

tation. This handsome volume on South African plant exploration, with the beautiful colored frontispiece drawing of a baobab by Thomas Baines, will surely find a permanent and distinguished place on the bookshelves of both plant systematists and historians of science.

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Evolution of an Orogenic Belt

Major Structural Zones and Faults of the Northern Appalachians. Papers from a symposium, Quebec City, May 1979. P. ST.-JULIEN and J. BÉLAND, Eds. Geological Association of Canada, Waterloo, Ontario, 1982. vi, 280 pp., illus. C\$29; to association members, C\$24. Geological Association of Canada Special Paper 24.

One of the imposing problems of regional geology is the application of the plate tectonic paradigm to crustal evolution in ancient orogenic zones. Recognition of continent-ocean interfaces within polydeformed and metamorphosed orogenic belt rocks is a typical example. This is one of the major considerations of this book. A collection of diverse papers concerning the tectonic evolution of the northern Appalachians, the book is loosely divided into two parts, dealing with tectonostratigraphic zonation and with the boundaries and faults within the belt. The papers are diverse in topic, data base, and overall geological significance. Some, such as an excellent and detailed synthesis of New England by Hall and Robinson and a discussion of the Baie Verte-Brompton line by Williams and St.-Julien, represent a culmination of many years of fieldwork. These, I think, are the major papers in the book.

Several of the other papers deal with documentation and delineation of oceanic crust remnants in various parts of Canada, New England, and the northern U.S. maritimes. Of note here are papers on the Taconian line in western New England by Hatch, the soapstones of Connecticut Valley and New Hampshire by Lyons *et al.*, and ophiolite assemblages in central western Maine by Boudette. Papers by Ruitenberg and McCutcheon and by Fyffe deal with the structural overprint of three orogenic phases and the structural evolution of New Brunswick respectively. Diachronous impingement of irregular continental margins during continent-arc collisional events is discussed by Doolan *et al.* with

respect to the Quebec reentrant. Papers on fault zones, such as those by Rast and Dickson, Keppie, and Kennedy *et al.*, once again highlight a developing scenario in which major structural discontinuities are reactivated through time in orogenic belt evolution. A minor comment is perhaps necessary here regarding the use of the term "cataclasite" to refer to mylonite series rocks. Although persistent in North America, this is not current practice elsewhere.

A paper by Haworth and Miller defining the subsurface geometry of ophiolitic rocks at Notre Dame Bay, Newfoundland, by geophysical techniques illustrates the importance of applying all facets of geology and geophysics to define models of tectonic evolution. The key to the book is the interaction of mapped geologic relations, lithofacies variations, structural setting, and mesoscopic structure in the attempt to reconstruct the history of the Caledonides. Controversy will still exist about the significance of some of these documented zones and boundaries, and many questions remain to be answered, but this volume makes a timely contribution to our knowledge of this region of the crust.

In short, the volume will be useful to workers in the northern Appalachians and to people interested in Appalachian tectonics, although it should be pointed out that the editors also provide a brief review of the tectonostratigraphic zonation and the associated orogenies. This enables the uninitiated reader to plunge straight into the individual papers.

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Books Received

The ABC and XYZ of Bee Culture. An Encyclopedia Pertaining to Scientific and Practical Culture of Bees. A. I. Root. Revised by E. R. Root, H. H. Root, J. A. Root, and L. R. Goltz. A. I. Root Company, Medina, Ohio, ed. 38, 1982 (distributor, Scribner, New York). viii, 712 pp., illus., + index. \$24.95.

Advances in Biochemical Engineering. A. Fiechter, Ed. Springer-Verlag, New York, 1981 and 1982. Vol. 19, Reactors and Reactions. viii, 270 pp., illus. \$57.90. Vol. 20, Bioenergy. x, 210 pp., illus. \$38. Vol. 21, Microbes and Engineering Aspects. viii, 230 pp., illus. \$39. Vol. 22, Space and Terrestrial Biotechnology. viii, 230 pp., illus. \$39.

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(Continued on page 202)

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Literature

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Products for Separations Technology lists materials for chromatography, ultrafiltration, and microfiltration. Amicon. Circle 572.

Instrumentation for Biotechnology includes a chart on the generation of monoclonal antibodies and information on process control and physiologic instrumentation and synthetic peptides. Beckman Instruments, Spinco Division. Circle 573.

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RNasin brochure details the uses and applications of this ribonuclease inhibitor. Biotec. Circle 576.

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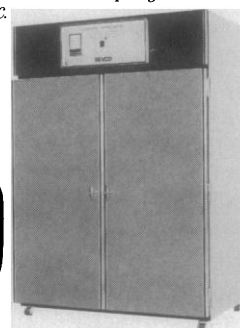
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(Continued from page 167)

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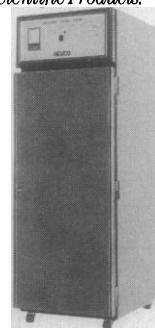
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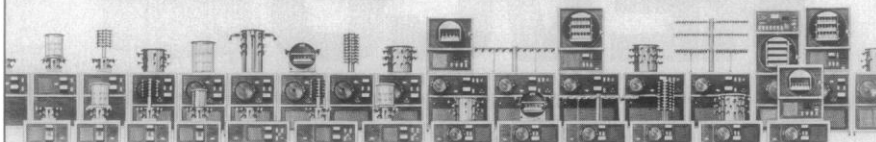
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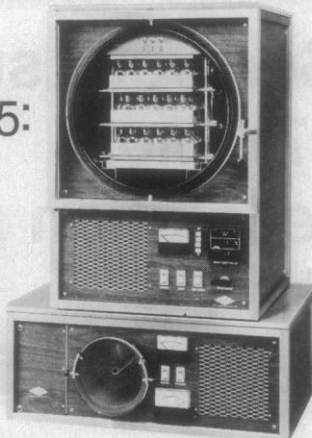
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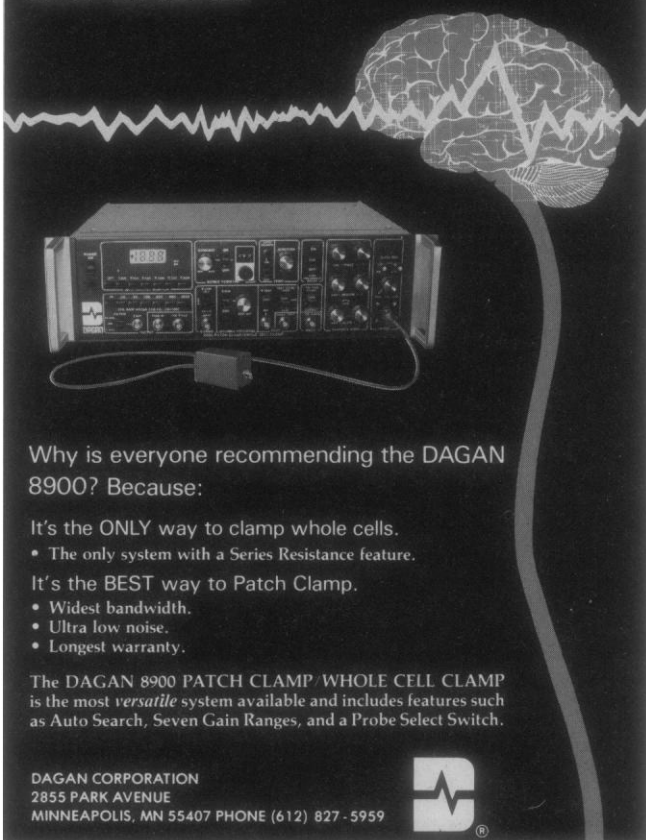
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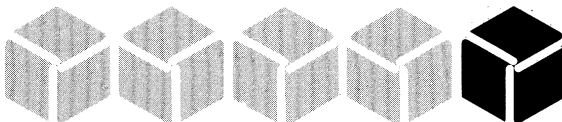
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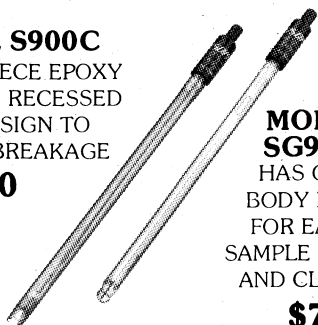
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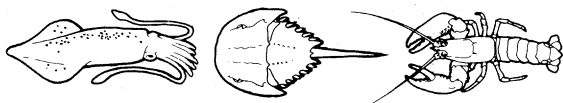
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Social Insects. Vol. 4. Henry R. Hermann, Ed. Academic Press, New York, 1982. xiv, 386 pp., illus. \$52.

The Social Sciences. Their Nature and Uses. Papers from a meeting, Chicago, Dec. 1979. William H. Kruskal, Ed. University of Chicago Press, Chicago, 1982. xvi, 166 pp. \$12.

Societas Ergophthalmologica Internationalis. Proceedings of symposia, Bordeaux, 1974, Hamburg, 1976, and Nagoya, 1978. H.-J. Merté, Ed. Karger, Basel, 1982. xx, 756 pp., illus. Paper, \$178.50. Arbeitsmedizinische Fragen in der Ophthalmologie, vols. 5-7.

Soil Water Assessment by the Neutron Method. Papers from a meeting. E. L. Greacen, Ed. CSIRO, East Melbourne, Australia, 1981 (U.S. distributor, ISBS, Beaverton, Ore.). viii, 140 pp., illus. Paper, \$17.50.

Stress Analysis of a Strapless Evening Gown. And Other Essays for a Scientific Age. Robert A. Baker, Ed. Drawings by Stanley Wyatt. Prentice-Hall, Englewood Cliffs, N.J., 1982. xvi, 192 pp. Paper, \$4.95. Reprint of the 1963 edition.

Structural and Functional Organization of the Placenta. Papers from a symposium, Hamburg, Sept. 1981. P. Kaufmann and B. F. King, Eds. Karger, Basel, 1982. viii, 164 pp., illus. \$91.75. Bibliotheca Anatomica, No. 22.

Studies of Mind and Brain. Neural Principles of Learning, Perception, Development, Cognition, and Motor Control. Stephen Grossberg, Reidel, Boston, 1982 (distributor, Kluwer Boston, Hingham, Mass.). xviii, 662 pp., illus. Cloth, \$59.50; paper, \$23.95. Boston Studies in the Philosophy of Science, vol. 70.

Study Topics in Physics. Revision and Workbook. W. Bolton. Butterworth, Boston, 1982. vi, 188 pp., illus. Paper, \$9.95.

Textbook of Commerce. Henry G. Hughes and John W. Loveridge. Butterworths, Boston, ed. 3, 1982. xviii, 340 pp., illus. \$15.95.

Theilheimer's Synthetic Methods of Organic Chemistry. Vol. 36, Yearbook, 1982. Alan F. Finch, William Theilheimer, and David G. Hawkins, Eds. Karger, Basel, 1982. xxiv, 530 pp., illus. \$298.25.

A Theory of Feeding and Growth of Animals. John R. Parks. Springer-Verlag, New York, 1982. xvi, 324 pp., illus. \$55. Advanced Series in Agricultural Sciences 11.

Theory of Laminar Flames. J. D. Buckmaster and G. S. Ludford. Cambridge University Press, New York, 1982. xii, 266 pp., illus. \$49.50. Cambridge Monographs on Mechanics and Applied Mathematics.

The Theory of Lengthwise Rolling. A. I. Tselikov, G. S. Nitkin, and S. E. Rokotyan. Translated from the Russian edition (1980), with revisions, by V. Afanasyev. Mir, Moscow, 1981 (U.S. distributor, Imported Publications, Chicago). 342 pp., illus. \$10.

Thermal Energy Storage. Papers from a course, Ispra, Italy, June 1981. G. Beghi, Ed. Reidel, Boston, 1982 (distributor, Kluwer Boston, Hingham, Mass.). vi, 506 pp., illus. \$59.50. Ispra Courses on Energy Systems and Technology.

Third European IUE Conference. Madrid, May 1982. European Space Agency, Paris, 1982 (available from Scientific and Technical Publications Branch, ESTEC, Noordwijk, Netherlands). xiv, 622 pp., illus. Paper, 175 F. ESA SP-176.

Tissue Culture in Forestry. J. M. Bonga and D. J. Durzan, Eds. Nijhoff, The Hague, 1982 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xii, 420 pp., illus. \$49.50.

Toward Safer Underground Coal Mines. Committee on Underground Coal Mine Safety. National Academy Press, Washington, D.C., 1982. xvi, 190 pp., illus. Paper, \$10.50.

Toxic Chemicals. The Interface Between Law and Science. Aaron S. Davis and Valerie A. Wilk. Farmworker Justice Fund, Washington, D.C., 1982. viii, 146 pp. Paper, \$15.

Toxic Shock Syndrome. Assessment of Current Information and Future Research Needs. Report of a Study. National Academy Press, Washington, D.C., 1982. x, 116 pp. Paper, \$10.95.

Trace Substances and Health. A Handbook, Part 2. Paul M. Newberne, Ed. Dekker, New York, 1982. x, 176 pp., illus. \$27.50.

Track of the Grizzly. Frank C. Craighead, Jr. Sierra Club Books, San Francisco, 1982. x, 262 pp., illus., + plates. Paper, \$9.95. Reprint of the 1979 edition.

Transport in Skeletal Muscle. Raymond A. Sjodin. Wiley-Interscience, New York, 1982. xvi, 158 pp. \$35. Transport in the Life Sciences, vol. 3.

Treatise on Materials Science and Technology. Vol. 22. Glass 3. Minoru Tomozawa and Robert H. Doremus, Eds. Academic Press, New York, 1982. xii, 320 pp., illus. \$48.

Twenty-One Astounding Science Quizzes. Grace Marmor Spruch and Larry Spruch. Barnes and Noble (Harper and Row), New York, 1982. 152 pp., illus. Paper, \$4.95.

Wolves of the World. Perspectives of Behavior, Ecology, and Conservation. Fred H. Harrington and Paul C. Paquet, Eds. Noyes, Park Ridge, N.J., 1982. xx, 474 pp., illus. \$48. Noyes Series in Animal Behavior, Ecology, Conservation and Management.

Writings of Charles S. Peirce. A Chronological Edition. Vol. 1, 1857-1866. Max H. Fisch and five others, Eds. Indiana University Press, Bloomington, 1982. xxxviii, 698 pp. \$32.50.

Yassi Ada. Vol. 1, A Seventh-Century Byzantine Shipwreck. George F. Bass and Frederick H. van Doorninck, Jr., with Vaughn M. Bryant, Jr., and ten others. Texas A&M University Press, College Station, 1982. xvi, 350 pp., illus. \$79.50.

Personnel Placement

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POSITIONS OPEN

ANATOMY FACULTY POSITION. Position open for assistant or associate professor of anatomy. Ph.D. required. Previous teaching experience preferred. Duties include teaching human anatomy sequence and embryology. Salary commensurate with background and experience. Send application, curriculum vitae, and three letters of recommendation to: **Anthony Bonduki, Ph.D., Sherman College of Straight Chiropractic, P.O. Box 1452, Spartanburg, S.C. 29304.** Deadline: 18 February 1983.

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The qualified candidate will be a veterinary pathologist with toxicology training and experience in industrial toxicological pathology. Candidates must have D.V.M. and Ph.D. in veterinary pathology with certification by the American College of Veterinary Pathologists. Candidates must also have significant experience in electron microscopic evaluation of animal tissue and specialized training in neuropathology.

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Faculty positions open in leading Midwest university hospital setting. Specialty Board-certification or eligibility is required. Activities include patient care, teaching at all levels, supervision of house staff, advanced life support, research, and administration. Send curriculum vitae to: **James R. Mackenzie, M.D., Head, Section of Emergency Services, Department of Surgery, C4020 Outpatient Building, University of Michigan Hospitals, 1405 East Ann Street, Ann Arbor, Mich. 48109.** A nondiscriminatory, Affirmative Action Employer. Code 173.

ANATOMY AND CELLULAR BIOLOGY: TENURE-TRACK POSITIONS

The Department of Anatomy and Cellular Biology, Tufts University Schools of Medicine, Dental Medicine, Veterinary Medicine, and the Sackler Graduate School of Biomedical Sciences, invites applications for tenure-track positions at the assistant and associate/full professor levels beginning July 1983. Applicants should hold the Ph.D. in anatomy and/or the M.D., D.M.D., or D.V.M. (or equivalent). Applicants should be qualified to teach either human gross anatomy or microscopic anatomy. Applicants at the assistant professor level should have at least 2 years of postdoctoral research experience and show promise of developing an active and independent research program. Applicants at the associate or full professor level should have an active, funded research program and teaching experience in either gross or microscopic anatomy. Current research areas in the department include: pulmonary cell biology and metabolism, reproductive biology and neuroendocrinology, neurobiology, muscle biology and the effects of stress/disease on the musculoskeletal system, and cell/developmental biology including secretory mechanisms, cell-extracellular matrix interactions, cell motility, and control of cell multiplication. Salary and rank dependent upon qualifications and experience. Applicants are invited to submit curriculum vitae, names of three references, and a letter describing research and teaching interests to: **Dr. Karen R. Hitchcock, Chairman, Department of Anatomy and Cellular Biology, Tufts University Schools of Medicine, Dental Medicine, and Veterinary Medicine, 136 Harrison Avenue, Boston, Massachusetts 02111.** Deadline for receipt of applications is 1 March 1983.

Tufts University is an Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF UTAH COLLEGE OF PHARMACY

APPLIED PHARMACOKINETICS: A tenure-track faculty position in the Department of Pharmaceutics, College of Pharmacy. Rank is open and commensurate to ability and experience.

Primary responsibilities include research and teaching at both undergraduate and graduate levels, as well as significant collaboration and interaction with existing units in toxicology, drug testing, and clinical pharmacy.

Please send a letter of interest, complete curriculum vitae, including list of publications, supporting materials, and names and addresses of three technical references by 1 March 1983 or until position is filled to: **Pharmacokinetics Search, Department of Pharmaceutics, College of Pharmacy, University of Utah, Salt Lake City, Utah 84112.**

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

ASSISTANT PROFESSOR Department of Physiology and Biophysics The University of Iowa College of Medicine

Applications are invited for a new tenure-track position at the assistant professor level available on or after 1 July 1983. We seek an individual with a background in physiology, biophysics, or biochemistry of membranes who will establish an independent research program on the structure, function and/or biosynthesis of hormone receptors, neurotransmitter receptors, transport ATPases, ionic channels, or metabolite transporters. Applicants must have the Ph.D. or M.D. degree and at least 2 years of postdoctoral experience, with a record of productivity in research. Screening will begin 1 March 1983. Please send curriculum vitae, description of research plans, and the names of three references to: **Dr. Michael Jennings, Department of Physiology and Biophysics, The University of Iowa, Iowa City, Iowa 52242.**

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POSITIONS OPEN

ASSISTANT PROFESSOR: Applicants are invited for a tenure-track position at the rank of assistant professor. Candidates possessing an M.D. or Ph.D., several years of postdoctoral experience, and a strong commitment to developing an independent research program are sought. Applicants with research interests in neuropharmacology or medicinal chemistry with an emphasis on neuro-active substances are preferred, but applications from candidates in any area of molecular pharmacology are welcomed. Responsibilities include participation in departmental teaching for medical and graduate student training. Inquiries, which should include curriculum vitae, synopsis of current research interests, list of publications, reprints of selected publications, and the names of five references should be sent by 30 January 1983 to: **Dr. Francis Johnson, Chairman, Faculty Search Committee, Department of Pharmacological Sciences, School of Medicine, Health Sciences Center, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794.** SUNY Stony Brook is an Equal Opportunity/Affirmative Action Employer. AK Number 494A.

ASSISTANT PROFESSOR position available for person with Ph.D. in biochemistry and experience in DNA structural analysis, including gene mapping, cloning, and sequence analysis. The candidate will become a member of a research team involved in studies of selected hemoglobinopathies, supported by NIH grants. Salary negotiable. Application deadline: 1 March 1983. Send résumé and two references to: **Dr. T. H. J. Huisman, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, Georgia 30912.** Equal Opportunity/Affirmative Action Employer, M/F.

ASSISTANT PROFESSOR AND EXTENSION RESIDENTIAL ENERGY SPECIALIST in Department of Design, College of Home Economics, University of Minnesota, St. Paul. Twelve-month, tenure-track position with statewide extension education responsibilities in residential energy. Ph.D. preferred; master's required. At least one degree in mechanical engineering, architecture, or other physical science field is required. For application information, contact: **Jim J. Lewis, Extension Personnel, 260F Coffey Hall, University of Minnesota, St. Paul, Minn. 55108; telephone: 612-373-1865.** Application deadline: 1 March 1983. The University of Minnesota is an Equal Opportunity Employer and Educator and specifically encourages applications from women and minorities.

ASSISTANT PROFESSORSHIPS: Inorganic and organic tenure-track positions. Applicants for these tenure-track positions must be committed to excellence in research and teaching. Areas of research should complement those presently represented in the department. Candidates should send complete curriculum vitae, which includes a description of future research plans and a documented summary of past accomplishments, and arrange to have at least three letters of recommendation sent to: **Chairman, Search Committee, Department of Chemistry, State University of New York at Buffalo, Buffalo, New York 14214-3094.** Interviewing of candidates will begin one month after publication of this advertisement and the position will be filled as soon as suitable individuals are identified. The Department of Chemistry is particularly interested in considering applications of women, ethnic minorities, or handicapped persons. State University of New York at Buffalo is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR OF ANATOMY. Tenure-track, fall 1983. Duties may include participation in human gross anatomy courses with cadaver dissection, neuroscience, and specialization course(s). A vigorous program of research is required (electron microscopy preferable). Candidates should submit curriculum vitae, copies of publications, and three letters of recommendation by 7 April 1983 to: **George Dalrymple, Department of Biological Sciences, Florida International University (FIU), Miami, Florida 33199.** FIU is a member of the State University System and an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR OF BIOCHEMISTRY. Funded on a 12-month basis with recurring University funds as 70 percent research, 30 percent teaching. It includes a full-time technician on similar funds. Qualifications: Ph.D. in biochemistry with at least 2 years of postdoctoral experience in nucleic acid biochemistry. Send curriculum vitae, three references, and reprints to: **S. B. Tove, Head, Biochemistry Department, North Carolina State University, Raleigh, N.C. 27650.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSORS

The Department of Biological Sciences, University of Maryland Baltimore County (UMBC), plans to make three tenure-track appointments for fall 1983 in: (i) **ANIMAL PHYSIOLOGY**, with research interests in invertebrate or vertebrate neural, endocrine, or regulation biology; (ii) **PLANT PHYSIOLOGY**, with research interests in photosynthesis, tumors, hormones, or molecular biology; and (iii) **IMMUNOLOGY, ANIMAL VIROLOGY, or MOLECULAR BIOLOGY** with specific teaching responsibilities in the areas of hybridoma technology.

Candidates must have postdoctoral training and a record of research accomplishments. Appointees are expected to initiate a productive research program and to teach at the undergraduate and graduate M.S. and Ph.D. levels. Send curriculum vitae, statement of future research interests, and names of four referees to:

Dr. S. D. Kung
Department of Biological Sciences
University of Maryland Baltimore County
Catonsville, Maryland 21228

UMBC is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR to develop a teaching and research program in manipulation of genetic material in mammalian embryos. A tenure-track position for a person with a Ph.D. in a biotechnology-related discipline. Nominee must have research expertise in areas of mammalian embryology, manipulation of genetic material in embryos, gene cloning and splicing, and gene insertion. Interaction with other scientists in campus-wide program in biotechnology essential. Send transcripts, three letters of reference, and résumé by 1 March 1983 to: **Dr. Charles A. Lassiter, Head, Department of Animal Science, North Carolina State University, P.O. Box 5127, Raleigh, N.C. 27650.**

An Equal Opportunity Employer

ASSISTANT PROFESSOR—BIOCHEMISTRY. The Department of Biochemistry at the State University of New York (SUNY), Upstate Medical Center, invites applications for a tenure-track position available beginning August 1983. The candidate's previous research experience should include use of recombinant DNA techniques in studies of basic biochemical problems. Applicants should have postdoctoral experience, a demonstrated productivity in research, and a commitment to excellence in teaching medical and graduate students. Please send a résumé and a short summary (1 to 2 pages) of your future research interests by 15 March 1983. In addition, please have three references forward their letters of evaluation as soon as possible to: **Dr. Richard L. Cross, Department of Biochemistry, SUNY, Upstate Medical Center, Syracuse, New York 13210. Telephone: 315-473-5127.** *An Affirmative Action/Equal Opportunity Employer.*

TEMPORARY ASSISTANT PROFESSORSHIPS DEPARTMENT OF BIOLOGY EMORY UNIVERSITY

Four 3-year, nontenure-track positions will be available in the Department of Biology, effective 1 September 1983. Three of these positions will be teaching/research positions. Successful candidates will be expected to teach in the undergraduate program and to pursue research in association with an established investigator in the department. Current research programs in the department include **MOLECULAR and GENERAL GENETICS, CELLULAR BIOLOGY, DEVELOPMENTAL BIOLOGY, NEUROBIOLOGY, EVOLUTION, POPULATION BIOLOGY, and ECOLOGY.** Although preference will be given to applicants with strong training and research experience at the molecular level, the principal consideration for employment will be excellence of the candidates. The fourth position will be devoted exclusively to full-time teaching in the introductory sequence of the undergraduate program. Salary: \$20,000 for a 9-month appointment. Summer salary supplementation may be possible from association with specific research programs within the department or by summer teaching. Applicants must send curriculum vitae and the names of three references by 15 February 1983 to:

Dr. P. Dennis Smith
Chairman of the Search Committee
Department of Biology, Emory University
Atlanta, Ga. 30322

Emory University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY

Two tenure-track positions (genetics and physiology) available for fall 1983. Applicants must have their Ph.D. degree and be committed to undergraduate teaching in a strong pre-professional program. New faculty members will be expected to develop graduate courses in their area of expertise and to conduct some research. Send curriculum vitae and three references to: **Dr. M. E. Warren, Department of Biology, Lamar University, P.O. Box 10037, Beaumont, Texas 77710.** *An Equal Opportunity/Affirmative Action Employer.* Application deadline: 25 February 1983.

ASSISTANT PROFESSOR OF BIOLOGICAL SCIENCES. The Division of Biological Sciences and Museum of Zoology, The University of Michigan, invite applications for a tenure-track position involving the molecular aspects of evolutionary biology and systematics. The successful applicant, who must have qualifications in molecular genetics, will be expected to develop a coherent program of research and teaching at the interface between molecular biology and evolutionary biology/systematics and supervise a laboratory of chemical systematics being established in the Museum of Zoology. Teaching load will be adjusted in recognition of this latter responsibility. Postdoctoral experience is desirable.

Applicants should arrange to have three supporting letters sent and to submit curriculum vitae, statement of research interests, and relevant reprints by 1 March 1983. The address for application materials is: **Search Committee, Molecular Evolutionary Biology, Division of Biological Sciences, The University of Michigan, Ann Arbor, Mich. 48109.** *The University of Michigan is a nondiscriminatory, Affirmative Action Employer.*

ASSISTANT PROFESSOR OF CHEMISTRY. The Chemistry Department at Amherst College seeks a Ph.D. chemist with a strong background and interest in biochemistry for a regular faculty appointment effective 1 July 1983. Excellent opportunity for a career emphasizing both research and undergraduate teaching. Teaching responsibilities may involve instruction in departmental courses at both elementary and advanced levels, one of which is an interdepartmental offering in biochemistry. The successful candidate will be expected to pursue a research program attracting the interest of chemistry majors and others such as students in our neuroscience program. Please send a résumé and brief description of your research and teaching ideas to: **Chairman, Department of Chemistry, Amherst College, Amherst, Massachusetts 01002,** no later than 8 February 1983. *Amherst College is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF ENTOMOLOGY. Tenure-track position; 85 percent research/15 percent teaching. Primary responsibility to conduct applied research on soil arthropods of agricultural importance. Opportunity for related basic research in incumbent's area of expertise. Participation in graduate teaching and training expected. Ph.D. required. Apply before 28 February 1983 by sending résumé, transcripts, Ph.D. thesis summary, reprints, and names of three references to: **R. J. Kuhr, Head, Department of Entomology, North Carolina State University, Raleigh, N.C. 27650.** *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR—GENETICS. The Department of Biological and Environmental Sciences, McNeese State University, invites applications for a tenure-track position in the general area of genetics, to begin August 1983. Applicants must have a Ph.D.; a strong commitment to research and teaching at both graduate and undergraduate levels is essential. Send résumé and summary of research plans by 15 March 1983 to: **Dr. Bill W. Taylor, Chairman, Biology Search Committee, Department of Biological and Environmental Sciences, McNeese State University, Lake Charles, La. 70609.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT RESEARCH PHYSIOLOGIST in the Cardiovascular Research Institute/Anesthesia Research Center, University of California, San Francisco. Respiratory, acid base, cerebral circulatory, barbiturate protection of injured brain, micro PO_2 , PCO_2 , electrodes, mass spectrometry, computer programming PDP 11/44 RSX11M. Position now open; salary range: Approximately \$23,800 to \$26,600. Apply to: **J. W. Severinghaus, M.D., 1386-HSE, University of California, San Francisco, San Francisco, Calif. 94143.** *The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

DIRECTOR—SCHOOL OF LIFE SCIENCES UNIVERSITY OF ILLINOIS AT URBANA—CHAMPAIGN

The School of Life Sciences (SOLS) at the University of Illinois at Urbana-Champaign includes the Departments of Anatomical Sciences; Botany; Ecology, Ethology, and Evolution; Entomology; Genetics and Development; Microbiology; Physiology and Biophysics, and the Center for Electron Microscopy, Museum of Natural History, and other support facilities. The director is the chief academic and administrative officer of the school, with responsibility for administrative and budgetary decisions, and for leading the faculty in the development of educational policy. An extensive program in general biology and premedical education is managed by the School. In addition, many faculty in the School share appointments in the School of Medicine and in the Colleges of Agriculture and Veterinary Medicine located on the campus. The director reports to the dean of the College of Liberal Arts and Sciences.

The Search Committee seeks candidates with a distinguished research record in the biological sciences who will continue research while serving as director. The director will have an important role in determining the future of the biological sciences on this campus. Successful administrative experience is preferred, though not necessary. Salary is negotiable with responsibilities to be assumed no later than 1 July 1984 but preferably by 21 August 1983.

To ensure full consideration, nominations or applications with a current résumé should be sent by 1 March 1983 to:

Search Committee for the SOLS Directorship
University of Illinois at Urbana-Champaign
294 Lincoln Hall
702 South Wright Street
Urbana, Ill. 61801
Telephone: 217-333-1350
Philip Teitelbaum, Chair
John Boyer (Botany)
Dennis Buetow (Physiology and Biophysics)
John Laughan (Genetics and Development)
Robert Metcalf (Entomology)
Ralph Wolfe (Microbiology)

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PROFESSOR AND CHAIRPERSON, DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY, UNIVERSITY OF MIAMI SCHOOL OF MEDICINE, MIAMI, FLORIDA.

Applications and nominations are invited for the position of professor and chairperson, Department of Microbiology and Immunology, University of Miami School of Medicine. Candidates with a distinguished record of research in immunobiology are especially encouraged. Applicants must have demonstrated leadership capability.

The chairperson will be expected to maintain a vigorous research program including a training program for postdoctoral fellows. Specific responsibilities of the departmental head include budget preparation, faculty evaluations, and initiation of recommendations for appointments, promotions, and tenure. They also include the management of undergraduate, graduate, and health science professional teaching programs.

The Department of Microbiology and Immunology has 20 full-time faculty members occupying over 1600 square feet of equipped laboratory space. Presently there are 43 predoctoral and postdoctoral trainees in the department. It is contiguous to the other Medical School departments and contained in a rapidly growing University Medical Center Complex near downtown Miami.

The department is affiliated with the Comprehensive Cancer Center of the University of Miami and several other multidisciplinary programs within the University. Additional tenure-track faculty appointments are anticipated in the department in the near future to facilitate departmental programs.

Applicants should send a statement of interest and curriculum vitae to:

J. Maxwell McKenzie, M.D.
Professor and Chairman
Department of Medicine
Chairperson, Microbiology and Immunology Search Committee
University of Miami School of Medicine
P.O. Box 016760 (R760)
Miami, Fla. 33101

POSITIONS OPEN

HARVARD MEDICAL SCHOOL, DEPARTMENT OF NEUROBIOLOGY, ASSISTANT PROFESSOR—Applications are invited for the position of assistant professor in the Department of Neurobiology at Harvard Medical School. Candidates should have a strong background in cell biology and in the use of immunological techniques to analyze the structure and function of the nervous system. The position will also involve active participation in the teaching of neuroscience to medical and graduate students. Applicants should submit curriculum vitae, statement of research interests, and the names of three references to: **Search Committee, Department of Neurobiology, Harvard Medical School, Boston, Mass. 02115**, by 15 February 1983. *Harvard Medical School is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR (neurobiology), nontenure-track. Term is 2 years, renewable; major teaching responsibility will be graduate/undergraduate neurobiology laboratory. Fall 1983. Candidate expected to pursue a vigorous research program. Please send curriculum vitae and three letters of reference to: **DeForest Mellon, Department of Biology, Gilmer Hall, University of Virginia, Charlottesville, Va. 22901**. Application deadline is 15 February. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF PHYSIOLOGY: NEUROPHYSIOLOGY. Position open for a Ph.D. or M.D. with at least 2 years of postdoctoral research experience for a tenure-track assistant professorship. This individual is expected to initiate and maintain a strong and independent research program and to participate in the teaching of the neurosciences. Researchers in the area of sensorimotor systems, cellular, developmental, and endocrine neurobiology are especially invited to apply. Applications, including curriculum vitae, a brief statement of research interests, and the names of three references, should be mailed by 15 February 1983 to: **Dr. Robert B. Gunn, Chairman, Department of Physiology, Emory University School of Medicine, Atlanta, Ga. 30322**. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF PHYSIOLOGY. A tenure-track position is available September 1983 for an individual with scientific interests in cellular/molecular neuroendocrine function, particularly release, secretion, and/or actions of mediators/hormones. Two years of postdoctoral experience in research and evidence of vigorous commitment to a career of investigator are expected. Teaching background in physiology or biology at the undergraduate level is desirable; initial instructional duties will be primarily in courses on systemic physiology to undergraduate health science students. Applications should include curriculum vitae, a statement of future research plans, and three independently sent letters of reference; they must be received by 28 February 1983 for first consideration. *Females and minorities are encouraged to apply.* All correspondence should be addressed to: **Neuroendocrine Search, Department of Physiology 206H, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27514**. *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.*

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT). The Department of Psychology anticipates an **ASSISTANT PROFESSORSHIP** with initial appointment for 3 years. The candidate should be an **experimental psychologist** with an active research program in human vision and with proven teaching ability. Applicants should send curriculum vitae, a brief letter describing their research program and teaching experience, and three letters of reference by 15 February 1983 to: **Jan Nagle (for the Search Committee), Department of Psychology (E10-139), Massachusetts Institute of Technology, Cambridge, Mass. 02139**. *MIT is an Equal Opportunity Employer.*

BIO-ORGANIC CHEMIST. Loyola University of Chicago expects to fill a tenure-track position available 1 September 1983. The position is at the assistant professor level but a higher rank will be considered depending upon qualifications. The candidate must present evidence of research and teaching ability commensurate with a Ph.D.-granting department. Applicants should submit curriculum vitae, including transcripts and a detailed statement of research plans, and have at least three letters of reference sent by 1 March 1983 to: **Professor Leslie Fung, Chairperson, Search Committee, Department of Chemistry, Loyola University of Chicago, Chicago, Ill. 60626**. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

BIOCHEMISTRY DEPARTMENT UNIVERSITY OF WISCONSIN-MADISON

Applications are invited for a faculty position as **assistant professor** in the Department of Biochemistry, University of Wisconsin-Madison. Exceptional individuals who would appropriately be appointed at higher ranks will also be considered. Candidates should have research interests and experience in the development of nuclear magnetic resonance spectroscopy and its application to biochemical problems. The successful applicant will be expected to develop a substantial independent research program, to teach in the Biochemistry Department's curriculum, and to supervise graduate students. Salary will be on a 12-month basis at a level that is commensurate with qualifications and experience and compatible with the salary structure of the University of Wisconsin system. *Women and minority candidates are especially encouraged to apply.* Send detailed curriculum vitae, including a statement of research accomplishments and interests and the names of three references, to: **H. F. DeLuca, Chairman, Department of Biochemistry, University of Wisconsin, Madison, Wis. 53706**, before 15 March 1983. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

BOTANIST

Assistant professor, August 1983, tenure-track. Ph.D. required. Able to teach plant physiology. Prefer cryptogram or non-vascular specialty. Research area open, electron microscopy optional. Teaching general biology, botany, advanced botany in area of specialty. Salary competitive. Program offers B.S. and M.S. degrees. State-supported university, enrollment 6000, department of 13 faculty. City of 20,000 located near both urban and wilderness areas. Send résumé, summary of course work, three letters of recommendation, and statement on philosophy of teaching before 1 March to: **Dr. Donald Culwell, Chairman, Botanist Search Committee, University of Central Arkansas, Conway, Ark. 72032**. *An Affirmative Action/Equal Opportunity Employer*

CELL BIOLOGIST

Applications are invited for a tenure-track assistant professor position in the Department of Biological Sciences at Wright State University, open 1 September 1983. Responsibilities involve teaching a graduate core course in cell biology, development of a research program to complement molecular, cellular, or genetic research groups in the M.S. and biomedical sciences Ph.D. programs, and participation in the undergraduate programs of the department. Doctorate in appropriate discipline required; teaching experience and postdoctoral research experience is highly desired. To apply, send curriculum vitae, a description of research interests, and names of three references by 18 February 1983 to: **Dr. John Rossmiller, Department of Biological Sciences, Wright State University, Dayton, Ohio 45435**. *An Affirmative Action/Equal Opportunity Employer*

CELL BIOLOGIST. The Department of Biology, University of California at San Diego, invites applications for a tenure-track faculty position, available 1 January 1984 in the general area of eukaryotic cell biology. The nontenured appointee must have had postdoctoral training and is expected to conduct a vigorous research program. The tenured appointee must already have made significant contributions to this field and is expected to continue a vigorous research program. Excellence in teaching and in the pursuit of an independent research program are the criteria to be met. Interest in an association with the Cancer Center is desirable but not required. Must have Ph.D. Applicants should send curriculum vitae, a list of publications, and a brief statement of research interests by 15 March 1983 to: **Joan Turner, Department of Biology B-022, University of California at San Diego, La Jolla, Calif. 92093**. *The University of California at San Diego is an Equal Opportunity/Affirmative Action Employer.*

CHAIRMAN, BIOLOGICAL SCIENCES. The University of Pittsburgh seeks an individual with an established record of research accomplishment and administrative ability to provide research and teaching leadership for a broad, 36-member department with an extensive graduate program and with concentrations in several areas of modern biology. Applications should be sent to: **Dr. Richard L. Russell, Search Committee Chairman, Department of Biological Sciences, University of Pittsburgh, Pittsburgh, Pa. 15260**. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA AT LOS ANGELES (UCLA) SCHOOL OF MEDICINE

Applications are invited to fill a tenured endowed professorship called the **JENNIFER JONES SIMON CHAIR IN BIOPHYSICS** within the **DEPARTMENT OF RADIOLOGICAL SCIENCES** at the UCLA School of Medicine. The endowment will be used to support the appointee's research which should be focused on both the normal and abnormal functioning of the human body involving, at least initially, the application of the nuclear medicine technique of positron emission tomography.

Highest priority will be accorded to applicants who have helped develop or have utilized emission tomographic and other comparably promising methods in nuclear medicine in the field of basic and/or clinical neuroscience research and who have demonstrated some of the potential that these methods may have for a better understanding of nervous and mental diseases. The Jennifer Jones Simon Professor is expected to qualify for appointment at the higher levels of the full professorship.

Applicants should forward a résumé or curriculum vitae and the names of at least three referees to the Search Committee chairman:

Dr. Carmine D. Clemente
Director, Brain Research Institute
UCLA School of Medicine
Los Angeles, California 90024

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

CHAIRMAN, DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY. Applications are invited for the position of chairman, Department of Microbiology and Immunology, Louisiana State University, School of Medicine in Shreveport. Applicants should have extensive research and teaching experience relative to microbiology and immunology and should have demonstrated leadership ability consistent with heading an academic department in a growing medical center. Applications, including complete curriculum vitae and the names of three persons who may be contacted for reference letters, should be sent no later than 15 February 1983 to: **Dr. John Diana, Department of Physiology and Biophysics, Search Committee for Microbiology, Louisiana State University Medical Center in Shreveport, P.O. Box 33932, Shreveport, Louisiana 71130**. *An Equal Opportunity Employer.*

CHAIRMAN, Department of Environmental Science, Oregon Graduate Center. Applications and nominations are sought for chairmanship of five-member, aggressive department with external research support exceeding \$1 million. Current department research includes aquatic chemistry, ground water pollution, toxic organics, atmospheric chemistry (trace gases, aerosols, rain), global modeling of tropospheric chemistry, and analytical environmental chemistry. The successful candidate should have a well-established research career of national stature. He/she will be expected to conduct an active, sponsored research program and to administer department affairs. Interested applicants should submit curriculum vitae (including list of publications) and the names of at least three references to: **Personnel Administrator, Oregon Graduate Center, 19600 N.W. Walker Road, Beaverton, Oregon 97006**. *An Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON DEPARTMENT OF PSYCHOLOGY WAYNE STATE UNIVERSITY

Applications and nominations are invited for the position of chairperson of the Department of Psychology with duties beginning fall 1983. Wayne State University is a comprehensive research university serving approximately 30,000 students. Its landscaped campus is situated in Detroit's midtown cultural center. The Department of Psychology conducts an extensive graduate program, granting more than 20 doctorates each year, and an active undergraduate program involving approximately 400 majors. The graduate programs include biopsychology, clinical (APA approved), cognitive, industrial, lifespan developmental, and social.

Applicants are expected to have a distinguished research record, a commitment to education, and the capability for leadership and administration. Send résumés together with the names of at least four references to: **Martin T. Wechsler, Associate Dean and Secretary, Search Committee, Wayne State University, College of Liberal Arts, 554 Mackenzie Hall, Detroit, Mich. 48202**.

An Equal Opportunity/Affirmative Action Employer

Pulmonary Pharmacologist

Leading pharmaceutical company, located in suburban Philadelphia, has an excellent opportunity available for a Pulmonary Pharmacologist at the Ph.D. level.

Candidates for this senior scientist position should have a research background and an interest in allergy/pulmonary pharmacology. Two to three years postdoctoral experience and a demonstrated ability to pursue independent, creative research are a prerequisite for this position.

The successful candidate will assume responsibility for a program to develop novel bronchodilator/antiallergic drugs.

If interested, send resume including salary requirements, in strict confidence to:

Wyeth Laboratories, Inc.



P.O. BOX 8299
Philadelphia, PA 19101

Equal Opportunity Employer, M/F/H

TRAINING COURSES

*in
Radioisotope Techniques in
Research & Development
and
Applied Health Physics
announced by ORAU*

A two-week *Radioisotope Techniques in Research & Development* course to be conducted April 11-22, 1983, and August 15-26, 1983, will provide training and laboratory experience in the safe use of radionuclides.

A five-week *Applied Health Physics* course to be conducted May 9-June 10, 1983, and October 10-November 11, 1983, will provide training in the principles of radiation protection.

For more information, telephone 8 a.m. to 5 p.m. Eastern:

800-362-5555
615-576-3434

or write:

Registrar, Professional Training
Programs

Oak Ridge Associated
Universities

P.O. Box 117
Oak Ridge, TN 37830



National Synchrotron Light Source

Brookhaven National Laboratory

Positions are open for Postdoctoral Research Associates and Scientific Support Staff at the National Synchrotron Light Source, now that the X-ray and VUV storage rings are operational. We seek candidates with recent doctorates, and for the support positions candidates with bachelor's or master's degrees, for experimental beam line commissioning and development in programs involving VUV Photoemission Spectroscopy and X-ray scattering or EXAFS. Postdoctoral Research Associates will also be expected to engage in a relevant research project. Opportunities will exist for collaboration and interaction with Laboratory scientists using the facility, and outside university and industrial users.

Postdoctoral Research Associate appointments will be offered for at least one year renewable, at a minimum salary of \$23,000 per year. Support Staff will be appointed according to qualifications and experience.

Apply with resume and transcripts, and arrange for three letters of reference to be sent to: W. C. Thomlinson, N.S.L.S. Department, Building 510E, Brookhaven National Laboratory, Associated Universities Inc., Upton, L.I., NY 11973



**Brookhaven National Laboratory
Associated Universities Inc.**

MOLECULAR BIOLOGISTS

The Upjohn Company, Kalamazoo, Michigan, has several openings for BS/MS level molecular biologists in its Fermentation Research and Molecular Biology Research units.

Applicants must have a BS or MS in Biochemistry, Microbiology, or related field and research experience in Recombinant DNA Technology and Microbial Genetics. Additional experience in Protein Chemistry/Enzymology or Animal Cell Culture is highly desirable.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational, and recreational pursuits, including numerous lakes and a four-season climate. Upjohn offers an excellent salary, commensurate with experience, and an outstanding benefits program.

Qualified applicants should send a resume, appropriate transcripts, and references to:

Lance D. Williams — 14636
Professional Employment

Upjohn

**The
Upjohn
Company**

7000 Portage Road
Kalamazoo, Michigan 49001

An Equal Employment Opportunity Employer M/F

RESEARCH IN BIOCHEMISTRY THE UNIVERSITY OF CALGARY

Under the auspices of the University Biochemistry Group, The University of Calgary offers an interdisciplinary environment for graduate and post-doctoral research in Biochemistry, Molecular Biology and Biotechnology. Highly qualified students with training in biochemistry, chemistry, biology or related disciplines may be admitted to programs leading to the MSc and PhD degrees. Research/teaching assistantships (\$9,420.00 to \$10,940.00/yr) are available from the University. Studentships (\$10,800.00/yr plus \$2500.00 research allowance) and post-doctoral fellowships (\$19,600.00/yr plus \$5000.00 research allowance) are available from the Alberta Heritage Foundation for Medical Research and may be applied for via The University of Calgary. Interested individuals should send a curriculum vitae which includes courses taken and grades obtained, and a statement of research interests to:

**Dr. George I. Drummond, Chairman,
University Biochemistry Group
The University of Calgary
2500 University Drive North West
Calgary, Alberta, Canada T2N 1N4**

POSITIONS OPEN

CHAIRPERSON AND PROFESSOR OF BIOLOGICAL SCIENCES NORTH TEXAS STATE UNIVERSITY

Applications and nominations are invited for chairperson of a 23-member Department of Biological Sciences which offers a strong doctoral-level program in a growing university of 18,000 students adjacent to the Dallas-Fort Worth metroplex. The successful candidate must hold an earned doctorate in biological or biomedical sciences and must demonstrate an outstanding ongoing research record and proven ability to obtain extramural research support. The successful candidate must have demonstrated qualities of energetic leadership and a broad perspective on the biological and biomedical science that will aid the department in moving toward national distinction in research and education. Administrative experience is desirable. The field of specialization is open, but it should complement one or more of the major areas in the department: cell biology, ecology, genetics, microbiology, or physiology. Salary is competitive. Desired starting date is August 1983. Applicants should send curriculum vitae, names of at least five references who will be requested by the applicant to furnish confidential supporting letters of recommendation, and a statement of current research interests and career goals to:

Dr. Alan P. Marchand
Chairperson, Search Committee
Department of Chemistry
North Texas State University
Denton, Texas 76203

Deadline for receipt of completed applications is 15 March 1983. *North Texas State University is an Equal Opportunity/Affirmative Action Employer.*

CHAIRPERSON PHYSIOLOGY AND PHARMACOLOGY

The Southern Illinois University School of Medicine at Carbondale, Illinois, is extending its search for the chair of its recently reorganized department and is inviting applications and nominations. Candidates, with earned doctorates, should have a strong record of academic excellence, a sustained record of scholarly publications, and a successful record of research funding. In addition, candidates should demonstrate interest in innovative medical education as well as graduate and undergraduate training.

The appointment will be at the level of professor with the search continuing until the position is filled. Interested candidates should submit letters of application, curriculum vitae, and the names of three referees as soon as possible to: **Office of the Associate Dean, Wheeler Hall Room 101, attention: Lonnie D. Russell, Ph.D., Search Committee Chairman, School of Medicine, Southern Illinois University, Carbondale, Ill. 62901. Southern Illinois University is an Equal Opportunity/Affirmative Action Employer.**

CHAIRMAN, DEPARTMENT OF MICROBIOLOGY, UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE

Applicants should have strong credentials in both the educational and investigative arenas and should be capable of providing vigorous academic leadership for this major basic science department. Desired starting date is 1 July 1983. Candidates are requested to submit curriculum vitae and names of three references no later than 28 February 1983 to: **Alan L. Bisno, M.D., Chairman, Microbiology Search Committee, Room 348, Van Vleet Memorial Cancer Center Building, 3 North Dunlap, Memphis, Tennessee 38163.**

The University of Tennessee is an Equal Opportunity Employer.

CHIEF PATHOLOGIST AND DIRECTOR OF LABORATORIES—St. Luke's-Roosevelt Hospital Center, a 1315-bed institution affiliated with Columbia University College of Physicians and Surgeons, is seeking a qualified individual to fill the position of chief pathologist and director of laboratories. This challenging position offers the successful candidate an exciting opportunity to be a key participant in the integration of pathology services at this multi-site institution on the west side of Manhattan. Experienced pathologists with demonstrated leadership and administrative skills are invited to submit their curriculum vitae for consideration in strictest confidence. Send curriculum vitae to: **Peter R. Holt, M.D., Chairman, Search Committee for a Director of Pathology, ST. LUKE'S-ROOSEVELT HOSPITAL CENTER, Amsterdam Avenue and 114th Street, New York, N.Y. 10025. An Equal Opportunity Employer, M/F.**

POSITIONS OPEN

CHAIRPERSON ENVIRONMENTAL HEALTH UNIVERSITY OF WASHINGTON

Nominations and applications sought for **CHAIRPERSON** of the Department of Environmental Health, one of five academic departments in the School of Public Health and Community Medicine. The department has 46 faculty and staff, offers graduate degrees in industrial hygiene and safety, radiological sciences, environmental health sciences, and occupational medicine, and has increasing strong research emphasis. Qualifications: M.D., Ph.D., or other earned doctorate; significant achievements and current research in environmental or occupational health; demonstrated administrative ability; experiences in academia and occupational or environmental health services desirable. Salary is competitive, commensurate with qualifications and experience. Send applications and nominations, curriculum vitae, and any other appropriate supporting materials by 15 February 1983 to:

Dr. Timothy A. DeRouen, Chairman
Environmental Health Search Committee
School of Public Health and Community Medicine
University of Washington, SC-30
Seattle, Wash. 98195

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

BIOLOGY DEPARTMENT CHAIRPERSON

Applications and nominations are invited from qualified individuals for the position of professor of biology and chairperson of the Department of Biology. Ph.D. in a biological science is required. Starting date: September 1983. The department has 22 full-time faculty, offers bachelor and master's degrees, and is being reviewed for a Ph.D. program. The department is housed in a newly renovated building and equipped with major research instrumentation. The University has 22,000 students and is located in the Dallas-Fort Worth metropolitan area. Criteria for selection include teaching experience, a distinguished research program, and promise of administrative skill and leadership. Please send the following: curriculum vitae, including bibliography and list of grant support; an outline of past administrative experience; a statement of your administrative philosophy and career goals; and the names, addresses, and telephone numbers of at least four references, by 1 March 1983 to: **Search Committee, Department of Biology, P.O. Box 19498, The University of Texas at Arlington, Arlington, Texas 76019. The University of Texas at Arlington is an Equal Opportunity/Affirmative Action Employer.**

COMMUNITY OR ECOSYSTEM ECOLOGIST.

Applications are invited for a tenure-track faculty position (rank open) to start 15 August 1983. Duties include graduate and undergraduate teaching, supervision of M.S. and Ph.D. student research, an active research program and pursuit of extramural research funding. Preference given to candidates with expertise in computer-assisted modeling. Applicants should submit a letter of application with a statement of research goals, curriculum vitae, reprints, and should arrange for three letters of reference to be sent to: **Ecologist Search Committee, Department of Biology, P.O. Box 42451, University of Southwestern Louisiana, Lafayette, La. 70504, by 1 March 1983. An Equal Opportunity/Affirmative Action Employer.**

CYTOGENETICIST. We are currently recruiting candidates for a collateral faculty position as head of a research-oriented cytogenetics laboratory with additional responsibilities for service. Send curriculum vitae and three letters of recommendation to: **Professor Millard Susman, Laboratory of Genetics, 445 Henry Mall, The University of Wisconsin, Madison, Wisconsin 53706. An Equal Opportunity Employer. Application deadline: 1 February 1983.**

SIDS INSTITUTE DIRECTOR

The University of Maryland, Department of Pediatrics, invites nominations and applications for director, Sudden Infant Death Syndrome (SIDS) Institute. This Institute implements and fosters interdisciplinary research, advanced training programs, and clinical service directed toward prevention of SIDS. Responsibilities include leadership, administration, and development of SIDS programs. The candidate must have established research skills and interest in relevant aspects of infant medicine.

Applications, including curriculum vitae and three letters of reference, will be received until 28 February 1983. *Equal Opportunity Employer. Department of Pediatrics, University of Maryland Hospital, Baltimore, Maryland 21201.*

POSITIONS OPEN

DEAN, College of Natural Sciences University of South Florida

The University of South Florida (USF) invites nominations and applications for the position of dean of the College of Natural Sciences beginning fall 1983. USF currently has 26,000 students and consists of the Colleges of Arts and Letters, Business Administration, Education, Engineering, Fine Arts, Medicine, Nursing, Natural Sciences, Social and Behavioral Sciences, a Graduate School, and School of Continuing Education. The University offers baccalaureate degrees in 80 fields, master's in 66 fields, doctorate in 10 disciplines, and the M.D. degree. The College of Natural Sciences is composed of the departments of biology, chemistry, geology, marine science, mathematics, and physics. All departments offer master's degree and the Ph.D. is offered in biology, chemistry, mathematics, mathematical physics, and marine science. There is also a Center of Excellence in Marine Science and a Mathematical Services Center.

Candidates for this position should have excellent academic credentials as scholars and proven leadership experience with earned doctorate in a relevant field. Besides directing instructional programs at undergraduate and graduate levels, the dean has responsibility for aggressively promoting high quality research and scholarly activities. Nominations and applications, including current curriculum vitae and five references, should be sent before 1 February 1983 to: **Professor S. Sundaram, Chair, Dean Candidate Screening Committee, Department of Physics, PHY 114, University of South Florida, Tampa, Florida 33620.**

The University of South Florida is an Affirmative Action/Equal Opportunity Employer and encourages applications from minorities and women. According to Florida law, applications and meetings regarding them are open to the public.

DEVELOPMENTAL BIOLOGIST. Tenure-track assistant professor, full time, starting 15 August 1983. Ph.D. required. Responsibilities: teaching general zoology; vertebrate embryology; advanced course in developmental biology; establish research program in area of specialty. Additional experiences in histochemistry, genetics, instrumentation, or electron microscopy are desirable. Send transcripts, curriculum vitae, and three letters of recommendation by 15 March 1983 to: **Dr. William Farrar, Search Committee, Department of Biological Sciences, Eastern Kentucky University, Richmond, Ky. 40475. An Equal Opportunity/Affirmative Action Employer.**

FIELD-ORIENTED ECOLOGICAL MODELER.

Tenure-track position. Ph.D. required. University experience preferred. Duties include general biology, a course in area of expertise, a research program in terrestrial vertebrate ecology, aiding in wildlife biology/conservation, ecology, and environmental studies, programs and data analysis, and computer programming support for graduate students. Send curriculum vitae, three letters of reference, transcripts, and statement of research interest(s) and teaching philosophy to: **Dr. Robert G. Johnson, Chairperson, Department of Biology, Southeast Missouri State University, Cape Girardeau, Mo. 63701. Application deadline: 18 February 1983.**

ECOLOGICAL MODELER

Full-time research position for an ecological modeler at the Savannah River Ecology Laboratory (SREL). Ph.D., refereed publications, modeling skills, and U.S. citizenship required. Focus will be on development of models appropriate for assessing and predicting impacts of perturbations of plant and animal populations. Send résumé, reprints, and names, addresses, and telephone numbers of four references by 1 March 1983 to:

Dr. Thomas Fontaine
Chairman of Search Committee
SREL
Drawer E
Aiken, S.C. 29801

University of Georgia—An Equal Opportunity/Affirmative Action Institution.

ENVIRONMENTAL PATHOLOGY. Pre- and post-doctoral positions available July 1983. Research emphasis is on cellular and molecular effects (mutagenesis, teratogenesis, biotransformation) of toxic chemicals (especially trace metals, aromatic hydrocarbons). Inquiries: **N. Karle Mottet, M.D., Program Director, Department of Pathology, SM-30, University of Washington, Seattle, Wash. 98195. The University of Washington is an Affirmative Action/Equal Opportunity Employer.**

SENIOR SCIENTIST

Bacterial Expression

GENETICS INSTITUTE is a well-funded company actively engaged in the development and application of recombinant DNA technology to human health care, agriculture, and chemicals. During the first eighteen months of our operation, we have grown to nearly 70 employees and have initiated research projects in collaboration with a number of prominent commercial partners.

We are seeking an innovative and energetic young researcher to direct a laboratory of staff scientists and research associates working on the expression of heterologous genes in bacteria. This senior position affords the opportunity within a challenging and stimulating scientific community for independent research into novel expression systems.

We offer equity participation, a competitive salary, and a complete benefits package.

Qualified candidates should forward their resumes, including references, in confidence to: Robert Kamen, Director of Research, Genetics Institute, 225 Longwood Avenue, Boston, Massachusetts 02115.

GENETICS
INSTITUTE

MAMMALIAN MOLECULAR GENETICS

The Laboratory of Genetics, National Institute of Environmental Health Sciences, Research Triangle Park, NC, has a permanent position for a qualified research geneticist at a salary commensurate with the candidate's qualifications. The scientists in this position will lead a research group in the study of mammalian gene structure and function. The group will gather information about the mechanisms of gene regulation and the role of differential gene activity in cell-type determination and differentiation in an attempt to understand the nature of mammalian genes as targets for environmental mutagens. The qualification requirements are a Ph.D. with emphasis in genetics and molecular biology, demonstrated research ability, and some experience as the leader of a research team. Experience with higher eukaryotic systems is highly desirable.

Applicants must be found to be eligible on a Civil Service Register. If interested, please send a curriculum vitae by February 4, 1983 to Personnel Office, Elena D'Orazio, NIEHS, P.O. Box 12233, Research Triangle Park, NC 27709.

The NIEHS is an Equal Opportunity Employer. Women and minority candidates are encouraged to apply.

THE INTERNATIONAL CENTRE OF INSECT PHYSIOLOGY AND ECOLOGY, P.O. BOX 30772, NAIROBI, KENYA.

PROGRAMME LEADER, CROP BORERS RESEARCH PROGRAMME—SCI/8/2/7

Position is tenable at Mbita Point Field Station, South Nyanza, Kenya, as from 1st January 1983.

Candidates in the Position of Programme Leader of Crop Borers should have a Ph.D. in applied entomology or a related area and have experience and interest in solving important insect problems for staple food crops in Africa. Experience in developing integrated pest management systems is particularly desirable.

The Crop Borers Research Programme is primarily concerned with serious pests (sorghum shootfly, stem borers and legume pod borers) of cowpeas, maize, sorghum, and rice. Attention is devoted to the effect of cultural practices such as intercropping on pest attack, genetics of plant resistance to insects, pest behaviour and survival studies, mass rearing, and crop loss assessment. The programme is supported by Bases of Plant Resistance Programme, Insect Pathology and Pest Management Programme, Chemistry and Bioassay Unit, Histology and Fine Structure Unit, and Sensory Physiology Unit.

The Crop Borers Programme staff is comprised of 6 senior staff, 4 post-doctoral fellows and 13 technical support personnel. Financial support is derived from the International Fund for Agricultural Development (IFAD), the French Government, and ICIPE core funds. Almost all of the research is conducted at or from the Mbita Point Field Station on the Shores of Lake Victoria in Western Kenya, a region of subsistence farming.

The Crop Borers Programme Leader must devote approximately 20% of his time to administrative duties, offer leadership to the Crop Borers Programme, and represent the Crop Borers Research Programme on various ICIPE Committee. In addition, this individual must be capable of co-ordinating the research activities of the Crop Borers Programme with other research units, programmes and institutions both within and external to ICIPE.

Salary is negotiable. Comfortable staff housing, a school, and clinic are available at Mbita Point Field Station.

Applications giving detailed information on general education, professional qualifications and experience, marital status, age, present terms of employment (including salary and benefits), names and addresses of referees (one being personal) and photocopies of relevant certificates and diplomas (which will not be returned) should be addressed to: THE AG. ADMINISTRATIVE MANAGER, ICIPE RESEARCH CENTRE, P.O. BOX 30772, NAIROBI, KENYA. TO REACH HIM NOT LATER THAN 31st JAN, 1983.

SENIOR LABORATORY TECHNICIAN

This full-time professional level research support position in our Basic Neuroendocrine Laboratory. Requires a Masters degree in Biochemistry or a Bachelors degree with equivalent training and experience.

Qualified candidates must have expertise in animal research and biochemical techniques for assays utilizing tissue and blood samples. Other requirements include proficiency in:

- Gel and Ion Exchange Chromatography.
- High Pressure Liquid Chromatography.
- Electrophoresis and Isoelectric Focussing.
- Radioimmunoassay.
- General laboratory methods such as: Spectrophotometry and Fluorometry.

We offer a good beginning salary and fringe benefit program including tuition reimbursement for staff and qualified dependent children

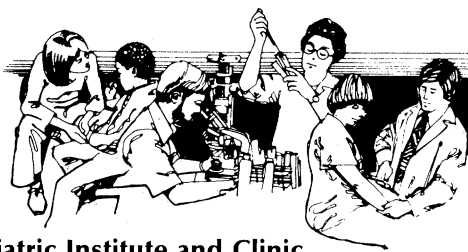
If you meet the above qualifications and have an interest in working for WESTERN PSYCHIATRIC INSTITUTE & CLINIC, a growing division of the University of Pittsburgh, and a member of the University Health Centers, send your resume in confidence to: (No Telephone Calls Please!)

Laboratory Recruiter
Personnel Department



Western Psychiatric Institute and Clinic
3811 O'Hara Street, Pittsburgh, PA 15213

An Equal Opportunity Employer



POSITIONS OPEN

The University of Michigan Medical School, Department of Internal Medicine, has a position available for the **DIVISION CHIEF OF HEMATOLOGY/ONCOLOGY** and the **DIRECTOR** of Simpson Memorial Institute. Physician must be Board-certified in hematology, oncology, and internal medicine; must have a strong record of research accomplishments; and must meet senior faculty level requirements of the department. Send inquiries, along with curriculum vitae, to: **William N. Kelley, M.D., Professor and Chairman, University Hospital, Department of Internal Medicine, D3105 SABC, Box 16, Ann Arbor, Mich. 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 20B0.

DNA SEQUENCING

RESEARCH ASSOCIATE. Calgene, Inc., is seeking an experienced DNA sequencer with general molecular biology experience; expertise with Maxam/Gilbert and Sanger methods; and supervisory ability. Calgene is a leader in the application of molecular genetics to crop plant improvement. Please send curriculum vitae, description of research experience and interests, and salary requirement to: **Calgene, Inc., File 855, 1910 Fifth Street, Davis, Calif. 95616.** An Equal Opportunity Employer.

ESTUARINE SCIENTIST/TECHNICAL WRITER: 12-month position starts February 1983 with Columbia River Estuary Data Development Program. Graduate training in estuarine science and experience in estuarine resource management required. Technical writing and editing skills useful. Successful applicant will monitor research contracts and synthesize results. Salary: \$20,000 to \$24,000 per year. Send résumé and names of three referees to: **Director, CREST, P.O. Box 175, Astoria, Ore. 97103.**

FACULTY POSITIONS AVAILABLE IN MOLECULAR CELL BIOLOGY

The Division of Life Sciences, The University of Texas at San Antonio, will hire four tenure-track faculty members by June 1983. Applications are invited for assistant professors in the field of **developmental neurobiology** with expertise in electron microscopy and **molecular genetics** with interests in recombinant DNA and for assistant and associate professorships in **molecular cell biology** with specialization in the regulation of RNA synthesis, neurochemistry, or membrane function at the molecular level. 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. with postdoctoral experience is desired. Submit curriculum vitae, names of at least three professional references, and representative publications to: **Matthew J. Wayner, Director, Division of Life Sciences, The University of Texas at San Antonio, San Antonio, Texas 78285,** prior to 1 February 1983. Telephone: 512-691-4457. The University of Texas at San Antonio is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION, rank open, in Division of Experimental Radiation Oncology, University of California, Los Angeles (UCLA), Medical School. Individual should have an interest in tumor biology and/or radiation biology. An excellent defined-flora mouse colony is available. Contact: **Dr. H. Rodney Withers, Department of Radiation Oncology, UCLA Center for Health Sciences, Los Angeles, Calif. 90024.** An Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS IN PHARMACOLOGY

The Department of Pharmacology at The University of Texas Health Science Center at Dallas seeks applications for tenure-track positions at the level of assistant or associate professor. Applicants must have a relevant Ph.D. or M.D. degree, postdoctoral training, and show evidence of firm commitment to a career in independent research. We are particularly interested in considering individuals with an appropriate background who wish to apply techniques of molecular or cellular biology or biochemistry to fundamental problems of pharmacological interest. Responsibilities will also include teaching of medical and/or graduate students after the first year of employment. Send curriculum vitae and a brief description of proposed research to: **Dr. Alfred G. Gilman, Chairman, Department of Pharmacology, University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

EVOLUTIONARY AND/OR PHYSIOLOGICAL ECOLOGIST. Tenure-track assistant professorship, starting 16 August 1983. Preference given to candidates with research interests involving higher plants. Duties include teaching an undergraduate core course in ecology, developing an advanced course in area of specialization, and occasional participation in the lecture portion of a team-taught introductory course. Development of a strong, independent research program and supervision of graduate students are required. Applicants must have Ph.D.; postdoctoral research and/or teaching experience desirable. Nine-month salary starts at approximately \$20,000. Send curriculum vitae, reprints, transcripts, and statement of research and teaching interests and arrange to have three letters of reference sent to: **Dr. Diana Lieberman, ECOLOGY SEARCH, Department of Biology, University of North Dakota, Grand Forks, North Dakota 58202.** Closing date: 15 February 1983. The position will be filled as scheduled, pending availability of funds. The University of North Dakota is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS COLLEGE OF MEDICINE UNIVERSITY OF KENTUCKY

The University of Kentucky, College of Medicine, invites applications for faculty positions in basic science and clinical departments. The University of Kentucky recognizes a specific responsibility to ensure that the search does not overlook qualified candidates who are women or members of ethnic minority groups. Salary is negotiable, based on qualification and experience. The following disciplines are encouraged to submit applications:

Basic Science Disciplines

Medical Microbiology and Immunology—Faculty positions available for individuals with specialization in cellular immunology and molecular genetics. Experience teaching medical/graduate students; ability to initiate and sustain a creative research program. Rank of assistant/associate professor based upon qualifications.

Submit curriculum vitae to:

**Tammy Rayburn
Special Assistant to the Dean
College of Medicine
University of Kentucky
800 Rose Street
Lexington, Kentucky 40536-0084**

The University of Kentucky is an Equal Opportunity Employer.

The University of Iowa, Department of Internal Medicine, invites applications for a **FACULTY POSITION** in the Division of Clinical Pharmacology. Minimum requirements include M.D. degree, Board-certification or eligibility in internal medicine, 2 years of training in a recognized clinical pharmacology training program, and research experience in cardiovascular medicine and pharmacology, specifically on clinical and basic investigation of receptors and their role in health and disease. The applicant will be expected to participate in the teaching and clinical activities of the Department of Medicine. Salary will be commensurate with applicant's qualifications and experience. Candidates should submit curriculum vitae to: **Randall Jordison, Administrator, Department of Internal Medicine, SE306 GH, The University of Iowa, Iowa City, Iowa 52242.** The University of Iowa is an Equal Opportunity/Affirmative Action Employer.

ORGANIC CHEMIST—WILLIAMS COLLEGE has an opening for fall 1983 for a regular assistant professor position (initial 3-year appointment with the possibility of reappointment and consideration for tenure) in organic chemistry (Ph.D. required; postdoctoral experience preferred). Applicants should have a strong commitment to both teaching and research. Teaching duties each semester normally include complete responsibility for one course with laboratory and supervision of senior research projects. Williams College is a highly selective, coeducational, liberal arts institution of approximately 155 faculty and 1900 undergraduates, located in northwestern Massachusetts. The Department of Chemistry is accredited by the ACS and has excellent facilities for teaching and research. Send résumé, description of research interests for undergraduates, and names of three references to: **Dr. Raymond Chang, Acting Chairman, Department of Chemistry, Williams College, Williamstown, Mass. 01267,** by 4 February 1983. Affirmative Action/Equal Opportunity Employer. We are especially eager to identify minority and women candidates.

POSITIONS OPEN

Applications are invited for a tenure-track **FACULTY POSITION** in the area of molecular biology/molecular genetics. Joint appointment in the Department of Cell Biology of New York University School of Medicine will be considered.

Applicants sought with broad experience in research on nucleic acids, gene expression, and genetic recombination who are interested in application of these approaches to parasite systems, particularly malaria and trypanosomes. Applicants would participate in the development of a strong research program in this area.

Deadline: 3 March 1983, Spring 1983 opening. Applicants should write to: **Professor R. S. Nussenzweig, Head, Division of Parasitology, Department of Microbiology, New York University Medical Center, 341 East 25 Street, New York, N.Y. 10010.** An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION AND NON-FACULTY POSITION

One research assistant professor and one research associate position are available immediately to study the structure, interaction, and reconstitution of hormone-sensitive adenylate cyclase components. Ph.D. in biochemistry or other related field. Strong background in protein purification and monoclonal antibodies helpful but not required. Salary negotiable. Salary funds are from research grants, and both positions will be contingent upon funds. Send curriculum vitae and three references to: **Dr. J. L. Irvin, Department of Biochemistry, School of Medicine, University of North Carolina, Chapel Hill, N.C. 27514.** We are keenly interested in attracting outstanding women and/or minority scientists to this department. Equal Opportunity/Affirmative Action Employer.

INSECT SYSTEMATIST. Assistant professor (non-tenure track) with responsibilities for research and teaching. Responsibilities include research in the area of insect systematics with emphasis on taxonomic group(s) of major economic importance, and teaching of courses in general entomology and systematics. Earned doctorate, with training/experience in insect systematics, and exceptional instructional capabilities required. Deadline for receipt of applications is 1 March 1983. For complete details, contact: **Dr. G. W. Krantz, Chairman, Search Committee, Department of Entomology, Oregon State University (OSU), Corvallis, Ore. 97331.** OSU is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of Rehabilitation Act of 1973.

The University of Michigan Medical School, **DEPARTMENT OF INTERNAL MEDICINE**, has a position available at the Veterans Administration Hospital to work in the Division of General Medicine. The individual will have patient care activities in both ambulatory care and inpatient settings. Candidates should be Board-eligible in internal medicine and have an interest in health services and research. Address inquiries, including curriculum vitae, to: **Jeffrey K. Stross, M.D., The University of Michigan Medical School, Department of Internal Medicine, D3211 SABC, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 149FO.

The **DEPARTMENT OF INTERNAL MEDICINE** is seeking a junior faculty member to work in the Division of General Medicine. The position will consist of clinical activity at the Brighton Health Center. This will include both patient care and teaching activities. Candidates should be Board-certified or -eligible in internal medicine and have an interest in health services. Address inquiries, including curriculum vitae, to: **Jeffrey K. Stross, M.D., Department of Internal Medicine, The University of Michigan Medical School, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 320HO.

The **DEPARTMENT OF INTERNAL MEDICINE** is seeking a junior faculty member to work in the Division of General Medicine. The position will consist of two bases of clinical activity—outpatient general medicine at the Veterans Administration Hospital and the Brighton Satellite Health Center. This will include both patient care and teaching activities. Candidates should be Board-certified or -eligible in internal medicine and have an interest in health services. Address inquiries, including curriculum vitae, to: **Jeffrey K. Stross, M.D., Department of Internal Medicine, University of Michigan Medical School, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 321HO.



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Molecular Biologist—

Research Scientist (Ph.D.) experienced in expression of cloned DNA sequences at the protein level.

Research Technician—

Technical assistance in the detection of proteins expressed from cloned DNA sequences. Demonstrated experience in immunological methodologies; familiarity with plant or animal cell culture desirable.

AgrigeneticsTM is an established, private, shareholder-owned company, engaged in the production and marketing of seeds of over 50 crop species as well as rhizobacterial preparations. It enjoys revenues exceeding \$100,000,000 and provides employees with attractive compensation and benefit programs.

Applicants confident of their superior practical abilities, intellectual stamina, and capacity for original thought should describe their research experience and training, together with the names of three referees to:

**Director, Advanced Research Laboratory, Agrigenetics Corporation,
5649 East Buckeye Road, Madison, WI 53716.**

GASTROINTESTINAL PHARMACOLOGIST

Sterling-Winthrop Research Institute announces an opening for a senior level Gastrointestinal Pharmacologist. The successful candidate will have a PhD degree in biological sciences or equivalent theoretical depth and at least 5 years of related experience.

The position will involve the development and implementation of new IN VITRO and IN VIVO animal models for the discovery of drugs to treat gastrointestinal disorders and the assessment of gastrointestinal side effects of compounds under development.

We provide a project team approach to research which offers opportunities for interaction within the Department of Pharmacology and other scientific disciplines.

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

Please send your Curriculum Vitae including salary requirement in confidence to:

John G. Barry,
Employment Administrator



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ELECTRICAL ENGINEERS AND COMPUTER SCIENTISTS

The *LISTER HILL NATIONAL CENTER FOR BIOMEDICAL COMMUNICATIONS*, the research and development arm of the *NATIONAL LIBRARY OF MEDICINE*, is recruiting for Computer Scientists and Electrical Engineers. They will work in broad areas of computer applications and communications research. Our laboratories house R&D activities in signal processing, digital communications, image data compression, library automation, videodisc technology, distributed information systems, information retrieval techniques, expert systems and knowledge base systems. Vacancies exist in hardware, software and firmware design and development. We are seeking qualified people in the following categories:

COMMUNICATIONS DESIGN ENGINEERS experienced in one or more of the following areas: the hardware, software and firmware design, development, implementation and evaluation of high-speed digital communications systems and network protocols; image enhancement and data compression algorithms; high resolution document scanners and displays; high density magnetic and optical storage devices. R&D facilities include a communications development laboratory, a signal processing laboratory and a video and image processing laboratory.

COMPUTER SPECIALISTS experienced in minicomputer/microprocessor hardware/software design and programming experience in one or more languages or systems such as MUMPS, PASCAL AND UNIX. R&D facilities

include MUMPS-based Data General Eclipse C/330, RDOS-based Data General Eclipse S/200 and UNIX-based PDP-11/60.

COMPUTER SCIENTISTS with research experience in artificial intelligence, database technology, language development, and distributed computer systems. Research facilities include a DEC-2060 with ARPANET connections, a database machine and an extensive array of software tools and languages including INTERLISP, C, PASCAL, SAIL.

Application may be made for both permanent and short-term appointments. Salaries range from \$24,508 to \$45,406, depending on grade equivalency (GS-11 through GS-13), type of appointment, and experience and educational background in any one or more of the above disciplines.

Please send a Standard Form 171 by May 31, 1983 to:

Ms. Yvonne Reid
National Library of Medicine
National Institutes of Health
Public Health Service
Building 38A, Room 7N714
8600 Rockville Pike
Bethesda, Maryland 20209

For further information call: (301) 496-4441

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POSITIONS OPEN

FACULTY POSITION IN MICROBIAL PATHOGENESIS. The Department of Microbiology and Immunology at the University of Washington is recruiting for a junior faculty member whose training is in an area of microbial pathogenesis, excepting viral pathogenesis. Applicants with postdoctoral experience whose research emphasizes molecular approaches are being sought. The appointee will teach medical microbiology and supervise Ph.D. candidates interested in microbial pathogenesis. Applicants should send curriculum vitae and names of three references to: **Dr. Neal Groman, Chairman, Pathogenesis Search Committee, Department of Microbiology and Immunology, School of Medicine, University of Washington, Seattle, Washington 98195.** Deadline: 15 February 1983. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

NORTHWESTERN UNIVERSITY HUMAN VISION AND AGING

Postdoctoral fellow/research associate to join ongoing project. Initial appointment for 2 years; flexible starting date. Salary commensurate with experience. Send résumé, including list of publications, summary of research, and three letters of reference, to:

**Dr. Robert Sekuler
Cresap Neuroscience Laboratory
Northwestern University
Evanston, Ill. 60201**

Affirmative Action/Equal Opportunity Employer

ILLINOIS LEGISLATIVE SCIENCE INTERN

Sangamon State University invites applications from graduates (B.S., M.S., Ph.D.) of natural science or engineering programs for a 9½-month science internship beginning 1 October 1983 as part of the Illinois Legislative Staff Internship Program. The science intern will be assigned to the Illinois Legislative Council's Science Unit and will respond to legislators' requests for information and research about policy issues that involve science and technology. As part of the program, the science intern will participate in an academic seminar with other legislative interns. Applicants should be mature, self-motivated scientists or engineers with interests in public service. Send curriculum vitae by 4 February 1983 to: **Dr. Kent Redfield, Coordinator, Illinois Legislative Staff Internship Program, Sangamon State University, Springfield, Illinois 62708.** *An Equal Opportunity/Affirmative Action Employer.*

MOLECULAR GENETICIST. Tenure-track position at assistant professor level effective 1 September 1983. Preference given to geneticist with postdoctoral training and recombinant DNA capability interested in structure and/or regulation of microbial genomes. Appointee expected to develop vigorous research program, supervise master's and doctoral students, and teach undergraduate and graduate levels. Send curriculum vitae, brief description of research goals, and three letters of reference by 1 March to: **Dr. Jack Spiegel, Department of Biology, Catholic University of America, Washington, D.C. 20064.** *An Affirmative Action/Equal Opportunity Employer.*

NEUROBIOLOGY POSTDOCTORAL position available for participation in studies of spinal cord development and plasticity. Experience with electron microscopy, spinal cord electrophysiology, or histochemical techniques would be useful. Send curriculum vitae and names of three references to: **Dr. M. S. Beattie and Dr. J. C. Bresnahan, Departments of Anatomy and Surgery, Ohio State University, College of Medicine, 1645 Neil Avenue, Columbus, Ohio 43210, or telephone: 614-422-2206.**

PHARMACOLOGIST/PHARMACOKINETICIST. Assistant professor. **Qualifications:** Doctorate degree (D.V.M., Ph.D., Pharm.D) with evidence of interest in teaching and research, preferably in the area of pharmacokinetics. **Responsibilities:** Contribute to the teaching of pharmacology in the professional curriculum as well as participation in graduate degree and other educational programs. The potential for interdisciplinary research is outstanding. The successful candidate will be expected to initiate and conduct a high-quality research program. **Closing date:** 1 March 1983, or until filled. **Availability date:** 1 July 1983. **Application procedure:** Send curriculum vitae with a statement of teaching and research interests and three references to: **Dr. Peter J. Bentley, Chairman of Search Committee, School of Veterinary Medicine, North Carolina State University, Raleigh, North Carolina 27606.**

North Carolina State University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

MANAGER NEW PRODUCT DEVELOPMENT IMMUNOCHEMICALS

Cappel Laboratories, a division of Cooper Diagnostics, Inc., a leading manufacturer of immunology products for use in research, has an immediate opening for a manager of new product development. Candidate should have a Ph.D. or M.D. with applicable research experience and an interest in entering a management position in a rapidly growing company. This position offers challenge and considerable growth opportunity.

Cappel Laboratories offers an excellent compensation and benefits program.

Please forward curriculum vitae to:

**P. J. Harvard
Personnel Administrator
Cooper Diagnostics, Inc.
1230 Wilson Drive
West Chester, Pa. 19380**

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NEUROBIOLOGIST. The Virginia-Maryland Regional College of Veterinary Medicine invites applications for a faculty position in neurobiology, with preference being given to applicants having research and/or clinical interests in neurophysiology or neurochemistry. Salary and rank will be commensurate with qualifications and experience.

Closing date is 15 February 1983, or until position is filled. Letters of application, including curriculum vitae and the names and addresses of three references, should be addressed to: **Dr. Peter T. McGovern, Chairman, Division of Veterinary Biology and Clinical Studies, Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, Va. 24061-5999.** *An Equal Opportunity/Affirmative Action Employer.*

NEUROSCIENCE—BIOPSYCHOLOGY—NEUROPSYCHOLOGY: Psychology Department, Michigan State University. Tenure-track **ASSISTANT PROFESSORSHIP** effective 1 September 1983. Applicants considered in any area of neuroscience dealing directly with the nervous system. Post-Ph.D. teaching and research experience preferred. Must be able to serve in dual role as member of Psychology Department and of Interdepartmental Graduate Neuroscience Program, contributing to teaching in both. Send curriculum vitae to: **Professor Gordon Wood, Chairperson, Department of Psychology, Michigan State University, East Lansing, Mich. 48824.** *Michigan State University is an Equal Opportunity/Affirmative Action Employer. Women and minority group candidates are specifically solicited.*

PHYSIOLOGY TEACHING POSITION, assistant professor, tenure-track. Begins 15 August 1983. Ph.D. and enthusiasm for teaching introductory normal and abnormal anatomy and physiology and upper-level general physiology or advanced human physiology required. Send statement of professional interests and goals, résumé, official transcripts, and three letters of reference by 1 March to: **Search Committee, Department of Biology, Salisbury State College, Salisbury, Md. 21801.** *An Equal Opportunity/Affirmative Action Employer.*

PLANT SCIENTIST to carry out independent original research in the area of introduction of genetic material into higher plant protoplasts via liposome fusion. Must have some knowledge of liposomes, plant tissue, and another culture, herbicides, have previously published, and have a demonstrated potential for originality and leadership. Ph.D. in horticulture, plant physiology, or plant genetics; \$15,000 per year. Send résumé to: **Job Service of Nebraska, 1010 N Street, P.O. Box 95200, Lincoln, Neb. 68509.**

POSTDOCTORAL FELLOW—RESEARCH ASSOCIATE POSITION available immediately for Ph.D. with expertise and interest in enzyme isolation and characterization to join group study in removal of blood group antigens from the red cell surface. Send curriculum vitae and names of three references to: **Dr. J. Goldstein, Head, Cell Biochemistry Laboratory, Lindsley F. Kimball Institute, NEW YORK BLOOD CENTER, 310 East 67 Street, New York, N.Y. 10021.** *An Equal Opportunity Employer, M/F.*

POSITIONS OPEN

The California Space Institute, La Jolla campus, of Scripps Institution of Oceanography, has an immediate opening at the postdoctoral level (Ph.D. or equivalent degree) for a **PHYSICAL OR INORGANIC CHEMIST OR CHEMICAL ENGINEER** with a research background appropriate to participate in a University of California, San Diego (UCSD), program for the development of chemical procedures and technologies for the separation and processing of lunar soil into useful materials. There may also be the opportunity to participate in experiments relating to processes using terrestrial materials in earth orbit. Position is for one year with the possibility of a second year, dependent on available funding. Salary range: \$18,132 to \$19,848 commensurate with qualifications. Send résumé and references to: **David Wirth, California Space Institute A030, Scripps Institution of Oceanography, La Jolla, Calif. 92093,** by 31 January 1983. For additional information regarding the position, contact: **Mr. Wirth or Dr. David Criswell at the above address or telephone: 619-452-4772.** *UCSD is an Equal Opportunity/Affirmative Action Employer.*

PHYSIOLOGICAL PSYCHOLOGIST: A full-time, tenure-track position opening 1 September 1983 in the Department of Psychology, College of St. Thomas. Requirements include educational background and teaching experience in the areas of physiology, sensation, and perception. A Ph.D. in psychology, evidence of professional activity and demonstrated teaching skills are required. Responsibilities will include teaching undergraduate courses in general psychology, physiological psychology, sensory and perceptual processes, as well as monitoring the use of departmental equipment and overseeing senior research projects. Rank and salary will be commensurate with academic, teaching, and research experience. Please submit a letter of application, curriculum vitae, and the names of at least three references to: **Dr. John Buri, Chairman, Department of Psychology, College of St. Thomas, 2115 Summit Avenue, St. Paul, Minn. 55105.** Deadline for receipt of application is 28 February 1983. The College of St. Thomas is a private, coeducational, Catholic, liberal arts college with an enrollment of 5900. *The College of St. Thomas is an Equal Opportunity/Affirmative Action Employer.*

POPULATION ECOLOGIST

The University of Georgia, Department of Zoology, announces a tenure-track opening as assistant professor for a population ecologist, starting September 1983. Requirements include teaching in the introductory ecology course and in graduate courses of population and theoretical ecology as well as establishing an independent research program. An interdisciplinary person is desired, one who will interact with terrestrial and aquatic ecologists. Send curriculum vitae, reprints, and addresses of three referees to: **R. G. Wiegert, Chairman, Search Committee, Department of Zoology, University of Georgia, Athens, Georgia 30602,** by 7 February 1983. The position will be filled only if suitable and qualified candidates apply.

Equal Opportunity/Affirmative Action Institution

POSTDOCTORAL POSITION— RICE UNIVERSITY

The Department of Biochemistry announces the availability of a postdoctoral position in the area of metalloprotein structure and function. Previous experience with hemoproteins, including purification and characterization, would be an advantage. Interested individuals should send a complete résumé, together with the names of three individuals who are willing to provide references for the applicant. All information should be sent to: **G. Palmer, Biochemistry Department, Rice University, P.O. Box 1892, Houston, Texas 77251.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

VETERINARIAN OR PHYSICIAN with interest and experience in immunology to assume medical responsibility for growing colony of 150 primates, microbiology chimpanzees located at the Liberian Institute for Bio-Medical Research, Robertsville, Liberia. Carry out independent and collaborative research on immunology of parasites or viruses. Current research interests of laboratory are in areas of hepatitis viruses and onchocerciasis. Research facilities include RIA, EIA, lymphocyte culture, immunofluorescence, EM. Please send résumé and letter indicating interests and career goals to: **Alfred M. Prince, M.D., Lindsley F. Kimball Institute, NEW YORK BLOOD CENTER, 310 East 67 Street, New York, N.Y. 10021.** *An Equal Opportunity Employer, M/F.*

POST DOCTORAL SCIENTIST IMMUNOLOGY

Sterling Winthrop Research Institute is seeking a Post Doctoral Scientist to join our Rheumatology Research Program. The candidate should have an interest in studying cell receptors on leukocytes. The position provides an opportunity for innovative research in an environment of scientific collaboration with local academic institutions. The Post Doctoral Scientist is assured of an independent research project and encouraged to publish results.

Successful candidate is required to have a Ph.D. and 0-3 years Post Doctoral experience. A background in biochemical techniques is desirable.

The appointment is made for 1 year and is renewable for a 2nd year by mutual agreement.

We offer an attractive salary and benefits package with the opportunity for professional growth. The institute is located near Albany, NY which is readily accessible to major summer and winter recreational activities. Please send your curriculum vitae including salary requirements in confidence to:

Mr. John Barry, Employment Administrator



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Professional credentials should demonstrate a PhD with experience in microbiology, immunology or biochemistry. Broad experience in infectious diseases and clinical microbiology a plus. Background in DLA, RIA, FIA, and/or EIA essential.

We offer excellent salary and complete benefits. For more information send resume with salary requirements to: **Ms. Joy Meini, Becton Dickinson and Company, Charles & Chase Streets, Baltimore, MD 21201.**

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Merci d'adresser lettre manuscrite + C.V. (rédigés en français) et photo à l'attention du Conseiller en Relations Humaines de l'Institut de Recherches SERVIER
14, rue du Val-d'Or - 92150 SURESNES (France).

POSITIONS OPEN

PHYSICAL OCEANOGRAPHER OR COASTAL ENGINEER (ASSISTANT PROFESSOR LEVEL): We have an opening for September 1983 at the assistant professor level for a physical oceanographer or coastal engineer interested in surface gravity waves and their effects on shore processes and sediment transport. Applicants should have a Ph.D. or commensurate experience in sediment dynamics of beaches and nearshore areas. The initial appointment will be for 3 years on a tenure-track faculty line. The position carries full support for the academic year. Candidates should send a résumé and have three letters of reference sent directly to: **Professor Harry H. Carter, Chair, Search Committee, Marine Sciences Research Center, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794.** *SUNY Stony Brook is an Equal Opportunity/Affirmative Action Employer.* AK Number 495A.

POSTDOCTORAL LECTURESHIPS Vertebrate Biologist

Two 12-month positions for 1983-1984 to begin anytime between July and September 1983. The successful candidates will share responsibility with departmental faculty for laboratory instruction and assistance in the department's human morphology course. Lectures are not required. This commitment requires about 150 contact hours (average of 2.5 afternoons per week) over the fall and winter quarters. The successful candidates are expected to pursue their research interests with a departmental faculty member during the rest of the time. Salary is \$14,000 with a \$1000 expense fund.

Applicants must have completed the Ph.D. and a course in human gross anatomy. Send curriculum vitae, statement of research interests, and three letters of reference to: **R. Eric Lombard, Department of Anatomy, University of Chicago, 1025 East 57 Street, Chicago, Ill. 60637,** by 15 February 1983.

The University of Chicago is an Equal Opportunity Employer; women and members of minority groups are specifically encouraged to apply.

An NIH-funded **POSTDOCTORAL POSITION** is available immediately to study neurotransmitter localization in mammalian retina. Prior experience in immunological or cell culture techniques desired. Send curriculum vitae to:

**Dr. P. V. Sarthy
Department of Ophthalmology, RJ-10
University of Washington
Seattle, Washington 98195**

An Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL POSITIONS IN METABOLIC REGULATION. A training program at the molecular level for research related to diabetes and other metabolic diseases has been instituted. Emphasis will be on basic approaches used in the study of protein phosphorylation, hormone receptors, calmodulin, ion transport, cyclic nucleotides, and the structure of relevant proteins. U.S. citizens or permanent residents who will soon be awarded or who are holding recent Ph.D. or M.D. degrees are invited to obtain further information by writing to the program director: **Dr. Edwin G. Krebs, Department of Pharmacology, SJ-30, School of Medicine, University of Washington, Seattle, Washington 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS

To participate in ongoing studies of cytochromes and metalloproteins from the mammalian and microbial sources. Preference will be given to candidates with a background in biochemistry, biophysics, inorganic chemistry, or microbiology. Salary range: \$14,000 to \$16,000. Send curriculum vitae and names of three references to: **Dr. David C. Wharton, Department of Biology, Northeastern University, 360 Huntington Avenue, Boston, Mass. 02115.** *Northeastern University is an Equal Opportunity/Affirmative Action/Title IX University.*

POSTDOCTORAL POSITION for recent Ph.D. to study peptide hormone-receptor interactions and signal transmission in cell membranes. Studies will utilize receptor binding, affinity labeling, and may include the development of monoclonal antibodies against receptors. The background of the successful candidate may be immunological, biological, or biochemical. Send curriculum vitae and the names of three references to: **Dr. David B. Donner, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, N.Y. 10021.**

POSITIONS OPEN

POSTDOCTORAL POSITION available for Ph.D. with experience in autonomic, cardiovascular, or smooth muscle pharmacology to investigate mechanisms involved in the regulation of excitable cell sensitivity to drugs. NIH-supported position. Send curriculum vitae and the names and addresses of three references to: **Dr. David P. Westfall, Department of Pharmacology, University of Nevada School of Medicine, Reno, Nevada 89557.**

THREE POSTDOCTORAL POSITIONS available beginning 1 March 1983 in the Developmental Biology Center, University of California, Irvine. Recent Ph.D. required, preferably in the areas of cell biology, molecular biology, developmental biology, neurobiology, or genetics. The positions are for research in the laboratories of M. Bronner-Fraser (developmental neurobiology, neural crest, migration and differentiation); R. Campbell (morphogenesis in hydra); R. Meyer (developmental neurobiology); S. Fraser (developmental neurobiology and cell communication in pattern formation); and S. V. Bryant (patterning in vertebrates). *The University of California is an Equal Opportunity/Affirmative Action Employer.* Submit résumé and brief description of research interests and experience, together with the names of three individuals willing to write on your behalf, to: **Peter J. Bryant, Developmental Biology Center, University of California, Irvine, California 92717,** by 1 February 1983.

POSTDOCTORAL POSITION available immediately. Ph.D. in cell biology, biochemistry, or related field, with possible experience in neuroscience, to study a brain/lymphocyte membrane protein. Experience in lymphocyte isolation, cell culture, cellular immunology, or hematology helpful. Other techniques used include protein chemistry, enzymology, and histochemistry. Send complete curriculum vitae, including names and addresses of three references, to: **Dr. R. J. Richardson, Toxicology Research Laboratory, M7525 SPH II, The University of Michigan, Ann Arbor, Michigan 48109.**

POSTDOCTORAL POSITION is available immediately for research into structure, function, and biosynthesis of bacterial redox proteins. The applicant should be a recent Ph.D. in biochemistry or microbiology with experience in protein purification and chemistry. Salary competitive. Send curriculum vitae and names of three references to: **Dr. D. DerVaranian, Department of Biochemistry, Boyd Graduate Studies Research Center, University of Georgia, Athens, Georgia 30602.** *An Equal Opportunity/Affirmative Action Employer.*

TWO POSTDOCTORAL POSITIONS in the nonlinear dynamics research program at the University of Texas at Austin. Current research focuses on instabilities and turbulence (described by strange attractors) in hydrodynamic and chemical systems. Applicants should send, by 28 February 1983, a résumé and have three letters of reference sent to: **Professor H. L. Swinney, Physics Department, University of Texas, Austin, Texas 78712.**

POSTDOCTORAL POSITION (readvertised). Immunologist with a background in genetics to work on developing the MHC of a marsupial under the supervision of William H. Stone, who is the Cowles Distinguished Professor at Trinity University, and scientist at the Southwest Foundation for Research and Education. The successful candidate will be appointed as postdoctoral scientist at the Southwest Foundation, and visiting research fellow at Trinity. Minimum salary for the first year is \$17,784 with consideration made for prior relevant postdoctoral experience. Candidates should respond to: **Personnel Manager, Southwest Foundation for Research and Education, P.O. Box 28147, San Antonio, Texas 78284.** Please include curriculum vitae, statement of research experience and interests, and names of three references. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH POSITION in the Department of Biochemistry of the University of Kentucky. Two-year appointment; starting salary: \$17,000 per year. Recent Ph.D. in biochemistry, chemistry, or related fields with experience in biochemical chemistry, nucleic acids, or proteins desired. Projects involve steady-state and time-resolved fluorescence studies of: (i) DNA dynamics, (ii) drug-DNA interactions, and (iii) active sites of nucleotide metabolizing enzymes.

Please send curriculum vitae and names of three references to: **Dr. Mary D. Barkley, Department of Biochemistry, University of Kentucky Medical Center, Lexington, Ky. 40236.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE UNIVERSITY OF COLORADO MEDICAL SCHOOL

A research associate position is available to study the molecular nature of the voltage-sensitive sodium channel in nerve and muscle membranes. This position will interact with an interdisciplinary approach to molecular mechanisms of sodium channel function, and experience may be obtained in a wide range of biochemical, immunological, and biophysical techniques. Ongoing projects include immunocytochemical localization of sodium channels in excitable tissues, chemical composition and structures of the channel, and reconstitution of channels in model membrane systems. It would be helpful if candidates had some background in membrane biochemistry or immunology (particularly monoclonal antibody methods). Interested persons should send curriculum vitae and the names of at least two referees to: **Dr. S. R. Levinson, Department of Physiology, C240, University of Colorado Medical School, Denver, Colo. 80262.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE. Position available in June 1983 for a membrane biochemist/immunochemist. Experience in protein purification and/or molecular immunology highly desirable. Research involves characterization of blood cell antigens. Salary is low-to mid-\$20,000's. Send résumé, description of current research, and names of three references to: **Dr. Richard Kahn, Missouri-Illinois Red Cross, Research Department, 4050 Lindell Boulevard, St. Louis, Mo. 63108.**

POSTDOCTORAL RESEARCHER. Ph.D. in physics and FORTRAN computer programming experience required. Salary \$1250 per month. Available immediately. Research to be done in theoretical atomic physics. Send résumé and names of three references to: **Nebraska Job Service, Box 95200, Lincoln, Neb. 68509,** attention: M. Pabian.

NATIONAL SCIENCE FOUNDATION (NSF)

The NSF, Division of Materials Research, is seeking a specialist in polymer science to be the **PROGRAM DIRECTOR** for the Polymers Program for a period of 1 year beginning about July 1983, while the permanent director is on sabbatical leave. This position is excepted from the competitive civil service at the GS-14/15 (equivalent to GS-14/15) level, \$41,277 to \$63,115 (limited by statute to \$57,500) per annum. Candidate should have a Ph.D. or equivalent research experience in polymer science and at least 8 years of research experience beyond the Ph.D., and be a respected figure in the field with a broad knowledge of the trends and scientists in this specialty. Administrative experience, especially in a university setting, is highly desirable. Applicants should submit a SF-171, Personal Qualifications Statement, or résumé to: **The National Science Foundation, Personnel Administration Branch, Room 212, 1800 G Street, NW, Washington, D.C. 20550,** attention: E. Paul Broglie, EX-83-12. For further information, telephone: 202-357-7841. *NSF is an Equal Opportunity Employer.*

RESEARCH AGRONOMIST. Career Federal Service. Incumbent will conduct research on forage quality analysis procedures and on the management of forage crops, primarily perennial grasses for improved forage quality. Position located at University of Nebraska Campus, Lincoln, Nebraska. GS-11/12, salary based on qualifications and experience. For applications, contact: **J. L. Brooks, USDA-ARS-B56, 2000 West Pioneer Parkway, Peoria, Ill. 61615.** Telephone: 309-671-7813. Closing date: 28 February 1983. Candidates must be U.S. citizens. *An Equal Opportunity Employer.*

RESEARCH ASSOCIATES, with Ph.D. in biochemistry, cell, or molecular biology. Positions are available immediately to study the role of cyclic AMP-dependent phosphorylation in hormonal regulation of gluconeogenesis and transport in kidney. These processes will be examined with purified enzymes and isolated epithelial cells. Other positions are available to study the biosynthesis and secretion of cell surface antigens in tumor cells and acidic mucin glycoproteins in respiratory tissue. These studies will involve carbohydrate structural analysis and gene regulation in isolated cell systems using current DNA technology. Salary: \$17,000.

Send résumé and references to:

**Dr. Joseph Mendicino
Department of Biochemistry
University of Georgia
Athens, Ga. 30602**

AGING-RELATED RESEARCH AT THE UNIVERSITY OF MICHIGAN

The Institute of Gerontology announces the availability of positions in the behavioral, biological, clinical, and social sciences, with joint appointments at the Institute and appropriate academic departments.

ASSOCIATE DIRECTOR FOR RESEARCH, INSTITUTE OF GERONTOLOGY

The appointee will direct independent research, coordinate Institute research projects and the research training of pre- and post-doctoral students, and contribute to the teaching program of a relevant academic department. Qualifications: credentials for senior faculty appointment, distinguished record in independent research in gerontology, experience in/appreciation for multi-disciplinary programs. Experience in the coordination and training areas described is desirable.

FULL-TIME FACULTY APPOINTMENTS IN THE BEHAVIORAL, BIOLOGICAL, CLINICAL, AND SOCIAL SCIENCES

Rank and discipline will be negotiable in appropriate academic departments. Qualifications: Ph.D. or equivalent and documentation of or potential for excellence and independent productivity in gerontological research and teaching. For candidates in the behavioral or social sciences, the gerontological research emphasis should be related to women, minorities, older workers, or housing.

JOINT FACULTY APPOINTMENTS IN THE INSTITUTE OF GERONTOLOGY AND THE DEPARTMENT OF BIOLOGICAL CHEMISTRY

Responsibilities will include independent research and teaching. Individuals will be housed in the new laboratory facilities at the Institute. Qualifications include those specified above; however, preference will be shown in at least one position for candidates with expertise in the area of endocrine regulatory mechanisms.

Apply by February 15, 1983 to:
Dr. Richard C. Adelman, Director
Institute of Gerontology
The University of Michigan
300 N. Ingalls Street
Ann Arbor, MI 48109
(313) 764-3493

A Non-Discriminatory/Affirmative Action Employer

DIRECTOR

Combined Ground-Based Astronomy Observatories

Applications and/or nominations are invited for the position of director of the combined ground-based national observatories managed by the Association of Universities for Research in Astronomy, Inc. (AURA). The combined observatories, which will be headquartered in Tucson, Arizona, will be comprised of the three AURA-managed national optical ground-based astronomical centers, each to be headed by an associate director; Kitt Peak National Observatory, Tucson, Arizona; Cerro Tololo Inter-American Observatory, La Serena, Chile; and the National Solar Observatories, Tucson and Sunspot, New Mexico.

The director will have responsibility for assuring accomplishment of the mission of these observatories, and deciding on priorities and allocating resources among the observatories within the constraints of an approved Program Plan and associated budget. The director will formulate long-range objectives for the combined observatories in consultation with the three associate directors and with input from the astronomical community. The director will report through the AURA president to the AURA Board of Directors, and will maintain close communications with the funding agency and the university community.

The director must have an earned doctorate in astronomy or a closely related physical science and a thorough understanding of the nature and purpose of major user-oriented world centers of astronomy. The successful candidate will be a recognized scientist as demonstrated by a record of significant publications and will have been effective in liaison with the national and international scientific communities. Experience in the management and supervision of major scientific research programs is required. Familiarity with development of state-of-the-art experimental techniques is highly desirable.

Applications, each accompanied by a résumé and names and addresses of at least three professional referees, or nominations with supporting statements, should be submitted no later than 15 February 1983 to:

Dr. George Clark, Chairman
Director of Search Committee
AURA, Inc., Corporate Office
1002 North Warren
Tucson, Arizona 85719

AURA, Inc., is an Equal Opportunity/Affirmative Action Employer.

PHYSICIAN (Cardiovascular and Nuclear Medicine Research). Physician-Board qualified/eligible in Radiology, Nuclear Medicine or Internal Medicine with experience in radiological techniques OR surgery with experience in radiation. Position is available July 1, 1983 at the Donner Laboratory, Biology and Medicine Division, Lawrence Berkeley Laboratory, University of California. Duties include: applications of isotopes, including positron emission tomography, single photon tomography, nuclear magnetic resonance, radioimmune assay, autoradiography and associated radiological and analytical methods. Human subject and animal work includes surgical preparation, catheterization, anesthesia, clinical evaluation and patient care responsibilities associated with clinical research. Clinical work is limited to research patients. Responsibilities include training of other physicians and scientists in clinical research, as well as supervision of studies, establishment of protocols and associated administrative responsibilities. Substantial experience in research involving use of radioisotopes, catheterization techniques, animal surgery, surgical preparations, clinical research, radiological techniques and supervision of radiation technicians essential. Salary range: \$2225-\$5669/mo. Send resume and names of three references to: Dr. Thomas F. Budinger, c/o Ronald Lowder, Employment Office, Lawrence Berkeley Laboratory, Bldg. 65, One Cyclotron Rd., Berkeley, CA. 94720. An Affirmative Action/Equal Opportunity Employer, M/F/H.

Section Head Clinical Pharmacology and Drug Metabolism

American Critical Care, a high growth pharmaceutical company specializing in cardiovascular drugs, is offering an excellent opportunity for a qualified individual in our Clinical Pharmacology and Drug Metabolism group.

Responsibilities include human and animal pharmacokinetics and drug disposition, drug metabolism, bioassay development and application to clinical and toxicology studies. The successful candidate should have demonstrated outstanding capabilities in leading a research team and have excellent administrative, communications and interpersonal skills. The position requires a Ph.D. in Pharmaceuticals or Pharm.D. with post doctoral training in pharmacokinetics and 5 or more years experience preferably in the pharmaceutical industry. A strong background in the design and management of clinical pharmacokinetic studies is desirable.

Our R&D facility is located in a beautiful park setting in the far north suburbs of Chicago. The work environment is progressive and fast-paced and the compensation package is outstanding. For confidential consideration, forward resume, including salary history to:

Personnel Manager
Dept. CP

American Critical Care

division of
American Hospital
Supply Corporation
1600 Waukegan Road
McGaw Park IL USA 60085

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POSITIONS OPEN

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Behavioral and Neural Sciences, is seeking applicants for **PROGRAM DIRECTOR POSITIONS** which periodically become available in the neurosciences. The positions are filled on a 1- or a 2-year rotational basis and are excepted from the competitive civil service at the GG-14/15 level (equivalent to GS-14/15), \$41,277 to \$63,115 (limited by statute to \$57,500) per annum. The openings will be in the fields of neurobiology and sensory physiology and perception. Applicants should have a Ph.D. or equivalent research experience, plus 6 to 8 years of successful scientific research experience. A broad general knowledge of the field and some administrative experience are also required. Applicants should submit a SF-171, Personal Qualifications Statement, or résumé to: **National Science Foundation, Personnel Administration Branch, Room 212, 1800 G Street, NW, Washington, D.C. 20550, attention: E. Paul Broglie.** For further information, telephone: 202-357-7841. NSF is an Equal Opportunity Employer.

RESEARCH ASSISTANT

Position in a molecular biology laboratory studying gene structure and expression. Position available immediately or in the near future. B.S. or M.S. degree in molecular biology/biochemistry required. Experience in recombinant DNA technology, nucleic acids, DNA sequencing, cell culture, microbiological techniques, and general biochemistry required. Send detailed curriculum vitae, transcripts, and names of four references to:

**Personnel Office
Trudeau Institute, Inc.
P.O. Box 59
Saranac Lake, N.Y. 12983**

RESEARCH ASSISTANT PROFESSOR, a nontenure position with salary substantially better than a postdoctoral stipend. The successful candidate should be a highly motivated, imaginative and independent individual to elucidate the roles of: (i) microheterogeneity in microtubule [Biochemistry 20, 2402 (1981)], and (ii) subunit interactions in the regulation of allosteric enzymes [Biochemistry 20, 2974 (1981); Biochemistry 21, 216 (1982)]. Applicants should send complete curriculum vitae and names of two individuals who can be contacted for letters of recommendation to: **Dr. James C. Lee, Department of Biochemistry, St. Louis University, 1402 South Grand Boulevard, St. Louis, Mo. 63104.**

RESEARCH ASSOCIATES BIOLOGY AND BIOCHEMISTRY

The College of Biological Sciences, University of Minnesota, has a limited number of non-faculty openings for scientists who have completed the Ph.D. and any postdoctoral training and who wish to continue independent research careers. While such research associates may work in collaboration with faculty, they will be expected to obtain independent funding prior to appointment. Appointments must be renewed annually but may be continued indefinitely, depending on funding, facilities, and evaluation of contribution.

Participating units are the Departments of Biochemistry, Botany, Ecology and Behavioral Biology, Genetics and Cell Biology, Microbiology, the Bell Museum of Natural History, and the Gray Freshwater Biological Institute. Availability of positions in each unit will depend on space, facilities, research interests, and success in obtaining external funding.

Apply to: **The Research Associate Program, College of Biological Sciences, University of Minnesota, Room 123 Snyder Hall, 1475 Gortner Avenue, St. Paul, Minn. 55108.** Provide curriculum vitae and list of publications, a one- to two-page statement of research plans, and a list of facilities and equipment required. Indicate the unit or faculty member with which affiliation is desired.

The University of Minnesota is an Equal Opportunity Employer and specifically invites and encourages applications from women and minorities.

THEORETICAL POSTDOCTORAL PHYSICIST for research in scattering theory and optics. Expected to coauthor papers, supervise graduate students, and teach courses in physics. Minimum qualifications include Ph.D. degree in nuclear/atomic physics, 2 years of postdoctoral research in three-body problems and optics, proven research ability in scattering theory, and in design of x-ray instrumentation. Salary in the range \$18,000 to \$22,000 per year on a 12-month basis, depending on experience. Send curriculum vitae and the names and addresses of three references to: **C. A. Pearson, Department of Physics, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294.**

POSITIONS OPEN

QUANTUM OPTICS THEORIST. Tenure-track position may be available August 1983, subject to funding. Applicant should possess proven record in research, ability to interact creatively with laser surgery group at neighboring hospital, as well as with solid-state and energy groups in local industry, ability to teach a variety of undergraduate and graduate level courses, and supervise doctoral candidates. Send résumé and names of three references to: **Norman Tepley, Department of Physics, Oakland University, Rochester, Mich. 48063, before 15 February 1983.** An Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSISTANT

Norden Laboratories, subsidiary of SmithKline Beckman Corp. and leader in the animal health industry, has an immediate opening in our research and development area. As an important member of one of our biological research teams, the research assistant will be responsible for laboratory work in the area of molecular biology.

Applicants should have an M.S. degree in microbiology, molecular genetics, or biochemistry; or a B.S. degree plus research experience.

In addition to an attractive starting salary and monthly cost-of-living adjustments, Norden offers a comprehensive benefit package that is one of the finest in the industry. Interested applicants should send a résumé (including salary requirements) in confidence to: **Connie Soucie,**

NORDEN LABORATORIES

**P.O. Box 80809
Lincoln, Neb. 68501**

An Equal Opportunity/Affirmative Action Employer

RESEARCH ASSOCIATE/CRYSTALLOGRAPHY. Develop and conduct research on dental materials and components related to constituents of tooth, bone, and dental calculus using x-ray and neutron diffraction and x-ray magnification microradiography. Collect data, interpret results, and write manuscripts for publication. Candidates must have Ph.D. in crystallography or physics/chemistry with special studies in crystallography, 3 years of postdoctoral experience, proven record of publications on crystal structure analysis, experience on diffractometers and Univac computer or equivalents, and minimum of 6 months of experience in x-ray magnification microradiography; 40 hours per week; \$28,700 per year. Submit résumé and references to: **Maryland State Employment Service, 1100 North Eutaw Street, Baltimore Md. 21201.** Refer to Job Order Number 4101805. *An Equal Opportunity Employer.*

Applications are invited for a position to carry out research on the mechanism of initiation of protein synthesis in eukaryotic organisms. Emphasis is on the cap-binding protein and its interaction with messenger RNA. Various aspects of the problem involve techniques of protein chemistry, recombinant DNA, nanosecond fluorimetry and monoclonal antibodies. The appointment is normally for 2 years with a starting salary of \$17,000. Recent Ph.D. in biochemistry, molecular biology, or virology is desired. Applicants should send curriculum vitae and names of three references to: **Dr. Robert E. Rhoads, Department of Biochemistry, University of Kentucky Medical Center, Lexington, Ky. 40536.**

An Equal Opportunity/Affirmative Action Employer

The University of Michigan, Section of Urology, is seeking a Board-certified or -eligible **PEDIATRIC UROLOGIST** who has completed a fellowship in pediatric urology in a children's hospital; has acquired experience as an investigator; is a competent clinician and surgeon; and is interested in an academic career. Salary and rank are negotiable. All inquiries should be directed to: **Jack Lapides, M.D., Professor and Head, Section of Urology, Department of Surgery, University of Michigan Hospitals, C5006 O.P.B., Box 3, 1405 East Ann Street, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 119.

The University of Michigan, Section of Urology, is seeking a Board-certified or -eligible **UROLOGIST** who is completing or has completed his/her residency within the past several years; has acquired experience as an investigator; is a competent clinician and surgeon; and is interested in an academic career. Salary and rank are negotiable. All inquiries should be directed to: **Jack Lapides, M.D., Professor and Head, Section of Urology, Department of Surgery, University of Michigan Hospitals, C5006 O.P.B., Box 3, 1405 East Ann Street, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory Employer. Code 127.

POSITIONS OPEN

ADVANCED GENETIC SCIENCES, INC., a company exploring the applications of modern biotechnology to agriculture, has openings for **RESEARCHERS** in the following areas:

Plant biochemistry (Group leader: Dr. Katherine Steinback)—Photosynthesis/electron transport, as related to herbicide mode of action. Photoinhibition, stress tolerance, and recovery.

Plant genetics (Group leader: Dr. Hugo Dooner)—Molecular characterization and utilization of plant transposable genetic elements. Regulation of coordinately expressed genes in higher plants.

Bacterial genetics (Group leader: Dr. Gareth Warren)—Genetics of rhizosphere Pseudomonads: characterization of bacterial genes and proteins involved in root colonization.

Applicants should submit curriculum vitae, bibliography, statement of research interests, and two letters of reference to the respective group leaders or to: **Dr. John Bedbrook, Advanced Genetic Sciences, Inc., P.O. Box 3266, Berkeley, Calif. 94703.**

UPJOHN VISITING SCIENTIST/POSTDOCTORAL POSITION. Available after 1 June 1983 in the laboratory of Dr. James W. Aiken, Experimental Sciences Department, for research on endogenous mechanisms for the regulation of blood pressure and blood flow. Study mechanisms for stimulation of the release of vasoactive hormones in vivo and/or their mode of action on isolated tissues using primarily physiological and pharmacological techniques with biochemical and chemical support. Current interests include active depressor mechanisms. Background in pharmacology and physiology desirable. Please send résumé and names of three references to: **Jerry Potratz, Department 14738, The Upjohn Company, Kalamazoo, Mich. 49001.** *An Equal Opportunity Employer, M/F.*

VIROLOGIST

The Department of Microbiology and Immunology, University of North Carolina (UNC), School of Medicine, Chapel Hill, invites applications from outstanding individuals for a tenure-track position in the area of virology. Rank will be directly dependent upon individual's education and experience. We seek an individual of demonstrated research productivity and teaching ability with a research program in the molecular and biochemical aspects of viral replication or pathogenesis. Position available fall 1983. *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer. We encourage applications from and nominations of minority and female candidates; such persons may identify themselves voluntarily.* Reply by 15 March 1983 with curriculum vitae and names and addresses of references to: **P. Frederick Sparling, M.D., 804 Faculty Laboratory Office Building, UNC, Chapel Hill, N.C. 27514.**

DEPARTMENT OF ZOOLOGY AND PHYSIOLOGY LOUISIANA STATE UNIVERSITY (LSU)

Applications are sought for four anticipated tenure-track positions, starting August 1983, in the following areas: **developmental biology, vertebrate systems physiology, cell/molecular biology, and genetics.** Rank open. Successful candidates must demonstrate potential for initiating an extramurally funded research program. Establishment of an active graduate program and excellence in undergraduate teaching is expected. Curriculum vitae, university transcripts, selected reprints, and three letters of reference should be sent to: **Chairman, Department of Zoology and Physiology, Louisiana State University, Baton Rouge, Louisiana 70803-1725.** Preference will be given to those applications received by 28 February 1983. *LSU is an Equal Opportunity/Affirmative Action Employer.*

ZOOLOGIST, academic staff (nontenured) position with reappointments to teach comparative anatomy, embryology, histology, physiology, and freshman courses. Ph.D. and excellence in teaching preferred. Salary is \$18,500 to \$21,000 plus. Send curriculum vitae, including course work and the names of three references, to: **Jay Dykstra, Department of Biology, University of Wisconsin-Platteville, Platteville, Wis. 53818.** Deadline to apply: 1 March 1983.

Equal Opportunity/Affirmative Action Employer

The MX Missile and the Strategic Balance of Power

A collection of recent articles from *SCIENCE* on contemporary strategic ideology is now available for use by professionals, teachers, and researchers interested in the nuclear arms race.

"Anyone seeking a better understanding of the MX debate would do well to look at [this] series of brief, clearly written analyses."

— *The Boston Globe*

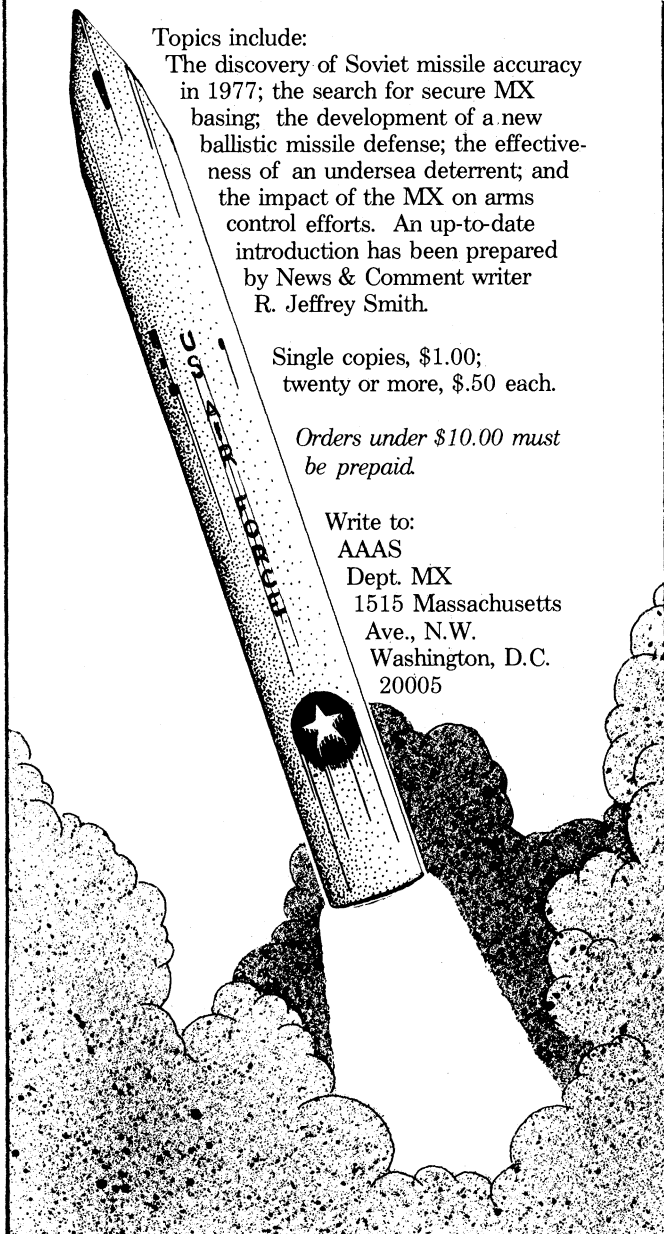
Topics include:

The discovery of Soviet missile accuracy in 1977; the search for secure MX basing; the development of a new ballistic missile defense; the effectiveness of an undersea deterrent; and the impact of the MX on arms control efforts. An up-to-date introduction has been prepared by News & Comment writer R. Jeffrey Smith.

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ANNOUNCEMENT

AVAILABILITY OF ANIMALS WITH INHERITED RETINAL DEGENERATIONS

The National Eye Institute (NEI) encourages research directed toward finding the causes of and preventing human hereditary retinal degenerations. An NEI contract supports the development of strains of dogs with progressive retinal atrophy and the breeding and distribution of these animals for research purposes. Irish setters exhibiting rod-cone dysplasia and miniature poodles with progressive rod-cone degeneration will continue to be made available to qualified investigators. Investigators interested in obtaining animals are encouraged to contact the NEI. A brief research protocol will be requested and it will be competitively reviewed for scientific merit by a selection committee. There will be no charge for the animals, but shipping and other research related costs will be the responsibility of the individual investigator. For further information, please contact:

Jack A. McLaughlin, Ph.D.
Retinal and Choroidal Diseases Branch
National Eye Institute
Building 31, Room 6A51
National Institutes of Health
Bethesda, Maryland 20205
Telephone: 301-496-5983

CONFERENCE

ONCOGENES AND CANCER TERRY FOX CANCER RESEARCH CONFERENCE

A conference will be held at the University of British Columbia, Vancouver, British Columbia, from 4 to 6 July 1983, sponsored by the National Cancer Institute of Canada.

Topics will include cellular and viral oncogenes in vertebrates, including man, cellular targets and mechanisms in tumor formation, theoretical and molecular aspects of mutagenesis, model systems for cancer, and the epidemiology of cancer.

Speakers invited thus far include: A. Bernstein, J. M. Bishop,* G. Cooper, R. Eisenman, E. Gateff, M. Hayman,* W. S. Hayward, T. Hunter, G. S. Martin, E. W. Nester, B. Ozanne, M. L. Paterson, T. Pawson, M. Radman, W. E. Rawls, R. Peto,* L. C. Strong,* G. J. Todaro, I. Verma, J. Vielkind, R. Weinberg, and E. Ziff (*Tentative).

The meeting will consist of 5 half-day sessions and 2 noon-hour poster sessions. Registration is \$100 (Canadian). Students and postdoctoral fellows \$50. The deadline for registration and the submission of abstracts is 1 May 1983.

For further information, registration, and abstract forms, contact: The Terry Fox Cancer Research Conference Secretary, British Columbia Cancer Research Centre, 601 West 10 Avenue, Vancouver, British Columbia, Canada V5Z 1L3. Telephone: 604-873-8401, local 31.

FELLOWSHIPS

NEUROSCIENCE RESEARCH LABORATORY FELLOWSHIPS are available to recent M.D.'s or Ph.D.'s for basic or clinical research in the neurosciences in the College of Medicine at The Ohio State University. Contact a potential faculty sponsor and/or send curriculum vitae and the names of three references before 1 March to: Dr. M. S. Beattie, Fellowship Director, Neuroscience Research Laboratory, 410 Hamilton Hall, 1645 Neil Avenue, Columbus, Ohio 43210. Telephone: 614-422-2206.

POSTDOCTORAL FELLOWSHIPS

Departments of
Cellular and Developmental Biology
Organismic and Evolutionary Biology
Harvard University

A limited number of postdoctoral research positions become available from time to time. Appointments are funded through research grants awarded to faculty members and are usually for one year, sometimes renewable. For a list of faculty members who have postdoctoral positions available, write, but do not send applications, to:

Departmental Offices
16 Divinity Avenue
Cambridge, Mass. 02138

Harvard University is an Equal Opportunity/Affirmative Action Employer.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS in molecular genetics and molecular biology. A wide range of genetic, regulatory, and cell biology projects in bacterial and human viruses, bacteria, yeast, and mammalian cells. Technology includes prokaryotic and eukaryotic expression systems, nucleotide and peptide synthesis, and monoclonal antibodies. Applicants should send complete curriculum vitae, letters of reference, and a statement of career objectives and area of investigative interest to: Dr. B. S. Strauss, Department of Microbiology, The University of Chicago, 920 East 58 Street, Chicago, Ill. 60637. The University is an Affirmative Action/Equal Opportunity Employer.

RESEARCH FELLOWSHIP. Postdoctoral research fellowship available from 1 January 1983 for 2 or 3 years in the areas of psychopharmacology and drugs of abuse in the Ensor Foundation Research Laboratory of the William S. Hall Psychiatric Institute, Columbia, South Carolina. Candidate is required to have Ph.D. degree in pharmacology with zero to 2 years of postdoctoral experience in psychopharmacology, neuropharmacology, or neurochemistry with training in radioreceptor assay, radioimmunoassay of peptide hormones and neurotransmitters, use of stereotaxic instruments. The salary range is \$16,000 to \$18,000. William S. Hall Psychiatric Institute is affiliated with the University of South Carolina, School of Medicine, and functions as part of the Department of Neuropsychiatry and Behavioral Science. Contact: Nandkumar S. Shah, Ph.D., Chief of Research Services, William S. Hall Psychiatric Institute, P.O. Box 202, Columbia, South Carolina 29202.

ASSISTANTSHIPS

THE MEDICAL SCIENTIST TRAINING PROGRAM AT THE MEDICAL UNIVERSITY OF SOUTH CAROLINA offers ASSISTANTSHIPS for a select number of individuals for training in an integrated basic and clinical medical science program leading to a combined M.D./Ph.D. degree in 6 to 7 years. For further information, please contact: Director, Medical Scientist Training Program, Dean's Office, College of Graduate Studies, Medical University of South Carolina, Charleston, South Carolina 29425.

GRADUATE STUDY

DOCTORAL PROGRAM IN MOLECULAR AND CELLULAR BIOLOGY AND PATHOBIOLOGY

Interdisciplinary program leading to Ph.D. degree seeks qualified candidates interested in fundamental molecular and cellular biology and its application to disease states in man.

Stipends are available on a competitive basis. Contact: Director, Program in Molecular and Cellular Biology and Pathobiology, College of Graduate Studies, Medical University of South Carolina, Charleston, South Carolina 29425.

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The Department of Biological Science, Murray State University, is seeking applicants for several graduate teaching assistantships up to \$3,600 per academic year, and research assistantships up to \$7,200 per year. The Department of Biological Sciences offers diverse research opportunities leading to an M.S. degree in biology. Some of the research areas are fisheries, aquatic biology, wildlife biology, microbiology, physiology, and botany. Send applications to: Dr. Joe M. King, Department of Biological Sciences, Murray State University, Murray, Ky. 42071.

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POSTDOCTORAL TRAINEESHIPS IN ENVIRONMENTAL TOXICOLOGY AND PATHOLOGY. Positions available in NIH-funded interdisciplinary program. Research areas include pharmacology and pathobiology of chemically induced disease (morphological and biochemical effects of chemicals, carcinogenesis, teratology, immunotoxicology, cytogenetics); food-borne disease (biochemistry and mechanisms of action of microbial toxins, food additives, naturally occurring toxicants); epidemiology; behavioral toxicology; fate of pesticides in the environment. U.S. citizenship or permanent residence required. To apply, identify area of interest and send résumé, transcripts, and three letters of recommendation to: Director, Environmental Toxicology Center, University of Wisconsin, 309 Infirmary, Madison, Wis. 53706; telephone: 608-263-4580. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL TRAINEESHIP available in experimental psychology starting before 30 July 1983, with concentration in one of the following areas: physiological psychology, mathematical psychology, cognition, developmental psychology, animal learning and behavior, or visual science. Appointment is for 1 year and renewable for 2. Applicants should have Ph.D. in any area of experimental psychology or in computer science, mathematics, or biological science. Yearly stipend is \$13,380 and up, depending on years of relevant experience. Send résumé, statement of research interest, publications, and three letters of recommendation by 30 March 1983 to: Professor L. Kaufman, Department of Psychology, New York University, 6 Washington Place, New York, New York 10003. An Equal Opportunity/Affirmative Action Employer.

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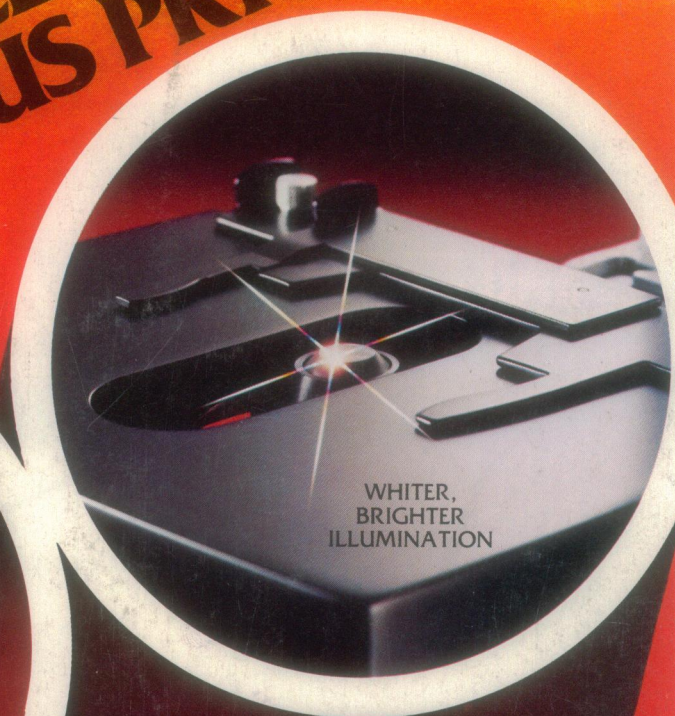
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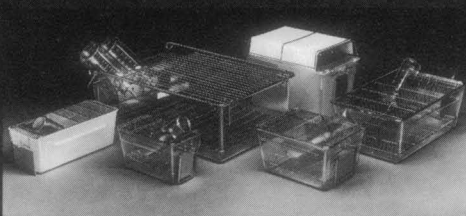
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