

by raising the chief problem of the outer planetary systems as they appear to us: the repeated appearance of short dynamical time scales. Their context is that of the reaction of dissipation of perturbations by satellites back on the satellites themselves. It may be that several satisfactory resolutions of this problem will appear and that we need not be diverted into generation of scenarios for holocausts à la Nemesis.

A. F. COOK

*Herzberg Institute of Astrophysics,
National Research Council of Canada,
Ottawa, Ontario K1A 0R6*

Adaptation in Sticklebacks

A Functional Biology of Sticklebacks. R. J. WOOTTON. University of California Press, Berkeley, 1985. xiv, 265 pp., illus. \$29.75. Functional Biology Series.

This is the second volume of a series intended to explain how organisms "make a living." The stickleback fishes, especially the three-spined stickleback (*Gasterosteus aculeatus*), are particularly appropriate for this purpose because their biology has been studied thoroughly from diverse perspectives. In chapter 1 Wootton argues that theory can illuminate one's understanding of an animal's daily activity and that important theoretical insights can be gained by focusing on a single, well-studied species. Aspects of genetics, morphology, behavior, and physiology and their influences on growth, reproduction, distribution, and mortality are taken up in the next nine chapters. The final chapter attempts to relate some of this information to life history theory. This book is greatly updated compared to Wootton's previous encyclopedic work, *The Biology of the Sticklebacks*, but has a narrow focus on information needed to use sticklebacks in addressing theoretical problems of ecology and evolution.

This book nicely summarizes a vast and diverse literature on the ecology, evolution, and organismal biology of sticklebacks and identifies numerous areas in which research would be particularly rewarding. Although this synthesis is generally successful, Wootton occasionally has neglected some very important studies. Most of the chapters open with brief conceptual introductions. Theoretical issues and similar critical or well-studied cases in other animals are treated at appropriate points, but this development is uneven. Sections on growth and reproductive effort, topics in

which Wootton has made original contributions, appear to be well developed; but the treatment of some other areas, systematics, morphology, and ecological genetics for example, is weaker. Some information is not traceable by citation to the original papers, and Wootton sometimes cites his earlier book rather than the primary literature. The closing chapter on theory of life history evolution is disappointing. Although the theory is suited to account for interpopulation differences, Wootton focuses on species-specific properties. Thus, no critical insights emerge. In addition, other theoretical issues concerning which stickleback biology could make fundamental contributions are neglected. The theory of clines, the maintenance of genetic diversity, speciation, the evolution of behavior (treated only in the context of parental investment), rates of evolution, and the adaptationist program beg for development.

Despite these criticisms, which admittedly reflect my own interests, this is a very readable book and an exceedingly useful and compact source of information on the ecology and evolution of a group that has the potential to provide major theoretical insights.

MICHAEL A. BELL

*Department of Ecology and Evolution,
State University of New York,
Stony Brook 11794*

Reprints of Books

Previously Reviewed

Phylogenetic Patterns and the Evolutionary Process. Method and Theory in Comparative Biology. Niles Eldredge and Joel Cracraft. Columbia University Press, New York, 1984. Paper, \$15. *Reviewed* 210, 1239 (1980).

A Slot Machine, a Broken Test Tube. An Autobiography. S. E. Luria. Harper and Row, New York, 1985. Harper Colophon Books. *Reviewed* 225, 46 (1984).

Books Received

The Control of Fish Migration. R. J. F. Smith. Springer-Verlag, New York, 1985. xvi, 243 pp., illus. \$49.50. Zoophysiology, vol. 17.

Craniofacial Mesenchyme in Morphogenesis and Malformation. Kenneth S. Brown *et al.*, Eds. Liss, New York, 1984. xviii, 146 pp., illus. \$44. Birth Defects: Original Article Series, vol. 20, No. 3. From a symposium, Seattle, June 1983.

Culture, Feeding and Diseases of Commercial Flatfish Species. E. W. Liewes. Balkema, Rotterdam, 1984. viii, 104 pp., illus. \$18.50.

DNA Repair. Errol C. Friedberg. Freeman, New York, 1984. x, 614 pp., illus. \$39.95.

Ecology. The Experimental Analysis of Distribution and Abundance. Charles J. Krebs. 3rd ed. Harper and Row, New York, 1984. xvi, 793 pp., illus. \$33.50.

Herbivore Nutrition in the Subtropics and Tropics. F. M. C. Gilchrist and R. I. Mackie, Eds. Science Press (Donker), Houghton, South Africa, 1984. 779 pp., illus. \$95. From a symposium, Pretoria, South Africa, April 1983.

Illustrated Encyclopedia of Human Histology. R. V. Krstić. Springer-Verlag, New York, 1984. x, 450 pp. \$38.50.

Microcomputers in Education Conference. Literacy Plus+. (Tempe, Ariz., March 1984.) Ruth A. Camuse, Ed. Computer Science Press, Rockville, Md., 1984. xii, 465 pp. \$35.

Models and Parameters for Environmental Radiological Assessments. Charles W. Miller, Ed. Technical Information Center, U.S. Department of Energy, Oak Ridge, Tenn., 1984 (available as DE81027154 from National Technical Information Service, Springfield, Va.). vi, 150 pp. Paper, \$12. DOE/TIC-11468.

Models in Dermatology. H. I. Maibach and N. J. Lowe, Eds. Karger, Basel, 1985. Two volumes. Vol. 1, Dermatology. x, 374 pp., illus. \$149.75. Vol. 2, Dermatopharmacology and Toxicology. x, 370 pp., illus. \$149.75.

Molecular Biology of Development. Eric H. Davidson and Richard A. Firtel, Eds. Liss, New York, 1984. xxvi, 685 pp., illus. \$96. UCLA Symposia on Molecular and Cellular Biology, New Series, vol. 19. From a symposium, Steamboat Springs, Colo., April 1984.

Monoclonal and Anti-Idiotypic Antibodies. Probes for Receptor Structure and Function. J. Craig Ventre, Claire M. Fraser, and Jon Lindstrom, Eds. Liss, New York, 1984. xii, 194 pp., illus. \$46. Receptor Biochemistry and Methodology, vol. 4.

Morphogenesis of the Brain in Staged Rhesus Monkey Embryos. Agnes A. M. Gribnau and Leonardus G. M. Geijsberts. Springer-Verlag, New York, 1985. viii, 69 pp., illus. Paper, \$19.50. Advances in Anatomy, Embryology and Cell Biology, 91.

Mössbauer Spectroscopy Applied to Inorganic Chemistry. Vol. 1. Gary J. Long, Ed. Plenum, New York, 1984. xviii, 667 pp., illus. \$92.50. Modern Inorganic Chemistry.

National Parks, Conservation, and Development. The Role of Protected Areas in Sustaining Society. Jeffrey A. McNeely and Kenton R. Miller, Eds. Smithsonian Institution Press, Washington, D.C., 1984. xiv, 825 pp., illus. Paper, \$25. From a congress, Bali, Indonesia, Oct. 1982.

1985 Yearbook of Astronomy. Patrick Moore, Ed. Norton, New York, 1985. 208 pp., illus. Paper, \$9.95.

Nonverbal Sex Differences. Communication Accuracy and Expressive Style. Judith A. Hall. Johns Hopkins University Press, Baltimore, 1985. xiv, 207 pp. \$24.

The North American Grasshoppers. Vol. 2, Acrididae: Oedipodinae. Daniel Otte. Harvard University Press, Cambridge, Mass., 1984. x, 366 pp., illus., + plates. \$60.

On the Centre of Gravity of the Human Body, as Related to the Equipment of the German Infantry Soldier. W. Braune and O. Fischer. Springer-Verlag, New York, 1984. viii, 96 pp., illus. \$29. Translated from the German edition (1889) by P. G. J. Maquet and R. Furlong.

Optical Radiation Detectors. Eustace L. Dereniak and Devon G. Crowe. Wiley, New York, 1984. xiv, 300 pp., illus. \$42.50.

Perceiving Ordinary Magic. Science and Intuitive Wisdom. Jeremy W. Hayward. New Science Library (Shambhala), Boulder, Colo., 1984 (distributor, Ramdom, New York). xii, 324 pp. Paper, \$9.95.

Perspectives in Theoretical Stereochemistry. I. Ugi *et al.* Springer-Verlag, New York, 1984. xviii, 247 pp., illus. Paper, \$19.30.

Pesticides and Human Health. William H. Hallenbeck and Kathleen M. Cunningham-Burns. Springer-Verlag, New York, 1985. xii, 166 pp. \$24.80.

Petunia. Kenneth C. Sink, Ed. Springer-Verlag, New York, 1984. xiv, 256 pp., illus. \$39. Monographs on Theoretical and Applied Genetics, 9.

Sustained Attention in Human Performance. Joel S. Warm, Ed. Wiley, New York, 1984. xvi, 352 pp., illus. \$44.95.

Thermal Power Plants and Environmental Control. L. A. Richter, E. P. Volkov, and V. N. Pokrovsky. P. S. Neporozhny, Ed. Mir, Moscow, 1984. 312 pp., illus. \$7.95. Translated from the Russian edition (Moscow, 1981) by V. Afanasyev.

Thermodynamics of Silicates. V. I. Babushkin, G. M. Matveyev, and O. P. Mchedlov-Petrosyan. Springer-Verlag, New York, 1985. xvi, 459 pp., illus. \$98. Translated from the 4th Russian edition (Moscow) by B. N. Frenkel and V. A. Terentyev.

Time-Related Single Photon Counting. Desmond V. O'Connor and David Phillips. Academic Press, Orlando, Fla., 1984. x, 288 pp., illus. \$45.

Time's Arrows. Scientific Attitudes toward Time. Richard Morris. Simon and Schuster, New York, 1985. 240 pp. \$17.95.

Two-Dimensional Gel Electrophoresis of Proteins. Methods and Applications. Julio E. Celis and Rodrigo Bravo, Eds. Academic Press, Orlando, Fla., 1984. xvi, 487 pp., illus., plates. \$69.50.

Universe. William J. Kaufmann, III. Freeman, New York, 1984. xvi, 594 pp., illus. \$32.95.

Personnel Placement

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POSITIONS WANTED

Anatomy-Teratology-Life Sciences. Doctorate. Experience: Teaching—anatomy, embryology, biology, research—teratology, reproduction, growth. Interdisciplinary health/life sciences background. Seeks term academic, industry position. Available immediately. Box 99, SCIENCE. 5/3, 10

Biochemist/Physiologist. Ph.D. 1982. Experience in protein purification, enzymology, immunoassays, drug metabolism, steroid chemistry, HPLC, GC, and spectroscopic techniques. Postdoctoral experience with excellent publications and references. Seeks challenging academic or industrial R&D position. Box 94, SCIENCE. X

Computational Chemist. Experienced Ph.D. is looking for product development or research group leader position in pharmaceutical, data acquisition, instrumentation, or chemical information areas. Broad experience with chemical software. Good communication skills. Publications. Frank Tobin, 1821 Fairbank Road, Baltimore, Md. 21209. Telephone: 301-821-5980. X

Immunologist. Ph.D. 1980. Five years of postdoctoral experience with extensive experience in many aspects of cellular immunology, including lymphokine production and analysis, monoclonal antibody production, and biochemical signaling in lymphocyte activation. Seeks challenging academic or industrial research position with advancement potential. Available fall 1985. Will relocate. 1782 35th Avenue, San Francisco, Calif. 94122. 5/3, 31

Regulatory Affairs-Toxicology. Twenty years of pharmaceutical, chemical, and consumer product industry experience. Ph.D. pharmacology-toxicology. Experienced in IND, NDA, FAP, foreign registrations; TSCA compliance; agency liaison; product safety evaluation. Box 101, SCIENCE. 5/3, 10

POSITIONS WANTED

Oscar Miranda-Brandt, **Marine Biologist**, Ph.D. Much experience in quantitative ecology, age, growth; seeks a quiet museum, fishery laboratory, or university to research or teach. c/o Sotomayor, PSC-1, Box 1298, APO, San Francisco. 94286. X

Toxicologist/Teratologist. Ph.D. with postdoctoral experience. Broad background encompassing engineering, biological sciences, toxicology, pharmacology with project management. "Hands on" experience in safety evaluations, necropsies, observing biological specimens for abnormalities, and report writing. Trained in a contract-type laboratory setting and risk assessment. Experience in teaching and supervision. Seeking industrial or governmental position; will consider an academic post. Well-organized researcher/coordinator, excellent communication skills. Available immediately. Hoffman, 8 Norwood Terrace, North Caldwell, New Jersey 07006. Telephone: 201-226-7617 or 7421. 5/3, 10

POSITIONS OPEN

ANIMAL PHYSIOLOGIST/ECOLOGIST

The Zoology Department at the University of Montana has a vacancy in physiological ecology for a visiting assistant professor, 1985–1986 academic year (possibility of tenure-track appointment to begin fall 1986). Duties involve teaching approximately one course per quarter: an introductory ecology course, a junior-level animal physiology course for majors, a general education course for nonmajors, and a graduate course in specialty. Ph.D. and teaching experience required. Postdoctoral experience desirable. The appointee will also be expected to play an active role in our graduate program, participate in department activities, and initiate an externally funded research program. Review to begin 24 May 1985. Send curriculum vitae, statement of professional goals, three letters of recommendation, and copies of transcripts to: Search Committee, Department of Zoology, University of Montana, Missoula, Mon. 59812. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR

University of California, Irvine, Department of Pathology, is recruiting for a faculty position at the assistant professor level. Required: M.C., eligible for licensure in California and ACP certification. Established documented research experience in recombinant DNA technology. Duties: Mount an independent research program in the use of recombinant DNA technology for the development of surgical pathology diagnostic methods. Instructing medical students and residents in pathology. Present conferences for the medical staff and residents in the teaching hospital. Send curriculum vitae and references to: E. R. Arquilla, M.D., Ph.D., Professor and Chair, University of California, Irvine, Department of Pathology, 101 City Drive South, Orange, California 92668, by 3 June 1985. *Affirmative Action/Equal Opportunity Employer.*

DEPARTMENT OF PHYSIOLOGY, UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE. Applications are invited for two tenure-track positions at the level of **ASSISTANT PROFESSOR**. The department seeks to expand research strength and structure and function relationships in cell physiology, such as, but not restricted to, exocytosis and its regulation, ciliary motility, or cell-cell interaction. The department wishes to maintain its traditional strength in the fields of respiratory and gastrointestinal physiology. Send curriculum vitae giving specific research interests and names of three referees to: Dr. S. Lahiri, Chairman of the Search Committee, Department of Physiology, University of Pennsylvania, School of Medicine/G4, Philadelphia, Pa. 19104, by 1 June 1985. *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF RADIATION ONCOLOGY DEPARTMENT OF RADIATION MEDICINE

M.D. or M.D./Ph.D. clinical, teaching, and research in academic radiation medicine for Board-eligible or -certified person. Position in tenure track. Research interests and experiences in tumor research and therapy desirable. Active neutron therapy research program ongoing. Send curriculum vitae, bibliography, and names of three references to: Chairman, Department of Radiation Medicine, University of Kentucky Medical Center, Room C-13, 800 Rose Street, Lexington, Kentucky 40536-0084. *An Equal Opportunity Employer.*

POSITIONS OPEN

UNIVERSITY OF UTAH. As part of a cooperative program, the Departments of Biology and Chemistry are inviting applications for two tenure-track **ASSISTANT PROFESSORSHIPS** for individuals whose research interests are in the area of structure and function of biological macromolecules. The selected candidates are expected to demonstrate excellence and creativity in research and to play an active role in teaching. Preference will be given to individuals who apply modern chemical methods to the study of proteins or nucleic acids in areas which complement existing programs. Send résumé, including a description of research plans and three letters of references, to: Professor C. D. Poulter, Department of Chemistry, University of Utah, Salt Lake City, Utah 84112. Closing date for the position in the Department of Biology is 17 May 1985 and 1 October 1985 for the position in the Department of Chemistry. *The University of Utah is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR. Department of Medicine and Cancer Center, University of California, San Diego (UCSD). Research scientist with a Ph.D. in the biological sciences to establish a molecular biology section in the tumor immunology program based in the UCSD Cancer Center. The applicant should be experienced in both hybridoma technology as well as molecular biology and have at least 6 years of professional experience including postdoctoral training. The successful applicant will be expected to participate in a currently funded NIH Program Project Grant and direct studies related to the structure and function of cell surface molecules on normal and malignant lymphoid cells, and participate in University teaching programs related to the above subject matter. Salary related to rank and step of appointment within the UCSD salary schedule. Apply by 31 May 1985 to: Ivor Royston, M.D., UCSD Cancer Center, T-011, UCSD Medical Center, San Diego, Calif. 92103. *The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR

Experienced investigator—The Department of Surgery, East Carolina University, is seeking a candidate with experience in either physiology, biomechanical engineering, biochemistry, or immunology to participate in the development of a cardiac surgical and physiological research laboratory. Both basic and clinical research interests will be addressed. Candidate selected will work in close association with clinical cardiac surgery program. Send curriculum vitae to:

Division of Cardiac Surgery
Department of Surgery
East Carolina University
Greenville, N.C. 27834

Affirmative Action/Equal Opportunity Employer

ASSISTANT/ASSOCIATE PROFESSOR OF PHYSIOLOGY. The Department of Physiology, State University of New York (SUNY) at Buffalo, Schools of Medicine and Dentistry, seeks a new tenure-track faculty member at the rank of assistant/associate professor, effective 1 September 1985. This individual is expected to teach endocrinology and to carry out independent research in the area of endocrinology, preferably at the cellular/subcellular level. The department has strong research programs in membrane transport, neurobiology, regulation of body fluid volume, and cardiovascular, respiratory, and environmental physiology. Minimal qualifications for this position are 5 years of training and experience beyond the doctoral degree, including 2 years of teaching at the postbaccalaureate level. Send résumé, names of three references, and a brief description of research interest by 15 June 1985 to: Dr. Suk Ki Hong, Professor of Physiology, 124 Sherman Hall, SUNY at Buffalo, Buffalo, New York 14214. *SUNY-Buffalo is an Affirmative Action/Equal Opportunity Employer.*

BIOLOGY LECTURER. Lecturer, general biology M.S. degree, nontenure-track renewable position available August 1985. Teaching responsibilities include lectures and laboratories in general biology for nonmajors, laboratories for majors, and possibly laboratories in human anatomy/physiology. Send curriculum vitae, statement of teaching experience and philosophy, transcripts, and three letters of reference by 17 May 1985 to: Dr. Jerry H. Carpenter, Chairman, Department of Biological Sciences, Northern Kentucky University, Highland Heights, Kentucky 41076. *Northern Kentucky University is an Affirmative Action/Equal Opportunity Employer and actively seeks the candidacy of minorities and women.*

POSITIONS OPEN

ASSISTANT PROFESSOR, BOTANY. The Department of Biological Science at Idaho State University invites applications for a 9-month, tenure-track faculty position in botany beginning September 1985 (salary range: \$19,000 to \$21,000). Candidates must possess a Ph.D. or D.A. degree. The successful candidate will be expected to teach courses in general botany and plant morphology, supervise graduate students (M.S., D.A., Ph.D.) and to pursue individual research interests. Please submit a letter of application, transcripts, curriculum vitae, and three letters of recommendation by 1 June 1985 to:

Dr. Edwin W. House, Chair
Botany Search Committee
Department of Biological Sciences
Idaho State University
Pocatello, Idaho 83209

Equal Opportunity/Affirmative Action Employer

ASSISTANT PROFESSOR

MICROBIOLOGIST. 12-month, tenure-track position, number AG-55, to teach and conduct research in the Department of Food Science and Human Nutrition. Responsibilities include undergraduate and graduate instruction and development of an externally funded research program using modern experimental approaches to solve problems of fundamental importance to microbiology as related to foods. Expertise in one or more of the following areas is desirable: microbial genetics and physiology, fermentations, or food safety. A Ph.D. degree with documented capability in microbiology is required. Salary commensurate with qualifications and experience. Interested individuals should submit a letter of application, a résumé, and have three letters of reference forwarded to: Dr. J. I. Gray, Chairperson, Search Committee, Department of Food Science and Human Nutrition, Michigan State University (MSU), East Lansing, Mich. 48824-1224. Deadline for applications is 15 August 1985 or until a suitable candidate is found. *MSU is an Affirmative Action/Equal Opportunity Institution.*

AUDITORY PHYSIOLOGIST. The Parmlly Hearing Institute of Loyola University, Chicago, seeks a research scientist (Ph.D. or M.D.) to direct a small mammal auditory physiology laboratory. Curriculum vitae, three letters of reference, and letter of interest should be sent by 17 June 1985 to: Dr. William Yost, Parmlly Hearing Institute, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, Ill. 60626. *Loyola University is an Equal Opportunity Employer/Educator.*

BIOCHEMISTRY-MOLECULAR BIOLOGY-VIROLOGY-IMMUNOLOGY. Several tenure-track, 12-month positions, assistant professors (associate professor possible). The University of Idaho is expanding its research effort in biotechnology with the formation of the Institute for Molecular and Agricultural Genetic Engineering and construction of new facilities. Candidates should show outstanding potential for research in areas which can include (but are not limited to): regulation of gene expression, protein engineering, genetic engineering of plants or yeasts-microorganisms, improved cloning vectors, molecular vaccines, molecular virology. Postdoctoral experience is desirable. Positions will be approximately 25 percent teaching and 75 percent research with an appointment in the Department of Bacteriology and Biochemistry and in the Agricultural Experiment Station. Deadline: 28 June 1985 or until suitable candidates are found. Send curriculum vitae, brief statement of research interests, and names of three references to: Dr. Wayne E. Magee, Head, Department of Bacteriology and Biochemistry, University of Idaho, Moscow, Idaho 83843.

An Equal Opportunity/Affirmative Action Employer

The University of Illinois at Chicago has an immediate opening for an academically oriented **BLOOD BANK DIRECTOR**. Qualifications include board certification in clinical pathology and blood banking. Experience in the operation of a blood bank required. The appointee is expected to share in teaching activities while continuing research activities. Salary and rank will depend upon experience and credentials. For fullest consideration, applications, including curriculum vitae and the names of three references, should be submitted by 24 May 1985 to: Egil Foslien, M.D., Chairman of the Search Committee for Medical Director of the Blood Bank, Department of Pathology, Division of Clinical Pathology, Box 6998, Chicago, Ill. 60680. *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

Two grant-supported faculty positions at the rank of research associate or assistant professor are available in the Department of Pharmacology and Toxicology:

BEHAVIORAL PHARMACOLOGIST to conduct studies on the effects of drugs on operant behavior of rats and monkeys, i.v. drug self-administration in rhesus monkeys, and the effects of intracerebrally-administered drugs.

BEHAVIORAL TOXICOLOGIST to conduct studies on the effects of inhaled vapors and gases on operant behavior of mice. Experience in operant behavior and inhalation methodologies is essential.

Both positions require at least 2 years of relevant postdoctoral experience. Submit curriculum vitae and the names of three references by 10 June to: Dr. Robert L. Balster, Department of Pharmacology and Toxicology, Medical College of Virginia, Virginia Commonwealth University, Richmond, Va. 23298. *Equal Opportunity/Affirmative Action Employer.*

BIOLOGY. Mammalian physiologist, visiting assistant professor, 1-year term. Teach cellular biology in a team-taught, year-long introductory biology course, comparative vertebrate morphology, a one-term human anatomy and physiology course for non-science majors, and direct students' research in these areas. 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: Dr. D. L. Wise, Department of Biology, College of Wooster, Wooster, Ohio 44691, by 17 May 1985.

CELLULAR PHARMACOLOGY AND DRUG RESISTANCE POSTDOCTORAL POSITIONS

Postdoctoral fellowships available in the newly established Pharmacology Program at the Fox Chase Cancer Center. We are recruiting two or three individuals with backgrounds in cell biology, biochemistry, molecular biology, or pharmacology to work with Drs. Ken Tew, Mark Stearns, and Neil Gibson in the areas of: anticancer drug resistance, aspects of Cytomatrix and nuclear matrix structure and function (including drug effects and MAP involvement).

PHARMACOKINETICIST

Pharmacologist needed for above program to interface with clinical studies of novel anticancer agents in Phase I, and so forth, trials. Individual may be of M.S. or Ph.D. equivalent, with prior experience in monitoring drug levels by HPLC, and so forth. Appointment and salary commensurate with qualifications and experience.

Laboratories will be complete, new equipment installed, and program functional by September 1985. The postdoctoral scale begins in the high teens. We provide an excellent benefits package. Qualified individuals should send curriculum vitae with three references to: Dr. Kenneth Tew, Care of Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, Pa. 19111.

An Affirmative Action/Equal Opportunity Employer

DEPARTMENT CHAIRPERSON. The Ohio State University College of Veterinary Medicine invites nominations and applications for the position of chairperson for the Department of Veterinary Physiology and Pharmacology. Applicants should hold the Ph.D. or equivalent degree and have demonstrated excellence in research, administration, communication skills, and a commitment to professional and graduate education. Duties include administration of a department with programs in physiology, pharmacology and toxicology, and assistance with college planning and administration. Salary is negotiable. Nominations or applications including curriculum vitae and names of three references should be sent to: Dr. L. E. Heider, The Ohio State University, College of Veterinary Medicine, 1900 Coffey Road, Columbus, Ohio 43210-1092. *The Ohio State University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

BIOCHEMISTRY OR CELL PHYSIOLOGY—The Gastroenterology Division of the Department of Pediatrics, Medical College of Wisconsin, invites applications for a faculty position at the assistant or associate professor level. Applicants must have a Ph.D., postdoctoral training, and a record of research productivity. Research in the division is on developmental physiology and cell biology of the exocrine pancreas. Applicants should submit curriculum vitae and names of two referees to: Starkey D. Davis, M.D., Professor and Chairman, Department of Pediatrics, Medical College of Wisconsin, 1700 West Wisconsin Avenue, Milwaukee, Wisconsin 53233.

Equal Opportunity/Affirmative Action Employer, M/F/H

CYTOGENETICIST to direct and to conduct experimental projects. Must have Ph.D. in cytogenetics and minimum of 4 years of experience in scientific research including 2 years in cytogenetics. Send résumé to: Box 100, SCIENCE.

DIRECTOR, RAPID DIAGNOSTICS

Experienced Ph.D. wanted to implement new rapid bacterial diagnostics research and development program. This unique hospital-based program is fully integrated with the Clinical Microbiology Laboratory and Division of Infectious Diseases, providing an excellent environment for developing and testing diagnostic procedures. Familiarity with immunologic or DNA-probe techniques and demonstrated ability to collaborate with industry highly desirable. Opportunity for academic advancement. Submit letter of application, curriculum vitae, and names of three references to: Donald Goldmann, M.D., Division of Infectious Diseases, The Children's Hospital, Boston, 300 Longwood Avenue, Boston, Mass. 02115. *An Affirmative Action/Equal Opportunity Employer, M/F.*

ECOLOGIST with training in behavioral ecology and population sampling. Full-time research on dynamics and habitat selection of Southern tree squirrels. U.S. Forest Service, Clemson, S.C. GS-408-11. Starts at \$26,381. Apply by 31 May to: Announcement Number 400-5-0059-SE, U.S. Department of Agriculture-ARS-SEU, Room 409, Building 003, BARC-West, Beltsville, Md. 20705. Information: Telephone: 803-656-3284. *Equal Opportunity Employer.*

EXECUTIVE DIRECTOR, for new, major Science and Technology Museum in Atlanta, Georgia. The successful candidate will have proven leadership ability, at least 5 years of administrative management experience, and the ability to be an articulate and effective community spokesperson. Salary and benefits are competitive with major science museums. Please send résumé to: Science and Technology Museum of Atlanta, Inc., 395 Piedmont Avenue, NE, Atlanta, Ga. 30308.

The University of Michigan Medical School, Department of Radiology, has on occasion open **FACULTY POSITIONS** within the department and its affiliated hospitals. Physicians filling these positions will take part in the programs of patient care, teaching, and research in the Department of Radiology. They will supervise the activities of house officers and aid in the teaching of house officers and medical students. Qualified applicants must be American Board of Radiology-certified or Board-eligible. Previous training or work experience in an academic institution as well as demonstration of previous academic research and teaching experience are desirable. Academic rank will depend on qualifications and experience. Interested applicants should contact: William Martel, M.D., Chairman, Department of Radiology, The University of Michigan Medical School, Ann Arbor, Michigan 48109. *A nondiscriminatory, Affirmative Action Employer.*

PSYCHOPHYSIOLOGIST. The Parmlly Hearing Institute, Loyola University, Chicago, has a 2-year, postdoctoral position starting 1 September 1985 for a person trained in making electrophysiological measurements with humans, especially regarding reflexes. Curriculum vitae, three letters of reference, and a letter of interest should be sent by 1 July 1985 to: W. A. Yost, Parmlly Hearing Institute, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, Ill. 60626. *Loyola University is an Equal Opportunity Employer.*

An Unusual Opportunity In Pharmaceutical R & D

SK & F, an ethical pharmaceutical company, is seeking a Project Manager, to coordinate, plan and manage the activities of worldwide drug development multidisciplinary project teams consistent with the strategic direction of the R&D projects' portfolio. Principal responsibilities will include the following:

- Participate in developing the overall development strategy to progress a project from initiation (e.g. early preclinical safety testing) to regulatory approval worldwide.
- Ensure project plans are compatible with the requirements of a network-based project management system and timings are consistent with available departmental resources.
- Identify critical issues impacting project development and progress and propose strategies for resolution.
- Participate in interactive project plan analyses required for strategic R&D decisions.
- Establish and maintain credibility in an environment of scientific excellence.

Success in this position requires highly motivated individuals with excellent interpersonal, verbal and written communication skills. Critical analytical skills applicable to the R&D environment will probably be evidenced by a Ph.D. in a biomedical science, with some experience in a field involving assessment of human benefit or risk based on preclinical or clinical evaluation. A business perspective, by interest or training, would be advantageous in liaising with non R&D colleagues within the SmithKline Beckman Corporation.

We offer excellent salary and benefits and an attractive relocation package. For confidential consideration, send your resume, including salary requirements and the names of three references to: Mary O'Neill, SMITHKLINE BECKMAN CORPORATION, 1552 Spring Garden Street, Phila., PA 19101. We are an equal opportunity employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

SCIENTIST

Program Resources, Inc. is the Operations and Technical Support Contractor for the NCI-Frederick Cancer Research Facility, a leading biomedical research facility located in Frederick, MD. We have an immediate opening for a Scientist in the Human Lung Cancer Drug Discovery Program.

Applicants must have a broad base of experience in cell biology, ability to characterize new cell lines for inclusion in panel testing of experimental therapeutic agents, and experience with recent techniques of molecular biology. Applicants should also be familiar with growth inhibition assays and/or *in vivo* metastatic model characterization. Requires a Ph.D. in a biological science plus 2-3 years postdoctoral experience in *in vitro* drug screening and/or working with *in vivo* metastatic models.

PRI offers an attractive salary and benefits program, which includes relocation assistance. Interested candidates are invited to send a curriculum vitae, including salary history and names of 3 references, to:



PROGRAM RESOURCES, INC.
NCI-Frederick Cancer
Research Facility
P.O. Box B., Bldg. 244
Frederick, MD 21701

An Equal Opportunity Employer, M/F.

ASSOCIATE RESEARCH SCIENTIST

Genetic Toxicology

The Bristol-Myers Pharmaceutical Research and Development Division has an excellent opportunity for an Associate Research Scientist to join the Genetic Toxicology Section of its Pathology and Toxicology Department. Successful candidate will be expected to supervise and perform selected genetic toxicology assays to assess pharmaceutical compounds for their genetic potential. Responsibilities will also include assay development, study design, performance evaluation and reporting.

To qualify, you will need a BS/MS degree in Biology, Genetics or related field with a minimum of 3-5 years experience in genetic toxicology testing. Preference will be given to candidates with successful experience in primary rat hepatocyte DNA repair assay, as well as experience with microbial mutagenicity, micronucleus or cytogenetic assays.

We offer excellent starting salary, comprehensive benefits and a work environment conducive to your professional growth. For prompt, confidential consideration, forward your resume with salary history and requirement to: EMPLOYMENT RECRUITER



**BRISTOL-MYERS COMPANY
RESEARCH AND DEVELOPMENT DIVISION**
P.O. Box 4755, Syracuse, New York 13221
An equal opportunity employer



SUPERVISORY RESEARCH PHYSICAL SCIENTIST

\$44,430.00-\$57,759.00

(Salary dependent upon qualifications)



The US Army Cold Regions Research and Engineering Laboratory is recruiting to fill the position of Supervisory Research Physical Scientist, GM-14.

DUTIES: Serves as Chief of the Geophysical Sciences Branch. Directs the activities of approximately 22 professional, technical, and support personnel engaged in basic and applied research in the following areas: the effects of cold environments on electromagnetic and acoustical waves; seismic propagation; optical properties of snow, ice, and frozen ground; radiation exchange; and related phenomena involving material functioning in an adverse environment. Performs research in a technical area related to the above.

QUALIFICATIONS: Bachelor's degree in a related field of science or engineering (Ph.D. preferred) plus three years of appropriate experience or graduate education. Candidates must have demonstrated technical competence and the potential to function effectively in a research management position.

For information and official application forms contact Ms. Elizabeth Raposa, USARREL-AP, 72 Lyme Road, Hanover, NH 03755-1290.

Closing date 1 July 1985.

An Equal Opportunity Employer.

**SABBATICAL LEAVE CANDIDATES
W. F. JAMES CHAIR OF STUDIES
in PURE and APPLIED SCIENCES
ST. FRANCIS XAVIER UNIVERSITY**

St. Francis Xavier University invites applications from candidates considering sabbatical leave in 1986-1987 for tenure in its W. F. James Chair of Studies in Pure and Applied Science. Eligible Departments are Biology, Chemistry, Geology, Mathematics and Computing Sciences, Physics and Psychology.

It is expected that the holder of the chair will have an established record as a recognized scholar in one of the above disciplines. The individual's educational background, professional qualifications and work experience are expected to be commensurate with that normally required for a senior academic appointment at a university.

In addition to pursuing his/her normal research activities, the incumbent is expected to interact extensively with faculty and senior students, teach a maximum of one course or seminar plus present a maximum of three public general lectures a year.

Cognizant of the nature of the position the University has set the stipend level to provide for full salary replacement, based on actual salary at the time of application. The department in which the incumbent is located will have access to research support for the incumbent. The appointment will begin 1 July 1986 or 1 September 1986. Applications are also invited from candidates proposing to spend one term or other fractions of a year in the chair.

Applications should be mailed prior to 1 August 1985 to:

**Dr. John T. Sears
Academic Vice President
St. Francis Xavier University
Antigonish, Nova Scotia, Canada B2G 1C0**

**DEAN OF
THE SCHOOL OF PHARMACY
STATE UNIVERSITY OF NEW YORK
AT BUFFALO (SUNYAB)**

Applications and nominations are invited for this position. The School, established in 1886, offers programs leading to the academic degrees of B.S. in pharmacy, B.S. in health sciences, Pharm. D., M.S., and Ph.D. in biochemical pharmacology, medicinal chemistry, and pharmaceuticals. These areas of study are part of a broad range of academic curricula offered at the University comprising 90 baccalaureate, 100 master's and 94 doctoral programs, including professional doctorates in law, medicine, and dentistry.

The dean is the chief executive of the School of Pharmacy who reports directly to the Office of the Provost of the University. Responsibilities of this position include fostering and maintaining excellence in the academic, professional and research programs of the School and coordinating the activities of the School with other units of the University and various clinical sites.

Candidates for this position should have an earned doctorate in pharmacy, one of the pharmaceutical sciences, or a related area. Individuals must have scholarly and research achievements commensurate with appointment as a full professor at a major university. A background of successful administrative leadership is necessary. The position requires ability to work effectively with student, faculty, staff, University administration, professional, and alumni groups.

Applications with curriculum vitae, or letters of nomination, should be submitted no later than 30 June 1985 to:

**Dr. W. M. Feagans, Search Committee Chair
Dean School of Dental Medicine
196 Farber Hall
State University of New York at Buffalo
Buffalo, New York 14214
SUNYAB is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

DEVELOPMENTAL GENETICIST. The Department of Biology, University of Santa Clara, offers a 1-year, temporary appointment (1985-1986 academic year) to teach an introductory cell biology/genetics course, and advanced courses in molecular genetics (with laboratory) and animal development (with laboratory). Teaching experience and a Ph.D. degree are required. Send résumé, transcripts, and names of three references to: **Dr. William Eisinger, Department of Biology, University of Santa Clara, Santa Clara, Calif. 95053, by 31 May 1985. The University of Santa Clara is a Jesuit University and an Equal Opportunity/Affirmative Action Employer, Title IX/M/F/H.**

EXECUTIVE DIRECTOR

The Committee for Responsible Genetics (CRG), a national public interest organization concerned about the impacts of biotechnology, is seeking a qualified director. Duties: fund raising, publishing, policy and program development, and administrative and fiscal management. Requirements: ability to write, edit, organize, and fund raise; experience managing science policy organizations. Send résumé to: **CRG, 5 Doane Street, 4th Floor, Boston, Mass. 02109. Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITIONS IN BIOMEDICAL ENGINEERING, BOSTON UNIVERSITY COLLEGE OF ENGINEERING, at the assistant/associate/full professor levels in expanding Department of Biomedical Engineering for September 1985 or January 1986. Applicants should have an earned doctorate, be committed to quality teaching at both undergraduate and graduate levels, and have the desire to develop strong research programs. Collaboration with the Boston University School of Medicine or other engineering departments may be facilitated through a joint faculty appointment. Candidates with backgrounds in image processing, computer science, chemical engineering, mechanical design, electronics, computer engineering, biomechanics and materials, or robotics are especially welcome. Opportunities for part-time (adjunct) faculty positions and for collaborative arrangements with nearby institutions involved in biomedical research and development are also available. Candidates should send résumé, list of publications, names and addresses of five references, and a brief statement of teaching and research interests to: **Dr. Eugene Smithberg, Chairman, Engineering Search Committee, College of Engineering, 110 Cummington Street, Boston, Mass. 02215. Boston University is an Equal Opportunity/Affirmative Action Employer.**

**FACULTY POSITIONS IN
MOLECULAR IMMUNOLOGY**

The Department of Microbiology and Molecular Genetics at the University of Cincinnati College of Medicine is expanding its faculty and is currently searching for individuals to fill tenure-track positions in the area of molecular immunology. Applicants should submit curriculum vitae and a short statement of research accomplishments and direction for future research, along with the names of three scientists willing to write letters of recommendation. These should be forwarded to: **Dr. Jerry B. Lingrel, Chairman, Department of Microbiology and Molecular Genetics, University of Cincinnati College of Medicine, Cincinnati, Ohio 45267-0524. The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.**

**FACULTY POSITIONS
AVAILABLE IN MOLECULAR CELL
BIOLOGY AND NEUROSCIENCE**

The Division of Life Sciences, The University of Texas at San Antonio, invites applications for two tenure-track positions at the rank of assistant professor, one in the field of developmental neurobiology with expertise in electron microscopy and one in molecular cell biology with interest and experience in recombinant DNA research related to the nervous system. Candidates must show demonstrated research productivity and substantial ability and interest in teaching. Responsibilities will include teaching, research, and supervision of undergraduate and graduate student research. A Ph.D. is required and postdoctoral experience desired. Submit curriculum vitae, names of at least three professional references, and representative publications to: **Director, Division of Life Sciences, The University of Texas at San Antonio, San Antonio, Texas 78285, prior to 1 July 1985. The University of Texas at San Antonio is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

The Department of Cell Biology at Baylor College of Medicine currently has **TWO FACULTY POSITIONS** open for outstanding scientists, at either a junior or senior level, in the area of contemporary molecular genetics. We are particularly interested in candidates that are involved in applying techniques of recombinant DNA research for studying basic problems in cell and developmental biology. The present well-funded and nationally renowned faculty in this department reflects a diverse set of research interests, and the existing resources should be an attractive feature for prospective candidates. Send curriculum vitae with names of three references to:

**Dr. Jeffrey M. Rosen
Professor, Department of Cell Biology
Baylor College of Medicine
1 Baylor Plaza
Houston, Texas 77030**

**FACULTY POSITION IN AUDITORY
NEUROPHYSIOLOGY**

The Section of Otolaryngology, Department of Surgery, Yale University School of Medicine, invites applications for a nontenured faculty position for teaching and research. Applicant must have a comprehensive knowledge of and previous experience in the field of electrophysiology of the auditory system, physiology of the vestibular system, behavioral techniques, mathematical data analysis, computer support, and basic biochemistry. A Ph.D. in neurophysiology and at least 3 years of postdoctoral experience are required. Candidates should exhibit evidence of an independent research program related to dysfunction of the auditory system and must be interested in and have the ability to interact productively with M.D.'s and other allied health professionals involved in clinical research. A principal responsibility includes teaching medical students and otolaryngology residents in fields of auditory and vestibular physiology and providing laboratory training for them. Candidates should submit curriculum vitae, list of publications, and names of three references to: **C. T. Sasaki, M.D., Chief, Section of Otolaryngology, Department of Surgery, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn. 06510. Deadline for applications is 27 May 1985.**

Yale University is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS

The Department of Physiological Sciences at the Dr. William M. Scholl College of Podiatric Medicine is seeking applicants for two full-time faculty positions:

- 1) Teaching a comprehensive course in biochemistry; and
- 2) Teaching a comprehensive course in medical physiology, including laboratory portion.

Rank and salary commensurate with experience. Candidates must possess a Ph.D. in biochemistry, physiology, or a closely related area; and demonstrate outstanding teaching ability and commitment. Additional duties include participation in department study-related activities and designated committee assignments. Limited funds are available to support research activities.

Both positions will be available on 1 July 1985. Qualified candidates may submit a letter of application, curriculum vitae, and supporting material, including the names of three references, by 17 May 1985, to: **Harold J. Stronach, Director of Human Resources, Dr. William M. Scholl College of Podiatric Medicine, 1001 North Dearborn Street, Chicago, Ill. 60610.**

Equal Opportunity Employer

FACULTY POSITION (TENURE TRACK). Experienced scientist to initiate **MALARIA RESEARCH PROGRAM** with emphasis on use of nonhuman primates and to expand training program for malaria and other vector-borne diseases. M.D. or Ph.D. required; 5 years of research experience and demonstrated teaching ability essential. Primary appointment (tenure track) in the Department of Tropical Medicine, School of Public Health and Tropical Medicine, Tulane University, with laboratory base at Tulane's Delta Regional Primate Research Center as head of Parasitology Department. Rank and salary commensurate with training and experience. Starting date: 1 August 1985 or thereafter. Qualified applicants mail curriculum vitae to: **Chairman, Search Committee, Department of Tropical Medicine, 1430 Tulane Avenue, New Orleans, La. 70112. Application deadline: 1 June 1985. Tulane University is an Equal Opportunity/Affirmative Action Employer.**



The International Atomic Energy Agency seeks for the International Laboratory of Marine Radioactivity in Monaco a

MARINE BIOLOGIST

at the Assistant Officer's level (P-2) to perform laboratory and field research on the bioavailability, transfer and behaviour of long-lived radionuclides and heavy metal pollutants in marine organisms. Knowledge of radiotracer techniques and pollutant dynamics in lower trophic levels is particularly desirable. PhD or equivalent in biological oceanography, marine biology or marine ecology necessary. Initial contract two years, tax-free emoluments approx. US\$ 23,500.-per annum. Additional allowances, if married. Travel and removal expenses paid. Six weeks annual leave.

Send curriculum vitae under VN 85/10 to the Division of Personnel, International Atomic Energy Agency, PO Box 100, A-1400 Vienna, Austria.

RESEARCH SCIENTISTS

The Biotechnology Division of Standard Oil Company (Indiana) at the Amoco Research Center is expanding its dynamic staff devoted to nucleic acid probe diagnostics. The recent impact of their significant advances in DNA probe detection systems has created the need for additional Research Scientists.

To explore the future development and commercial use of genetic diagnostics, we seek candidates who possess a PhD and have had related post-doctoral experience OR 2-5 years productive research in this area. A strong background in molecular biology is also required.

Ideal applicant background should include recent achievements in nucleic acid hybridizations plus work in DNA probes or gene detection.

Your benefits will come in the form of a challenging professional environment and long range growth potential. Because we are located in Naperville, Illinois, just 30 miles outside Chicago, a choice of urban, suburban or rural living is available to you. Salary is commensurate with experience and we offer a comprehensive benefits package. Please forward your resume in confidence to:

Professional Recruiting Coordinator

AMOCO RESEARCH CENTER

P.O. Box 400 • Naperville, IL 60566

An Equal Opportunity Employer M F H



Microbiologists (Ph.D.), Molecular Biologists (Ph.D.) and Cell Biologists (Ph.D.)

BASF is a leading company of the chemical industry. An important contribution to our company's success is made by interdisciplinary research. In order to extend our research activities in the field of biotechnology (with emphasis on medicine and nutrition), we require several younger **Microbiologists (Ph.D.)**

- to search for microorganisms for biotransformations
- to screen microorganisms for active compounds
- to develop highly productive pro- and eukariotic strains
- to develop fermentation processes on a lab and pilot-plant scale

We also require several younger **Molecular Biologists (Ph.D.)** and **Cell Biologists (Ph.D.)** for the development of therapeutically active proteins by recombinant DNA-techniques. Applicants should have a good knowledge of, and experimental experience in

- DNA cloning techniques
- cell biology
- protein engineering

If you are willing to cooperate in an interdisciplinary team of young scientists, please send us your application as soon as possible.

BASF Aktiengesellschaft
Personalwesen AT/LA, D-6700 Ludwigshafen

BASF

NATIONAL SCIENCE FOUNDATION Washington, D.C.

The **DIRECTORATE FOR SCIENCE AND ENGINEERING EDUCATION** is seeking qualified applicants for the following senior-level positions.

—**DIRECTOR, DIVISION OF MATERIALS DEVELOPMENT AND RESEARCH**—manages Division responsible for funding precollege science and mathematics education in the areas of materials development and research.

—**HEAD, OFFICE OF STUDIES AND PROGRAM ASSESSMENT**—manages Office responsible for the collection, analyses, evaluation and dissemination of information on the status and condition of mathematics, science and technology education in the United States and for special efforts to develop a program plan for science and engineering education.

These positions are in the Senior Executive Service with a salary ranging from \$61,296 (ES-1) to \$68,700 (ES-4). Appointment may be on either a career or a one- to three-year rotational basis. Applicants must have a doctorate or equivalent professional experience or a combination of education and experience in science or engineering or science education; demonstrated knowledge of relevant academic communities and recognized professional standing in the science, engineering or education communities as evidenced by publications and/or professional awards; knowledge of current capabilities and trends of the scientific/engineering education communities; and demonstrated ability to achieve organizational objectives through the supervision and management of subordinates.

Applicants should contact Margaret Cademartori on 202-357-7857 (hearing impaired individuals may call TDD 202-357-7492) to request vacancy announcements which contain specific qualification requirements and application procedures. Applications must be received by May 31, 1985.

EQUAL OPPORTUNITY EMPLOYER

A New Position PRESIDENT ST. LOUIS SCIENCE CENTER

Museum of Science & Natural History and McDonnell Planetarium which recently merged to form the St. Louis Science Center, is preparing to expand significantly as a member of the tax-supported Metropolitan Zoo-Museum District.

A proposed enlargement of facilities and the current 32 permanent and 22 part-time staff is to be headed by a President, a new position, who would be the Chief Executive/Chief Scientist, reporting to the governing Board of Commissioners.

St. Louis Science Center intends to become a national-class institution emphasizing education, cultural enjoyment and communication about the impact of science and technology on society.

Responsibilities/Qualifications:

- build the new center
- become a spokesman for the science issues
- create an atmosphere of excitement for learning
- provide leadership for fund raising

Salary and benefits are open and consistent with the objective of creating and building a national-class center, and will be based on experience and qualifications.

Letters of interest should be sent to:

M. C. Throdahl
Chairman, Search Committee
St. Louis Science Center
5050 Oakland Avenue
St. Louis, MO 63110
(314) 652-5500

An Equal Opportunity Employer

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA, IRVINE FACULTY POSITION

The University of California, Irvine, Department of Radiological Sciences, anticipates having a tenured opening for a senior (associate or full professor) faculty position in medical imaging physics. The candidate must have a Ph.D. in physics or engineering with proven research experience and preferably administrative experience. Individuals with broad interdisciplinary research interests are encouraged to apply. Experience in nuclear imaging instrumentation, single photon emission tomography, and related algorithms is desirable. Applicants should have a distinguished academic and research reputation which includes a successful record in obtaining contract and grant support. Additional responsibilities include directing the graduate program in radiological sciences and interfacing with the clinical faculty. The level of appointment and salary is dependent upon candidate's experience and academic achievements. Candidates should send curriculum vitae, statement of research interests, and names of five references to:

Professor Z. H. Cho
Department of Radiological Sciences
University of California, Irvine
Irvine, Calif. 92717

Deadline for applications is 1 August 1985. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION: IMMUNOLOGY AND INFECTIOUS DISEASES. Permanent-track position for person with M.D. or Ph.D. degree. Involves conducting an independent research program in immunology with pertinence to some aspect of the relationship of immunity to infection (for example, immunodeficiency, viral immunity, phagocyte function), and participating in the teaching program in immunology. Will receive academic appointment commensurate with his/her qualifications. Send curriculum vitae and names of three references to: **Gerald J. Gleich, M.D., Department of Immunology, Mayo Clinic, Rochester, Minn. 55905.** *An Equal Opportunity/Affirmative Action Institution.*

GENERAL SURGEON—Position available at the University of Arizona Health Sciences Center for a Board-eligible or Board-certified general surgeon with special training and research interest in surgical oncology. Send curriculum vitae to: **Stephen Wangenstein, M.D., Department of Surgery, University of Arizona Health Sciences Center, Tucson, Arizona 85724.** *Equal Opportunity/Affirmative Action Employer.*

POSITION AVAILABLE AT THE UNIVERSITY OF CALIFORNIA, DAVIS, IN HUMAN DEVELOPMENT; 12-month (including 1-month vacation), 70 percent teaching/30 percent research, tenure-track position at the assistant professor level, beginning 1 January 1986 (negotiable). Salary range: \$29,600 to \$33,600 (increase expected 1 July 1985). Qualifications: Ph.D. in relevant discipline; specialization in human behavioral development; emphasis in biological bases of behavior or behavioral genetics; research expertise in adolescent/adult development. Responsibilities: teaching and advising in child/human development. Send curriculum vitae, statement of qualifications, list of publications, transcripts of undergraduate and graduate work if within 5 years of receiving doctorate, and names and addresses of three references to: **R. H. Kraft, Chair, Human Development Search Committee, Department of Applied Behavioral Sciences, University of California, Davis, Calif. 95616.** To be assured of consideration, submit materials by 31 July 1985.

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

INSTRUCTOR/ASSISTANT PROFESSOR. A cardiothoracic surgeon is being sought for a position in the cardiothoracic section of the Department of Surgery at the University of Minnesota. Individual should have a strong interest in teaching, patient care, and research. Training in cardiothoracic surgery at an academic institution is to have been completed. Applicants should include curriculum vitae and bibliography and the name of three references. Submit all application materials to: **Dr. John Foker, Department of Surgery, University of Minnesota, Box 495 Mayo Memorial Building, Minneapolis, Minn. 55455.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

POSITIONS OPEN

INSECT ANTIHORMONE RESEARCH: Full-time. Postdoctoral research position available immediately to study the action of insect juvenile hormone antagonists on the insect corpora allata in vivo and in vitro. Education in insect physiology and/or biochemistry required. Experience in tissue or organ culture techniques desirable. Send résumé and names of three references to: **Professor William S. Bowers, The University of Arizona, Department of Entomology, Tucson, Ariz. 85721.**

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

MICROBIOLOGIST—Multi-year, renewable contract position available for Ph.D., D.O., or M.D. to perform RESEARCH, seek outside support and teach part of medical microbiology course to medical students. New modern laboratories are available for qualified person with track record and publications. Salary, length of renewable contract, and academic rank commensurate with qualifications. Interested candidates should send curriculum vitae, and all supportive evidence (current grant support and grant track record and teaching experience) to: **Search Committee, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, New York 11568.**

MOLECULAR OR CELL BIOLOGIST. Associate professor or professor level (tenure-track) academician is required for the newly formed Department of Pathology and Microbiology at the University of Nebraska Medical Center. M.D., Ph.D.; Ph.D. or M.D. degrees plus a substantial publication record and grant support is required. Our department has developed a strong group studying etiological factors and mechanisms of carcinogenesis, basic and clinical immunology, and infectious diseases. The position is available 1 July 1985. Send curriculum vitae and three letters of support to:

David T. Purtilo, M.D.
Professor and Chairman
Department of Pathology and Laboratory Medicine
University of Nebraska Medical Center
42nd and Dewey Avenue
Omaha, Neb. 68105
Telephone: 402-559-4186

NATURAL PRODUCT CHEMISTRY: Postdoctoral. Full-time research position available immediately for the isolation and identification of plant secondary chemicals responsible for plant resistance to insects, plant pathogens, and nematodes. Education in organic chemistry with experience in chromatographic techniques and chemical and spectroscopic methods of structure elucidation required. Send résumé and names of three references to: **Professor William S. Bowers, The University of Arizona, Department of Entomology, Tucson, Ariz. 85721.**

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

NEUROPHYSIOLOGIST. Assistant professor level position at Harvard Medical School available for investigation of cellular mechanisms of sleep cycle control. Applicant should have background in intracellular recording in the anesthetized and naturally sleeping cat and in brainstem reticular formation, a background in sleep research, and have demonstrated ability in the various technical aspects of the research area. Applicant must have doctoral degree and sufficient experience to instruct postdoctoral fellows. Minority applications encouraged. Send curriculum vitae, reprints of publications, and letters from three references to: **Dr. Robert W. McCarley, Chair, Search Committee, Psychiatry (116A), Brockton VA Medical Center, 940 Belmont Street, Brockton, Mass. 02401.**

POSTDOCTORAL BIOCHEMIST OR PHARMACOLOGIST

Position available to begin in fall 1985 in the Positron Emission Tomography Program at University of California, Los Angeles (UCLA) School of Medicine. We invite applications from outstanding individuals to study neurotransmitter receptor function and regulation. Applicants should have a strong background in biochemistry or pharmacology and experience with receptor systems. Send curriculum vitae, list of publications, and two letters of recommendation to: **Dr. J. R. Barrio, Laboratory of Biomedical and Environmental Sciences, Laboratory of Nuclear Medicine, UCLA School of Medicine, Los Angeles, California 90024.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

NEUROBIOLOGY

Assistant/Associate Professor—The Department of Anatomy and Cell Biology is developing a thrust in cellular/molecular neurobiology. We seek an individual using cellular and molecular probes to study CNS structure. Research on the organization, development, and plasticity of chemical sensory systems is becoming a focal point for individuals within and outside the department. The department has excellent resources in electron microscopy, image analysis, neurophysiology, and molecular genetics. The successful candidate will eventually take part in one of the basic medical courses taught in the department. Applicants should send their curriculum vitae, a brief statement of research goals, and the names of four persons willing to write letters of recommendation to: **Neurobiology Search Committee, Department of Anatomy and Cell Biology—ML 521, University of Cincinnati College of Medicine, Cincinnati, Ohio 45267.**

NEUROSCIENTIST OR SMOOTH-MUSCLE PHYSIOLOGIST

Opening available at postdoctoral to assistant professor level. Area of investigation: control mechanisms of gastrointestinal motor function. Opportunity to collaborate with well-established clinical research group engaged in in vivo animal studies of alimentary tract motility. Will also pursue own in vitro or in vivo work. Desirable skills include: organ-bath preparations, muscle-strip techniques, and intracellular recording. Reply by 1 June 1985 to:

**Harold F. Hardman, M.D., Ph.D.
Chairman**

**Department of Pharmacology and Toxicology
Medical College of Wisconsin
8701 Watertown Plank Road
Milwaukee, Wis. 53226**

Equal Opportunity/Affirmative Action Employer

PHARMACOLOGIST—Multi-year, renewable contract position available for Ph.D., D.O., or M.D. to perform **RESEARCH**, seek outside support and teach part of medical pharmacology course to medical students. New modern laboratories are available for qualified person with track record and publications. Salary, length of renewable contract, and academic rank commensurate with qualifications. Interested candidates should send curriculum vitae and all supportive evidence (current grant support and grant track record and teaching experience) to: **Search Committee, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, New York 11568.**

PHYSICAL SCIENTIST: DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA). The NOAA Undersea Research Program (NURP), Sea Grant and Extramural Program, Office of Oceanic and Atmospheric Research, NOAA, announces a vacancy for the position of physical scientist, GM-1301-13 (promotion potential to GS-14), Rockville, Maryland. (Salary range: \$37,599 to \$48,876 per annum). Vacancy closes 24 May 1985. Incumbent will serve as chief scientist for the office's undersea scientific programs. Using recognized undersea scientific capabilities and experience, the incumbent will provide scientific guidance to the office in developing, coordinating, evaluating, and implementing its undersea research programs. Integrating NURP's efforts with the marine science community, incumbent will be involved in making recommendations on policy decisions regarding NOAA's undersea research activities. Applicants must show specific experience in various aspects of undersea research and underwater diving. Persons interested in applying **SHOULD** request a copy of vacancy announcement by writing to: **NOAA, 6001 Executive Boulevard, Rockville, Md. 20852; attention: V. Peters, RAS/DC21, or telephoning: 301-443-8373.** Applications must be submitted on Standard Form 171. *Department of Commerce is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION available to study chemotaxis and bactericidal activity of macrophages. Experiments use cytophotometry and computerized image analysis techniques. Experience in these areas of research or related fields of immunology or biophysics desirable. Submit curriculum vitae and three references to: **Dr. Elliot Goldstein, Department of Medicine, University of California, Davis School of Medicine, Davis, California 95616.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF GÖTEBERG Sweden

Applications are invited for a **CHAIR OF OCEANOGRAPHY,** *in particular the analysis of marine systems.*

Please quote reference nr E 311 917/85.

Closing date: June 4, 1985.

The scientific domain covers general and physical oceanography with emphasis on the analysis of marine systems including interaction between physical, chemical, and biological processes. Interdisciplinary scientific problems, in particular climate theory and the cycles of chemical components, constitute an important part of the scientific domain.

Besides research the professorship involves sponsoring graduate students and giving advanced courses in this field.

Current starting salary: 150.000 Sw. Kr. per year.

Applications including four copies of (a) curriculum vitae; (b) published papers (as well as unpublished) and also a list of the above mentioned papers, and (c) accounts of pedagogical experience. All these should be sent in four separate packages, addressed to the Swedish government, Registrar, University of Göteborg, Vasaparken S-411 24 Göteborg, Sweden.

Further information can be obtained from Professor Gösta Wallin, Dept of Physical Oceanography, Stigbergstorget 8, Box 4038, S-400 40 GÖTEBERG, tel: Sweden-31-12 80 13.

RESEARCH CHEMIST

The Navy's largest research, development, test and evaluation activity, located at the foot of the Sierra Nevada has an immediate vacancy for a Research Chemist to conduct studies in

CHEMOMETRICS

Applicants with a Ph.D. in chemistry and a background in chemometrics, the science of chemical data analysis, are encouraged to apply for this position in the Instrumental Chemical Analysis Branch. The successful applicant will be expected to develop collaborative and independent research programs in some aspect of **MULTIVARIATE ANALYSIS, PATTERN RECOGNITION, OR ARTIFICIAL INTELLIGENCE APPLIED TO CHEMICAL SYSTEMS.** Secondary areas of specialization should complement Chemistry Division interests.

This position offers the opportunity to work in a challenging research environment combined with community living in a small town environment.

Applications accepted until 15 June 1985.

SALARY \$31,619 - \$48,876

**NAVAL WEAPONS CENTER
Code 092-385-85-2
China Lake, CA 93555-6001**



An Equal Opportunity Employer

U.S. Citizenship Required

POSITIONS OPEN

PHYSIOLOGY/ANATOMY. The Department of Biological Sciences at Wright State University invites applicants for a tenure-track position at the **ASSISTANT PROFESSOR** level beginning 1 September 1985 or 1 January 1986. The successful applicant will develop and teach a two-quarter course in human anatomy and physiology for undergraduate majors in biology and allied health. Additional teaching responsibilities will include participation in other appropriate undergraduate and graduate biology courses depending upon the selected applicant's specialty. Ph.D., postdoctoral experience, and demonstrated teaching and independent research ability are required. The successful applicant will be expected to establish a vigorous research program in the general field of mammalian biology which will complement existing programs in the environmental, cell/tissue or toxicology areas. Send curriculum vitae, statement of teaching and research goals, and three letters of reference by 24 May to: **Dr. Larry G. Arlian, Department of Biological Sciences, Wright State University, Dayton, Ohio 45435.** An Affirmative Action/Equal Opportunity Employer.

PLANT MOLECULAR BIOLOGY. U.S. Department of Agriculture (USDA)-ARS has a research affiliate position available at the Plant Science Research Unit, Gainesville, Florida, in the area of cytoplasmic male sterility of maize and sorghum. Applicants should forward curriculum vitae and three letters of recommendation to: **Dr. D. R. Pring, Plant Science Research Unit, c/o Plant Pathology Department, University of Florida, Gainesville, Fla. 32611.** Applications should be received by 25 May 1985. U.S. citizenship required. *Equal Opportunity Employer.* Salary: GS-7, \$17,824 per annum.

POSTDOCTORAL ASSISTANT in ophthalmic research available for applicants with expertise in recombinant DNA technology and/or biochemistry of extracellular components. Projects include studies on the metabolism of extracellular matrix during embryonic development of cornea and wound-healing of injured corneas. Send curriculum vitae and two letters of reference to: **Dr. W. W.-Y. Kao, Director of Ophthalmic Research, Department of Ophthalmology, University of Cincinnati College of Medicine, Cincinnati, Ohio 45267-0527.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWS/RESEARCH ASSOCIATE. Positions immediately available in a group interested in applications of growth factor regulation of human lung cancer, especially using monoclonal antibodies. Studies utilize immunologic, HPLC, protein chemistry methods. Cell and/or molecular biology experience desirable. Send curriculum vitae and references: **J. Mulshine or F. Cuttitta, National Cancer Institute-Navy Medical Oncology Branch, Naval Hospital Bethesda, Bethesda, Md. 20814.** An Equal Opportunity Employer

POSTDOCTORAL FELLOW. Position immediately available to study oncogenes of human tumors in a human-cell assay system. Techniques required include: cell culture, molecular cloning, and analytic biochemistry. Send curriculum vitae and names of three references to: **Dr. Robert Pollack, Department of Biological Sciences, 813 Fairchild, Columbia University, New York, N.Y. 10027.**

POSTDOCTORAL POSITIONS are available for research on the biochemistry and molecular biology of the components of **CONNECTIVE TISSUES**. A background in collagen, proteoglycan, or glycoprotein biochemistry with experience in cell or molecular biology is desirable. Applicants must have U.S. citizenship or permanent resident status. Send résumé to: **N. A. Kefalides, M.D., Ph.D., Connective Tissue Research Institute, University of Pennsylvania, University City Science Center, 3624 Market Street, Philadelphia, Pa. 19104.** An Affirmative Action/Equal Opportunity Employer.

UNIVERSITY OF FLORIDA—POSTDOCTORAL POSITION available July 1985. Candidate should have experience in enzymology and organic synthesis with strength in at least one. Study of enzymes involved in biosynthesis of long chain isoprenoid phosphates. Photoaffinity labelling, protein/peptide chemistry, and development of affinity probes. Send résumé and three letters of reference before 1 June 1985 to: **Dr. Charles M. Allen, Department of Biochemistry and Molecular Biology, J. Hillis Miller Health Center, Box J-245, University of Florida, Gainesville, Fla. 32610.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

A **POSTDOCTORAL POSITION** is available immediately in the area of selenium metabolism. The focus of the studies is application of stable isotope tracers to the dynamics of selenium metabolism in human subjects. An important component of the studies relates to measurement of selenium metabolites in human urine using HPLC/MS techniques. Candidates should have strong background in HPLC, suitable experience/knowledge related to metabolism, and strong analytical chemistry techniques. Experience with mass spectrometry as related to stable isotope measurements is an asset. Interested persons should write to: **Dr. Morteza Janghorbani, Stable Isotope Laboratory, Boston University School of Medicine, M1008, 85 East Newton Street, Boston, Mass. 02118, or telephone 617-247-5770.**

An Equal Opportunity Employer, M/F

TWO POSTDOCTORAL POSITIONS are available immediately in the areas of applications of inductively coupled plasma/mass spectrometry (ICP/MS) and thermal ionization/mass spectrometry (TI/MS) to precise measurement of isotope ratios and biological materials. Candidates should have strong background in analytical chemistry of trace elements, methods of inorganic chemistry, and experience with isotope ratio mass spectrometry or a closely related field. Candidate should be strongly research oriented with special interest in biomedical applications. Interested persons should write to: **Dr. Morteza Janghorbani, Stable Isotope Laboratory, Boston University School of Medicine M1008, 85 East Newton Street, Boston, Mass. 02118, or telephone: 617-247-5770.**

An Equal Opportunity Employer, M/F

TWO POSTDOCTORAL POSITIONS are available immediately to study the regulation and processing of myelin membrane components as well as expression and regulation of novel glycoconjugates in the developing nervous system. Candidates with Ph.D. in biochemistry and having interest in the chemistry and biology of the nervous system should send their résumé with the names of two references to:

**Dr. Firoze B. Jungalwala
Department of Biochemistry
Eunice Kennedy Shriver Center
200 Trapelo Road
Waltham, Mass. 02254**

POSTDOCTORAL POSITION in the area of gene expression in *Saccharomyces cerevisiae* available 1 September 1985 for recent Ph.D. Background in molecular biology, recombinant DNA techniques, and/or monoclonal antibody techniques preferred. Research will focus on translational and transcriptional mechanisms for the control of gene expression. Send curriculum vitae and three letters of reference to: **Dr. Kivie Moldave, Department of Biology, Thimann Laboratories, University of California, Santa Cruz, Calif. 95064.** University of California is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE (plant physiologist, plant biochemist). An individual is sought to conduct basic research as part of a team studying the regulation of photoassimilate allocation in plants. Possible areas for research are: (i) characterize phloem unloading in vegetative tissues, (ii) turgor regulation of sugar transport and cellular metabolism, and (iii) hormonal regulation of assimilate allocation. Candidates must have a Ph.D. in plant physiology or biochemistry. Research experience in membrane transport, plant enzymology, or plant water relations desirable. Salary: \$17,000 per annum, with excellent employee benefits. Send letter of application, résumé, and three letters of reference to: **Roger E. Wyse, U.S. Department of Agriculture-ARS Plant Biochemistry Laboratory, Utah State University, UMC 63, Logan, Utah 84322.** Telephone: **801-750-3062.** Utah State is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE

The Department of Neurology, University of Alabama at Birmingham, has an immediate opening for a Ph.D. with experience in protein purification and immunoassays. Applicants must have experience in these areas and will be engaged in research on the degradation and immunochemistry of myelin proteins. Salary is negotiable. Send curriculum vitae and names of references by 31 May 1985 to: **John N. Whitaker, M.D., Department of Neurology, University of Alabama at Birmingham, University Station, Birmingham, Ala. 35294.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITIONS in metabolic regulation available as part of a training program involving laboratories in the Departments of Pharmacology and Biochemistry, University of Washington. Areas of research emphasis include hormone receptors, transmembrane signalling, protein phosphorylation, cyclic nucleotides, Ca^{2+} (CaM)-dependent processes, and phosphatidylinositol metabolism. Applicants contact: **Dr. Edwin Krebs, Program Director, Howard Hughes Medical Institute 5L-15, University of Washington, Seattle, Wash. 98195.**

TWO POSTDOCTORAL POSITIONS available immediately. Molecular biologist (recombinant DNA and gene expression) or enzymologist. Send résumé and three letters of recommendation to: **Dr. Li-Fu Chen, Department of Food Science, Smith Hall, Purdue University, West Lafayette, Ind. 47907.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

Opening in the research laboratories of the Division of Hematology and Oncology, Children's Hospital, Harvard Medical School, for a Ph.D. to study the biochemistry of red blood cell differentiation. Current areas of research include the structural and functional analysis of hormone-receptor interaction, molecular biology and biochemistry of erythropoietin, and the regulation of erythropoiesis. Send résumé and three references to: **Dr. Arthur J. Sytkowski, Children's Hospital, 300 Longwood Avenue, Boston, Mass. 02115.** An Affirmative Action/Equal Opportunity Employer, M/F.

POSTDOCTORAL POSITION RETROVIRAL ONCOGENESIS, VECTORS

A position is available immediately in the laboratory of Dr. David Steffen at the Worcester Foundation for Experimental Biology. Projects available include the study of murine leukemia virus-induced lymphomas and the development of murine leukemia virus vectors for the study of transcriptional regulation. Molecular biology experience desirable. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. David Steffen, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.** An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL RESEARCH ASSOCIATE position (available summer 1985) for at least 2 years to study the electrophysiology/pharmacology/anatomy of midbrain dopamine neurons. Experience in intracellular recording desirable. Send curriculum vitae and the names of three referees to: **Dr. D. C. German, Department of Physiology, University of Texas Health Science Center, Dallas, Tex. 75235.** An Affirmative Action/Equal Opportunity University.

TWO POSTDOCTORAL RESEARCH POSITIONS are available immediately to study the immunobiology of the human malaria parasite *Plasmodium falciparum*. Ph.D. with research experience in cell biology, immunology, or molecular parasitology preferred. Salary from \$18,000 to \$21,000 per year, depending upon experience. Applicants should send curriculum vitae, statement of research interests, and the names and addresses of three references to: **Dr. Susan G. Langreth, Department of Microbiology, c/o Personnel/Manpower Division, Uniformed Services University of the Health Sciences (USUHS), 4301 Jones Bridge Road, Bethesda, Md. 20814.** USUHS is an Equal Opportunity/Affirmative Action Employer. Curriculum vitae will not be returned.

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Polar Programs, is seeking qualified applicants for the position of **PROGRAM MANAGER, Polar Atmospheric Sciences Program**. The position will be filled on a permanent basis in either the competitive or excepted service at the GG/GH-15 level, \$52,262 to \$67,790 per annum. Applicants should have a Ph.D. in aeronomy or solar terrestrial physics, astronomy, polar meteorology, and atmospheric chemistry. Applicants should also have experience or familiarity with current polar research, as well as administrative experience. The person selected for this position must be able to pass the physical examination required for travel to Antarctica. For details on application procedures, telephone: **Stuart Solomon 202-357-7840.** For further technical information, telephone: **Dr. Francis S. L. Williamson, Chief Scientist, 202-357-7894.** NSF is an Equal Opportunity Employer.

RESEARCH SCIENTIST

The Massachusetts Institute of Technology (MIT), Whitaker College of Health Sciences, Technology and Management, announces an opening for a Research Scientist to work within the Center for Biological Information Processing integrating theoretical and experimental brain sciences. Responsibilities will include developing computer models of single neurons, dendritic trees and synapses from physiological and anatomical data, as well as interaction with visual psychophysics and the computational theories of vision. He or she will also explore computational properties of biophysical mechanisms and will apply these results to the analysis of the neural circuitries involved in the perception of motion and stereo.

A Ph.D. in mathematics, physics or computer science is required. Experience in how computational theories can be implemented in algorithms, and how the underlying biophysical hardware can determine the nature of the algorithm is also required. A solid background in mathematics, knowledge of invertebrate and vertebrate biophysics, physiology and extensive computer experience is expected. LISP computer language desirable.

Interested applicants should send two copies of cover letter and curriculum vitae, as well as any relevant publications to: Dr. Tomaso Poggio, c/o MIT Personnel Office (E19-239), 77 Massachusetts Avenue, Cambridge, MA 02139. Reference Job #R84-573. MIT is an Affirmative

Action/Equal Opportunity Employer.

Qualified minorities and women are encouraged to apply.

MIT

NEUROPSYCHOLOGIST/ PROJECT SCIENTIST

Ph.D in Psychology, neuroscience or related field with demonstrated competence in conducting macrophysiological research. Will be a member of an established multidisciplinary research team that is working to develop cost effective methods for assessing the function integrity of the CNS rodents exposed to suspect neurotoxins in collaboration with neurophysiologists investigate sensory systems, will formulate and implement an in vivo micropsychological program investigating nonsensory system (e.g. Limbic) and will publish the findings in scientific literature.

Please send c.v., with salary history and present salary required, copies of recent publications, statement of research interests and names of three references in confidence to:

GLENDA WARD JANTANIAH
NORTHROP SERVICES
Environmental Sciences
P.O. Box 12313
Research Triangle Park, N.C. 27709

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Become a member of a superb team of scientists and engineers who are conducting pioneering scientific research and advanced technological development for tomorrow's Navy. Join the Navy's Corporate Laboratory which has a sterling reputation for technical excellence and achievement for new and improved materials, equipment, techniques, systems, and operational procedures for the Navy.

Career opportunities exist in Material Science and Technology Division for highly motivated individuals with bachelor's and/or advanced degrees in the following disciplines:

• **SUPERVISORY METALLURGIST, MATERIALS SCIENTIST, OR CHEMIST**, GM-15, \$52,262 to \$67,940 per annum (depending on experience and qualifications), to Head the Environmental Effects Branch. Leads a branch of approximately 13 research chemists, metallurgists, and physical science technicians conducting basic and applied research on various aspects of electrochemistry and surface science related to materials degradation in hostile environments. Research focuses toward the development of rational mitigative procedures leading to improved corrosion resistance of materials and coatings through control and modification of material and environmental factors. Expert knowledge and

experience in corrosion science and engineering with emphasis on surface protection, general corrosion, stress-corrosion cracking, and related metallurgical aspects are required. (ID#63-015-13.1MB)

• **SUPERVISORY CERAMICS ENGINEER OR MATERIALS SCIENTIST**, GM-15, \$52,262 to \$67,940 per annum (depending on experience and qualifications), to Head the Ceramic Branch. Leads branch of approximately 10 ceramic engineers, chemical engineers, research physicists, and materials engineers conducting basic and applied research on ceramic encompassing inorganic, nonmetallic solids of both crystalline and glassy structure. Research focuses on relationships of composition, microstructure, and processing variables to properties for development of new and improved ceramic materials and to development of phase and property predictive capabilities. (ID#63-016-13.1MB)

NRL provides a campuslike atmosphere that fosters exchange of new ideas, techniques, and approaches to problems and encourages continuing education and publication of research results.

Send resume or SF-171 by May 30, 1985 to:



NAVAL RESEARCH LABORATORY

Civilian Personnel Office Attention: (ID#)
4555 Overlook Avenue, S.W., Washington, D.C. 20375-5000

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POSITIONS OPEN

POSTDOCTORAL POSITION available spring/summer 1985 to study steroidogenic enzymes and steroid receptors in the vertebrate testis. Experience in biochemistry essential, some cell biology desirable. Submit curriculum vitae and names of three references to: **Dr. Gloria Callard, Biology Department, Boston University, 2 Cummings Street, Boston, Mass. 02215.**

TWO POSTDOCTORAL POSITIONS available immediately to study carcinogen and pesticide metabolism and chemical mutagenesis. Annual salary: \$18,000. The position is for 1 year, renewable for the second year. Send curriculum vitae and names of three references to: **Dr. S. K. Yang, Department of Pharmacology, F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Maryland 20814-4799.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for research concerned with molecular basis for antiviral or anticancer activity of compounds developed in our laboratory. A background in enzymology and nucleic acid biochemistry is desirable. Salary negotiable. Send résumé and names of three references to: **Dr. William H. Prusoff, Department of Pharmacology, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn. 06510.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study drug absorption by the intestinal lymphatics. Experience with lymphatic cannulations and HPLC is required. Send curriculum vitae and names of three references to: **Dr. Clarence T. Ueda, Department of Pharmaceutics, University of Nebraska Medical Center, College of Pharmacy, Omaha, Neb. 68015.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

SHAW VISITING PROFESSORSHIP IN AQUATIC SCIENCE—1985-1986

The Center for Great Lakes Studies and Department of Biological Science, University of Wisconsin-Milwaukee, invite applications for sabbatical support for up to 1 year at the Center.

Visitors will present a series of lectures and participate in interdisciplinary research related to biogeochemical cycling in aquatic environments, for example, biogeochemistry of metals; microbial ecology; phytoplankton ecology; remote sensing, and so forth.

For applications and information, contact: **Dr. D. N. Edgington, Director, Center for Great Lakes Studies, 600 East Greenfield Avenue, Milwaukee, Wis. 53204; telephone: 414-649-3007.** An Affirmative Action/Equal Opportunity Employer.

DISTINGUISHED PROFESSOR OF CHEMISTRY

The Department of Chemistry and the Laboratory for Surface Studies of the University of Wisconsin-Milwaukee offer a joint appointment at the level of distinguished professor with tenure. We are seeking an internationally recognized individual with research interests in heterogeneous catalysis and surface chemistry. The applicants must have a substantial publication record and recognition of achievements commensurate with the title. Salary is negotiable. Nominations and applications should be sent as soon as possible to: **Dr. James T. McFarland, Chairman, Chemistry Department, University of Wisconsin-Milwaukee (UWM), Milwaukee, Wis. 53201.** UWM is an Equal Opportunity/Affirmative Action Employer.

The **PULMONARY DIVISION** of Uniformed Services University of the Health Sciences (USUHS) is seeking applicants with a few years of experience in bioengineering and a working knowledge of analytical chemistry and statistics. The incumbent should have a Ph.D. Duties include maintenance and functioning of the H/P gas chromatograph-mass spectrometer (FID and ECD) for V/Q analysis in patients with respiratory disease. Experience with data handling, statistical analysis, computer modeling, and manuscript preparation. Salary based on applicant's qualifications. Interested candidates should submit curriculum vitae, bibliography, and names of three references to: **Directorate of Civilian Personnel, USUHS, 4301 Jones Bridge Road, Bethesda, Maryland 20814-4799.** Applications will not be returned. USUHS is an Equal Opportunity/Affirmative Action Employer.

RESEARCHER

Sepulveda area, \$2400 per month. Required: Ph.D. in neurology/biology, use of EEG Polygraph electrostimulator, spike triggering computer, preamplifier, oscilloscope, stereotaxic, and demonstrated research ability. Duties: experimentation on cats with respect to decerebration, cannulation, tracheotomy, dissection of muscle tissue, and placement of electrodes in muscle tissue to determine brainstem effect on muscle activity. Send this ad and your résumé to: **Job Number 4473, P.O. Box 865, Sacramento, Calif. 95804, not later than 18 May 1985.**

SENIOR RESEARCH ASSOCIATE—\$1852 to \$3022 per month. The NMR group at the Lawrence Berkeley Laboratory and the University of California, Berkeley, seeks candidates for the position of senior research associate. Duties include responsibility for group NMR spectrometers as well as participation in research developing new NMR techniques and applying them to materials problems. Requires experience in modern pulsed NMR technology, in particular the design, construction, and use of solid state NMR spectrometers. Must have experience with high power and high frequency components and amplifiers, phase shifters, probes, magic angle spinning, computer pulse programmers and data acquisition, two-dimensional NMR software and pulsed field gradients. Familiarity with cryogenics and with basic theory and application of modern NMR spectroscopy, including two-dimensional spectroscopy, multiple pulse NMR, multiple quantum spectroscopy and imaging will be helpful. Prefer a degree in physical science. Send two copies of résumé and three letters of recommendation to: **Lawrence Berkeley Laboratory, 1 Cyclotron Road, Employment Office 90-1042, Job Number A/3270, Berkeley, Calif. 94720.** An Equal Opportunity Employer, M/F/H. Résumé/application must be in the Employment Office by 31 May 1985.

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Hoffmann-LaRoche is recognized around the world for its innovations and leadership in the development and manufacture of pharmaceuticals, vitamins and fine chemicals. Here, you will discover an ideal research environment and a shared commitment to produce major contributions to medical progress.

We have an excellent opportunity for a highly qualified professional who can supervise an active research group engaged in drug discovery research. Involves the design and implementation of behavioral pharmacology experiments to identify active psychotropic agents, especially cognitive performance enhancers.

You must have a PhD in Neuropharmacology or Neuroscience with particular strengths in behavioral pharmacology, and with a successful record of at least 3-6 years involvement in cognitive performance research, either in the pharmaceutical industry or in an academic setting. Also required are excellent oral and written communications skills; the ability to utilize one or more neuroscience techniques; and a well-grounded knowledge of experimental design and statistical techniques.

Roche offers an outstanding compensation package, excellent company benefits, and highest caliber professional teams. To find out more, send your resume with current salary information to: **Mr. A.L. Vinson, Director of Planning and Staffing,**



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Head of Clinical Pharmacology Research Program

Memorial Sloan-Kettering Cancer Center is seeking a leader for its Clinical Pharmacology research program. We encourage applications from investigators who would like to explore new approaches to cancer treatment, utilizing recent knowledge of the importance of growth factors, differentiating agents, tumor cell heterogeneity, mechanisms of drug action and drug resistance, as well as oncogene functions. There will be opportunity to recruit additional individuals for this program.

The Head of Clinical Pharmacology research program will be in a unique position to collaborate with investigators at the Center as well as with members of the neighboring biomedical research community.

Candidates or nominators should write:

John Mendelsohn, M.D.

Chairman, Search Committee

Memorial Sloan-Kettering Cancer Center

1275 York Avenue

New York, New York 10021



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MICROBIOLOGY

IMMUNOLOGIST

CONNAUGHT LABORATORIES, the U.S. subsidiary of an international biological products company, is inviting applications for PhD Immunologists to participate in the development of vaccines of viral and bacterial origin. The successful candidate will have a broad background in immunology and immunochemistry with experience relating to antigen enhancement and the development of evaluation methods in appropriate animal test systems.

CONNAUGHT is located in the Pocono Mountain region of northeastern Pennsylvania. We offer a competitive starting salary and comprehensive benefits package. To apply, submit resume including current salary to: D.H. Gattone, Director, Human Resources, CONNAUGHT LABORATORIES, INC., Swiftwater, PA 18370. An Equal Opportunity Employer, M/F.

CONNAUGHT
LABORATORIES, INC.



PHARMACEUTICAL RESEARCH OPPORTUNITIES

Monsanto Company's Health Care Division is establishing leading edge research teams in important scientific fields relating to human health. The setting for these programs is in our newly dedicated state-of-the-art Life Sciences Center in suburban St. Louis. Currently, openings and exciting career prospects exist in the following areas:

CARDIOVASCULAR PHARMACOLOGY. Evaluation of hemodynamic effects of agents in animal models.

CELLULAR IMMUNOLOGY applied to immediate and delayed type hypersensitivity. T-cell circuitry, macrophage function, and/or regulation of immunoglobulin synthesis. RIA's, ELISA assays, and human (or mouse) tissue culture techniques.

MOLECULAR IMMUNOLOGY applied to cytokines and their receptors on lymphocytes and target tissues. Experience in characterization of the biochemical mechanisms through molecular biology.

IMMUNOPHARMACOLOGY applied to animal models for arthritis and allergies.

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- Behavioral pharmacology, especially evaluation of neuroleptic activity.
- Evaluation of neurotransmitter agonists and antagonists on isolated tissue and receptor binding preparations. Experience with opioid peptides, other neuropeptides, and/or adenosine.

PHARMACOLOGY applied to analgesic evaluation. Experience with endogenous opioid systems and other neuropeptides.

Qualified candidates will have a PhD or equivalent and active research programs in one of these fields.

In addition to excellent technical and educational resources, we provide varied outlets and recognition for achievement. Please forward your resume in confidence to: **Dr. P.R. Schenkenberg, Box S-1; MONSANTO COMPANY; Mail Zone G4NG; 800 N. Lindbergh Blvd.; St. Louis, MO 63167.**

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POSITIONS OPEN

PROJECT ASSOCIATE POSITION available for M.D. or Ph.D. in biology, \$21,000 per year, to perform self-directed studies on transmembrane ion fluxes in bacterial chemotaxis. Giant *Escherichia coli* cells will be used for patch-clamp electrophysiology, to determine which ions flow across the membrane for various attractants and repellents. Molecular biological studies would then be performed on the nature of the ion channels and on their relation to the known part of the chemotaxis system. One year of postdoctoral research experience in bacterial chemotaxis and electrofusion with the Zimmermann method is required. Applicant must have 2 years of research experience in molecular biology.

Job to begin 1 September 1985. Send curriculum vitae and have three letters of reference, sent by 10 June 1985, to: Eileen Breitwieser, Wisconsin Job Service, 206 North Broom Street, Madison, Wis. 53703.

This is an Equal Opportunity Employer. An employer-paid ad.

POSITIONS OPEN

RESEARCH ASSOCIATE/RESEARCHER (NEUROPHARMACOLOGY)

The Southern Illinois University (SIU) School of Medicine has a position for a research associate or researcher in the Division of Neurology, Department of Internal Medicine, to work in the area of neuropharmacology of Parkinson's disease and movement disorders. Qualifications for the position include a Ph.D. or master's degree, with 2 years of experience in laboratory research. Preference will be given to applicants with experience in the following areas: neuropharmacology, biochemistry, neurochemistry, familiar with the operation of HPLC, GC-MS, and knowledge of handling primate and other laboratory animals. Résumés for this position will be accepted through 14 June 1985, or until the position is filled. Please send résumés to: Bala V. Manyam, M.D., Department of Internal Medicine, SIU School of Medicine, P.O. Box 3926, Springfield, Illinois 62708. SIU School of Medicine is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

REPRODUCTIVE BIOLOGIST

The established in vitro Fertilization Program at the University of Miami School of Medicine is recruiting a director for its IVF laboratory. Applications invited from qualified persons with a Ph.D. degree and experience in in vitro fertilization. Position includes a tenure-earning faculty appointment in obstetrics/gynecology. Salary commensurate with experience. Ample opportunity for independent and collaborative research. Reply by 1 July 1985, with curriculum vitae and names of three references, to:

William J. LeMaire, M.D., Professor
Head, Division of Reproductive Endocrinology
Department of Obstetrics and Gynecology (D-5)
P.O. Box 016960
Miami, Florida 33101

Equal Opportunity/Affirmative Action Employer

RESEARCH ASSOCIATE, POSTDOCTORAL for individual with background in neurobiology. Research project focuses on the marking and tracking of neurons from the acoustic receptors through the central nervous system to the motor outputs of the Noctuid moth, *Heliothis zea*. Previous experience in neuroanatomy and/or neurophysiology desirable. This is an Agricultural Research Service (ARS), U.S. Department of Agriculture (USDA) position. GS-11, salary: \$26,300 for 1 year, with probable renewal for a second year. U.S. citizenship required. Equal Opportunity Employer. Send résumé to: Dr. Herndon R. Agee, Insect Attractants, Behavior, and Basic Biology Research Laboratory, USDA, P.O. Box 14565, Gainesville, Fla. 32604; or telephone: 904-374-5737.

STAFF RESEARCHER to carry out research involving purification and characterization of protein kinase from several cell types and to determine its role in inflammatory processes. Candidate should have a minimum of 2 years of postdoctoral experience working with cellular receptors for hormones or other biologically active molecules as they relate to purification and evaluation of their biological role in cellular functions. Hands-on experience in determining binding parameters using both purified receptors and intact cells as well as in computer modeling of ligand-receptors binding data is essential. Experience with protein phosphorylation as they relate to control of biochemical functions of the cell is highly desirable. Proven originality and productivity are very important. Job site: Palo Alto. Salary: \$35,000 per year. Please send résumé to: Ad Number 5326, P.O. Box 865, Sacramento, Calif. 95804, no later than 30 days after date of publication.

A **SYNTHETIC PEPTIDE CHEMIST**, with a strong interest in immunochemistry, is required by our Virology and Immunology Department for participation in research programs on major health problems related to viral infections. Major projects are in the areas of viral hepatitis and AIDS. Applicants should have a strong background in organic and physical chemistry with a Ph.D. in biochemistry or microbiology and an interest in at least one of the following areas: immunopotentialization of the immune response to natural and synthetic viral antigens, viral vaccines, serological techniques and development of new chemical synthetic procedures. Ample opportunity exists to initiate new projects in virology or cardiovascular diseases and to work with other departments at the Foundation as well as the nearby University of Texas Health Science Center. Please mail curriculum vitae, plus names of three references, to arrive by 31 May 1985, to: Personnel Manager, Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, Texas 78284. An Equal Opportunity/Affirmative Action Employer.

TEACHER-INVESTIGATOR in neuromuscular diseases is needed by Tulane Medical School's Department of Psychiatry and Neurology. This is a tenure-track position, academic rank and salary depending on qualifications. Principal duties are teaching undergraduate medical students, biomedical engineering students, and residents in neurology. It is expected that the successful applicant will conduct research in various aspects of neuromuscular diseases. Applicants must be fully trained in neurology with at least two additional years of training in neuromuscular diseases. Competence in electromyography, muscle and nerve pathology essential. Send curriculum vitae to: Joseph B. Green, M.D., Department of Psychiatry and Neurology, Tulane Medical School, 1430 Tulane Avenue, New Orleans, La. 70112. Tulane is an Affirmative Action/Equal Opportunity Employer. Qualified women and minority candidates are encouraged to apply.

VIROLOGIST PROTEIN BIOCHEMIST

MOLECULAR THERAPEUTICS, INC. is a newly organized biotechnology research group affiliated with Bayer AG of West Germany and its subsidiaries Molecular Diagnostics, Inc., and Miles Laboratories, Inc. We are located in a sizable, attractive, and well equipped facility, 10 minutes from West Haven and 90 minutes from New York City.

The company functions independently as a basic research facility guided by an internationally recognized Scientific Board. Areas of research include molecular and cellular genetics, nucleic acids chemistry, immunochemistry, and protein chemistry. We are currently seeking to expand our initial scientific Staff, and offer outstanding opportunities for PhD's with appropriate qualifications.

VIROLOGIST/MOLECULAR BIOLOGIST

Should have strong research experience in the molecular genetics of animal viruses. Emphasis on mammalian infection systems and virus-host interactions is desirable.

PROTEIN BIOCHEMIST

Should have strong research experience with a wide variety of protein and immunochemical procedures including purification, characterization, and derivatization of proteins and their interactions with receptors and ligands. Experience in peptide mapping and sequencing would also be desirable.

Applicants for each position must have at least 2-3 years' postdoctoral experience and must demonstrate capabilities for carrying primary research program responsibilities and for directing scientific personnel. Individuals should be able to function effectively in an informal but challenging research environment which includes academic ties. These positions offer attractive compensation, generous benefits, and an excellent opportunity for personal and professional growth.

Please send a curriculum vitae along with a statement of research interest and capabilities in confidence to: Research Director.

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POSITIONS OPEN

RESEARCH ASSOCIATE IN MOLECULAR BIOPHYSICS

The Department of Biochemistry, University of Minnesota, invites applications for the position of research associate (annual, renewable appointment) in molecular biophysics. Responsibilities: (i) perform independent research on spectroscopic studies of muscle contractions, (ii) give lectures in graduate level courses on biophysical spectroscopy, muscle biochemistry, and membrane biochemistry, and (iii) supervise graduate students and teach them laboratory techniques. Experience required: (i) Ph.D. in biophysics, (ii) at least 1 year of research on muscle biochemistry or physiology, and (iii) at least 2 years of research using electron paramagnetic resonance. Applications must be postmarked by 1 June 1985. Send curriculum vitae and three letters of reference to: **Molecular Biophysics Search Committee, Department of Biochemistry, Medical School, University of Minnesota, 4-225 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.

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Biochemistry Department
SOUTHERN RESEARCH INSTITUTE
P. O. Box 55305
Birmingham, Alabama 35255-5305

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Board-certified/eligible clinical pathologist for staff of veterinary school and associated animal teaching hospital. Responsibilities include pathology teaching (veterinary students and residents) with opportunity for basic/clinical research. Prior clinical experience desirable. Send replies and references to: **Martin H. Flax, M.D., Ph.D., Professor and Chairman, Department of Pathology, Tufts University School of Veterinary Medicine, 136 Harrison Avenue, Boston, Mass. 02111.** This University is an Equal Opportunity/Affirmative Action Institution.

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Dr. Leland C. Clark, Jr.
Children's Hospital Research Foundation
Elland and Bethesda Avenues
Cincinnati, Ohio 45229

An Equal Opportunity/Affirmative Action position; women and minorities encouraged.

POSTDOCTORAL FELLOWSHIP position available immediately for research related to molecular and cell biology of ovarian folliculus development and mammalian gametes. Send curriculum vitae and three letters of recommendation to:

Dr. B. Dunbar
Department of Cell Biology
Baylor College of Medicine
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NSERC UNIVERSITY RESEARCH FELLOWSHIP. Assistant professorship, tenable 3 to 5 years. Applications invited from Canadian citizens and permanent residents for position(s) in: population/evolutionary genetics, plant/microbial physiology/biophysics, or neurobiology. Send curriculum vitae, publications list, and three referees names before 28 June to: **Chairman, Department of Biological Sciences, Brock University, St. Catharines, Ontario, Canada L2S 3A1, from whom further information can be obtained. Telephone: 416-688-5550.**

POSTDOCTORAL FELLOWSHIP immediately available for immunological studies of fibrosis in complications of burn trauma. Research goal directed to improving patient management. Experience in cellular immunology desirable. Please contact:

Dr. Paul Ehrlich
Shriners Burns Institute
Blossom Street
Boston, Mass. 02114

POSTDOCTORAL FELLOWSHIP available from July for research on normal and neoplastic prostate. Experience in enzyme purification and kinetics required, in synthetic steroid chemistry desirable. The laboratory is affiliated with Tufts University School of Medicine and Laboratory of Toxicology, Harvard School of Public Health. Please send curriculum vitae and names of three references to: **Dr. Peter Ofner, Lemuel Shattuck Hospital, 170 Morton Street, Boston, Massachusetts 02130.**

POSTDOCTORAL FELLOWSHIPS available for study of neural control of behavior or developmental neurobiology. Participating faculty and research areas are: George Bittner (synaptic facilitation, modulation and regeneration), James L. Larimer (generation of motor behaviors in crustacea), George Pollak (CNS mechanisms of sound localization in echolocating bats), Wesley Thompson (neuromuscular synapse elimination), and Harold Zakon (mechanisms of receptor tuning in weakly electric fish). Applicants should write one of the faculty at: **The Department of Zoology, University of Texas, Austin, Tex. 78712.** Applicants should enclose curriculum vitae and furnish the names, addresses, and telephone numbers of three persons who can provide reference letters. *Equal Opportunity Employer.*

FELLOWSHIPS

IMMUNOLOGY POSTDOCTORAL FELLOWSHIPS funded by an NIH Training Grant are available now in the University of Iowa Immunology Group. Laboratories include: Dr. Robert Ashman (B cell activation), Dr. John Butler (secretory immunity, immunochemistry), Dr. Robert Clark (neutrophil physiology), Dr. Thomas Feldbush (B cell memory), Dr. Nancy Goeken (transplantation immunology), Dr. William Johnson (immunology of bacterial infection), Drs. Gary Hunninghake and Hal Richerson (pulmonary cellular immunology), Dr. Richard Lynch (regulation of myeloma cell growth and Ig secretion), and Dr. David Lubaroff (T cell function). Contact: **Dr. Robert F. Ashman, Department of Internal Medicine, University of Iowa, Iowa City, Iowa 52242; telephone: 319-356-2287.** The University of Iowa is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP. NIMH-sponsored fellowship at Harvard Medical School available 1 September 1985 for qualified Ph.D. or M.D. in brain topographic mapping (BEAM) of EEG to study event-related potentials (P300) and cognitive processes in schizophrenics and normals with Drs. Robert W. McCarley and Frank H. Duffy. Experience with EEG recording techniques necessary, familiarity with computer and multivariate statistical techniques useful. Send curriculum vitae to: **Karen Lyon, Program Administrator, Clinical Research Training Program, 74 Fenwood Road, Boston, Mass. 02115. Telephone: 617-734-0031.**

TRAINING PROGRAMS

POSTDOCTORAL TRAINING PROGRAM IN SLOW INFECTIONS

NIH/University of California San Francisco (UCSF) postdoctoral training program in the molecular biology and chemical structure of slow infectious agents, or prions. Program emphasizes studies on experimental scrapie in rodents as a model degenerative neurologic disease. Areas of study include: molecular cloning, expression of cloned genes, gene mapping and time structure, immunogenetics, production of monoclonal antibodies to synthetic peptides, ultrastructure and x-ray diffraction of filamentous and membrane proteins, molecular neuropathology, and experimental neurology. Program is directed by five UCSF faculty members. Candidates should be U.S. citizens or permanent residents committed to a research career and hold a Ph.D., M.D., or D.V.M. degree. Experience in molecular biology, biochemistry, biophysics, macromolecular structure, immunology, virology, neurology, or neuropathology is encouraged. Appointments, beginning 1 June 1985, are for 3 years with a salary ranging from \$15,996 to \$30,000. Send curriculum vitae and three letters of reference to: **Dr. Stanley Prusiner, Department of Neurology, HSE 781, University of California, San Francisco, Calif. 94143.** The University of California is an Affirmative Action/Equal Opportunity Employer.

REQUEST FOR PROPOSALS

REQUEST FOR PROPOSALS. Research on the effects of atmospheric deposition on spruce-fir forests will be supported in 1985 by the Northeastern Forest Experiment Station, on behalf of the U.S. Department of Agriculture (USDA) Forest Service and the Environmental Protection Agency. A Request for Proposals will be issued in May or June for laboratory and field research projects. Send written inquiries to: **USDA Forest Service, Room 308 (ASDPL), 370 Reed Road, Broomall, Pa. 19008.**

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

OPENING DATE: May 1, 1985

CLOSING DATE: May 31, 1985

(All applicants must be postmarked before closing date)

The National Institutes of Health invites nominations and applications for the position of Associate Director for Medical Applications of Research, Office of the Director, NIH. The Associate Director provides leadership and direction to the Office of Medical Applications of Research (OMAR), and advises the Director, NIH, and the senior staff on matters pertaining to medical applications of research. The OMAR coordinates, reviews, and facilitates the systematic identification and evaluation of clinically relevant NIH research program information, and promotes the effective transfer of this information to the health care community. The OMAR also provides a link between technology assessment activities of the NIH components, and monitors the effectiveness and progress of the assessment/transfer activities of the NIH.

This is a Civil Service position in the Senior Executive Service (SES), with an authorized salary range from \$61,296 to \$68,700 per annum depending on qualifications. Candidates may be eligible for Physicians Comparability Allowance up to \$10,000 per year. Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.

This position requires experience at a senior level in managing a research program in the biomedical sciences and/or clinical applications. Additional information, including the formal vacancy announcement, may be obtained from Mrs. Helen C. Stafford, (301) 496-4197.

Applications (Personal Qualifications Statement, SF-171) are to be sent to Helen C. Stafford, Executive Secretary, Search Committee for Director, OMAR, National Institutes of Health, Shannon Building, Room 19, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.

ALL QUALIFIED CANDIDATES WILL RECEIVE CONSIDERATION WITHOUT REGARD TO RACE, RELIGION, COLOR, SEX, AGE, NATIONAL ORIGIN, LAWFUL POLITICAL AFFILIATION, MARITAL STATUS, UNION MEMBERSHIP, OR ANY NONDISQUALIFYING PHYSICAL OR MENTAL HANDICAP.

United States Department of Agriculture

Postdoctoral Research Associates

The Agricultural Research Service as the principal scientific research agency of USDA, conducts research to produce more and better food and fiber; to control insect pests and weeds safely; to get food to consumers in better condition; to improve human nutrition; to help protect soil, water, and air, and to find new uses for agricultural commodities. Much of the work is on the cutting edge of each discipline—biotechnology (including molecular biology, genetic engineering, and membrane research), application of theories of artificial intelligence to computer technology, and innovative approaches to pest control through insect neurochemistry and the use of pheromones.

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