

notwithstanding their penchant for a scientific vocabulary, health reformers of all persuasions shared an optimistic view of nature/God that attributed disease to the violation of hygienic law and argued that personal salvation lay within the reach of every individual who pledged to eschew "temptation" and live healthfully. Though methods and means might shift with the vicissitudes of scientific, pseudoscientific, and cultural innovation, underlying assumptions about the essential goodness of nature, including the presumption that evil either did not exist or could be profitably ignored, remained consistent. Though such systems could tantalize a person like William James, the ethical messianism of optimistic hygiene raised the hackles of thinkers whose vision tended toward a darker view of human existence. H. L. Mencken, for example, called hygiene "the corruption of medicine by morality," complaining that it was "impossible to find a hygienist who does not debase his theory of the healthful with a theory of the virtuous."

And yet what remains curious about the heroes of Wharton's narrative is that often they were well-read, forward-looking individuals whose education allowed them to appropriate the language and authority of the hard sciences but who did not recognize any implications that science might be "running contrary to their fundamental faith in human perfectibility." As Oliver Wendell Holmes observed of the phrenologists, each one's system was "so adjusted as to soak up all evidence that helps it, and shed all that harms it."

If Wharton's book has a failing, it is with respect to this tension between science and belief. Though we are left with the impression that the concern for individual and community health in the form of public crusades for perfection was a new and distinct characteristic of the post-1830 period, and thus probably the product of a modernizing and industrializing culture, the author does not probe the connection between modernism and health reform as thoroughly as he might. If we agree that the general cultural thrust of Western thinking in the last three centuries has been to disseminate the Enlightenment's respect for skepticism, empiricism, and the scientifically demonstrable, the appearance of pseudoscientific panaceas that essentially appeal to man's spiritual nature tells us something about the general acceptance of Enlightenment ideas. Roszak suggests one explanation for the persistence of the "irrational": "In the deep allegiance of the people," he writes, "the scientific



"Bernarr Macfadden displaying the fruits of physical culture." [From Macfadden's *Virile Powers of Superb Manhood* (London, 1900); reproduced in *Crusades for Fitness*]

world view simply has not taken, though it continues to dominate our economic and political life." Could it be that the rise of health reform was directly linked to the increasing failure of traditional religions to grab hold of people's imaginations? Did not the ideology of hygiene demonstrate the inadequacy of Enlightenment ideas to satisfy a persistent yearning for the transcendent that the Age of Reason believed would pass away with continuing progress?

And what of the relationship between health reform and politics? Body worship, as Charles Krauthammer has observed (*New Republic*, 16 and 23 Aug. 1982, p. 30-31), has traditionally been the province of the political right. Yet we have recently witnessed the publication of *Jane Fonda's Workout Book*, a how-to best-seller that would have delighted the likes of Bernarr Macfadden and that, according to Krauthammer, "peddles Tom Hayden's ideas wrapped in Jane Fonda's body."

One regrets that Wharton has not probed these issues more deeply. Though *Crusades for Fitness* combines lively readability and good-natured humor without sacrificing lucid analysis and serious historical scholarship, it leaves us wishing for more.

REGINA MARKELL MORANTZ  
Charles Warren Center for  
Studies in American History,  
Harvard University,  
Cambridge, Massachusetts 02138

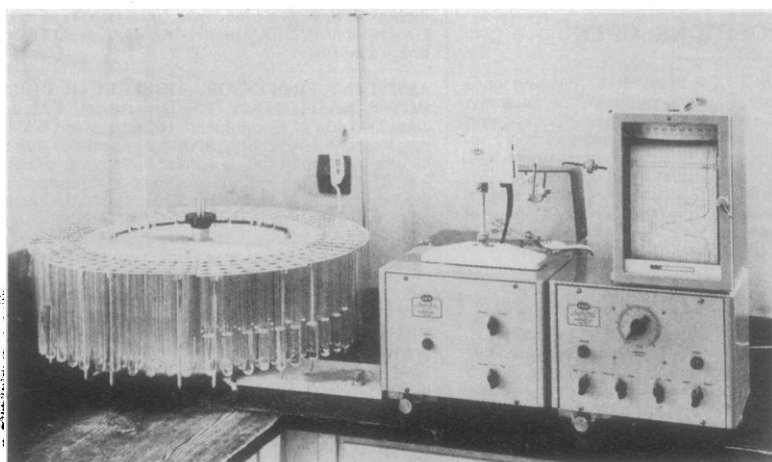
## Books Received

- Adeles and Algebraic Groups.** A. Weil. Birkhäuser, Boston, 1982. viii, 130 pp. \$10. Progress in Mathematics, vol. 23.
- Advances in Cancer Research.** Vol. 36. George Klein and Sidney Weinhouse, Eds. Academic Press, New York, 1982. xii, 364 pp., illus. \$46.
- Biological Magnetic Resonance.** Vol. 4. Lawrence J. Berliner and Jacques Reuben, Eds. Plenum, New York, 1982. xx, 340 pp., illus. \$42.50.
- Cell Biology of the Eye.** David S. McDevitt, Ed. Academic Press, New York, 1982. xii, 572 pp., illus. \$67.50. Cell Biology.
- Ceramic Raw Materials.** W. E. Worrall. Published on behalf of the Institute of Ceramic by Pergamon, New York, ed. 2, 1982. iv, 112 pp., illus. Cloth, \$18; paper, \$8.50.
- Digital Computer Structure and Design.** R. Townsend. Butterworth, Boston, ed. 2, 1982. viii, 252 pp., illus. \$24.95.
- Early Emission Line Stars.** C. R. Kitchin. Hilger, Bristol, England, 1982 (U.S. distributor, Heyden, Philadelphia). xii, 182 pp., illus. \$35. Monographs on Astronomical Subjects, 8.
- Fundamentals of Enzymology.** Nicholas C. Price and Lewis Stevens. Oxford University Press, New York, 1982. xvi, 454 pp., illus. \$49.
- The Genetics and Biology of Drosophila.** Vol. 3b. M. Ashburner, H. L. Carson, and J. N. Thompson, Jr., Eds. Academic Press, New York, 1982. xviii, 428 pp., illus., + index. \$98.
- Ground Water.** Hydrogeology/Ground Water Survey and Pumping Tests/Rural Water Supply and Irrigation Systems. H. M. Raghunath. Halsted (Wiley), New York, 1982. viii, 456 pp., illus. \$29.95.
- Guidebook to Organic Synthesis.** Raymond K. Mackie and David M. Smith. Longman, New York, 1982. xii, 338 pp., illus. Paper, \$19.95.
- Handbook of Carcinogens and Hazardous Substances.** Chemical and Trace Analysis. Malcolm C. Bowman, Ed. Dekker, New York, 1982. xii, 750 pp., illus. \$99.50.
- Introduction to Atomic and Molecular Collisions.** R. E. Johnson. Illustrated by T. J. Johnson, Plenum, New York, 1982. xiv, 288 pp. \$32.50.
- Introduction to Planetary Geology.** Billy P. Glass. Cambridge University Press, New York, 1982. x, 470 pp., illus., + plates. \$29.95.
- The Language of Television Advertising.** Michael L. Geis. Academic Press, New York, 1982. xiv, 258 pp., illus. \$26.50. Perspectives in Neurolinguistics, Neuropsychology, and Psycholinguistics.
- Learning and Memory.** Donald A. Norman. Freeman, San Francisco, 1982. xiv, 130 pp., illus. Cloth, \$14; paper, \$6.95.
- The Life Cycle Completed.** A Review. Erik H. Erikson. Norton, New York, 1982. 108 pp. \$10.95.
- Linguistic Evidence.** Language, Power, and Strategy in the Courtroom. William M. O'Barr. Academic Press, New York, 1982. xvi, 192 pp. \$23.50. Studies on Law and Social Control.
- The Making of the European Monetary System.** A Case Study of the Politics of the European Community. Peter Ludlow. Butterworth, Boston, 1982. xii, 320 pp. \$29.95. Butterworths European Studies.
- Nonverbal Behavior and Social Psychology.** Richard Heslin and Miles L. Patterson. Plenum, New York, 1982. xii, 184 pp. \$24.50. Perspectives in Social Psychology.
- The Orion Complex.** A Case Study of Interstellar Matter. C. Goudis. Reidel, Boston, 1982 (distributor, Kluwer Boston, Hingham, Mass.). xiv, 312 pp., illus. \$59.50. Astrophysics and Space Science Library, vol. 90.
- The Pathophysiology of Human Immunologic Disorders.** Jeremiah John Twomey, Ed. Urban & Schwarzenberg, Baltimore, 1982. xii, 270 pp., illus. \$39.50.
- Pediatric Surgery in Tropical Countries.** Papers from a meeting, Bombay, 1980. P. P. Rickham, W. Ch. Hecker, and J. Prévot, Eds. Urban & Schwarzenberg, Baltimore, 1982. 312 pp., illus. \$32. Progress in Pediatric Surgery, vol. 15.
- Petrography.** An Introduction to the Study of Rocks in Thin Sections. Howel Williams, Francis J. Turner, and Charles M. Gilbert. Freeman, San Francisco, ed. 2, 1982. xiv, 626 pp., illus. \$29.95.
- Stochasticity and Partial Order.** Doubly Stochastic Maps and Unitary Mixing. Peter M. Alberti and Armin Uhlmann. Deutscher Verlag der Wissenschaften, Berlin, and Reidel, Boston, 1982 (distributor, Kluwer Boston, Hingham, Mass.). 124 pp. \$28.50. Mathematics and Its Applications, vol. 9.
- Ultrasound and Cancer.** Proceedings of a symposium, Brussels, July 1982. Salvator Levi, Ed. Excerpta Medica, Amsterdam, 1982 (U.S. distributor, Elsevier, New York). xvi, 364 pp., illus. \$80.75. International Congress Series 587.
- Understanding the Space-Time Concepts of Special Relativity.** Arthur Evett. Publishers Creative Services, Jamaica, N.Y., 1982 (distributor, Halsted [Wiley], New York). x, 162 pp., illus. \$19.95.

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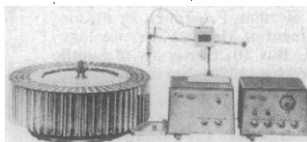
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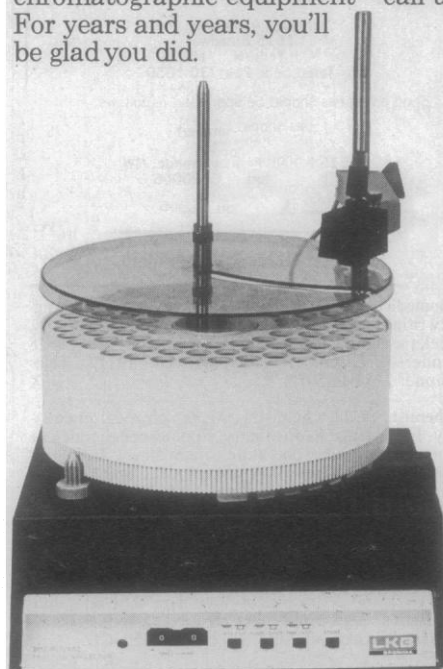
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## CLASSIFIED ADVERTISING DEADLINES:

18 February issue (mailed 11 February): **28 January**  
25 February issue (mailed 18 February): **4 February**  
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1515 Massachusetts Avenue, NW  
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## POSITIONS WANTED

**Biomedical Writer/Editor**, experienced in preparing/revising basic research and reference publications, seeks assignments. Edwin H. Feinberg, Ph.D., 6828 Anderson Street, Philadelphia, Pa. 19119. Telephone: 215-844-5972. X

**Chemist**, Ph.D. chemistry, M.Sc. physical chemistry. Experience in dosimetry, luminescence, nuclear chemistry, and solid-state chemistry. Biological background, supervisory experience, and publications. Experience in Fortran and Basic programming. Presently working in nuclear physics. Desires job in industry, research, academic fields. Box 16, SCIENCE. X

**Immunologist**, Ph.D. Four years of experience in the research and development of enzyme-labeled immunoassays. Seeks mid-level position in industry/academic research institute. Box 19, SCIENCE. X

**International Energy Policy**, Ph.D. (political science) 1977. Administrative, budgetary, grants, and multidisciplinary research experience. Seeks private sector, government, or university position. Box 8, SCIENCE. X

**Psychobiologist**, Ph.D., January 1983. Currently employed as computer programmer and research technician at prominent New York City university medical center; seeks challenging position in academic, clinical, or industrial setting, particularly in northeastern United States. Research background in human EEG and in perceptual deficit following stroke; strong academic background in biochemistry and physiology. Extensive experience with computer applications, including Fortran, Basic, assembly-machine languages, and statistical programming. Teaching experience and coauthorship of one book chapter. Research position in human experimental neuropsychology or technical/programming position in neurophysiology/neurobiology desired. Program portfolio and curriculum vitae available on request. Box 15, SCIENCE. X

## POSITIONS WANTED

**Director/Manager**: Ph.D., M.B.A. Fifteen years of diversified technical (chemistry and health care) and research management experience. Publications. Desires similar position with advancement in research institute, government, or industry. Box 18, SCIENCE. X

**Medical Physiologist**, Ph.D., M.S. bio. engineering. Research experience in cardiopulmonary pathophysiology, mechanisms of hemostasis and thrombosis, host defense after trauma and during sepsis, plasma fibronectin, fibrinogen, biomedical instrumentation and computer applications to physiology, statistics, and imaging technologies. Competence in all major biochemical, immunochemical, and radioisotopic techniques. NIH postdoctoral research, 1 year; available immediately; prefers Northeast. Academic, industrial, or governmental research; salary negotiable. Box 17, SCIENCE. X

## 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.

**ASSISTANT PROFESSOR**, tenure track. Starting 1983. Salary: upper \$20,000's. Appointee must have a doctoral degree in engineering, biomedical engineering, computing, or M.D. with an undergraduate engineering degree or equivalent experience. Principal responsibilities involve the engineering management of a computer facility, medical instrumentation, and teaching special courses to medical students. Appointee is expected to develop a productive research program in an area of study applicable to medical care.

Applicants should send curriculum vitae, list of publications, and names and addresses of three references to: **Dr. W. S. Yamamoto, Chairman, Department of Clinical Engineering, George Washington University Medical Center, 2300 K Street, NW, Washington, D.C. 20037**.

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

**ASSISTANT PROFESSOR**—Faculty position available in the area of medical microbiology and immunology. Applicants with background and experience in the area of infectious disease immunology should send curriculum vitae and names of three individuals familiar with their background no later than 14 February 1983 to: **Dr. Herman Friedman, Professor and Chairman, Department of Medical Microbiology and Immunology, MDC Box 10, University of South Florida, College of Medicine, 12901 North 30 Street, Tampa, Fla. 33612**.

**ASSOCIATE EXPERIMENTAL PHYSICIST** (academic setting): Will conduct experimental research in the area of gravitation and gravitational radiation, to develop ultrasensitive laser interferometers for detection and study of gravitational radiation produced by astronomical phenomena. Requires good understanding of physics and experience with precision computers (including both hardware and software). Job site Pasadena, California. Ph.D. or equivalent. Starting salary: \$1500 per month. Send this ad and your résumé to: **Job Number 4302, P.O. Box 865, Sacramento, Calif. 95804**, not later than 11 February 1983. If offered employment, you must show you have the legal right to work. *Equal Opportunity Employer.*

**BIOORGANIC 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

**ASSISTANT PROFESSOR OF BIOLOGY**. The Department of Biology of Columbus College invites applicants for a tenure-track position at the assistant professor level, starting in fall 1983, for a teaching assignment in **human anatomy and physiology**. A successful candidate must demonstrate ability to team with other faculty to develop and deliver informative and enthusiastic instruction in an introductory anatomy and physiology sequence. Applicants must also be capable of teaching general biology and an advanced course in physiology, cell biology, or exercise physiology. A Ph.D. is required and teaching experience preferred. Columbus College grants associate, baccalaureate, and master's degrees and has an enrollment of about 4300. Qualified applicants should send curriculum vitae, a statement of interests and goals, names and addresses of three referees, and other supporting materials by 15 February 1983 to: **George E. Stanton, Chairperson, Department of Biology, Columbus, Ga. 31993**. *Columbus College is a unit of the University System of Georgia and is an Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR—MOLECULAR BIOLOGY-PARASITOLOGY**. The Department of Medicine, Division of Geographic Medicine, Case Western Reserve University, invites applications for a faculty position in the molecular biology of parasitism. This position will involve joint appointment in the Department of Molecular Biology and Microbiology. We encourage applications from candidates with strong credentials in molecular biology and a commitment to develop an independent research program in molecular parasitology. This appointment provides excellent opportunities to combine a previous background in molecular biology with a strong center in geographic medicine which is studying several model parasite systems. Send curriculum vitae, a statement of research interests, and names of four references to: **Dr. Adel Mahmoud, Department of Medicine, Division of Geographic Medicine, University Hospitals, 2074 Abington, Cleveland, Ohio 44106**. *An Equal Opportunity/Affirmative Action Employer.*

## ASSISTANT RESEARCH PHYSICIST OR ASTRONOMER SPACE SCIENCES LABORATORY UNIVERSITY OF CALIFORNIA, BERKELEY

**EUV SPECTROSCOPY**. The Space Sciences Laboratory of the University of California at Berkeley has openings for two assistant research astronomers or physicists. Positions will be for a period of 1 year with high likelihood of extension and will begin 1 June and 1 October 1983. The responsibilities of the positions will be the development of EUV spectrometers for an astronomy satellite. A Ph.D. in physics or astronomy with experience in space instrumentation is required. Experience with reflection grating spectrometers and microchannel plate detectors is desirable.

Send résumé and three letters of recommendation by 1 May 1983 to:

**Professor C. S. Bowyer**  
Space Sciences Laboratory  
University of California  
Berkeley, Calif. 94720

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

**BIOLOGY**—Tenure-track assistant professorship in the area of cell biology/physiology. Ph.D. and teaching experience required. Founded in 1828, McKendree College is a 4-year liberal arts institution 23 miles from St. Louis, Missouri, with an emphasis on quality undergraduate instruction. Applicants should submit letter of application, résumé, and undergraduate and graduate transcripts and have three letters of recommendation sent to: **Chairman, Biology Search Committee, McKendree College, Lebanon, Ill. 62254**, by 1 March 1983. *Equal Opportunity/Affirmative Action Employer.*

## FACULTY POSITION

The Department of Biology at Saint Vincent College invites applications for a full-time faculty position at the assistant professor level in the area of organismal and population biology beginning August 1983. Excellence in teaching, ability to direct undergraduate research, and willingness to advise undergraduates, including premedical and health sciences, is essential. Applicants must have the Ph.D. Submit résumé, including details of teaching experience, statement of research interests, transcripts, and names of three references, by 28 February 1983 to: **Director of Personnel, Saint Vincent College, Latrobe, Pa. 15650**. *Affirmative Action/Equal Opportunity Employer.*

## CSIRO

MICROMETEOROLOGIST/FLUID DYNAMICIST  
A\$23,340 to A\$34,330  
DIVISION OF ENVIRONMENTAL MECHANICS  
CANBERRA, ACT, AUSTRALIA

CSIRO has a broad charter for research into primary and secondary industry areas. The Organization has approximately 7400 employees, 2900 of whom are research and professional scientists, located in divisions and sections throughout Australia.

**FIELD:** Turbulent Dispersion in the Atmospheric Boundary Layer.

Research in the Division of Environmental Mechanics is aimed primarily at gaining a better understanding of the biological and physical processes of the soil-plant-atmosphere system with particular regard to the transport of energy, water, nutrients, and other materials. Facilities include laboratories for soil physics, solar radiation, fluid mechanics, micrometeorology and physiology, as well as mobile laboratories for study of the field environment. The laboratory has a large and well-instrumented, boundary layer wind tunnel and computer facilities for the collection and analysis of experimental data. The division also has a micrometeorology field site located 45 kilometers from Canberra. The divisional staff at present includes 12 research scientists (biologists, physicists, and mathematicians) together with experimental and technical staff and is usually augmented by several visiting research workers.

Research within the micrometeorology program is concentrated on the problems of momentum, heat and mass transfer over irregular and spatially variable surfaces, above and within crop canopies, and in the wakes of obstacles. Parallel and complementary investigations are conducted in the field and in the wind tunnel.

**DUTIES:** As a member of the micrometeorology program, to carry out wind tunnel, field, and theoretical investigations of dispersion in turbulent boundary layers, with special reference to vegetation canopies and complex terrain.

**QUALIFICATIONS:** Applicants should have a Ph.D. degree or equivalent qualification in an appropriate field, supported by evidence of proven research ability. Experience in wind tunnel simulation of atmospheric boundary layer flows and in the study of turbulent dispersion in such flows, is highly desirable.

**TENURE:** Indefinite with superannuation benefits available.

**APPLICATIONS:** In writing, stating full personal and professional details, the names of at least two scientific referees, and quoting reference Number A2239 should reach: The Chief, Division of Environmental Mechanics, CSIRO, P.O. Box 821, Canberra City, ACT 2601, Australia, by 25 February 1983.

## CSIRO

RESEARCH FELLOW  
A\$23,340 to A\$28,000 per annum  
DIVISION OF FISHERIES RESEARCH  
MARMION LABORATORY  
PERTH, WESTERN AUSTRALIA, AUSTRALIA

CSIRO has a broad charter for research into primary and secondary industry areas. The Organization has approximately 7400 employees, 2900 of whom are research and professional scientists, located in divisions and sections throughout Australia.

**GENERAL:** The CSIRO Marine Laboratories, which include the Division of Fisheries Research and the Division of Oceanography, is Australia's principal marine research institution, employing about 200 scientists and support staff investigating the physical, chemical, and biological features, including fisheries, of the oceans around Australia. The main laboratory is in Sydney, with smaller laboratories in Brisbane and Perth. The appointee will be located at the Perth laboratory.

At its Perth laboratory the Division of Fisheries Research is studying the coastal limestone reef systems of Western Australia, the habitat of the western rock lobster, which is one of Australia's most important fisheries. Much work has been done on studying the migrations of lobster larvae and juvenile behaviour over the past decade. Problems currently being investigated include juvenile homing behaviour, the role of lobsters in the coastal reef food webs, feeding behaviour, and broad studies to determine the most favourable reef conditions for lobsters.

**DUTIES:** As a member of a small team, the appointee will carry out research on the ecology of juvenile rock lobsters on the nursery reefs off the southwest coast of Western Australia.

**QUALIFICATIONS:** A Ph.D. degree, or equivalent qualifications, in a relevant field of zoology, with research ability and initiative and skill in planning and carrying out a field program. Research experience in some aspect of lobster biology would be an advantage.

**TENURE:** A 3-year term, with the possibility of a further term not exceeding 2 years. Australian Government pension benefits are available, subject to normal conditions.

**APPLICATIONS:** In writing, quoting reference Number A2291 and giving full personal particulars, including details of qualifications and experience, copy of academic transcripts, and the names of at least three professional referees, should reach: The Acting Chief, Division of Fisheries Research, CSIRO, P.O. Box 21, Cronulla, NSW 2230, Australia, by 25 February 1983.

## RESEARCH OPPORTUNITIES

### WITH THE U. S. DEPARTMENT OF AGRICULTURE

The Eastern Regional Research Center of USDA's Agricultural Research Service is seeking qualified professionals for the positions listed below. The Center is located in Wyndmoor, PA, a beautiful suburb of Philadelphia. USDA is an Affirmative Action/Equal Employment Opportunity Employer. Women and minorities are urged to apply.

#### SHORT TERM RESEARCH POSITIONS (approximately 2 years duration) (Ph.D. is desirable)

**RESEARCH CHEMIST (ANIMAL BIOMATERIALS LABORATORY)** Research to evaluate the physical and dynamic mechanical properties of intact connective tissue and its component proteins elastin and collagen derived from bovine muscle tissue in both intact and restructured beef matrices.

**RESEARCH CHEMIST (PHYSICAL CHEMISTRY & INSTRUMENTATION LABORATORY)** Research to evaluate the molecular interactions and dynamics of intact connective tissue and its purified component proteins derived from bovine muscle using <sup>13</sup>C CP-MAS NMR spectroscopy in conjunction with 2-D and relaxation methods.

**RESEARCH CHEMIST (FOOD SCIENCE LABORATORY)** Research to determine the efficacy of selective enzymatic digestion of unpliant connective tissue components from bovine tissues used in restructured meat products.

**RESEARCH CHEMIST (FOOD SCIENCE LABORATORY)** Research on the biochemical events leading to the synthesis and secretion of protein, fat, and lactose and on the processes by which they are regulated in the lactating mammary gland.

Salary is based on qualifications and experience. Most Federal Government benefits apply.

Salary ranges: (GS-11) \$24,508-31,861, (GS-12) \$29,374-38,185

At the Eastern Regional Research Center, scientists are engaged in basic and applied research in the public's interest on a variety of agricultural commodities to develop new fundamental information and new processing technologies, improve the nutritional value of foods, eliminate health hazards, reduce environmental pollutants and conserve natural resources. We are now accepting applications from qualified professionals for the above positions. Applications may only be accepted from U.S. citizens. Applications MUST BE received by February 25, 1983. For further information and application requirements contact:

Personnel Office, USDA, Eastern Regional Research Center  
600 East Mermaid Lane, Philadelphia, PA 19118  
(215) 233-6573

## POSITIONS OPEN

**ASSOCIATE DIRECTOR OF AGRICULTURAL EXPERIMENT STATIONS AND RESIDENT DIRECTOR OF THE GEORGIA STATION.** Nominations and applications are being accepted for the associate director of Agricultural Experiment Stations and resident director of the Georgia Station, The University of Georgia College of Agriculture. The Georgia Station located in Griffin (P. O. Experiment), Georgia, is one of three major agricultural experiment stations of The University of Georgia and has approximately 70 full-time research faculty. The person occupying this position is a member of the college-level administrative team and reports directly to the associate dean in the College of Agriculture and director of the Agricultural Experiment Station. Responsibilities include overall administration of the research program, facilities, and budget at the Georgia Station, and in an overall advisory capacity the management of research programs at three north Georgia branch stations. Candidates must have the Ph.D. degree and qualifications for the rank of professor with demonstrated excellence in research and a strong interest in administration. Position available 1 February 1983. Applications will be received until 15 March 1983. Letters of application, with résumés, and the names and addresses of three references should be submitted to:

**Dr. Wiley N. Garrett, Chairman  
Search Committee  
Department of Plant Pathology  
University of Georgia  
Athens, Georgia 30602**

*The University of Georgia is an Equal Opportunity/Affirmative Action Institution.*

**ASSOCIATE CHIEF OF STAFF FOR RESEARCH**—The Brooklyn Veteran's Administration Medical Center and State University of New York, Downstate Medical Center, invite applicants for the position of associate chief of staff for research. The Veteran's Administration Medical Center is seeking an individual with a distinguished background in academic medicine who is actively engaged in clinical and/or basic research and who will qualify for a faculty appointment. The applicant must have administrative experience and clearly demonstrate the ability to assume leadership responsibility in developing new programs. Our objective is to expand the research activities at the VA and increase collaborative programs with Downstate Medical Center. Laboratory space is available and there are construction plans which will add additional laboratories. Interested applicants should send their curriculum vitae to: **Dr. Sheldon P. Rothenberg, Chairman, Search Committee, BROOKLYN VA MEDICAL CENTER, 800 Poly Place, Brooklyn, N.Y. 11209.** VA is an Equal Opportunity Employer.

**MEIJI MILK PRODUCTS CO., LTD.**, a leading food-processing company in Japan, is launching an interdisciplinary basic research program of cell biology. Several positions are available at junior and senior levels in protein/glycoprotein characterization, eukaryotic cell biology, hybridoma technology, and genetic engineering. Innovative researchers and clinicians are encouraged to apply. The candidate speaking fluent Japanese and English is most desirable. The company provides a competitive salary, moving expense, and excellent fringe benefits. Applicant should send curriculum vitae, the names of three or more references, bibliography, and a summary of research accomplishment and research interest in English to: **Masaru Imada, Ph.D., Department-1, MEIJI MILK PRODUCTS CO., LTD., Rockefeller Center Station, P.O. Box 927, New York, N.Y. 10185.**

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

Interested applicants should contact: **William Martel, M.D., Chairman, Department of Radiology, The University of Michigan Medical School, Ann Arbor, Michigan 48109.** A nondiscriminatory, Affirmative Action Employer. Code 07.

## POSITIONS OPEN

**DEAN, FACULTY OF SCIENCE.** The College of Arts and Sciences at the University of Arizona is composed of the Faculties of Fine Arts, Humanities, Science, and Social and Behavioral Sciences, each of which has its own dean. The Faculty of Science consists of 12 departments, including mathematics and the physical and biological sciences.

The dean serves as the chief academic and budget officer of the Faculty of Science and has full responsibility to promote the continued growth of quality in teaching, research, and service programs. In fulfilling these duties, the dean represents the faculty within the University community and is directly responsible to the senior vice president for academic affairs.

Applicants and nominees should send a letter of interest in the position, along with up-to-date curriculum vitae and the names of five references, no later than 30 March 1983, directly to:

**A. B. Weaver, Executive Vice President  
University of Arizona  
Administration 512  
Tucson, Arizona 85721**

*Equal Opportunity/Affirmative Action Employer*

**DEVELOPMENTAL BIOLOGIST**—Opening for a developmental biologist with broad interests in molecular and cellular biology. A tenure-track position at the assistant professor level is open immediately for a person able to generate own salary from grants or contracts. A University commitment to assume funding of the position at a later date has been made. Send application, résumé, and names of three or more references to: **Professor W. J. Brett, Chairperson, Life Sciences Department, Indiana State University, Terre Haute, Ind. 47809,** no later than 15 March 1983. *Indiana State is an Equal Opportunity/Affirmative Action Employer.*

### 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.**

**DIRECTOR OF FACULTY RESEARCH.** Coordinate/promote faculty research activities. Doctorate degree; 5 years as a university faculty member; 3 years of university/federal agency/industrial and/or private foundation administrative experience. Credentials permitting tenured senior appointment in an academic department. Active in scholarly research; success in obtaining extramural support for research, creative, or educational projects; experience in staff supervision and budget preparation. Start 1 July or 22 August 1983; \$34,800 to \$42,120. Complete job announcement should be obtained by telephoning: 714-773-2614 or writing: **Patricia E. Worden, Chair, Search Committee, Director of Faculty Research, c/o Office of the Provost, California State University, Fullerton, Calif. 92634.** Applications must be postmarked by 22 February 1983; include a letter of intent and complete résumé. Have at least three letters of recommendation sent. *An Affirmative Action/Equal Opportunity Employer.*

**DIRECTOR.** Mailman Research Center at McLean Hospital. With the approaching retirements of Doctors Seymour S. Kety and Alfred Pope, the Harvard Medical School and McLean Hospital are looking for an outstanding person to direct a major medical research laboratory and conduct a research program in the areas of neuroscience and psychiatry. Successful candidate will also receive an appointment as a tenured professor at Harvard Medical School. Please submit curriculum vitae and a letter of interest by 1 March 1983 to: **Dr. Joseph B. Martin, Chairman, Search Committee for Director, Mailman Research Center at McLean Hospital, Department of Neurology, Massachusetts General Hospital, Boston, Mass. 02114.** Harvard University and the McLean Hospital are Equal Opportunity/Affirmative Action Employers.

## POSITIONS OPEN

**DIRECTOR, DIVISION OF PUBLIC HEALTH, UNIVERSITY OF MASSACHUSETTS AT AMHERST.** The Division of Public Health is one of three major academic units located in the School of Health Sciences. The division is accredited as a School of Public Health by the Council on Education of Public Health and offers the M.S., M.P.H., and Ph.D. degrees. There is also a small undergraduate program. The director of the division serves as the overall academic administrator of this unit, which consists of four major academic programs: biostatistics and epidemiology, community health education, environmental health, and health administration. There is also a formal joint graduate degree program with the Department of Food Science and Nutrition in Public Health Nutrition. The director of the division also represents Public Health in all professional endeavors including the Association of Schools of Public Health. The four academic program units are administered by chairpersons who report to the director. A top-level academic administrator is required. The individual must hold a terminal doctorate degree, have had relevant administrative experience, have the required public health preparation and experience, exhibit a superior academic and research background, and be eligible for the rank of full professor. Salary: competitive, dependent on background and experience. Starting date: 1 September 1983 (earlier if possible). Send nominations and résumés to: **Dr. Edward Calabrese, c/o Dean's Office, School of Health Sciences, University of Massachusetts, Amherst, Mass. 01003.** Submit résumés by 15 March 1983. *An Affirmative Action/Equal Opportunity Employer.*

**REGIONAL DIRECTOR OF GRANTS FOR RESEARCH CORPORATION,** a foundation for the advancement of science and technology. Expected qualifications include a Ph.D. in chemistry or physics with teaching and research experience. Administrative experience is a plus. Moderate travel will be required to maintain necessary interaction with academic institutions and their departments. Candidates should send curriculum vitae and names of three references by 14 March to: **Dr. John P. Schaefer, President, Research Corporation, 405 Lexington Avenue, New York, N.Y. 10174.** *Research Corporation is an Equal Opportunity Employer.*

**ENDOCRINOLOGIST**—A tenure-track position to be filled at any level, assistant through full professor, is available September 1983. Duties include teaching an upper-level undergraduate course in general endocrinology and one other course per year and maintaining a vigorous research program, including supervision of graduate students. All areas of endocrinology are to be considered from hormone receptors through neuroendocrinology. Applicants should send their curriculum vitae and a list of at least three referees to: **Dr. Joseph Kunkel, Chairman, Endocrinology Search Committee, Zoology Department, University of Massachusetts, Amherst, Mass. 01003.** Deadline for submission of application is 28 February 1983. *An Equal Opportunity/Affirmative Action Employer.*

### EXPERIMENTAL HEMATOLOGY

Postdoctoral position, 1 to 3 years. Standard NIH starting stipend. Hemopoietic stem cells: effect of cell cycling, microenvironment, aging, transplantation on same. In vivo and cell culture studies. Excellent interaction opportunities with other basic scientists in hemopoiesis, immunology, and cellular genetics. Starting date: June to September 1983. Inquiries: **Dr. N. S. Wolf, Department of Pathology, University of Washington, SM-30, Seattle, Wash. 98195.** *An Equal Opportunity/Affirmative Action Employer.*

**FACULTY TEACHING AND RESEARCH POSITION,** Institute of Marine Science, University of Alaska, Fairbanks. Research interests should include the numerical modeling of estuarine, coastal, and open ocean physical oceanography in subpolar or polar environments. Participation in interdisciplinary studies is encouraged. Applicant should have an extensive background in hydrodynamics and numerical modeling. Ph.D. degree in physical oceanography is preferred (or its equivalent in training or experience). Rank and salary will be determined by experience. Candidates should send résumé and names of three referees to: **Dr. Vera Alexander, Director, Institute of Marine Science, University of Alaska, Fairbanks, Alaska 99701.** Closing date: 15 March 1983. *The University of Alaska is an Equal Opportunity/Affirmative Action Employer and Educational Institution.* Your application for employment with the University of Alaska may be subject to public disclosure if you are selected as a finalist.



**THE PENNSYLVANIA  
STATE UNIVERSITY  
ERIE, PENNSYLVANIA**

**HEAD, DIVISION OF NATURAL SCIENCES AND ENGINEERING.** The division has 40 full-time faculty in the disciplines of engineering, biology, chemistry, physics, mathematics, geoscience, and computer science. The division offers associate, baccalaureate, and graduate programs in science, engineering, and technology, and it has a special commitment to innovation and interdisciplinary studies, recently supported by a NSF CAUSE grant. The division has chosen to focus on the themes of energy and the environment for much of its instruction and research programs.

General qualifications include an earned doctorate in engineering or a closely related field, successful teaching experience, and a strong record in research and scholarship. In addition, significant administrative experience is desirable. The division headship includes a faculty appointment at the rank of associate or full professor.

Erie is a city of year-round cultural and recreational opportunities with particularly strong opportunities for music, theatre, skiing, and water sports. Applications and three letters of recommendation should be received by 15 March 1983 and should be addressed to:

Search Committee for NSE Head  
Office of the Dean  
Behrend College, Box 102  
The Pennsylvania State University  
Station Road  
Erie, Pa. 16563

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**DEPARTMENT HEAD  
PHYSICS AND ATMOSPHERIC  
SCIENCE  
DREXEL UNIVERSITY**

Drexel University seeks an outstanding individual to be head of the Department of Physics and Atmospheric Science beginning fall 1983. Applicants should have extensive research/teaching experience and should have demonstrated appropriate leadership ability. The appointment is nonrotating and the successful applicant will be concurrently a full professor with tenure.

Drexel is a private technological university with an enrollment of 10,000, most of whom participate in a unique cooperative program. It is located in the West Philadelphia community of University City, in close proximity to two other educational institutions and a major science center. The Department of Physics and Atmospheric Science has 30 faculty, plus an average of five visitors per year, and 40 graduate and 60 undergraduate students. There is significant research activity in three major areas: experimental physics (biophysics, nuclear physics, quantum optics, solar energy, solid-state physics), theoretical physics (atomic and molecular physics, biomathematics, mathematical physics, nonlinear dynamics, nuclear physics, quantum optics, solid-state physics), and atmospheric science (mesometeorology, remote sensing of the atmosphere, and satellite meteorology). Funding for these research activities exceeds \$1 million per year.

Screening of applicants will begin on 15 March 1983. Nominations or inquiries should be directed to:

Dr. T. K. Lim, Chairperson  
Departmental Head Search Committee  
Department of Physics and Atmospheric Science  
Drexel University  
Philadelphia, Pa. 19104  
Telephone: 215-895-2717

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

**Senior Scientist  
Immunologist**

**Wampole Laboratories, a prominent leader in the diagnostic field, seeks an experienced Immunologist.**

The candidate must have a PhD in a Biological Science subspecialty with a major emphasis in Immunology and minimum 2 years post graduate experience. The individual should have a demonstrated capability of conducting a basic research program related to infectious diseases. Exp in Immunochemistry, production of monoclonal antibodies and protein purification techniques is expected. Candidate will be required to establish a research program related to infectious diseases, interact with other staff groups associated with Immunodiagnostics and participate with extramural research programs.

**Qualified candidates are encouraged to forward their curriculum vitae, a description of research interests and references to**

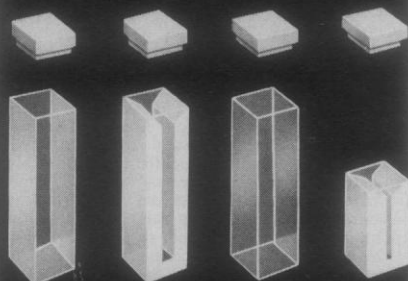
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Cranbury, NJ 08512

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**The  
Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.  
announces the establishment of a  
Clinical Research Group of the Max Planck Society  
at the Department of Internal Medicine, Goettingen University**

**A JUNIOR SCIENTIST**

is given the opportunity to independently establish this group and carry out a research program on the subject of

**biologic regulation of the host-tumor interaction**

in close collaboration with the Division of Hematology/Oncology, Department of Internal Medicine at the University of Goettingen. The research program will focus on the demonstration, isolation, identification and therapeutic use of substances mediating host-tumor interactions in men.

It is expected that the applicant has gained international reputation in the research fields of cellular and/or humoral tumor immunology. The project is outlined and the appointment will be made for a period of five years. Salary is according to group C 3 of the Bundesbesoldungsgesetz.

The group will have at its disposal approximately 160 m<sup>2</sup> research space and appropriate funding for scientific coworkers and technical supporting staff, equipment and running costs.

Applications including curriculum vitae, list of publications, summary of present and planned research activities should be mailed until February 28, 1983, to the

**Max-Planck-Gesellschaft zur  
Förderung der Wissenschaften e.V.  
— Generalverwaltung —  
Postfach 647  
D-8000 Muenchen 1**

## POSITIONS OPEN

### FACULTY POSITION IN NUTRITION/ FOOD POLICY AND PLANNING

The Department of Nutritional Sciences, University of California, Berkeley, invites applications for an 11-month faculty appointment in nutrition/food policy and planning. The position is open at the assistant, associate, or full professor level. The applicant must hold a Ph.D. (or equivalent) degree in nutritional sciences, with primary or secondary emphasis on public policy, nutritional anthropology, economics, or political science. The appointee is expected to develop a new academic and research program concerned with food systems and distribution and the nutritional state of people, from the point of view of policy analysis, at the national and international levels. Research topics could include the ecologic, geographic, economic, or cultural aspects of food distribution and utilization patterns; nutritional status measurement; and/or analysis of intervention methodologies and risk assessment.

The position will be available 1 July 1983. To apply, please send curriculum vitae, bibliography, statement of research and teaching interests, and the names of five referees who may be contacted. Apply to: **Dr. Norman Kretschmer, Chair, Nutrition/Food Policy and Planning Search Committee, Department of Nutritional Sciences, University of California, Berkeley, Calif. 94720.** Application deadline: 1 March 1983 or until position is filled. Salary: commensurate with qualifications. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

Two continuing positions, which together must cover the specialties of **genetics, microbiology, animal physiology, and embryology**, are available starting September 1983. Applicants must be able to teach in at least two of these areas and also have skill in teaching general biology. Rank and salary open. Send statement of teaching interests, transcripts, and letters of reference to: **Dr. Stanley Caine, Vice President for Academic Affairs, Hanover College, Hanover, Ind. 47243.**

**TEXAS—GROSS ANATOMY.** Two full-time faculty positions available 1 July 1983 at assistant and associate professor levels. Applicants must have demonstrated research productivity and training in gross anatomy. Responsibilities include undergraduate and graduate teaching and research. Previous academic experience desirable. Rank and salary commensurate with qualifications. *Affirmative Action/Equal Opportunity Employer.* Application deadline 1 April 1983. Send curriculum vitae and names and addresses of three references to: **Dr. Patricia L. Blanton, Department of Gross Anatomy, Baylor College of Dentistry, 3302 Gaston Avenue, Dallas, Texas 75246.**

### IMMUNOPHARMACOLOGIST

Full-time position for doctorate-level candidate in privately endowed, growing institute specializing in arthritis and related inflammatory diseases. Background in immunopharmacology, pharmacology of inflammation. Position requires experience with animal and in vitro models. Send curriculum vitae to:

Box 14, SCIENCE

### INHALATION TOXICOLOGIST

The Life Sciences Research Division of IIT RESEARCH INSTITUTE, a Chicago-based not-for-profit research organization, has a position for a qualified candidate to assume responsibility for the conduct of short- and long-term animal inhalation toxicity studies. The duties will include the design of experiments, preparation of study protocols, interpretation and evaluation of results, and preparation of final reports. A Ph.D. in toxicology or related sciences is required and prior experience in inhalation and acute toxicity testing is desirable but not necessary. The position offers excellent opportunity for collaborative work with staff members involved in carcinogenesis, mutagenesis, teratology, behavioral and reproductive toxicology, and pharmacokinetics research. Please submit letters of inquiry, including curriculum vitae, description of research interests, and salary history to: **Lucy Ampt, Professional Staffing, Department A/28, IIT RESEARCH INSTITUTE, 10 West 35 Street, Chicago, Ill. 60616.** We are an *Affirmative Action/Equal Opportunity Employer, M/F/V/H.*

## POSITIONS OPEN

**IMMUNOLOGIST**—Assistant/associate professor. Tenure-track position in an expanding microbiology department occupying a new research facility. Must have active research program in cellular and/or humoral aspects of host defense mechanisms. Postdoctoral or equivalent experience in immunology or pathogenic microbiology desired. Teaching experience in medical microbiology and/or graduate immunology courses required. Closing date: 31 March 1983. Send curriculum vitae, description of professional aspirations, and names of three references to: **Dr. Byron Burlingham, Department of Microbiology, School of Medicine, East Carolina University, Greenville, N.C. 27834.** An *Equal Opportunity/Affirmative Action Employer.*

### IMMUNOPARASITOLOGIST

The University of Georgia, Department of Zoology, has a tenure-track position, starting September 1983, at assistant or associate professor level, for an immunoparasitologist. The candidate will be expected to develop an active research program, preferably dealing with parasitic protozoa. He or she will also be expected to develop advanced courses and/or participate in existing courses. Rank and salary will be commensurate with qualifications and postdoctoral experience.

Send résumé, a brief description of research and teaching goals, and at least three letters of reference by 15 March 1983 to: **Dr. Raymond T. Damian, Department of Zoology, University of Georgia, Athens, Ga. 30602.**

An *Affirmative Action/Equal Opportunity Employer*

### THE DEPARTMENT OF NEUROBIOLOGY AND ANATOMY THE UNIVERSITY OF TEXAS MEDICAL SCHOOL AT HOUSTON

Invites applications for two positions available at the assistant, associate, and full professor levels from candidates with research interests related to neuroscience. Preference will be given to candidates with teaching capability in gross anatomy. Please submit curriculum vitae and names of three references by 15 February 1983 to:

Search Committee  
Neurobiology and Anatomy  
University of Texas  
Medical School at Houston  
P.O. Box 20708  
Houston, Texas 77025

An *Equal Opportunity/Affirmative Action Employer.* Women and minorities are encouraged to apply.

### NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Behavioral and Neural Sciences, is seeking candidates for two Intergovernmental Personnel Act (IGPA) Assignments from state and local government. The individuals selected for these assignments will remain employees of their home institution which may be reimbursed by NSF for salary and other costs related to the assignment. Nominations should be forwarded by the candidate's institution, not by the individual. The openings will be in the fields of **NEUROBIOLOGY and PSYCHOBIOLOGY.** Candidates should have a Ph.D. or equivalent experience and training in an appropriate field, plus a minimum of 4 to 6 years of successful scientific research experience. A broad general knowledge of the field and some administrative experience are also required. Assignment will include selecting reviewers for proposals; preparation of awarded and declined proposals; discussions with principal investigators about their proposed research; and providing technical leadership and guidance in the particular scientific area. Nominations should be forwarded to: **Dr. Richard Louttit, Division Director for Behavioral and Neural Sciences, NSF, Washington, D.C. 20550; telephone: 357-7564.**

The Department of Biotechnology Research of Pioneer Hi-Bred International, Inc., is seeking a **PLANT TISSUE CULTURE SPECIALIST** to work primarily with maize. Research will focus on manipulation of cultured cells and protoplasts including culture establishment and plant regeneration. The long-term objective is to use tissue and cell culture technology to support the corn-breeding program. The tissue culture specialist will be part of a cooperative research effort which includes plant pathology, cytogenetics, molecular biology, and tissue and cell culture. A Ph.D. with relevant research experience in basic plant biology is required. Salary will be commensurate with experience. Letters of application, curriculum vitae, and references should be sent to: **Dr. Nicholas M. Frey, Pioneer Hi-Bred International, Inc., Box 85, Johnston, Iowa 50131.**

## POSITIONS OPEN

### PHYSICAL BIOCHEMISTRY OPENING AT VANDERBILT UNIVERSITY

The Department of Biochemistry at the Vanderbilt University School of Medicine is seeking a physical biochemist at the level of assistant professor (tenure-track) or, possibly, associate professor. The primary requirement is promise of excellence in research and teaching, and preference will be given to applicants with demonstrated competence, including relevant postdoctoral experience and publications, in any area of physical biochemistry, particularly those related to proteins. The position can be filled on or after 1 July 1983. Applications must be received by 1 April 1983 and should include curriculum vitae, the names of three references, and a statement of the candidate's proposed research. Please direct all correspondence to: **Dr. Leon W. Cunningham, Chairman, Department of Biochemistry, Vanderbilt University, Nashville, Tenn. 37232.** Vanderbilt is an *Equal Opportunity/Affirmative Action Employer.*

### PHYSICAL OCEANOGRAPHER

Assistant or associate professor, depending on experience. Applicants may be observationalists or theoreticians but must have a Ph.D. in the physical sciences, have demonstrated the ability to conduct independent high-quality research, and they are expected to obtain research funding. Duties include teaching and supervision of graduate students. Interested candidates should submit a résumé and names of three references by 1 March 1983 to: **G. Ross Heath, Dean, School of Oceanography, Oregon State University, Corvallis, Ore. 97331.** *Affirmative Action/Equal Opportunity Employer.*

### PLANT BIOLOGY PROGRAM Department of Biology, Washington University St. Louis, Missouri

Applications are invited for two faculty appointments at the **ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** levels to be made between September 1983 and September 1984. Applicants able to integrate molecular biology with cell, developmental, and genetic biology, host-pathogen or symbiont interactions, and/or physiology are especially encouraged to apply. Evidence of creative and productive research, and interest in, and aptitude for, teaching are essential. Applications will be received until the positions have been filled. Send summary of research plans, curriculum vitae, and names of three references to: **Dr. Roger Beachy, Plant Biology Search Committee, Department of Biology, Box 1137, Washington University, St. Louis, Mo. 63130.** Washington University is an *Equal Opportunity/Affirmative Action Employer.*

**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. DerVaratianian, Department of Biochemistry, Boyd Graduate Studies Research Center, University of Georgia, Athens, Georgia 30602.** An *Equal Opportunity/Affirmative Action Employer.*

**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.*

### THE UNIVERSITY OF TEXAS AT DALLAS

**POSTDOCTORAL POSITION** available immediately for research in the biochemical genetics of the mammalian mitochondria. Research projects employ somatic cell genetic, molecular genetic, and biochemical approaches to investigate the organization, inheritance, and expression of the mammalian mitochondrial genes. Send résumé and names and telephone numbers of three references to: **Dr. G. Breen, Department of Biology, University of Texas at Dallas, Box 688, Richardson, Texas 75080.**

# CSIRO

RESEARCH FELLOW (TWO POSITIONS)  
A\$23,340 to A\$34,330  
DIVISION OF TROPICAL ANIMAL SCIENCE  
INDOOROOPILLY, QUEENSLAND, AUSTRALIA

CSIRO has a broad charter for research into primary and secondary industry areas. The Organization has approximately 7,400 employees, 2,900 of whom are research and professional scientists, located in divisions and sections throughout Australia.

**GENERAL:** The Division of Tropical Animal Science was recently formed to integrate CSIRO's research activities on the improvement of animal production, particularly cattle production, in tropical Australia. It brings together programs on breeding and management, disease and parasite control, and nutrition. Major facilities of the new division consist of the Long Pocket Laboratories in Brisbane and its associated field stations for the study of cattle diseases and parasites, and the Tropical Cattle Research Centre at Rockhampton and the associated Belmont Field Station, for research on cattle genetics and physiology. In addition, facilities at the Davies Laboratory in Townsville, North Queensland, and at the associated Lansdown Pasture Research Station, operated by the Division of Tropical Crops and Pastures, have been made available for the study of cattle nutrition. Divisional Headquarters is at the Long Pocket Laboratories.

**POSITION NUMBER:** A0740.

**FIELD:** Biochemistry/Immunology.

**LOCATION:** Long Pocket Laboratories, Indooroopilly, Queensland.

Long Pocket Laboratories are situated in the Brisbane suburb of Indooroopilly, where excellent animal accommodation and laboratory facilities for the study of parasitic diseases of cattle are available. Research in progress includes programs in helminthology, immunology in relation to ticks and tick-borne diseases, biochemistry of acaricide resistance, and veterinary virology.

**DUTIES:** To isolate, purify, and characterise antigenic compounds from the various life-cycle stages of the common gastrointestinal nematode parasites of cattle in northern Australia and examine the capacity of these compounds to protect calves against infection with the parasite species concerned. To study the immune response of the host with a view to determining the most efficient means of inducing artificial immunity to such parasites.

**QUALIFICATIONS:** A Ph.D. degree or equivalent qualification, with a strong background in preparative biochemistry and a knowledge of, and interest in, the mechanisms of immunity in mammals.

**TENURE:** A term of 3 years. Superannuation benefits available.

**POSITION NUMBER:** A5871.

**FIELD:** Reproductive Biology.

**LOCATION:** Tropical Cattle Research Centre, North Rockhampton, Queensland.

The Tropical Cattle Research Centre has, since 1954, conducted research on defining and quantifying the environmental limitations and the impact of genetic adaptations in cattle productivity in the tropics. It has been shown that realized production consists of two genetically controlled components: one is production potential, that is, production under stress-free conditions, and the other is adaptation to environmental stress. Across breeds, these two sets of factors are negatively correlated. Scientists at the Centre are now searching for ways to overcome this nexus and to combine high production potential with high levels of adaptation. Apart from conventional selection techniques, a long-term approach is to study the control of productive and adaptive traits in cattle so that the mechanisms may be traced back to their genetic origins. The application of these approaches to the improvement of cattle for the tropics requires the study of embryonic development. A veterinary scientist, along with appropriate support staff, has been appointed recently to develop and apply embryo transfer and manipulation techniques.

**DUTIES:** The appointee, as a member of the reproductive biology program, will conduct research aimed at developing tissue culture methods and investigating the applications of these to cattle improvement, particularly in relation to the future possibility of incorporating new genetic material into the bovine genome. The major areas in which opportunities exist are:

- Production of cattle chimeras and twins for physiological and genetic analysis;
- The development of vectors and microinjection techniques for genetic engineering; and
- Production of teratocarcinoma cell lines.

**QUALIFICATIONS:** A Ph.D. degree, or equivalent qualification, in an appropriate field, such as reproductive biology. Experience in the field of cell tissue or embryonic culture is desirable.

**TENURE:** A term of 3 years, with the possibility of a further term not exceeding 2 years. Superannuation benefits available.

**APPLICATIONS:** In writing and stating full personal and professional details, the names of at least two referees, and quoting reference Number A0740 or A5871, should reach: **The Chief, Division of Tropical Animal Science, Long Pocket Laboratories, CSIRO, Private Bag Number 3, Indooroopilly, Queensland 4068, Australia**, by 25 February 1983.

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## POSITIONS OPEN

**POSTDOCTORAL POSITION** starting September 1983 to study the immunology of complement and complement receptor regulation of: (i) lymphocytes and the immune response; (ii) tumoricidal activity of macrophages and NK cells; and (iii) neutrophil and monocyte respiratory burst. Send curriculum vitae and names and telephone numbers of three professional references to: **Dr. Gordon Ross, Division of Rheumatology-Immunology, University of North Carolina, 932 FLOB 231H, Chapel Hill, N.C. 27514.** Awards subject to citizenship eligibility requirements as defined by the granting agency.

*An Equal Opportunity/Affirmative Action Employer*

### POSTDOCTORAL POSITION Fluorescence Studies of Protein Dynamics

Position available early spring for a Ph.D. experienced in modern luminescence spectroscopy as applied to biomolecules to investigate rapid structural fluctuations of globular proteins. Experience in protein chemistry desirable. Much of the work to be carried out at Bell Laboratories, Murray Hill, New Jersey. Send résumé to: **Dr. A. A. Lamola, Department of Dermatology, College of Physicians & Surgeons, Columbia University, 630 West 168 Street, New York, N.Y. 10032.**

**POSTDOCTORAL POSITION—Neuropharmacology.** The fellow will join an established group studying the effects of alcohol on neurochemistry and behavior. The project involves investigation of brain opiate receptor function. Candidates should be knowledgeable in biochemical methods: enzymology and receptor binding assays, HPLC, GC. Position available immediately; salary \$16,000 to \$19,000 per year. Send curriculum vitae and three letters of reference to: **Dr. P. L. Hoffman, University of Illinois at Chicago, Health Science Center, Department of Physiology/Biophysics, P.O. Box 6998, Chicago, Ill. 60680.** *An Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITIONS IN REGULATORY BIOCHEMISTRY

Several postdoctoral and research associate positions will be available on a competitive basis in a research-intensive department of biochemistry. Currently there are 20 postdoctoral fellows and 13 faculty in the department. Research interests include: hormone secretion and action, metabolic regulation; membrane receptor dynamics; membrane transport; regulation of gene expression; protein chemistry of immune system components; and the physical chemistry of membrane structure. Access to several institutional core facilities such as those for tissue culture, hybridoma preparation, fluorescence-activated cell sorting, and protein sequencing is available to all investigators. For further information about individual faculty research programs, please write to: **Dr. Michael P. Czech, Postdoctoral Fellowship Program, Department of Biochemistry, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, Mass. 01605.** *An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL POSITION** for research on mouse embryos. Work includes microinjection of genes into eggs, cell culture, embryo transfer, and development of mouse strains containing foreign genes. Apply with curriculum vitae to: **R. L. Brinster, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pennsylvania 19104.**

**POSTDOCTORAL POSITION IN PARASITE IMMUNOLOGY.** Available immediately to join a research group studying the immunology of filarial parasites. Emphasis is on antigen purification, immunoassay, monoclonal antibody, and molecular biology techniques. NIH-supported fellowship. Send curriculum vitae and names of three references to: **Professor David A. Levy, Department of Immunology and Infectious Diseases, Johns Hopkins University School of Hygiene and Public Health, Baltimore, Maryland 21205.** *Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS** are presently available in the area of the statistical mechanical theory of amphiphilic chain molecules, including those of lipid bilayer membranes, surfactant micelles, and including problems of the folding of proteins. Background in these areas or other areas of statistical mechanics or polymer physics is highly desirable. To apply, please send résumé and two letters of reference to: **Professor Ken A. Dill, Department of Pharmaceutical Chemistry, University of California, San Francisco, Calif. 94143.**

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## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** available to work on the molecular biology of leukemia induction by fractionated x-irradiation and regulation of gene expression by retroviral infection and transformation. Candidates need to be well versed in molecular biotechnology and have shown great promise as graduate students. U.S. citizenship or permanent residence is required. Please send letter describing research experience with curriculum vitae and three letters of recommendation by 30 April 1983 to:

**Dr. Daniel Meruelo  
New York University Medical Center  
Department of Pathology  
550 First Avenue  
New York, N.Y. 10016**

**University of Chicago  
The Ben May Laboratory for Cancer Research  
NICHD Program Project**

A **POSTDOCTORAL POSITION** is available immediately for a Ph.D. biochemist to participate in a project involving purification of human progesterone receptor and preparation of monoclonal antibodies. Experience with steroid receptors, protein purification techniques, and/or monoclonal antibody production is desired.

A position is also available immediately for a tissue culture technologist to supervise a cell culture laboratory. This person will be responsible for the production and culturing of hybridomas as well as the maintenance of human cell cultures.

Applicants for both positions should send curriculum vitae and letters of recommendation to: **Dr. Geoffrey L. Greene, Box 424, Ben May Laboratory for Cancer Research, The University of Chicago, 950 East 59 Street, Chicago, Illinois 60637.** *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** to study developmental mechanisms underlying evolution of the vertebrate nervous system. Prerequisites include knowledge of neuroanatomy. Position available fall 1983. Send curriculum vitae and names of two references to: **Dr. Michael J. Katz, Department of Developmental Genetics and Anatomy, Case Western Reserve University, Cleveland, Ohio 44106.**

**POSTDOCTORAL POSITION** available immediately to develop physiology-based computer model of algal growth and biomass production, supporting mariculture project and ongoing research in kelp physiology and ecology. Previous modeling experience necessary. Background in plant physiology, ecology, or oceanography helpful. Submit application, curriculum vitae, and names of three references by 15 February 1983 to: **W. J. North, California Institute of Technology, Kerckhoff Marine Laboratory, 101 Dahlia, Corona Del Mar, Calif. 92625.**

### POSTDOCTORAL RESEARCH ASSOCIATE YEAST MOLECULAR GENETICS

Applications are invited for a position to study regulation of mating-type related functions in *Saccharomyces cerevisiae*. The position requires a Ph.D. degree and research experience in molecular genetics, preferably with yeast. Experience in conventional yeast genetics and in immunological methods is also desirable. Salary range will be \$16,000 to \$19,000 per year, dependent upon qualifications. Send résumé and three references to: **Dr. Thomas R. Manney, Cardwell Hall, Kansas State University, Manhattan, Kans. 66506.** *An Affirmative Action/Equal Opportunity Employer.*

**PROFESSOR OF BIOCHEMISTRY,** Rutgers University, Newark. A professor of biochemistry (with tenure) will be appointed to the faculty of Rutgers University, Newark, on 1 July 1983. Scientists with established research programs and a record of funding, preferably in molecular biology, nucleic acids are invited to apply. Curriculum vitae, including names of references, should be sent to: **The Biochemistry Search Committee, Department of Zoology and Physiology, Rutgers University, Newark, New Jersey 07102.** *An Equal Opportunity/Affirmative Action Employer.* Deadline: 1 March 1983.

**RESEARCH ASSOCIATE or RESEARCH ASSISTANT PROFESSOR:** To study structure of physiologically identified neurons in the cat's visual systems. Minimum requirement: Ph.D. or equivalent degree plus training in electrophysiology or biophysics. Send curriculum vitae plus three references to: **Dr. S. M. Sherman, Department of Neurobiology and Behavior, State University of New York (SUNY) Stony Brook, N.Y. 11794.** *SUNY Stony Brook is an Equal Opportunity/Affirmative Action Employer.* AK number 500.

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE.** Seek Ph.D. in chemistry to work in the area of theoretical surface chemistry related to chemisorption of gas molecules on transition metal surfaces. The work involves ab initio quantum chemical calculations on large adsorbate-metal clusters used to model the chemisorption process, and is both computational and formulative in nature. Applicants must have a Ph.D. degree in chemistry with a strong research background in theoretical/computational quantum chemistry, and previous computing/programming experience in ab initio quantum chemical calculations on large transition metal clusters or related systems. Salary: \$18,500 per year; 40 hours/5 days per week. Apply to: **Dr. M. D. Newton, Chemistry Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973.** *Equal Opportunity Employer, M/F.*

Southern Methodist University (SMU) invites applications and nominations for the position of **PROFESSOR and CHAIR OF THE DEPARTMENT OF BIOLOGY.** Candidates should have an outstanding record of research accomplishment and possess qualities of constructive and imaginative leadership. SMU is committed to development of the area of cellular and molecular biology and biochemistry with new positions, facilities, and resources. The successful candidate will be responsible for building a strong program with emphasis in these areas. The department offers B.S., M.S., and Ph.D. degree programs. SMU is strongly committed to the concept of liberal education. The review of applicants will begin on 7 March 1983, and will continue until a suitable candidate is identified. Nominations and applications, including curriculum vitae and the names of five persons who may be contacted for references, should be directed to: **Dean R. Hal Williams, Biology Chair Search Committee, Dedman College, Southern Methodist University, Dallas, Texas 75275.** *SMU is an Equal Opportunity/Affirmative Action/Title IX Employer.*

**RESEARCH LEADER IN FOREST BIOLOGY—**Candidate will serve as a lead scientist in the development of a program of forest improvement through selection and enhancement of cold weather adapted species. This individual will lead a research team composed of forest geneticists, plant tissue culture specialists, plant physiologists, and forest ecologists. Duties will include program development; technical direction; proposal preparation; and university, industrial, and governmental coordination. Minimum qualifications include a Ph.D. in forest science and some research management experience. Send résumé to: **Dr. Bert K. Whitten, Director of BioSource, Michigan Technological University, Houghton, Mich. 49931.** *Michigan Technological University is an Equal Opportunity Educational Institution/Equal Opportunity Employer.*

**RESEARCH SCIENTIST—**Plant physiology/biochemistry/tissue culture. Candidate must have a background in woody species. Activities will include tissue culture techniques and vegetative reproduction for establishing large-scale clonal propagation of desirable genotypes. Minimum qualifications are a Ph.D. in one of the above areas. Some research experience beyond the Ph.D. is desirable. Send résumé to: **Dr. Bert K. Whitten, Director of BioSource, Michigan Technological University, Houghton, Mich. 49931.** *Michigan Technological University is an Equal Opportunity Educational Institution/Equal Opportunity Employer.*

### SENIOR RESEARCHER POSITION AT THE ETH-ZURICH, SWITZERLAND

In the group of biopolymers of the Department of Chemistry, starting 1 March or later. Research themes: protein fragments and their condensation with proteases. The position is not permanent and involves some laboratory assistance activity. Only for experienced, dedicated scientists. Write to: **Professor P. L. Luisi, Technisch-Chemisches Laboratorium der ETH-Zurich, ETH-Zentrum, 8092 Zürich, Switzerland.**

**STAFF BIOLOGIST—**Temple University Institute on Aging is seeking a staff biologist to conduct independent research to study mechanism of action of a group of potential new antiobesity substances. Successful candidate will have Ph.D., background in biochemical aspects of obesity, or thermogenesis. We offer excellent salary and fringe benefits. Interested applicants please send letter of application and résumé in confidence to: **Ellen Scheitrum, Temple University, Room 203, University Services Building, 1601 North Broad Street, Philadelphia, Pa. 19122.** *Equal Opportunity 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."

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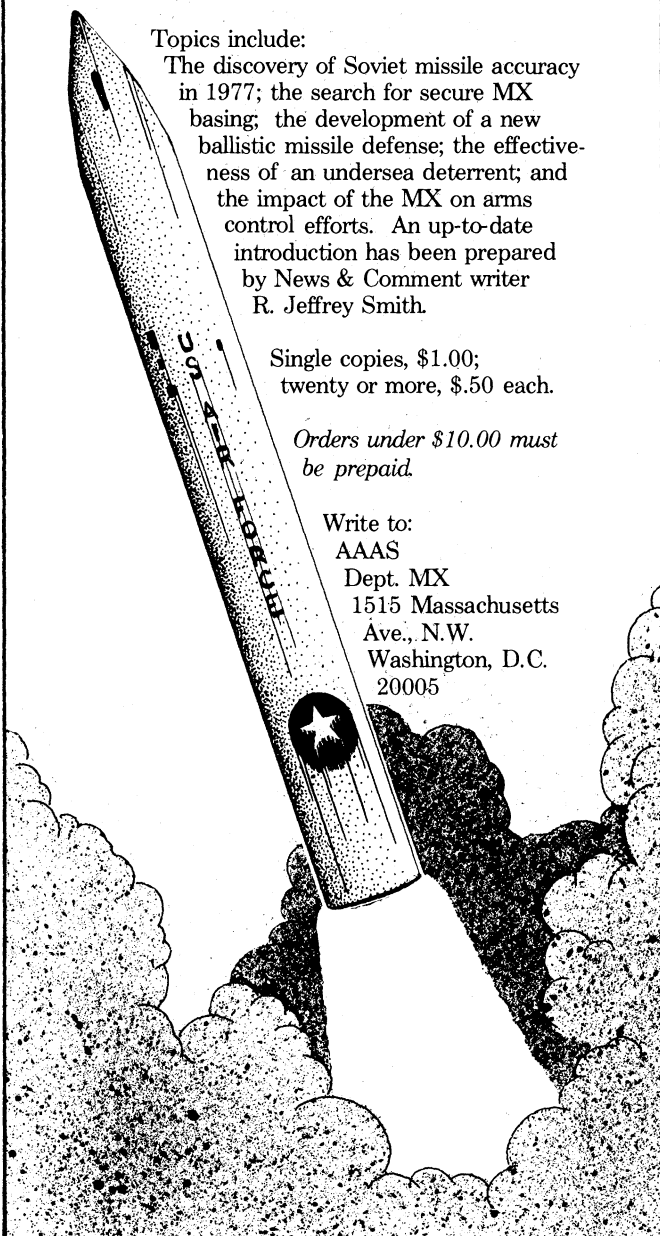
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The discovery of Soviet missile accuracy in 1977; the search for secure MX basing; the development of a new ballistic missile defense; the effectiveness of an undersea deterrent; and the impact of the MX on arms control efforts. An up-to-date introduction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

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## SQUIBB



## SENIOR SCIENTIST Drug Metabolism

E.R. Squibb & Sons, Inc., a world leader in the pharmaceutical industry, seeks a Senior Scientist in its Drug Metabolism Department. The position will be located at the Squibb Institute for Medical Research in Princeton, New Jersey.

The position will be involved in the early phases of drug discovery and will be responsible for studying the stability and fate of investigational compounds after administration to animals; analysis of plasma and tissue levels of compounds and metabolites; and studying pharmacokinetics of compounds. This position will work closely with pharmacologists and medicinal chemists.

Qualified applicants will have a PhD or equivalent in Pharmacology, Biopharmaceutics or related field plus 3 to 5 years related experience in drug metabolism. State-of-the-art knowledge of bioanalytic methods and pharmacokinetics is required.

We offer a salary and benefits package fully attuned to the importance of this position. Qualified applicants should forward their C.V. or resume to: Department BR, Employment Office, E.R. SQUIBB & SONS, INC., P.O. Box 4000, Princeton, NJ 08540. We will accept direct applicant response only. Equal Opportunity Employer, M/F/H/V.

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For further information, telephone Dick Charles at **SCIENCE: 212-730-1050**, or write: 1515 Broadway, New York, N.Y. 10036.

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## POSITIONS OPEN

**RESEARCH POSITION** available immediately for Ph.D. in cerebrovascular research laboratory. Excellent opportunity to join expanding, privately funded research facility affiliated with the Department of Neurosurgery at the Pennsylvania Hospital and residency training program at The University of Pennsylvania. Background in stroke and stroke management, cerebral blood flow techniques, and animal surgery desired. Please send curriculum vitae, including salary history and/or requirement, to: **Frederick Simeone, M.D., Chairman of Department of Neurosurgery, Pennsylvania Hospital, 8th and Spruce Streets, Philadelphia, Pa. 19107. Equal Opportunity Employer.**

## REQUEST FOR PROPOSALS

### REQUEST FOR PROPOSALS

The Lighting Research Institute, Inc., a not-for-profit organization, was recently formed for charitable, educational, and scientific purposes to promote and sponsor basic and applied research and development for all forms of lighting and illumination phenomena, practices, and devices. Initially the Institute expects to sponsor \$500,000 of research in 1983 and augment this amount substantially in following years.

The Institute is making an open request for proposals concerning lighting and illumination phenomena. Proposals for 1983 must be received by 31 March 1983. For further information, contact: **Richard L. Vincent, Secretary, Lighting Research Institute, 345 East 47 Street, New York, N.Y. 10017.**

## AWARDS

### ARE YOU INTERESTED IN WORKING IN SPACE BIOLOGY?

NASA is offering several **RESEARCH ASSOCIATE AWARDS** for scientists to work in laboratories capable of providing scientific advice and facilities relevant to **SPACE BIOLOGY**. The awards will vary from \$14,000 to \$18,000, based on experience. They are planned for a 12-month period with the possibility of renewal. Proposals are due 1 April for 1 July funding and 1 October for 1 January funding. Eligible: U.S. citizens having Ph.D., D.Sc., M.D., D.D.S., or D.V.M. For information/application forms, contact (specify award date applying for): **Dr. X. J. Musacchia, Chairman, NASA Award Committee, Graduate School, University of Louisville, Louisville, Ky. 40292, or Dr. Thora W. Halstead, Space Biology Research Associates Program, Life Sciences Division, NASA Headquarters, Washington, D.C. 20546.**

## FELLOWSHIPS

**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.**

**SYSTEMATIC HERPETOLOGY.** Applications are still open for a 1-year research fellowship in systematic herpetology. Applicant must have received Ph.D. Stipend: \$17,000 plus \$1000 expenses. Award on or about 28 February 1983. Submit résumé, including list of publications and description of research to be undertaken, including desirability of working at Academy; graduate transcripts if Ph.D. received in past 5 years; and names, addresses, and telephone numbers of three references to: **Director of Administration, CALIFORNIA ACADEMY OF SCIENCES, Golden Gate Park, San Francisco, Calif. 94118. Closing date extended to 28 February 1983.**

## FELLOWSHIPS

### GRADUATE FELLOWSHIPS IN BIOMEDICAL AND PHYSICAL SCIENCES

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

Well-funded faculty with diverse interests. Good post-graduation placement record. Above average stipends include full payment of tuition. Contact: **The Graduate School (A), University of Alabama in Birmingham, Birmingham, Ala. 35294; telephone: 205-934-7110.**

### POSTDOCTORAL FELLOWSHIP IN NEUROBIOLOGY

Postdoctoral position available for studies which include determining the mechanism by which synaptic contacts form, receptor transport and incorporation into plasma membrane, and the involvement of neurotrophic factors in neuronal growth. These studies are carried out in tissue culture, and utilize immunocytochemistry, biochemistry, and electron microscopy. Experience in any of these areas helpful. Interested students should send their curriculum vitae, including three references and personal letter, to:

**Dr. S. Bursztajn**  
Neurology Department  
Neuroscience Program  
Baylor College of Medicine  
1200 Moursund  
Houston, Texas 77030  
Telephone: 713-790-4965

*Baylor College of Medicine is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL FELLOWSHIPS IN CELLULAR AND MOLECULAR BIOLOGY AT UNIVERSITY OF CALIFORNIA, SAN FRANCISCO.** Fellowships are available in a multidisciplinary program focusing on the molecular, cellular, genetic, and developmental aspects of cells responding to perturbations of their milieu. Faculty includes: J. E. Cleaver, R. B. Painter, R. A. Pedersen, Z. Werb, and S. Wolff. Stipends are funded through a training program on basic mechanisms of carcinogenesis and mutagenesis sponsored by the NIH National Research Service. Appointments to begin July 1983. The requirements are U.S. citizenship or permanent residency, and a Ph.D. degree in biological science or an M.D. Send résumé, graduate transcript, and three letters of recommendation by 31 March 1983 to: **Sheldon Wolff, Program Director, Laboratory of Radiobiology and Environmental Health, University of California, San Francisco, Calif. 94143. An Equal Opportunity/Affirmative Action Employer.**

## PROGRAMS

### PREDOCTORAL AND POSTDOCTORAL PROGRAM IN DEVELOPMENTAL BIOLOGY—TERATOLOGY

The Graduate Program in Developmental Biology at the University of Cincinnati offers predoctoral and postdoctoral training in these general areas of development: genetics, cell biology, and teratology. A NIH training grant offers traineeships for pre- and postdoctorates interested in teratology (U.S. citizenship or permanent residency necessary). In addition, various other forms of financial support are available. For further information, contact: **Graduate Program in Developmental Biology, Children's Hospital Research Foundation, Elland and Bethesda Avenues, Cincinnati, Ohio 45229. Equal Opportunity/Affirmative Action Institution.**

**POSTDOCTORAL RESEARCH TRAINING** in Department of Pharmacology. NIDA-sponsored research training program in the pharmacology of drugs of abuse. Opportunities exist for studies using biochemical, behavioral, molecular, neurophysiological, and histological techniques. Candidate must have a Ph.D. or M.D. degree before entering the program. Only U.S. citizens or permanent residents are eligible. Position(s) must be filled no later than 1 November 1983. Please submit curriculum vitae to: **Box S, Department of Pharmacology, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029. An Equal Opportunity Employer.**

## PROGRAMS

### ACCELERATED DOCTOR OF OPTOMETRY PROGRAM

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **The Dean of Admissions, The New England College of Optometry, Room 102, 424 Beacon Street, Boston, Mass. 02115.**

### UNIVERSITY OF MIAMI SCHOOL OF MEDICINE

The Basic Science Departments of the Medical School of the University of Miami are seeking qualified candidates for its **doctoral programs** in the areas of cell biology, biochemistry, neurobiology, microbiology, pharmacology, and physiology. Candidates are also sought for the Cellular and Molecular Biology Program, which is a federally funded training program emphasizing interdisciplinary training.

The Medical School also offers a unique 6-year M.D./Ph.D. program. Stipend levels are set at \$7500 per annum, with full tuition remission.

The Medical School is located at the University of Miami/Jackson Memorial Medical Center, and is a major center for biomedical research.

Requests for further information and application kits should be addressed in writing to: **Dr. E. Y. C. Lee, Box 016129, Miami, Florida 33101**, with a statement of the programs for which information is requested.

## ASSISTANTSHIPS

**GRADUATE LABORATORY ASSISTANTSHIPS** (M.S.), 1983-1984 academic year, are available in areas of general, aquatic, marine, and wildlife biology and botany, microbiology, physiology, and zoology. Appointment for 9 months with stipend of approximately \$5700 and waiver of out-of-state tuition. For information, contact: **Dr. E. L. Schneider, Department of Biology, Southwest Texas State University, San Marcos, Texas 78666. An Equal Opportunity/Affirmative Action Employer.**

## MARKETPLACE

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**THE INTERNATIONAL CENTRE OF  
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P.O. BOX 30772, NAIROBI, KENYA.**

**PRINCIPAL SCIENTIST AND STATION MANAGER—  
ICIPE's MBITA POINT FIELD STATION**

**REF: SCI/83/1**

The International Centre of Insect Physiology and Ecology (ICIPE) has a vacancy early in 1983 for Principal Scientist and Station Manager for its major field station—Mbita Point Field Station in Western Kenya. This senior position requires a mature scientist with interest and ability in administration. Mbita Point Field Station has approximately 125 permanent staff including 14 senior research scientists, several postdoctoral and graduate students, a medical doctor, school teachers, engineers, and other appropriate support personnel. A large cadre of seasonal labour is also present. The multidisciplinary research programmes are focussed on development of integrated pest management systems for maize, sorghum, and cowpea for subsistence African agriculture, and involves extensive field trials and relevant laboratory/greenhouse research.

Candidates with a background in agronomy, agricultural pest management or related areas are urged to apply. A Ph.D. is desirable. Salary (paid to an external account) and benefits are on an international scale. New comfortable staff housing is available.

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 four referees (one 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 29th February, 1983.

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Qualified candidate will have Ph.D. in Biochemistry, Immunology or related field plus five years industrial experience in non-isotopic immunoassay development. Familiar with reagent instrument interface. Knowledgeable in GMP and government regulatory agencies. Proven record of organizational and communications skills.

Candidate will be responsible for managing multi-disciplined team of scientists involved with immunoassay development.

**SENIOR SCIENTIST — IMMUNOLOGIST**

Qualified candidate will have Ph.D. in cellular immunology or microbiology with several years experience in Hybridoma technology. Strong background in protein purification and immunoassay techniques is desirable.

Responsibilities include at-the-bench research and supervision of professionals involved with monoclonal antibodies for immunodiagnostics.

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**TERUMO MEDICAL CORPORATION  
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Elkton, MD 21921**

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**INTERNATIONAL CANCER TREATMENT  
AND RESEARCH OPPORTUNITIES  
RIYADH, SAUDI ARABIA**

The King Faisal Specialist Hospital and Research Centre, the major acute care specialty and referral health-care facility for the Kingdom of Saudi Arabia, is seeking highly qualified professionals for the new CANCER THERAPY INSTITUTE, the most comprehensive and advanced facility in this area of the world dedicated to the investigation of cancer research and patient care. The investigators will actively interface with the clinicians in the hospital's Department of Oncology in pure radiation research and other research disciplines to optimize studies in cancer causes, diagnosis and treatment.

The CTI provides an excellent environment highly conducive to facilitating and supporting your needs, including research funding in addition to your compensation, well equipped, and spacious laboratories and highly qualified support personnel. In addition, you will have access to the various high energy particle accelerators and generators on a time-share basis if that is your research interest.

Current and future employment opportunities are available for:

**Head of Service, Cancer & Radiation Biology Research**

Will organize, coordinate and implement scientific investigations in cancer and radiation biology research appropriate to the hospital and Kingdom. Will direct the laboratory animal program and Cancer Information Center. Will conduct appropriate research relevant to cancer diagnosis, treatment and epidemiology. Requires a Ph.D. in a field appropriate to cancer and radiation biology with a minimum of 10 years experience in and directing research in these disciplines, 2 of those years in this type of position in a medical center. Starting Annual Salary: Approximately \$88,000 (U.S.).

**Cancer Epidemiologist**

Organizes and directs epidemiological investigations on problems related to cancer causation, morbidity, mortality and methods of cancer control taking into consideration the geographic, occupational, dietary and life-style factors in the Kingdom of Saudi Arabia. Requires a Ph.D. in Epidemiology or science with a minimum of 15 years experience in Epidemiology. Preference will be given to those who have worked and published extensively on cancer-related problems. Starting Annual Salary: Approximately \$88,000 (U.S.).

**Coordinator, Cancer Information Center**

Will develop, coordinate and execute a sound program on cancer education and information concerned with modern approaches for prevention, control, diagnosis and treatment of cancer. Requires an M.S. in professional education and 5(+) years experience in cancer education and information or Ph.D. in professional education and two(+) years of experience in this field. Starting Annual Salary: Approximately \$50,000 (U.S.).

**Life Science Technician**

Performs routine laboratory tasks under direction of Radiation Biologists/Scientists. Must have a B.S. degree in chemistry or one of life sciences with a minimum of three years experience. Research experience in external/internal irradiation, culturing of human cells required. Starting Annual Salary: Approximately \$35,000 (U.S.).

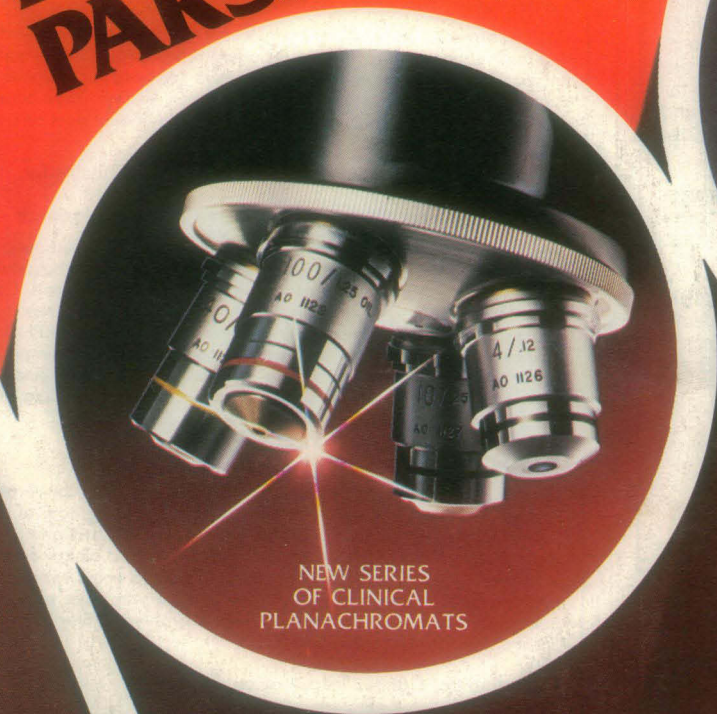
Your benefits for an initial 2 year contract in addition to the potential U.S. tax-free compensation include: free transportation, 30 day annual paid vacation; free furnished housing; educational tuition for eligible dependents; bonus pay and leave; and more. (Depending on available position, contract may be single status only.)

If you wish to become a member of this multi-national Cancer Treatment and Research team, we would like to hear from you. Please call toll free **800-251-2561** or indicate the position in which you are interested by sending your resume and salary history to: **Steven H. Ludlam, Personnel Consultant, HCA—International Division, P.O. Box 550, Nashville, Tennessee 37202.** An Equal Opportunity Employer.

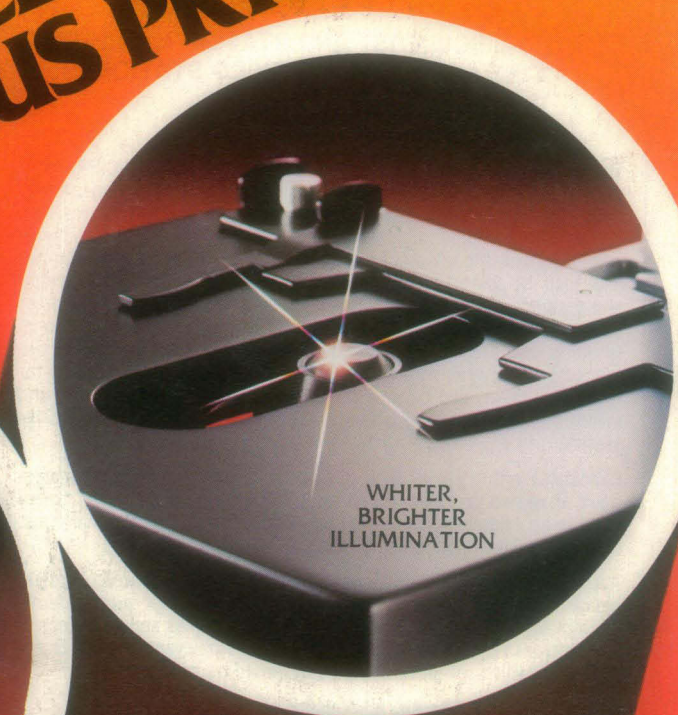
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