

Western Deer: A Status

Report

Mule and Black-Tailed Deer of North America. OLOF C. WALLMO, Ed. Illustrated by Dean Rocky Barrick. University of Nebraska Press, Lincoln, 1981. xviii, 606 pp. \$29.95. A Wildlife Management Institute Book.

Mule and black-tailed deer, races of *Odocoileus hemionus*, occur in western North America and have been hunted by humans for centuries. With European settlement, unrestricted hunting reduced deer populations, but recovery occurred as state conservation agencies began to license and regulate hunters. Wildlife conservation was also assisted by the sporting arms and ammunition industry, which created a foundation now called the Wildlife Management Institute. To encourage the wildlife research needed for conservation, the Institute, in the mid-1930's, helped promote a federal tax on sporting arms and ammunition, to provide the states with necessary funds.

The results of two decades of study of deer were published in 1956 in *The Deer of North America* (W. P. Taylor, Ed.) under the sponsorship of the Wildlife Management Institute. That volume provided support for the view that deer populations, in the prevailing absence of much natural predation, would increase, overuse their plant food, and decline. Subsequently, most state deer management programs sought a maximum annual sustained yield of deer, through controlled recreational hunting. At the same time, research focused more closely on deer nutrition and the prospects for im-

provement of deer diet through vegetation management.

The present volume, then, draws on two decades of work on nutrition and population biology, ecology and habitat management, and conflicts between deer conservation and competing land uses. The 16 well-qualified authors have been active in deer research, either in western universities or in state or federal agencies.

The results reflect the strengths and weaknesses of wildlife investigation and conservation in the United States. On the strong side, financial support has been sustained, and long-term studies of captive, tamed, individually marked deer have produced much well-organized information on deer distribution, morphology, physiology, nutrition, metabolism, disease, behavior, and population dynamics and on food habits and other ecological relations in the major types of habitat.

On the weak side, fewer than half the references cited are in refereed journals; the gray portion of the wildlife literature is substantial. A second weakness is that on the scale at which management is conducted there are no satisfactory methods for routinely monitoring major deer population variables, such as structure, density, physical condition, or reproduction. Consequently, deer management decisions must be made in the virtual absence of reliable biological information, and major deer population changes may occur without timely managerial response.

A widespread mule deer decline seems to have occurred from the early 1960's to the mid-1970's. The present volume doc-

uments this but cannot explain it. The decline has been followed by a recovery equally mysterious. The understanding of such large-scale deer population phenomena, perhaps, will constitute a strong theme in the next big deer book, two decades hence.

RICHARD D. TABER

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University of Washington,
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Books Received

Acceptable Risk. Baruch Fischhoff, Sarah Lichtenstein, Paul Slovic, Stephen L. Derby, and Ralph L. Keeney. Cambridge University Press, New York, 1981. xvi, 186 pp., illus. \$19.95.

Acceptance Sampling in Quality Control. Edward G. Schilling. Dekker, New York, 1982. xx, 776 pp., illus. \$65. Statistics, vol. 42.

Advanced Computer Concepts. Papers from a workshop, La Jolla, Calif., 1981. James Clark Solinsky, Ed. La Jolla Institute, La Jolla, Calif., 1981. xiv, 154 pp., illus. \$24.95. LJ Conference Proceedings.

Advances in Botanical Research. Vol. 9. H. W. Woolhouse, Ed. Academic Press, New York, 1981. xii, 280 pp., illus. \$49.50.

Advances in Fracture Research (Fracture 81). Proceedings of a conference, Cannes, Mar. 1981. D. Francois and 13 others, Eds. Pergamon, New York, 1982. Six volumes, illus. Vol. 1, xl + pp. 1-514. Vol. 2, xl + pp. 515-1142. Vol. 3, xl + pp. 1143-1418. Vol. 4, xl + pp. 1419-2058. Vol. 5, xl + pp. 2059-2634. Vol. 6, xl + pp. 2635-2786. The set, \$450. International Series on the Strength and Fracture of Materials and Structures.

Advances in Immunopathology. Papers from a symposium, La Jolla, Calif., Oct. 1980. William O. Weigle, Ed. Symposia Specialists, Miami, 1981 (distributor, Elsevier/North-Holland, New York). xiv, 352 pp., illus. \$65.

Brain Neurotransmitters and Hormones. Papers from a congress, Montreal, May 1981. Robert Collu, Jacques R. Ducharme, André Barbeau, and George Tolis, Eds. Raven, New York, 1982. xviii, 410 pp., illus. \$46.

Calculus for the Practical Worker. J. E. Thompson. Van Nostrand Reinhold, New York, ed. 4, 1982. xvi, 280 pp., illus. Paper, \$6.95. Mathematics Library for Practical Workers.

Enzyme Diagnosis in Diseases of the Heart, Liver, and Pancreas. L. Adolph and R. Lorenz. Karger, Basel, 1982. 124 pp., illus. Paper, \$20.50.

Exercise and Sport Sciences Reviews. Vol. 9, 1981. Doris I. Miller, Ed. Franklin Institute Press, Philadelphia, 1981. viii, 390 pp., illus. \$25. American College of Sports Medicine Series.

Helping Children Cope with Death. Guidelines and Resources. Hannelore Wass and Charles A. Corr, Eds. Hemisphere, Washington, D.C., 1982. xii, 194 pp. \$24.95. Series in Death Education, Aging, and Health Care.

Hermes. Literature, Science, Philosophy. Michel Serres. Translated from the French. Josué V. Harari and David F. Bell, Eds. Johns Hopkins University Press, Baltimore, 1982. xl, 168 pp. \$14.

A Higher Form of Killing. The Secret Story of Chemical and Biological Warfare. Robert Harris and Jeremy Paxman. Hill and Wang (Farrar, Straus and Giroux), New York, 1982. xiv, 274 pp. + plates. \$14.95.

Histological Typing of Lung Tumours. World Health Organization, Geneva, ed. 2, 1981 (U.S. distributor, WHO Publications Centre USA, Albany, N.Y.). 36 pp. + plates. \$11. International Histological Classification of Tumours, no. 1.

The History of Modern Whaling. J. N. Tønnessen and A. O. Johnsen. Translated from the Norwegian by R. I. Christophersen. University of California Press, Berkeley, 1982. xx, 798 pp., illus. \$45.

HLA 1982. Complexe Majeur d'Histocompatibilité de l'Homme. Jean Dausset, Ed. Flammarion, Paris, 1982. viii, 414 pp., illus. Paper, 150 F.

The HMG Chromosomal Proteins. E. W. Johns, Ed. Academic Press, New York, 1982. x, 252 pp., illus. \$39.50.

Hormonal Factors in Fertility, Infertility and Contraception. Proceedings of a meeting, Rome, Dec. 1981. H. J. Van der Molen, A. Klopfer, B. Lunenfeld, M. Neves e Castro, F. Sciarra, and A. Vermeu-
(Continued on page 956)



A mule deer bounding. "In many habitats, bounding is a faster means of locomotion than galloping. In open areas it is an important behavior for eluding pursuing predators." [Photograph by Dave Daughtry, courtesy of the Arizona Game and Fish Department; from *Mule and Black-Tailed Deer of North America*]

BOOKS RECEIVED

(Continued from page 926)

Ilen, Eds. *Excerpta Medica*, Amsterdam, 1982 (U.S. distributor, Elsevier, New York). vi, 318 pp., illus. \$86.

How Safe Is Food in Your Kitchen? Beatrice Trum Hunter. Scribner, New York, 1982. xiv, 88 pp. Paper, \$3.95. Reprint of the 1981 edition.

The Human Impact. Man's Role in Environmental Change. Andrew Goudie. MIT Press, Cambridge, Mass., 1982. xii, 316 pp., illus. Cloth, \$22.50; paper, \$10.

In a Different Voice. Psychological Theory and Women's Development. Carol Gilligan. Harvard University Press, Cambridge, Mass., 1982. viii, 184 pp. \$15.

Induced Skeletal Muscle Ischemia in Man. Papers from a symposium, Linköping, Sweden, Nov. 1980. D. H. Lewis, Ed. Karger, Basel, 1982. iv, 180 pp., illus. Paper, \$69.

The Inheritance of Personality and Ability. Research Methods and Findings. Raymond B. Cattell. Academic Press, New York, 1982. xxiv, 452 pp. \$47.50. Personality and Psychopathology.

Inheritance of Susceptibility to Cancer in Man. W. F. Bodmer, Ed. Published for the Imperial Cancer Research Fund by Oxford University Press, New York, 1982. vi, 188 pp., illus. Paper, \$26. *Cancer Surveys*, vol. 1, No. 1.

Neuropathology. A Summary for Students. Richard W. Leech and Robert M. Shuman. Illustrations by G. David Brown. Lippincott/Harper and Row, Philadelphia, 1982. xiv, 258 pp., illus. Paper, \$15.75.

Neuroreceptors. Proceedings of a symposium, Berlin, Sept. 1981. Ferdinand Hucho, Ed. Walter de Gruyter, New York, 1982. xiv, 368 pp., illus. \$75.

New Trends in Osteoarthritis. Papers from a symposium, Monte Carlo, Oct. 1981. E. C. Huskisson and G. Katona, Eds. Karger, Basel, 1982. viii, 198 pp., illus. \$48. *Rheumatology*, vol. 7.

New Trends in Suicide Prevention. J. Wilmoite and J. Mendlewicz, Eds. Karger, Basel, 1982. vi, 104 pp. Paper, \$28.75. *Bibliotheca Psychiatrica*, No. 162.

Nitroimidazoles. Chemistry, Pharmacology, and Clinical Application. Proceedings of a conference, Cesenatico, Italy, Aug. 1980. A. Breccia, B. Cavaleri, and G. E. Adams, Eds. Plenum, New York, 1982. xii, 212 pp., illus. \$35. NATO Advanced Study Institutes Series A, vol. 42.

Non-Tricyclic and Non-Monoamine Oxidase Inhibitors. H. E. Lehmann, Ed. Karger, Basel, 1982. viii, 212 pp., illus. \$69. *Modern Problems of Pharmacopsychiatry*, vol. 18.

The Nuclear Envelope and the Nuclear Matrix. Proceedings of a symposium, Philadelphia, Sept. 1981. Gerd G. Maul, Ed. Liss, New York, 1982. x, 324 pp., illus. \$34. *The Wistar Symposium Series*, vol. 2.

Postwar Soviet Politics. The Fall of Zhdanov and the Defeat of Moderation, 1946-53. Werner Hahn. Cornell University Press, Ithaca, N.Y., 1982. 244 pp. \$19.50.

Practical Management Skills for Engineers and Scientists. William C. Giegold. Lifetime Learning Publications (Wadsworth), Belmont, Calif., 1982. xxiv, 430 pp. \$25.

Precious Metals in the Northern Cordillera. Proceedings of a symposium, Vancouver, Canada, Apr. 1981. A. A. Levinson, Ed. Association of Exploration Geochemists, Rexdale, Ontario, Canada, 1982. x, 214 pp., illus. Cloth.

Principles and Techniques in Diagnostic Histopathology. Developments in Immunohistochemistry and Enzyme Histochemistry. Jules M. Elias. Noyes, Park Ridge, N.J., 1982. x, 342 pp., illus. \$48.

Prior Information in Linear Models. Helge Toutenburg. Wiley, New York, 1982. x, 216 pp., illus. \$39.95. Wiley Series in Probability and Mathematical Statistics.

Problems of Physiographic Zoning of Polar Lands. L. S. Govorukha and Yu. A. Kruchinin, Eds. Translated from the Russian edition (Leningrad, 1971). Published for the Division of Polar Programs and the National Science Foundation by Amerind, New Delhi, 1981 (available as TT 75-52080 from the National Technical Information Service, Springfield, Va.). viii, 242 pp., illus. Cloth.

Proceedings of the Exxon Engineering Symposium 1981. Barry Tarmy and Richard Thomas, Eds. Exxon Research and Engineering Company, Florham Park, N.J., 1982. xxx, 98 pp., illus. Cloth.

Proceedings of the Fifth International Symposium on Biological Control of Weeds. Brisbane, Australia, June 1980. E. S. Del Fosse, Ed. Commonwealth Scientific and Industrial Research Organization, Melbourne, 1981 (U.S. distributor, ISBS, Beaverline, Ore.). x, 650 pp., illus. Paper, \$35.

Walter Reed. A Biography. William B. Bean. University Press of Virginia, Charlottesville, 1982. xiv, 190 pp., illus. \$12.95.

Water Reuse. E. Joe Middlebrooks. Ann Arbor Science (Butterworth), Ann Arbor, Mich., 1982. xii, 852 pp., illus. \$56.95.

Personnel Placement

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POSITIONS WANTED

Behavioral Pharmacologist, Ph.D. 1966; excellent funding history (two ADAMHA grants current); good publication record. Desires industrial or academic position with opportunities for collaborative research with other neuroscientists. Box 236, SCIENCE. X

San Jose State University **Biology Student** seeks medical research assistant position in San Jose-Palo Alto area; 7 years of experience as electronic technician. Willing to work 40-hour/7-day week but hours must flex around class schedule. Box 237, SCIENCE. X

Cardiovascular Physiologist, M.S., Ph.D., 1978. Four years of postdoctoral experience in thoracic surgical laboratory. Myocardial oxygen consumption, global and regional function (ultrasonic analysis), microspheres, cardiopulmonary bypass, cardioplegia; regional and global models of ischemia, chronic instrumentation. Seeks industrial/academic position. Box 238, SCIENCE. X

Computer Systems Engineer. B.S., Cornell C.S./E.E. Specialties: real-time systems, systems integration. Experience: Lockheed L1011 avionics system, N.S.A. command and control, high-resolution graphics. Presently director of R & D computing facility. Seeks to consult and/or collaborate on challenging projects-software-systems. Send proposal with remuneration schedule to: Box 234, SCIENCE. No agencies or recruiters. X

Microbiologist/Virologist, Ph.D. Two years of postdoctoral training. Experience in many areas of microbiology including basic research in microbial and viral pathogenesis. Numerous publications and extensive teaching experience. Seeks academic position at liberal arts college. Box 239, SCIENCE. X

POSITIONS OPEN

ANALYTICAL CHEMIST. The Department of Chemistry of The University of Texas at Austin is seeking an outstanding individual to fill a new faculty position in analytical chemistry. The appointment will probably be at the assistant professor level, but truly exceptional senior candidates will be considered. The field of research specialization is open. However, we particularly encourage applications from candidates with research interests in mass spectrometry, chemical applications of synchrotron radiation, or modern magnetic resonance methods. Applications with curriculum vitae, publications, and three letters of recommendation should be sent to: **Professor James A. Holcombe, Department of Chemistry, The University of Texas at Austin, Austin, Texas 78712.** The deadline for receipt of completed applications is 1 November. *The University of Texas is an Equal Opportunity Employer and encourages applications from all qualified persons.*

ANALYTICAL CHEMISTRY: Seek Ph.D. holders to apply for tenure-track assistant/associate professor position starting August 1983. Rank dependent upon qualifications. Research interest may be in any area of analytical chemistry or at the interface of analytical and other areas of chemistry. Apply by 15 October with complete résumé, undergraduate and graduate transcripts, a description of research plans, plus three reference letters to: **Professor Michael L. Gross, Department of Chemistry, University of Nebraska-Lincoln, Lincoln, Nebraska 68588-0304.** *Affirmative Action/Equal Opportunity Employer; applications from women and minorities encouraged.*

ANATOMY FACULTY POSITION open for productive researcher and teacher. Rank and salary negotiable; M.D. or Ph.D. required. Current areas of research interest include cell and molecular biology of nervous, cardiovascular, and reproductive/endocrine systems. Send curriculum vitae and three letters of reference to: **Dr. T. H. Williams, Department of Anatomy, BSB, The University of Iowa, Iowa City, Iowa 52242.** *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT ADJUNCT PROFESSOR OF SURGERY/OTOLARYNGOLOGY

University of California at San Diego (UCSD)

Qualifications: Ph.D. in biomedical engineering and 4 years or more of research experience to assist in development of biomedical engineering program in the Division of Otolaryngology. Expertise in biomedical engineering with special emphasis on biomechanics of soft tissues. Contact:

Alan M. Nahum, M.D.
University Hospital (H-895)
225 Dickinson Street
San Diego, California 92103

Salary: Related to the academic rank and appointment within the established salary schedule of the UCSD Medical School Clinical Compensation Plan. All applications received by 30 September 1982 will receive thorough consideration.

UCSD is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR. Full-time tenure-track position for protein biochemist. Postdoctoral experience required. Preference for clinically related research interests; others will be considered. Duties include graduate and undergraduate teaching, supervision of graduate research, and establishment of independent research program. Begins January or September 1983. Send curriculum vitae, statement of research interests, and three letters of recommendation to: **J. M. Mullins, Department of Biology, Catholic University of America, Washington, D.C. 20064.** *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR IN ANATOMY

Applications are invited from persons with M.D., D.D.S., or Ph.D. degrees for the above tenure-track position, which will be available on 1 July 1983. Applicants should be able to teach gross anatomy and neuroanatomy or histology to medical, dental, and health professional students and should be capable of undertaking an independent research program in one of the following areas: neuroanatomy, neuroendocrinology, genetics, ophthalmic morphology, cell biology, and evolutionary biology. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Applicants should forward a copy of their curriculum vitae and the names of three referees to **Dr. D. G. Gwyn, Professor and Head, Department of Anatomy, Dalhousie University, Halifax, Nova Scotia, Canada B3H 4H7.** The deadline for receipt of applications is 31 October 1982.

POSITIONS OPEN

ASSISTANT PROFESSOR. Diabetes Section, Department of Medicine, University of Pennsylvania. Candidate must be Board-certified in internal medicine, be trained as a diabetologist, and have a demonstrated capacity for basic research related to diabetes mellitus. Address applications to: **Albert I. Winegrad, M.D., Cox Institute, Hospital of the University of Pennsylvania, 3600 Spruce Street, Philadelphia, Pennsylvania 19104.** *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR. Applications are invited for a faculty position at the Assistant Professor level in the Department of Bacteriology, University of Wisconsin-Madison. Candidates must have research interests and experience in the broadly defined field of microbial physiology which might include ecology, biotechnology, or development. Emphasis will be placed on selecting an outstanding individual with postdoctoral experience. The successful applicant will be expected to develop a dynamic independent research program, teach in the Bacteriology Department curriculum, and supervise graduate students. Salary will be on a 12-month basis. The application deadline is 15 November 1982. A detailed curriculum vitae, including research accomplishments and interests and a list of publications, as well as three letters of recommendation should be sent directly to **Dr. Greg Zeikus, Chairman, Search Committee, Department of Bacteriology, 1550 Linden Drive, University of Wisconsin, Madison, Wisconsin 53706.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR MOLECULAR GENETICS

Candidates sought to conduct independent research in the field of molecular genetics, preferably with an interest in eukaryotic cells or their viruses. Tenure-track position with light teaching load, excellent lab facilities, and strong research environment. Applicants are invited to submit a curriculum vitae, representative publications, and three letters of recommendation by 1 November 1982 to: **Chairman of the Search Committee, Department of Human Genetics, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn. 06510.** *Yale is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR (MATHEMATICS)

Tenure-track position (10 months), available spring 1983. Ph.D. required; teaching experience preferred. Salary commensurate with training and experience. Position subject to budget approval/authorization. Letter of application, three letters of recommendation, and résumé by 15 October 1982 to:

**Director of Personnel/AA
State University of New York College of Technology
Box 2012
811 Court Street
Utica, N.Y. 13502**

An Equal Opportunity/Affirmative Action Employer

ASSISTANT PROFESSOR OF MEDICAL MICROBIOLOGY/IMMUNOLOGY

The Department of Medical Microbiology/Immunology at the School of Medicine, University of Minnesota at Duluth (UMD), has a tenure-track opening for an assistant professor. The successful candidate should have: (i) an active, competitive research program in pathogenesis of infectious diseases or molecular genetics of infectious agents, (ii) strong teaching skills to participate in a team-taught medical microbiology course for medical students, and (iii) the ability to supervise graduate students. Submit curriculum vitae and three letters of reference to: **Louise Bader Hawley, Ph.D., Medical Microbiology/Immunology, UMD School of Medicine, Duluth, Minn. 55812.** Closing date is 15 October 1982. *The University of Minnesota is an Equal Opportunity educator and employer and specifically invites and encourages applications from women and minorities.*

UNIVERSITY OF FLORIDA. Department of Medicine seeks an Associate in Medicine with a Ph.D. in biochemistry or a related field with publications to study metabolism of insulin and GI peptides by liver. Three years of postdoctoral experience required with some experience in hepatocyte isolation. Recruiting deadline: 30 September 1982. Anticipated starting date: 15 October 1982. Contact **R. I. Misbin, M.D., Box J-226, JHMHC, University of Florida, Gainesville, Florida 32610.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF MARINE ECOLOGY

The Department of Earth and Planetary Sciences at Johns Hopkins University invites applications for a tenure-track position at the assistant professor level in marine ecology, to begin 1 July 1983. Applicants should have completed the Ph.D. and should have a strong academic and research background in ecology and evolutionary biology. Candidates interested in genetics, developmental biology, or behavior will be favored, but outstanding scientists specializing in other areas of marine ecology will be considered. The successful candidate will be expected to develop a strong research program, advise graduate students, and teach undergraduate and graduate courses in the departmental program in ecology and paleobiology. Send curriculum vitae, list of publications, summary of research interests, and the names of at least three referees to:

**Dr. George W. Fisher
Department of Earth and Planetary Sciences
Johns Hopkins University
Baltimore, Md. 21218**

prior to 1 October 1982. Letters of recommendation should not be included; they will be solicited directly by the department when needed.

The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR OF PHARMACOLOGY

Tenure-track faculty position now available for Ph.D. in pharmacology or closely related field, preferably with 2 years of postdoctoral research experience. Candidate to assume teaching responsibilities and to develop independent research program preferably in neuropharmacology, cardiovascular pharmacology, or toxicology. Submit curriculum vitae, bibliography, names of three references, and a brief statement of research plans by 4 October 1982 to **Dr. H. George Mandel, Chairman, Department of Pharmacology, George Washington University Medical Center, 2300 Eye Street, NW, Washington, D.C. 20037.**

An Equal Opportunity/Affirmative Action Employer

CARNEGIE-MELLON UNIVERSITY DEPARTMENT OF METALLURGICAL ENGINEERING AND MATERIALS SCIENCE TENURE-TRACK FACULTY POSITIONS

The department currently has two immediate openings for either junior (aP or AP level) or senior (AP or P level) faculty.

Applicants should have a Ph.D. degree, preferably in metallurgy or in materials science, and will be expected to undertake teaching on both the undergraduate and graduate levels as well as developing a strong research program.

We are primarily interested in people in one of the following areas:

- Nonmetallic materials with emphasis on the use of modern analytical techniques, such as transmission electron microscopy, and to characterize and understand ceramics, glasses, and semiconductors, particularly for electronic and magnetic applications.
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Apply to:

**I. M. Bernstein
Professor and Head
Department of Metallurgical
Engineering and Materials Science
Carnegie-Mellon University
Pittsburgh, Pennsylvania 15213**

*Equal Opportunity/Affirmative Action
Employer*

YALE UNIVERSITY

Department of Biology

(SEARCH EXTENDED)

Yale University's Department of Biology seeks applications for an assistant professorship in plant molecular biology, previously announced in *Science*, 12 February 1982. Starting academic year 1983-1984. Areas of interest include molecular approaches to the genetics or development of plants or plant organelles and to the interaction between plant and microbial genomes.

Duties for the position: participation in both undergraduate and graduate teaching and management of a strong research program.

Send curriculum vitae, résumé of past and present research, and the names of three referees to: **Executive Secretary, Department of Biology, Yale University, P.O. Box 6666, New Haven, Conn. 06511.** Deadline for applications is extended to 1 November 1982. *Yale University is an Equal Opportunity/Affirmative Action Employer.*

The Caswell Silver Distinguished Professorship in Geology THE UNIVERSITY OF NEW MEXICO

The Department of Geology of the University of New Mexico is pleased to invite nominations or applications for the Caswell Silver Distinguished Professorship in Geology. This endowed professorship shall be awarded for periods of up to two years to earth scientists of distinguished accomplishment and international reputation. The professorship may be held by scientists of all specialties of the earth sciences in the broadest sense, and the major criterion for selection is that the individual be an active, productive leader in his or her field of research. The recipient must carry out a vigorous research program while in residence at UNM. The recipient is expected to interact with the faculty and students of the Department and to provide one or more seminars, in an advanced topic of his/her choice, during each academic year. The Foundation will provide unusually advantageous remuneration commensurate with the distinguished nature of the appointment. In addition, a generous allocation for travel and operating expenses (to include secretarial support, analytical services in department laboratories, use of field vehicles, and preparation of manuscripts) will be provided.

An appointment will be made for 1983-84 academic year based on applications received by November 1, 1982. Applications for 1984-85 and 1985-86 may also be submitted at that time.

Applications or nominations should include a detailed resume and brief statement of major research accomplishments. Applications or nominations should be forwarded to:

**Rodney C. Ewing, Chairman
Department of Geology
University of New Mexico
Albuquerque, New Mexico 87131**



*The deadline for applications is November 1, 1982.
The Caswell Silver Foundation is an
equal opportunity employer.*

POSITIONS OPEN

HAVERFORD COLLEGE ASSISTANT PROFESSOR OF BIOLOGY

The Biology Department has a regular tenure-track position available for September 1983. The department is interested in persons who have a deep commitment to teaching and research. We are looking for a person whose research field of interest is a molecular approach to cellular differentiation. A strong background in cell biology, biochemistry, and molecular biology is essential. Teaching duties involve participation in introductory and advanced courses in a core curriculum in cell and molecular biology. The senior-level course involves directing the research of a number of senior majors. The department is committed to a curriculum where research plays a crucial teaching role. Applicants should have postdoctoral research training. Please send curriculum vitae and names of three references to: **M. Santer, Biology Department, Haverford College, Haverford, Pa. 19041.** *An Equal Opportunity Affirmative Action Employer.*

ASSISTANT PROFESSOR—TOXICOLOGY

Candidates with a Ph.D. in pharmacology or related field or an M.D. and two or more years of relevant postdoctoral experience in toxicology are invited to apply for this tenure-track position. The successful candidate should show promise of developing an independent research program and will be expected to teach and advise graduate and health professional students. Some preference may be given to candidates with active research grants. Send curriculum vitae, general statement of research plans, and three letters of recommendation to:

Curtis D. Klaassen, Ph.D.
Department of Pharmacology, Toxicology
and Therapeutics
University of Kansas Medical Center
Kansas City, Kansas 66103

Position is available immediately. Closing date: 15 October 1982. *Kansas University is an Affirmative Action/Equal Opportunity Employer.*

THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON SPEECH AND HEARING INSTITUTE ASSOCIATE DIRECTOR OF ACADEMIC AND RESEARCH AFFAIRS

The Institute invites applications from Ph.D. and Ph.D./M.D. scientists with a rank of professor, a minimum of 7 years in basic and/or applied research, at least 3 years' experience in administration, and 7 years of teaching experience in M.S. and Ph.D. degree programs. Persons applying must have a strong commitment to research and its clinical application.

Duties of the Associate Director include administration and continued development of innovative research programs in Communication Sciences in a multidisciplinary setting within the Health Science Center and the integration of a clinical program into a research milieu. In addition, the Associate Director shall be responsible for faculty activities.

Position is currently open. Applicants should contact:

Tina E. Bangs, Ph.D.
Chairperson of Search Committee
Speech and Hearing Institute
1343 Moursund
Houston, Texas 77030

The Speech and Hearing Institute is an Affirmative Action/Equal Opportunity Employer.

ASSOCIATE PROFESSOR—PHARMACOLOGY

The Pharmacology Department of Stanford University School of Medicine invites applications for a position at the Associate Professor level. Applicants are expected to have strong orientation to modern biochemistry and molecular biology and the application of these disciplines to pharmacological investigations. Send curriculum vitae, summary of research interests, and names of three references to: **Dr. Tag E. Mansour, Chairman, Department of Pharmacology, Stanford University School of Medicine, Stanford, California 94305.** *Stanford University is an Equal Opportunity Employer and welcomes nominations of women and minority group members and applications from them.*

BIOCHEMIST wanted, with experience in Protein Chemistry, specialized, if possible, for coagulation products, for an interesting position in development and production with a not-for-profit-making organization in the public health field in Germany. Some German helpful. Please submit résumé and salary requirements to: **Box 240, SCIENCE.**

POSITIONS OPEN

BIOLOGY EDITOR. Oxford University Press is seeking an editor to acquire upper-level texts, reference volumes, and monographs in the life sciences. Successful candidates will have a graduate degree in biology and familiarity with books being published in the field. Please send résumé and cover letter detailing your experience in biological research or teaching and your reasons for applying for this position to: **Personnel Manager, Oxford University Press, 200 Madison Avenue, New York, N.Y. 10016.** *An Equal Opportunity Employer.*

BOTANIST. Assistant professor to teach undergraduate and graduate courses and to establish a vigorous research program in one of the following areas of physiology: development, symbiosis, photosynthesis, or plant-herbivore interactions. Postdoctoral experience preferred. Position starts fall semester 1983. Apply by 1 October 1982 and have three letters of recommendation sent to: **Chairman of the Search Committee, Department of General Biology, Vanderbilt University, Nashville, Tenn. 37235.** *Vanderbilt University is an Affirmative Action/Equal Opportunity Employer.*

BOTANIST. Connecticut College will make a regular faculty appointment in developmental botany, starting September 1983. We seek someone with an experimental orientation, but applications from individuals in all areas of developmental botany are welcome. Teaching responsibilities include team-taught courses in general biology and botany and a course in plant structure and development. An active research program that includes undergraduate participation is expected. Connecticut College is a highly selective coeducational liberal arts college. Facilities include TEM, growth chambers, a well-maintained greenhouse, and the 415-acre Connecticut Arboretum. The biology building is being renovated; the successful applicant will be involved in planning his/her research and teaching labs. Curriculum vitae, transcripts, and three letters of reference should be sent to: **Dr. Scott Warren, Chairman, Department of Botany, Connecticut College, New London, Conn. 06320.** *Connecticut College is an Equal Opportunity Employer.*

CELL BIOLOGISTS OR NEUROBIOLOGISTS. The Department of Anatomy at the University of Tennessee Center for the Health Sciences announces three tenure-track positions at the level of Assistant Professor beginning 1 July 1983. Applicants should have at least 2 years of postdoctoral experience with good publication record and demonstrated ability to conduct an active research program in an area of **cell biology or neurobiology.** Teaching experience in gross anatomy, histology, or neuroanatomy is preferred. Curriculum vitae, brief statement of research interests, reprints, and names of four references should be received by 15 November 1982, addressed to: **Dr. Sidney A. Cohn, Chairman, Department of Anatomy, University of Tennessee Center for the Health Sciences, Memphis, Tennessee 38163.** *An Equal Opportunity/Affirmative Action Employer.*

CHEMICAL ENGINEERING AND PUBLIC POLICY

The Department of Chemical Engineering and the Department of Engineering and Public Policy at Carnegie-Mellon University are seeking a candidate for a joint appointment. Candidates must have strong credentials in chemical engineering and demonstrated research ability in the area of public policy. Areas of particular research interest include environmental systems and control, toxic substances, issues of safety and risk in process design, products liability, productivity and industrial automation, and regulatory issues in coal conversion technologies. Send résumé, list of publications, and names of three references to:

Dr. M. Granger Morgan
Department of Engineering and
Public Policy
Carnegie-Mellon University
Pittsburgh, Pa. 15213

CURATOR, VERTEBRATE PALEONTOLOGY. Stovall Museum of Science and History. Specialists in Upper Paleozoic reptiles or late Cenozoic mammals preferred. Ph.D. geological and zoological training required. Position is tenure track and with academic appointment in School of Geology and Geophysics. Responsibilities include research, collections management, public interpretation, and teaching. Deadline extended until 1 November 1982. Curriculum vitae, transcripts, reprints, and three letters of recommendation to: **P. K. Sutherland, School of Geology and Geophysics, University of Oklahoma, Norman, Oklahoma 73019.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CHAIRPERSON, DEPARTMENT OF CHEMISTRY. Reopened, West Georgia College, a liberal arts institution of approximately 5500 located 50 miles west of Atlanta, is seeking a Ph.D. with a distinguished academic record for the position of Head of the Department of Chemistry effective as early as 1 January 1983 and as late as 1 July 1983. A Ph.D. in analytical chemistry with training in instrumental analysis and experience in minicomputers is desirable. Initial screening of candidates will begin 1 November 1982. Send résumés and three references to **W. Glenn Esslinger, Chairman of the Search Committee, Department of Chemistry, West Georgia College, Carrollton, Ga. 30118.** Telephone: 404-834-1310. *An Equal Opportunity/Affirmative Action Employer.*

THE UNIVERSITY OF SOUTH FLORIDA COLLEGE OF MEDICINE

Announces THE GEORGE V. CORTNER AND THEODORE J. COUCH ENDOWED CHAIR IN CANCER RESEARCH

Applications are invited from world renowned clinical or basic science investigators with an M.D. degree for this endowed position in the newly established **CANCER CARE RESEARCH AND TREATMENT CENTER** at the University.

The person selected will be expected to provide leadership and promote collaborative research in the field of neoplasia, develop an independent research program in this field, and treatment programs for cancer in the **CANCER CARE RESEARCH AND TREATMENT CENTER.**

Applicants must have administrative ability and interest to recruit faculty and to assist in their research development.

Applicants are requested to submit curriculum vitae and a brief statement of interest by 17 September 1982.

Send application or suggestions for potential candidates to:

Search Committee
The George V. Cortner and Theodore J. Couch
Endowed Chair in Cancer Research
Office of the Dean and Director
University of South Florida College of Medicine
12901 North 30 Street
Tampa, Florida 33612

COMPARATIVE PHYSIOLOGIST Department of Biology, University of Ottawa

Applications are invited for a replacement appointment at the assistant professor level for up to 3 years. The successful candidate will be expected to teach a semester course in comparative (environmental) biochemistry and a semester course in either general physiology or introductory zoology and portions of other upper-level courses. In addition, the candidate will be expected to participate in the graduate program and to develop his/her own research interests.

Preference will be given to candidates with postdoctoral experience, demonstrated research achievements, and a strong interest in comparative physiology. The department is particularly well equipped to support research in the area of fish physiology.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.

Applications, as well as three letters of reference, will be received until 15 November 1982 and should be sent as soon as possible to **Professor J. C. Fenwick, Physiology Selection Committee, Department of Biology, University of Ottawa, Ottawa, Ontario, Canada, K1N 6N5.**

DIRECTOR OF NUCLEAR MAGNETIC RESONANCE CLINICAL RESEARCH FACILITY

The Mercy Health Care Foundation is establishing a major research and clinical facility to interact with existing extensive programs in imaging, nuclear magnetic resonance spectroscopy, and clinical medicine at the University of Illinois. We seek a nationally recognized individual with extensive research interests and publications in the area of biomedical applications of nuclear magnetic resonance to develop and direct the research and clinical activities. Funds are available for acquisition of state-of-the-art clinical and research instruments and supporting staff. Very competitive salary. Joint appointment, including tenured university position, to be available for suitable candidate.

Send curriculum vitae and names of four references by 1 October to: **Dr. Ben Williams, Chair, Nuclear Magnetic Resonance Search Committee, Mercy Hospital, 1400 West Park Avenue, Urbana, Illinois 61801.**

POSTDOCTORAL SENIOR RESEARCH ASSISTANT

position available immediately for basic diabetes-related research. Emphasis is on nucleotide, glycoprotein and basement membrane metabolism in the kidney. PhD in biochemistry or related field required; prefer experience in enzyme assays, tissue culture, HPLC, aminoacid analysis and glycoprotein synthesis. Salary commensurate with qualifications. Send curriculum vitae indicating areas of interest and research experience and names of three references to: **Dr. Pedro Cortes, Division of Nephrology and Hypertension, CFP-5, Henry Ford Hospital, 2799 W. Grand Blvd., Detroit, Mich. 48202.** Henry Ford Hospital is an equal opportunity employer.

NRL

ASSOCIATE SUPERINTENDENT PLASMA PHYSICS DIVISION

GM-1301-15

\$46,685 to \$57,500

(Salary dependent on qualifications)

As Deputy Technical Manager of the Division which employs 110 scientific, technical and support personnel, assists in planning, directing and administering a broad theoretical and experimental program of basic and applied research in plasma physics, electron beams, pulsed-power sources, laser-matter interactions and numerical simulation. Areas of particular interest are: High power mm wave radiation, advanced accelerators, inductive storage, interaction of charged particle beams with the atmosphere, generation of intense electron and ion beams, thermonuclear plasma confinement, atomic physics processes, high altitude nuclear weapons effects and ionospheric/magnetospheric phenomena.

Aids in coordinating Division efforts with the interests/achievements of the Department of the Navy, Department of Defense, other Federal agencies, industry and academia. Represents the Division to these groups and provides consultation in plasma physics related areas.

Qualifications: Ph.D. or equivalent in physics and at least three years specialized experience in the areas listed above with at least one year equivalent to the GS/GM-14.

Interested applicants should submit a comprehensive resume or Personal Qualifications Statement (SF-171) by 15 October 1982 to:

NAVAL RESEARCH LABORATORY

Civilian Personnel Division

Attn: Code 47-031-13.1:KO:S

4555 Overlook Avenue, S.W.

Washington, D.C. 20375

An Equal Opportunity Employer

U.S. Citizenship Required

J. ROBERT OPPENHEIMER RESEARCH FELLOWSHIPS

Los Alamos National Laboratory announces the competition for the J. Robert Oppenheimer Postdoctoral Fellowships, which become available about midyear. The appointments are designed to foster continuing contacts between the Laboratory and recent recipients of doctoral degrees who show clear and definite promise of becoming outstanding leaders in scientific research areas.

Appointments are considered in many areas of experimental and theoretical physics, chemistry, mathematics, computer science, biology, materials science, environmental health, geoscience, and engineering.

Candidates may be persons completing their doctoral work or finishing a current postdoctoral appointment, as well as junior faculty members seeking support for a period of concentrated research.

Appointments are for two years, with the possibility of renewal for a third year. We provide a stipend of \$36,600 per year (12 months). Fringe benefits are also provided, including incoming travel and moving expenses.

Applications must be submitted by December 15. Following a preliminary review, selected candidates with superior professional qualifications will be asked to collaborate with appropriate Laboratory staff members to prepare a research proposal reflecting the candidate's creativity, interest, and abilities. Final selection of a Fellowship recipient is based on the merits of the proposed research and on the ability and accomplishments of the candidates.

Send resume or application (usually available from placement office) with supporting documents to, or request application from:

Personnel Services Manager
MS P-201, Div. 82-AL
Los Alamos National Laboratory
Los Alamos, NM 87545

University of California

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

An Affirmative Action/Equal Opportunity Employer: Women, minorities, veterans, and handicapped are urged to apply.

POSTDOCTORAL RESEARCH APPOINTMENTS IN SCIENCE AND ENGINEERING LOS ALAMOS NATIONAL LABORATORY

The Los Alamos National Laboratory is seeking candidates for our Postdoctoral Research Program. Appointments are considered in many areas of theoretical and experimental physics, chemistry, engineering, biology, materials science, environmental health, mathematics, and geoscience.

Applicants should have received their doctoral degree within the past three years. The appointments are for one year, renewable for a second year. The annual stipend range is \$22,800 - \$25,200 per year; fringe benefits and moving expenses are provided.

Postdoctoral appointments are awarded through a Laboratory-wide competition. The Selection Committee meets four times a year—in December, February, May, and August. Applications are accepted any time during the year.

Send resume or application (usually available from your placement office) with supporting documents to, or request application from:

Personnel Services Manager
MS P201, Div. 82-AL
Los Alamos National Laboratory
Los Alamos, NM 87545

University of California

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

An Affirmative Action/Equal Opportunity Employer: Women, minorities, veterans, and handicapped are urged to apply.

LIPID ANALYTICAL CHEMIST

The Upjohn Company, a worldwide producer of pharmaceuticals, health care products, chemicals and agricultural products, has an opening in the Physical and Analytical Chemistry Research unit for a Chemist with strong background in lipid chemistry and lipid analysis. Duties will include: (a) the development and application of methods for the qualitative and quantitative analysis of lipids of biological origin, including the characterization of lipid classes and the fatty acid composition of each class, (b) participation in collaborative research projects with other research personnel in the areas of lipid chemistry, biology, and biomembrane characterization, (c) the operation of a lipid analysis service facility, and (d) supervision of the lipid laboratory personnel.

The successful applicant will possess a Ph.D. in physical, analytical, or biochemistry (or closely related field) with experience in HPLC, GC (packed column and capillary), and TLC (preferably of materials of biological origin), and a demonstrated ability to pursue collaborative research in lipid analysis. Experience in biomembrane isolation and characterization via physical techniques such as ESR, spin labeling, fluorescence polarization and GC/MS is highly desirable. U.S. citizenship, or a visa entitling the applicant to work in the U.S., is required.

Kalamazoo is a medium-sized Southwest Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits, including numerous lakes and a four-season climate.

Upjohn offers an excellent salary, commensurate with experience, and an outstanding benefits package. Qualified candidates should send a curriculum vitae, transcripts, references, and salary requirements to:

Gerald L. Potratz, Department 14467

THE UPJOHN COMPANY

7000 Portage Road • Kalamazoo, MI 49001

Equal Opportunity Employer M/F

Upjohn

POSITIONS OPEN

FACULTY APPOINTMENTS IN MOLECULAR BIOLOGY/GENETICS AND IN MEMBRANES

These are tenure-track faculty openings in the above areas which can include cellular and developmental aspects. Appointments can be made at the assistant or associate professor level, depending upon experience.

All applicants should have a minimum of 2 years of postdoctoral experience and proven research ability. Applicants will be expected to develop independent research programs and supervise the training of Ph.D. candidates. There are active groups interested in the above areas in several departments of the College of Medicine, and excellent opportunities exist for fruitful collaborations.

Applicants should send curriculum vitae and a detailed outline of future research plans to: **Dr. Harry Rudney, Director, Department of Biological Chemistry (522), University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, Ohio 45267.**

An Affirmative Action/Equal Opportunity Employer

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

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

UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE

Applicants are solicited for faculty positions in the following departments:

MEDICINE (#409) Assistant/Associate Professor. Academic nephrologist for teaching clinical nephrology and research. Eligible for licensure in Oklahoma. Board-eligible in internal medicine and nephrology is required. (**#412) Assistant Professor.** Director of Pulmonary Function Lab. Certified by American Board of Internal Medicine and pulmonary Board-eligible. Duties to include M.I.C.U. and consultation attending in rotation with other faculty along with medical school teaching and individual research.

Applicants should send curriculum vitae identifying vacancy number for which they are applying to: **Charles B. McCall, M.D., Dean, College of Medicine, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Okla. 73190.** We are an Equal Opportunity Employer.

FACULTY POSITION BIOLOGICAL OCEANOGRAPHY UNIVERSITY OF HAWAII, MANOA

The Department of Oceanography is seeking applicants for an appointment in the field of biological oceanography. This state-funded position is tenurable and will become available in the fall semester of 1983. The successful applicant should have the communication skills of an excellent teacher, the intellect and creativity for high-quality individual research, and a demonstrated ability or potential to obtain federal funds. All interested scientists with training and demonstrated research capability in any aspect of the field of biological oceanography are urged to apply. Top priority will be based on individual qualifications rather than on specific disciplines.

Applicants must hold a Ph.D. in biological oceanography, marine biology, or a related field, but there is no restriction on the experience level—salary and rank will depend on qualifications of the individual selected. Applications should include curriculum vitae and names of three scientists whom we can contact for reference. Send application to:

**Chairman, Search Committee
Department of Oceanography
University of Hawaii at Manoa
1000 Pope Road
Honolulu, Hawaii 96822**

Application deadline is 1 December 1982.

An Equal Opportunity Employer

PhD's • Pharmacology • Physiology

Your scientific expertise is the foundation for a strong future at American Hoechst

We're a \$1.6 billion division of one of the world's leading producers of chemicals, and pharmaceuticals, with several newly-created opportunities for published pharmacologists or physiologists in our Pharmaceutical Division. Your primary responsibilities will entail developing contacts within medical institutions, universities, teaching hospitals and government research groups. In addition, you will prepare auxiliary technical sales materials and develop training pro-

grams for field sales personnel.

The ideal candidate will possess a BS in Pharmacy, a PhD in Physiology or Pharmacology, and 2-3 years teaching experience at the university level.

This is a unique opportunity which will provide direct contact with prominent figures in the medical and pharmaceutical industry.

We offer a superb compensation package, including an excellent salary plus expense account, a company car and outstanding company benefits.

Positions are available in New York City, Philadelphia, Chicago, Dallas/Ft. Worth, St. Louis, Atlanta and Los Angeles. For complete details send curriculum vitae to:

Gary Kowalski
Hoechst-Roussel
Pharmaceuticals, Inc.
Route 202-206 North
Somerville, New Jersey 08876

An affirmative action corporation M F H

Hoechst



POSTDOCTORAL RESEARCH ASSOCIATE IN BIOCHEMISTRY



Sandoz, Inc., a leading manufacturer of chemical and pharmaceutical products, is accepting applications from recent Ph.D.'s for a postdoctoral research appointment.

We are seeking a Biochemist with a strong background in protein chemistry/enzymology to do research on carbohydrate metabolism. Experience in enzyme assay procedures, enzyme purification and separation techniques required. Candidates should possess a basic knowledge of intermediary metabolism and hormonal control of protein phosphorylation-dephosphorylation mechanisms. Experience in isolated hepatocyte systems would be helpful.

This postdoctoral appointment will be for a two-year period and provide excellent opportunities for experience in an industrial R&D environment.

Please send resume and salary history in confidence to:

Ms. Judith O'Hagan
Personnel Manager, Research & Development
Rt. 10, East Hanover, NJ 07936
Equal Opportunity Employer M/F

PATHOBIOLOGY



PROFESSOR and HEAD Dept. of Pathobiology

The Department Head will provide administrative and scientific leadership for the Department of Pathobiology, which encompasses veterinary and comparative pathology, microbiology, virology, immunology, wildlife diseases, and avian medicine as represented by research, teaching and service. The Department Head's responsibilities also include promoting departmental instructional and research programs, cooperative extension activities and diagnostic laboratory service, and establishing liaison with Federal, State, and private granting agencies. An undergraduate major and an M.S. program are offered in Pathobiology. Ph.D. programs are offered in several departmental research specialties. Facilities include academic offices and laboratories, departmental library, diagnostic testing and necropsy laboratories, and a research farm. Collaborative programs exist within the University, including the University of Connecticut Health Center in Farmington, and with other New England institutions.

MINIMUM QUALIFICATIONS: Must have a Doctorate in Veterinary Medicine, recognized research accomplishments and administrative experience. This is a tenure-track nine-month position which will be filled at the Professional level. Salary will be commensurate with qualifications, starting at \$40,000 to negotiable. Applications will be accepted through November 1, 1982. Interested persons should apply to:

Dr. Frank D. Vasington, Chairman
Search Committee for Pathobiology

UNIVERSITY OF CONNECTICUT

Box U-86, Storrs, Ct. 06268

equal opportunity/affirmative action employer
(SEARCH #2A61)

NATIONAL HEART, LUNG, AND BLOOD INSTITUTE NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

HEALTH SCIENTIST ADMINISTRATOR (BIOLOGICAL SCIENCES)

The National Heart, Lung, and Blood Institute, Division of Lung Diseases, Interstitial Lung Diseases Branch, is seeking qualified applicants for a permanent appointment as Health Scientist Administrator (Biological Sciences). This position is in the Civil Service at the GS-13 or GS-14 level with a salary range of \$33,586 to \$50,112 per annum. The incumbent serves as a professional assistant to the Branch Chief with primary responsibilities for scientific review, evaluation, and administration of research grants and contracts; applies technical knowledge of the general field of pulmonary physiology, immunology, biochemistry or pharmacology; acts as a co-participant with the Branch Chief in the planning and direction of the Branch programs related to acute respiratory failure; and assists in project site visits and serves as a representative of the NHLBI.

Further information about the position and qualification requirements may be obtained by contacting Ms. Kathryn Osbourn at (301) 496-6477. Applications (Personal Qualifications Statements, SF-171) accompanied by a current curriculum vitae and bibliography should be submitted to Ms. Osbourn at: NHLBI Personnel, Building 31, Room 5A32, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20205.

Applications must be postmarked no later than October 9, 1982. (The SF-171 form is available at all Federal Personnel Offices and Job Information Centers.).

NATIONAL INSTITUTES OF HEALTH
IS AN EQUAL OPPORTUNITY EMPLOYER.

PHARMACOLOGIST OR BIOCHEMIST

Ph.D. to work on glycosaminoglycan isolation and identification. Experience in cartilage organ, synovial tissue culture, and osteoarthritic models. Familiarity with protease characterizations advantageous.

Commitment is enhanced by affiliation with extensive research of ICI Pharmaceuticals, which led to worldwide introduction of the first beta blocker, the first specific antilipidemic agent, and a non-steroidal anti-estrogen for palliative treatment of breast cancer.

New laboratories in suburban setting, 25 miles south of Philadelphia. Competitive salaries/benefits include tax-sheltered investment program. Please submit detailed C.V. in confidence.

C.T. Brodigan



**STUART
PHARMACEUTICALS**
division of ICI Americas Inc
Wilmington, Delaware 19897
An Equal Opportunity Employer M/F



The International Atomic Energy Agency seeks for its International Laboratory of Marine Radioactivity, Monaco, a scientist with at least ten years graduate research in marine science to undertake studies on various aspects of the occurrence and behaviour of radioactivity in the marine environment. Ph.D. in radioecology or relevant nuclear experience essential. Initial contract two years, tax-free emoluments depending on experience and qualifications approx. \$38,000–41,000 per annum. Additional allowances for dependents. Travel and removal expenses paid. Six weeks annual leave. Send curriculum vitae with an indication of your nationality under Vacancy Notice No. 53/82 to **Division of Personnel, International Atomic Energy Agency, P.O. Box 100, A-1400 Vienna, Austria before 22 October 1982.**

POSITIONS OPEN

MICROBIAL BIOLOGIST

The Vassar College Biology Department invites applications for a tenure-track appointment at the associate or assistant professor rank. We seek candidates with proven teaching ability and an active research program. Supplementary areas of interest include molecular genetics, immunology, virology, and microbial ecology. Position available immediately, but starting date is negotiable.

Candidates should submit curriculum vitae which include list of publications and a statement concerning interests and objectives in both teaching and research. Samples of published work should be included and three letters of reference requested. Applications will be reviewed as received. Send materials to:

Dr. Patricia Johnson, Chairman
Department of Biology
Box 377

Vassar College
Poughkeepsie, N.Y. 12601

An Equal Opportunity/Affirmative Action Employer

DEPARTMENT OF CELLULAR AND DEVELOPMENTAL BIOLOGY UNIVERSITY OF ARIZONA

Is seeking two individuals: (i) a **MOLECULAR BIOLOGIST** with demonstrated ability to apply modern molecular and/or genetic methods to the analysis of cellular or developmental biology systems and (ii) a **CELL BIOLOGIST** working in the area of genetic or structural aspects of cell cycle regulation. The successful candidates will be expected to establish active research programs and to participate in the department's teaching program. Rank and salary dependent upon qualifications. Please direct inquiries or applications to:

Search Committee
Department of Cellular
and Developmental Biology
University of Arizona
Tucson, Arizona 85721

An Equal Opportunity/Affirmative Action Employer

IMMUNOLOGIST ARTHRITIS/CONNECTIVE TISSUE RESEARCH

There is a vacancy for a postdoctoral immunologist to work with Dr. A. R. Poole on autoimmunity to collagen and proteoglycan in a research group of biochemists and cell biologists interested in connective tissue structure and degradation. This is a continuation of earlier experimental work and studies of human disease. Suitable applicants should be experienced in immunological methods including those used to study cell-mediated immunity. The starting salary will be up to \$20,000 per annum and the position is available for up to 3 years in the first instance. Applications, naming three referees and supplying a full curriculum vitae, should be sent to:

Dr. A. R. Poole
Joint Diseases Laboratory
Shriners Hospital
1529 Cedar Avenue
Montreal, Quebec, Canada H3G 1A6

THE CHINESE UNIVERSITY OF HONG KONG, FACULTY OF MEDICINE, LECTURESHIP IN ANATOMY. Tenable from 1983–1984. Applicants should have a doctorate in anatomy or a related subject or a medical qualification with appropriate teaching, research, or clinical experience, preferably in neuroanatomy. Appointee is expected to assume duty on 1 August 1983 or as soon as possible thereafter. Annual salary: HK\$129,840 to HK\$147,360 by two increments BAR \$156,120 to \$217,380 by seven increments. Exchange rate approximately U.S.\$1 = HK\$5.9. Starting salary will depend on qualifications and experience. Benefits include superannuation (university, 15 percent; appointee, 5 percent), medical benefits, education allowance for children, and long leave; for those whose annual salary is \$138,600 or above, housing allowance/accommodation on campus as appropriate. Air passages will also be provided for appointees on overseas terms. Application forms and further information concerning terms of service are obtainable from: **The Personnel Section, The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong.** Completed application forms together with one set of major publications and copies of testimonials should be returned before 30 November 1982. Please mark "Recruitment" on cover.

POSITIONS OPEN

MOLECULAR BIOLOGIST

Applications and nominations are invited for a tenure-track position, the rank dependent upon qualifications. Candidates qualifying for a senior rank should have a record of distinguished contributions. Other candidates should have already demonstrated their research capabilities. Background and experience in biophysical aspects of molecular biology are strongly desired. Responsibilities will include development of a vigorous independent program of research in molecular biology and participation in the teaching program. Please send applications, including curriculum vitae, list of publications, and summary of research plans, as well as letters of reference, by 1 November 1982, to **Dr. Oscar Touster, Chairman, Department of Molecular Biology, Vanderbilt University, Nashville, Tennessee 37235.**

An Affirmative Action/Equal Opportunity Employer

NEUROBIOLOGY POSTDOCTORAL FELLOW in biophysical approaches to neurobiology/neuropharmacology. Projects include (i) mechanisms of anti-convulsant drug action [*Fed. Proc.* 39 (1980)] or (ii) intrinsic properties of neuronal thermosensitivity [*J. Physiol.* 327 (1982)]. Current experiments utilize intracellular electrophysiological methods to record from organotypic tissue cultures and slices of rat brain and computer methods to analyze and display data online. Experience with intracellular recording from isolated preparations or computer applications in neurobiology is desirable. Please submit curriculum vitae and names of three references to: **Dr. Geller, Department of Pharmacology, University of Medicine and Dentistry of New Jersey–Rutgers Medical School, P.O. Box 101, Piscataway, New Jersey 08854.** *An Equal Opportunity/Affirmative Action Employer, M/F.*

ORGANIC CHEMIST

Applicants are invited for a tenure-track position in the **Department of Chemistry, Washington University, St. Louis, Missouri.** Preference will be given to applicants at the assistant professor level, but appointment as associate or full professor for a candidate with an outstanding record of accomplishment will be considered. Candidates of interest are those who have the potential for outstanding research accomplishment as well as excellence in teaching. Liberal start-up funds will be made available to the successful applicant. Applicants are requested to submit by 1 December 1982 a curriculum vitae and a statement of research interests and to arrange to have three letters of reference sent to: **Professor William D. Phillips, Chairman, Department of Chemistry, Washington University, St. Louis, Mo. 63130.** *Washington University is an Equal Opportunity/Affirmative Action Employer.*

BERKELEY PHYSICS EXPERIMENTAL CONDENSED MATTER PHYSICIST

The Department of Physics of the University of California, Berkeley, expects during the next few months to make an appointment at the tenure level of an experimental condensed matter physicist. The successful candidate should be able to start his/her own substantial research program and supervise high-quality Ph.D. students interested in pursuing research in that area.

Applicants should write, as soon as possible, and definitely before 15 October 1982, to the **Chairman of the Department of Physics, University of California, Berkeley, California 94720,** giving curriculum vitae, publication list, and references. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

DEPARTMENT OF PHARMACOLOGY HARVARD MEDICAL SCHOOL

Two faculty positions in the Department of Pharmacology, Harvard Medical School, are available at the Assistant/Associate Professor level. Both positions could be filled within the coming year. Research interests should be concerned with mechanisms of regulation of cellular function. Examples of areas of interest include neuropharmacology, membrane biochemistry, and drug-receptor interactions. Applicants using chemical, electrophysiological, biochemical and/or genetic approaches are particularly encouraged. Interested candidates should send a curriculum vitae, brief statement of research interests, bibliography, and names of three references to: **Chairman, Search Committee, Department of Pharmacology, Harvard Medical School, 250 Longwood Avenue, Boston, Mass. 02115.** *Harvard University is an Equal Opportunity/Affirmative Action Employer.*

DEPUTY DIRECTOR FOR TECHNICAL OPERATIONS

The Princeton Plasma Physics Laboratory, one of the world's leading laboratories engaged in the development of magnetic fusion as an inexhaustible energy source, seeks a Deputy Director for Technical Operations who will be responsible for the Laboratory's major experimental projects—TFTR, PLT, PDX, etc.—and the facilities and activities that support them.

The principal responsibilities of the Deputy Director will include the management of day-to-day technical operations in accordance with the Laboratory's research program, the construction and maintenance of experimental facilities, and the oversight of support facilities and personnel. The Deputy Director will implement the Laboratory's Safety and QA programs.

The essential qualifications for this position are broad experience in experimental physics or related advanced technologies, and successful management of large technical enterprises. Other requirements are familiarity with government operations and procedures, particularly those concerned with the support of scientific projects, and experience with the interactions of academic, industrial, and FFR&D institutions.

The Laboratory offers stimulating and challenging work, a salary fully commensurate with experience, and a comprehensive benefit package.

Please forward a detailed resume and salary requirements to:

Dr. Harold P. Furth, Director
Princeton Plasma Physics Laboratory
Post Office Box 451
Princeton, New Jersey 08544

An Equal Opportunity/Affirmative Action Employer

**Plasma Physics
Laboratory**
Princeton University

BIOLOGY/ BIOCHEMISTRY ASSISTANT

The Upjohn Company's Pharmaceutical Research Headquarters in Kalamazoo, Michigan has an opening in its Experimental Science unit for a Biology/Biochemistry Assistant. This individual will assist a Research Scientist in the design and performance of studies concerning ion transport in mammalian cell membranes and effects of various drugs on membrane ion permeation.

Applicants must possess a BS or MS degree in Biochemistry, Physiology, or Cell Biology with specific training in membrane studies.

Kalamazoo is a mid-sized southwestern Michigan community offering an excellent mix of cultural/recreational opportunities including lakes, nearby colleges, and a four-season climate. The Upjohn Company offers an excellent salary, benefits and relocation plans.

For confidential consideration, please send your resume to:

Lance D. Williams — 14452
5044-41-1

Upjohn

The Upjohn Company

7000 Portage Road
Kalamazoo, Michigan 49001

An Equal Employment Opportunity Employer M/F

Kuwait

**University of Kuwait Health Science Centre
Faculty of Medicine**

Chief Technician in Toxicology

Applications are invited for the post of Chief Technician in Toxicology in the Department of Pharmacology. Candidates should have experience in gas-liquid chromatography, high pressure liquid chromatography and mass-spectrometry. Candidates should hold the F.I.M.L.S., or equivalent qualification, with fifteen years' experience including training.

Salary will be in the range KD 450–512 per month, (KD = £ 1.8, US \$ 3.5 approx.). There is no income tax in Kuwait and currency is transferable without restriction. Free, furnished, air-conditioned accommodation is provided, and electricity and water supplied free of charge. Sixty days paid annual leave for each completed year of employment, and annual economy class return air tickets to the country of citizenship or permanent residence are provided for the appointee, spouse and three dependent children. Free medical treatment is available under the State Health Service.

Applications should be submitted to: **The Dean, Faculty of Medicine, University of Kuwait Health Science Centre, P.O. Box 24923 Safat, Kuwait**, with detailed curriculum vitae in duplicate, recent passport photograph, and the names of three referees, to arrive not later than 30th October 1982.

POSITIONS OPEN

MOLECULAR EVOLUTIONARY BIOLOGIST

Applications are invited for a tenure-track position at the Assistant Professor level; must begin January 1983. Teaching duties will include a portion of introductory biology for majors, a senior/graduate-level course emphasizing recombinant DNA technology and development of a laboratory course in molecular biology techniques. Ph.D. in molecular biology, postdoctoral experience and promise of outstanding research potential are essential. Preference will be given, but not limited, to persons interested in molecular biology of plant systems. Applicants should have interest in the use of modern biochemical and molecular approaches to evolutionary biology of eukaryotic systems. Participation in the supervision of graduate students, development of an active research program, and attraction of extramural funding are expected. Excellence in teaching is required. Qualified candidates submit curriculum vitae, copies of recent or most important research papers, and a brief statement of research goals; they should also contact at least three referees for letters of reference. All materials should be sent to:

Dr. Donald W. Duszynski, Chairman
Department of Biology
The University of New Mexico
Albuquerque, New Mexico 87131

Deadline for receipt of application materials is 1 October 1982.

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

TYRRELL MUSEUM OF PALAEOONTOLOGY

A challenging opportunity exists to develop an important section of a new museum being constructed in Alberta. Positions are still available in invertebrate palaeontology, palynology, palaeobotany, and palaeoecology. You will be involved in multidisciplinary research projects on Cretaceous terrestrial ecosystems of Alberta and related topics. Fieldwork and resource management will be given a high priority. Story lines and scripts for the displays will be written prior to the museum opening in June 1985. Academic association with the University of Calgary if desired. Salary: \$25,452 to \$32,040 (Canadian). Apply to **Tyrrell Museum of Palaeontology, Drumheller, Alberta, Canada, T0J 0Y0.**

BERKELEY PHYSICS ASSISTANT PROFESSORSHIPS

Pending budgetary approval, the Department of Physics of the University of California, Berkeley, expects during the next 2 years to make several appointments at the assistant professor level. Preferred areas of theoretical and experimental research are particle physics, condensed matter physics, statistical physics, astrophysics, atomic physics, and nuclear physics. For exceptional candidates there is a possibility of a research fellowship for 1 or 2 years preceding the assumption of the regular duties of an assistant professor.

Applicants should write, as soon as possible, and definitely before 15 October 1982, to the **Chairman of the Department of Physics, University of California, Berkeley, California 94720**, giving curriculum vitae, publication list, and references. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

PLANT PHYSIOLOGIST (VITICULTURIST)/Assistant or Associate Professor of Viticulture, University of California, Davis, commencing 1 January 1983. A tenure-track position to conduct research (75 percent) on the water relations and/or mineral nutrition of grapevines and to teach (25 percent) an undergraduate grape production course. Supervision of graduate students, participation in university service, and student advising will also be expected. Requires Ph.D. in plant physiology or a related discipline and demonstrated research ability and experience in plant water relations and/or mineral nutrition. Experience with grapevines or other perennial horticultural crops is desirable but not essential. A commitment to excellence in research and teaching is required. A curriculum vitae, statement of research and teaching interests (and background in each), official undergraduate and graduate transcripts (if within 5 years of graduation date), lists and reprints of published works and submitted manuscripts, and names and addresses of at least three references should be sent to: **Professor C. S. Ough, Department of Viticulture and Enology, University of California, Davis, California 95616**, ending date 15 October 1982. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

BERKELEY PHYSICS ASSISTANT PROFESSORSHIP— PLASMA THEORY

Pending budgetary approval, the Department of Physics of the University of California, Berkeley, expects during the next year to make an appointment at the assistant professor level in the area of theoretical plasma physics and nonlinear dynamics.

Applicants should write, as soon as possible, and definitely before 15 October 1982, to the **Chairman of the Department of Physics, University of California, Berkeley, California 94720**, giving curriculum vitae, publication list, and references. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

BERKELEY PHYSICS TENURED APPOINTMENTS

Pending budgetary approval, the Department of Physics of the University of California, Berkeley, expects during the next 2 years to make several appointments at the tenure level. Preferred areas of theoretical and experimental research are particle physics, condensed matter physics, statistical physics, astrophysics, atomic and plasma physics, and nuclear physics.

Applicants should write, as soon as possible, and definitely before 15 October 1982, to the **Chairman of the Department of Physics, University of California, Berkeley, California 94720**, giving curriculum vitae, publication list, and references. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

PLANT CELL BIOLOGIST/PLANT GENETICIST

The Department of Botany, The George S. Wise Faculty of Life Sciences, Tel Aviv University, invites applications for a tenure-track teaching and research position at the Assistant Professor level. Ph.D. in cellular or molecular biology of plants, such as cytogenetics, somatic plant cell genetics, or molecular genetics, and at least 1 year of postdoctoral research experience are required. The research and teaching are expected to be part of interdepartmental effort in plant cell biology.

A complete curriculum vitae, including a list of publications and teaching experience, academic transcript, reprints and names of at least three referees, should be sent to the **Dean, The George S. Wise Faculty of Life Sciences, Tel Aviv University, Tel Aviv 69978, Israel.**

UNIVERSITY OF ALBERTA DEPARTMENT OF GENETICS POSTDOCTORAL THEORETICAL POPULATION BIOLOGIST

Research in molecular evolution, population genetics, and evolutionary ecology. Available immediately. Send curriculum vitae and the names of three references to **Curtis Strobeck, Department of Genetics, University of Alberta, Edmonton, Alberta, Canada T6G 2E9.**

POSTDOCTORAL FELLOW

Postdoctoral position available to study the molecular mechanism of genetic recombination. Applicants experienced in microbial genetics or protein-nucleic acid biochemistry preferred.

Send curriculum vitae, names of three references, and a summary of recent research activities to:

Dr. Gerald R. Smith
FRED HUTCHINSON CANCER
RESEARCH CENTER
1124 Columbia Street
Seattle, Washington 98104
Equal Opportunity Employer

POSTDOCTORATE POSITION available to study hormonal regulation of liver metabolism, especially hormonal effects on calcium sequestering. Good background in biochemistry necessary. Write to **Dr. Naomi Kraus-Friedmann, Department of Physiology and Cell Biology, University of Texas School of Medicine, P.O. Box 20708, Houston, Texas 77025.**
Equal Opportunity Employer

POSTDOCTORAL POSITION

Available immediately for individual with expertise in muscle, preferably smooth muscle, physiology. Project concerns excitation-contraction coupling in isolated muscle cells. Send résumé and names of references to: **Dr. Peter Anderson, C. V. Whitney Laboratory, University of Florida, Route 1, Box 121, St. Augustine, Fla. 32084.** *The University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION on NIH training grant for psychoendocrinologist, stress physiologist, or chronobiologist. Send curriculum vitae and two letters of recommendation to **Dr. B. Natelson, Department of Neurosciences, UMDNJ Medical School, East Orange, N.J. 07018.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION available for research on microinjection of eggs and gene regulation in the mouse. Apply with curriculum vitae to:

R. L. Brinster
Laboratory of Reproductive Physiology
School of Veterinary Medicine
University of Pennsylvania
Philadelphia, Pennsylvania 19104

POSTDOCTORAL POSITION available to study enzyme variation in *Escherichia coli* either at DNA or protein level. Requirements include either a background in nucleic acid or in protein research. Send résumé and names of three references to:

Dr. Daniel Dykhuizen
Department of Genetics
Box 8031
Washington University School of Medicine
St. Louis, Mo. 63110

POSTDOCTORAL POSITIONS (two) for Ph.D. or M.D. in the area of alcohol research supported by NIAAA training grant. Seek one individual with background and interests in evaluating behavioral/neurobiological consequences of prenatal alcohol exposure in animals and one with skills and interests in biopsychology of alcoholism in humans. Send letter indicating date available, curriculum vitae, and names of three references to: **Dr. Carrie Randall, Veterans Administration Medical Center, Research Service, Charleston, S.C. 29403.** *The Medical University is an Equal Opportunity Employer, M/F/H.*

POSTDOCTORAL POSITIONS open in Multidisciplinary Cancer Research Program. NIH fellowship now available for recent Ph.D. or M.D. to study immunology, carcinogenesis, experimental therapeutics, or molecular biology at the University of California, San Diego (UCSD). Additional positions available after 1 August 1983. Positions are restricted to U.S. citizens and permanent residents. For further information concerning participating faculty and program, send curriculum vitae and statement of interests to **Dorothy Hudig, Ph.D., Associate Director, Oncology Training Grant, UCSD Cancer Center T-006, University of California, San Diego, La Jolla, Calif. 92093.**

POSTDOCTORAL POSITION IN BIOCHEMISTRY with potential for long-term position. Work involves biochemical studies on recently discovered regulatory factors in bone metabolism. Experience desirable in protein purification. Top academic and publication records essential. Competitive salary in a well-equipped, exciting, multidisciplinary laboratory. Please send three references, curriculum vitae, bibliography, transcripts, and reprints to **Dr. D. J. Baylink, Department of Medicine, Loma Linda University, 11201 Benton Street, Loma Linda, Calif. 92357.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL MOLECULAR GENETICS

Battelle Columbus Laboratories, a world leader in contract research and development, has an immediate need for a postdoctoral candidate to work on molecular genetics of carcinogenesis and development of mammalian gene cloning systems. Experience in animal cell culture, tumor virology, gene cloning/sequencing, and/or microcomputers desirable.

This position is for a 1-year initial appointment, potentially renewable, with the possibility of a permanent position with Battelle's multidisciplinary industrial contract research operations in biotechnology. Salary range will be \$18,000 to \$24,000 per year. U.S. citizenship or permanent residency required. Interested individuals should send résumé with references to: **Richard C. Needles, Employment Department V-1,**

 **Battelle**
Columbus Laboratories
505 King Avenue
Columbus, Ohio 43201
Equal Opportunity Employer

**DEAN
COLLEGE OF PHARMACY**
**University of Tennessee
Center for the Health Sciences**

Nominations and applications are being accepted for the position of Dean of the College of Pharmacy at the UTCHS in Memphis, Tennessee. The dean reports directly to the chancellor and serves as chief academic and administrative officer for the fully accredited college that offers both the baccalaureate and the Pharm.D. degree as well as a Ph.D. graduate program; there is an enrollment of approximately 300 students. The College has approximately 60 full and part time faculty and is located on a large health sciences center campus with four other professional colleges and a graduate school providing outstanding interdisciplinary opportunities. Candidates should be highly accomplished senior faculty who have considerable experience as a departmental chairman or in a dean's office or both. Applications should be accompanied by a curriculum vitae and a listing of three references submitted no later than October 1, 1982, to John A. Shively, M.D., Vice Chancellor for Academic Affairs, University of Tennessee Center for the Health Sciences, 62 South Dunlap, Memphis, Tennessee 38163. Affirmative Action, Equal Opportunity Institution.



NATIONAL INSTITUTE FOR HIGHER EDUCATION DUBLIN

The Institute having enrolled its first students on a number of first degree programmes in Autumn 1980, including a degree in Electronic Engineering offers degree and postgraduate programmes in Science, Engineering, Business, Computing, Communication, Languages and Accounting. A major new building development for 2,000 student places in Science and Engineering is being planned. In addition the Irish Government has decided to locate a multi-million pound National Micro-electronic Laboratory on the Institute's campus. Academic staff will be given the opportunity to be involved in these developments.

Applications are invited for the following positions within the Faculty of Engineering and Design.

Head of Electronic Engineering and Lecturers in Electronic Engineering

Candidates should be well qualified academically and should also have industrial or research experience. The Governing Body of the Institute may award the title of Professor to an appropriate appointee.

Salary Scale: Head: Principal Lecturer - IR£17,789 - IR£21,838
Lecturer: Senior Lecturer - IR£13,828 - IR£18,265
Lecturer - IR£11,865 - IR£16,561
Assistant Lecturer - IR£9,296 - IR£11,367

Application forms and further details are available from:
The Personnel Office, National Institute for Higher Education, Glasnevin,
Dublin 9, Ireland. Closing date - Six weeks from the date of this
publication.

RESEARCH TECHNOLOGISTS

Frito-Lay, Inc. is currently seeking Research Technologists with the talent and expertise to excel in either of the following two areas:

Assist Research Scientists in the development of new potato varieties, and new methods of variety characterization. A Master of Science degree in Plant Physiology and strong background in biochemistry and/or analytic chemistry preferred. You must be versatile and able to adjust to changes in research objectives with ease.

Assist in the execution of nationwide potato variety evaluation, as well as conduct research in the areas of tuber density, chip color and yield. Masters degree in Agricultural Sciences preferred, coupled with potato research or production experience. Agri-business or farming background a plus.

At Frito-Lay, Inc., we offer an excellent salary and comprehensive benefits package. If you seek a career that offers constant challenge and a fast track to advancement, please send your resume, including salary history, to:



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Professional Placement-TL
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Dallas, Texas 75245
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POSITIONS OPEN

POSTDOCTORAL FELLOW

Advanced postdoctoral position in Division of Nutrition and Metabolism. Ph.D. sought with documented potential in biomedical research to join established research team studying lipoprotein metabolism in primates. Associated with Brown University, Program in Medicine. Salary commensurate with experience. Please forward résumé to: **Peter N. Herbert, M.D., Director of the Division of Nutrition and Metabolism, The Miriam Hospital, 164 Summit Avenue, Providence, R.I. 02906. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION to study health effects of energy-related pollutants. Training in pulmonary biochemistry, microbiology, or immunology desirable. Send curriculum vitae and names of three references to:

Dr. James J. McGrath
Department of Physiology
Texas Tech University Health Sciences Center
Lubbock, Texas 79430

POSTDOCTORAL POSITION available to study the biochemistry of the renin-angiotensin system in neural and endocrine tissues. A strong protein biochemistry background preferred; experience with hybridoma technology and high-performance liquid chromatography techniques would be helpful. Send curriculum vitae and two letters of recommendation to: **Drs. F. M. Bumpus and R. R. Smeby, Division of Research, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44106.**

THE STELLA DUNCAN INSTITUTE

A postdoctoral position is available immediately to study the yeast-to-hypha transition in *Candida albicans*. This project will include in vivo and in vitro analyses as well as the integration of these data into dynamic (computer) models of this system. Send résumé and references to: **Dr. Barbara Wright, Stella Duncan Memorial Research Institute, Microbiology Department, University of Montana, Missoula, Montana 59812. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available immediately for recent Ph.D. in biochemical cardiovascular pharmacology, drug-receptor pharmacology, or membrane receptor biochemistry. Position is for research on interaction of digitalis glycosides with receptors of cardiac sarcolemma membrane and mechanism of action of digitalis glycosides. Beginning stipend is \$14,500. Please send letter describing research experience, curriculum vitae, and names of three references to: **Dr. George T. Okita, Department of Pharmacology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Ill. 60611. Equal Opportunity Employer, M/F.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position available for up to 4 years for studies on structure and control of transcription of protein synthesis factor genes in mammalian cells. Recent experience with recombinant DNA techniques desirable. Salary commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Lawrence I. Slobin, Department of Biochemistry, University of Mississippi Medical Center, 2500 North State Street, Jackson, Mississippi 39216. Equal Opportunity Employer, M/F/V/H.**

THE AUSTRALIAN NATIONAL UNIVERSITY invites applications for **PROFESSORIAL FELLOW IN SURFACE PHYSICS, RESEARCH SCHOOL OF PHYSICAL SCIENCES.** The University has decided to establish a Professorial Fellowship in Surface Physics to be located initially in the Department of Applied Mathematics. It is anticipated that the appointee will lead diverse theoretical and experimental groups established in colloid and surface science in that department and will develop major experimental programs in collaboration with the Department of Solid State Physics and the Atomic and Molecular Physics Laboratories. Salary will be: Professorial Fellow \$A40,786 per annum. Current exchange rates: \$A1 = \$U.S.1 = U.K.56P. Appointment will be to retiring age. Reasonable appointment expenses are paid; superannuation; assistance with housing. The university reserves the right not to make an appointment or to make an appointment by invitation at any time. Applicants may obtain further particulars from **The Registrar, The Australian National University, P.O. Box 4, Canberra, Australia**, with whom applications close on 15 October 1982.

POSITIONS OPEN

RESEARCH ASSISTANT needed for growth of animal cells in culture; use of subcellular systems for studying macromolecular synthesis in vitro; recombinant DNA studies using lambda bacteriophage and cosmid and plasmid vectors; and genetic mapping of mammalian genes by northern and southern analysis. Must have Ph.D. in biochemistry and be adept at bacterial and animal cell culture, using subcellular systems for studying macromolecular synthesis and at recombinant DNA techniques useful for mapping mammalian genes; 55 hours per week; \$14,500 per year. Apply at the **Texas Employment Commission, Houston, Texas**, or send résumé to **Texas Employment Commission, TEC Building, Austin, Texas 78778. J.O. #2699109. Ad paid by An Equal Employment Opportunity Employer.**

The Department of Pathology, University of Chicago, has an opening for a **RESEARCH ASSOCIATE** for the study of nonhuman primate apolipoproteins. Responsibilities will include conducting and developing radioimmunoassay techniques and assisting in the characterization and development of antibodies, including monoclonal antibodies. A relevant Ph.D. and research experience is required. Send curriculum vitae, salary expectations, and references to **Dr. Godfrey S. Getz, Department of Pathology, 950 East 59 Street, Chicago, Illinois 60637.**

RESEARCH ASSOCIATE

Department of Physics, Massachusetts Institute of Technology (MIT), has an immediate opening for a Ph.D. theoretical condensed matter physicist to participate in the study of semiconductor surface reconstruction using electronic total energy calculations and renormalization group approaches. The candidate should have a strong background in both of these techniques and in semiconductor surface science. The salary is \$18,000 to \$22,000 per year. Send curriculum vitae and the names of three references to: **Professor J. D. Joannopoulos, Department of Physics, MIT, Cambridge, Mass. 02139. MIT is an Equal Opportunity/Affirmative Action Employer.**

RESOURCE GENETICIST

The National Council on Gene Resources has occasional openings for resource geneticists to work with a dedicated, interdisciplinary staff in developing plans for managing the genetic resources of agricultural commodities and natural resources of economic importance. Applications are requested for openings during the coming months. The applicant should have a Ph.D. in a biological science with emphasis in population and quantitative genetics and evolution. Strong writing skills, interdisciplinary research team experience, resource management experience, and administrative experience are highly desired.

Send curriculum vitae, list of references, and writing sample to:

Dr. Mary Martin, Assistant Director
National Council on Gene Resources
2855 Telegraph Avenue, Suite 216
Berkeley, Calif. 94705

SPACE FLIGHT PROJECT PHYSIOLOGIST NASA-AMES RESEARCH CENTER MOFFETT FIELD, CALIF. 94035

NASA is preparing to fly the first life sciences-dedicated Spacelab mission on board the Space Shuttle in 1985. Spacelab 4 will carry human and animal experiments to evaluate the effects of spaceflight on living systems, particularly the effects of weightlessness as related to space biomedicine and fundamental biology. Ames Research Center is seeking a senior staff scientist to lead the science activities for investigations on this mission using nonhuman test specimens.

Responsibilities include: science management and coordination of spaceflight biological and biomedical experiments using laboratory rodents, small primates, amphibians and plants.

Specific qualifications include: (i) ability to develop and implement science policy; (ii) knowledge of life science—space flight experiments; (iii) ability to direct research; (iv) knowledge of space environmental stresses on biological systems; and (v) ability to publish and critically review scientific research and supporting documentation.

Permanent position in federal service. Salary range: \$39,689 to \$51,596, commensurate with experience beyond the Ph.D. or equivalent. For further details regarding application requirements, write: **SL-4 37/82** at the above address or **telephone: 415-965-5084** for copy of Vacancy Announcement 37/82. Applications accepted until 1 October 1982. *An Equal Opportunity Employer.*

POSITIONS OPEN

RESEARCH POSITION

For recent Ph.D. in biochemistry-cell biology to join newly established laboratory in gynecologic oncology and study in vitro metabolism/activation of estrogens and carcinogens. Salary: \$18,000. Send curriculum vitae and names of three references by 30 September 1982 to: **John Tslbris, Ph.D., or Josh Tunca, M.D., Department of Obstetrics and Gynecology, University of Illinois College of Medicine, 840 South Wood Street, Chicago, Illinois 60612.**

Affirmative Action/Equal Opportunity Employer.

Ph.D. SCIENTISTS/ISRAEL

International Genetic Sciences Partnership, a new scientific company being established in Jerusalem, is seeking Ph.D. scientists in the areas of cell and molecular biology. Experience in techniques of recombinant DNA, plant and mammalian tissue culture preferred. Operations are scheduled to start within 8 to 12 months. Send curriculum vitae, lists of publications, and recommendations to:

International Genetic Sciences Partnership
155-25 Styler Road
Jamaica, New York 11433
Telephone: 212-526-0400

The **DEPARTMENT OF VETERINARY SCIENCE** at the University of Wisconsin-Madison invites applications for a tenure-track faculty position to be filled by the best available candidate from one of the following research disciplines:

EXPERIMENTAL PATHOLOGY. Assistant/Associate Professor. The candidate is expected to develop an independent research program and direct graduate student training and be responsible for a graduate-level comparative pathology course. Candidates with interests in infectious disease processes are especially encouraged to apply. The applicant must have a D.V.M. and a Ph.D.

INFECTIOUS DISEASES. Assistant Professor. The candidate is expected to develop an independent research program, direct graduate student training, and be responsible for an undergraduate/graduate-level course in his/her discipline. The applicant must have a Ph.D. and a veterinary medicine background.

Submit application with curriculum vitae, copies of recent publications, description of research goals, and names of four references to: **Dr. R. F. Marsh, Professor, Department of Veterinary Science, University of Wisconsin-Madison, 1655 Linden Drive, Madison, Wis. 53706.**

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

FELLOWSHIP

POSTDOCTORAL FELLOWSHIP—OCULAR IMMUNOLOGY. A 2-year position is available for an immunobiologist to investigate immune mechanisms of various diseases of the eye in collaboration with ocular microbiologist and ocular virologist. Send résumé by 31 October 1982, to: **Dan B. Jones, M.D., The Neurosensory Center, Cullen Eye Institute, 6501 Fannin, Houston, Texas, 77030. An Equal Opportunity/Affirmative Action Employer.**

SYMPOSIUM

APPLICATION OF BIOLOGICAL MARKERS TO CARCINOGEN TESTING

15-19 November 1982
at the Holiday Inn
8120 Wisconsin Avenue
Bethesda, Maryland 20814

Sponsored by the
U.S. Environmental Protection Agency

The symposium will examine the current status of biochemical and immunological markers of carcinogenicity as they relate to the detection of cancer in experimental animals. Sessions will encompass enzymes, monoclonal antibodies, oncofetal antigens and hormones, DNA-adducts, viruses, and in vitro and in vivo tests.

Registration fee: \$200. Deadline for registration is 31 October 1982. Deadline for poster abstract submission is 15 October 1982. For details, contact:

Associated Universities, Inc.
1717 Massachusetts Avenue NW, Suite 603
Washington, D.C. 20036
Telephone: 202-462-4475
Attention: Claire M. Wilson



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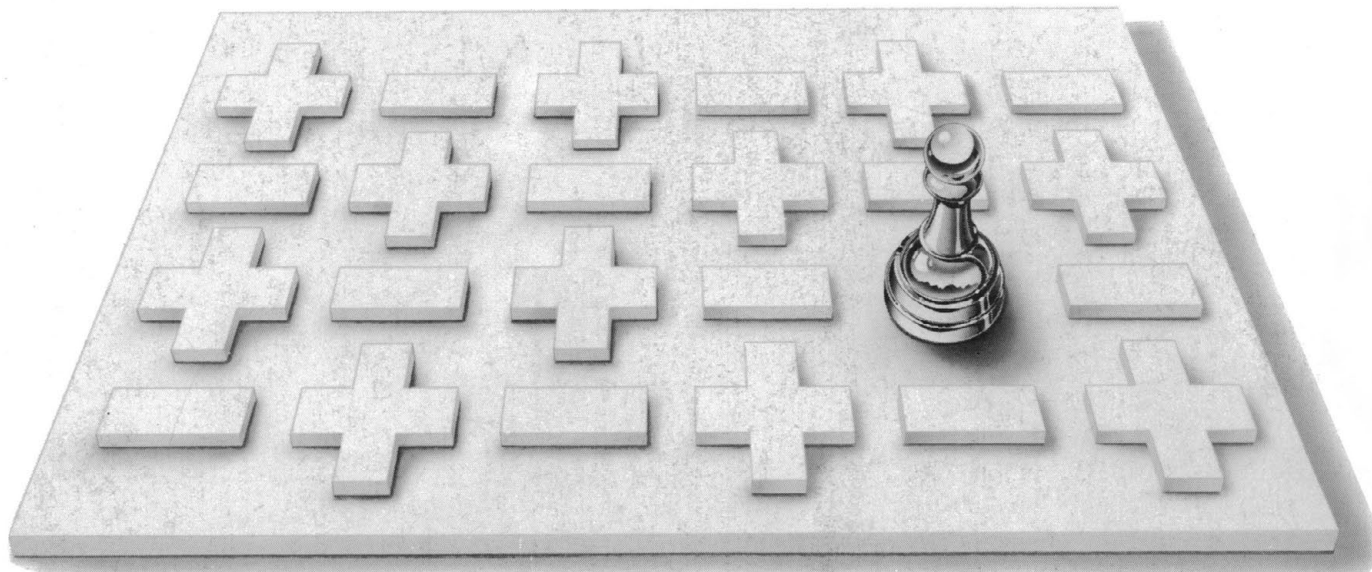
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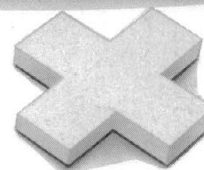
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