arboviruses and certain other viruses of vertebrates. Am. J. Trop. Med. Hyg. 29:1359-1381.

Reports. Quarterly, annual and final progress reports shall be required in accordance with the schedule of any resultant contract. Reprints of any publications resulting from sponsored research shall also be provided to the USAMRDC. Testing data is to be reported essentially as it is obtained.

Contract Provisions. Contracts awarded shall contain, where appropriate, detailed special provisions concerning patent rights, rights in technical data and computer software, reporting requirements, equal employment opportunity, care of laboratory animals, use of human subjects, Good Laboratory Practices requirements, procedures for safeguarding proprietary information, acquisition and disposition of equipment, and other provisions required by the FAR, and certification that all EPA Regulations concerning chemical residue disposal will be followed.

METHODS OF SELECTION AND EVALUATION CRITERIA

Proposals will be evaluated first on their relevance to military and program requirements. Those found to be relevant will then be evaluated on a competitive basis by a collective discussion conducted by a Source Evaluation Board composed of scientists knowledgeable in the topic area. Scientific acceptability will be determined by using the criteria listed below in descending order of importance:

a. *Soundness of Biology.* Are the laboratory model systems appropriate for the human condition under consideration? Are *in vitro* and *in vivo* models appropriate for the major types of disease pathogenesis of Toga-, bunya-, and arenaviridae infections in humans? Are results in the test system with standard compounds consistent with clinical results so that the system can be considered predictive?

b. *Programmatic Relevance.* Is the proposal deemed to be in support of ongoing intramural and extramural research in the program area listed as representative viruses? The relative degree of support will be the basis for scoring this criterion.

c. *Technical approach to testing.* Are appropriate numbers of data points obtained? Are proper standards and controls considered? Is procedure fully described and sufficiently well documented?

d. *Quality of Available Facilities and Equipment.* Are they appropriate to accomplish the job? Are safety and biocontainment factors properly considered? If shared with other projects, what are the priorities established for use? If additional facilities and equipment are needed, are those proposed appropriate?

e. *Competency of key personnel.* Are the personnel proposed qualified to do the work? Does past experience and/or training indicate probable success?

f. *Safety Considerations.* Is the investigator cognizant of the requirements for and capable of working with any hazardous materials involved? Has the organization agreed to allow storage and use of such materials in its facility?

g. *Animal Use Consideration.* Are the studies in which animal models are to be used to be conducted in accordance with all appropriate regulations? Are all necessary assurances of compliance and certificates provided?

After determination of scientific acceptability, the internal Source Evaluation Board will determine the competitive range based on priority of program requirements, scientific acceptability, and cost to complete the contract. Although cost will be a factor in the selection, program relevance and scientific acceptability will be more significant factors in selection for contract award. Also, the proposed cost must be realistic and reasonable to be selected for contract award.

Negotiations will be conducted with those contractors in the competitive range, as determined by the factors in paragraphs a-g above. Final decisions for funding will be made by the USAMRDC based upon those criteria and consideration of duplication of other research and program balance.

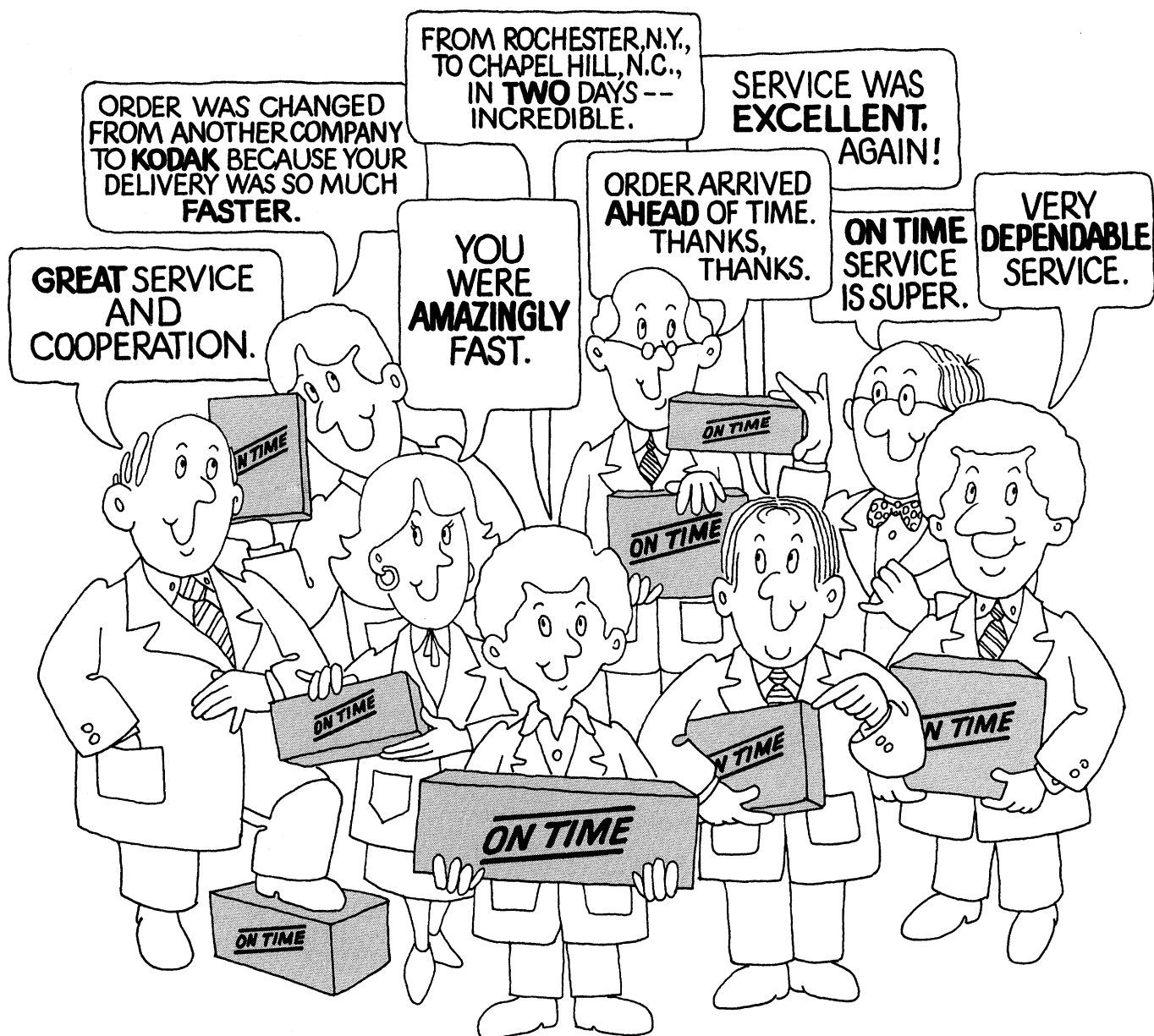
The Government may elect to fund several or none of the proposed approaches to the same topic. There is no commitment by the Government to make any awards on any topic, to make a specific number of awards, or to be responsible for any monies expended by the proposer before award of a contract. It should be noted that only a duly appointed Contracting Officer has the authority to enter a contract on behalf of the U.S. Government.

SUBMISSION OF PROPOSALS

Ten copies of the complete proposal are required for review and evaluation. Proposals must be received at the address below by 4:00 p.m. on 31 Jan 85 to:

Commander
U.S. Army Medical Research Acquisition Activity
ATTN: SGRD-RMA-RC/DAMD17-85-R-0009 (P. McAllister)
Fort Detrick, Frederick, MD 21701-5014

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