sues and Implications. Papers from a conference, Oswego, N.Y., July 1976. William C. Ritchie, Ed. Academic Press, New York, 1978. xiv, 222 pp. \$14.50. Perspectives in Neurolinguistics and Psycholinguistics.

Seedlings of the North-Western European Lowland. A Flora of Seedlings. F. M. Muller. Junk, the Hague, and Centre for Agricultural Publishing and Documentation, Wageningen, 1978 (U.S. distributor, Kluwer Boston, Hinghan, Mass.). vi, 654 pp., illus. \$73.

Shock Tube and Shock Wave Research. Proceedings of a symposium, Seattle, July 1977. Boye Ahlborn, Abraham Hertzberg, and David Russell, Eds. University of Washington Press, Seattle, 1978. xvi, 656 pp., illus. \$40. Soft-Tech. J. Baldwin and Stewart Brand,

Eds. Penguin, New York, 1978. 176 pp., illus. Paper, \$5. A CoEvolution Book.

Soil Conservation and Management in Developing Countries. Food and Agriculture Organization of the United Nations, Rome, 1977 (U.S. distributor, Unipub, New York). iv, 212 pp. Paper, \$9. FAO Soils Bulletin, 33.

Solar Cooling and Heating. Architectural, Engineering, and Legal Aspects. Proceedings of a forum, Miami Beach, Dec. 1976. T. Nejat Veziroğlu, Ed. Hemisphere, Washington, D.C., 1978. Three volumes. xlviii, 1066 pp., illus. \$120.

Spectacle Lens Technology. D. F. Horne. Crane, Russak, New York, and Hilger, Bristol, England, 1978. xiv, 324 pp., illus. \$52.50.

Stable Peace. Kenneth E. Boulding. Univer-



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sity of Texas Press, Austin, 1978. xii, 144 pp. Cloth, \$9.95; paper, \$3.95.

The Stable Society. Its Structure and Control. Towards a Social Cybernetics. Edward Goldsmith. Wadebridge Press, Wadebridge, Cornwall, England, 1978. vi, 154 pp. £3.80.

Stalking the Wild Taboo. Garrett Hardin. William Kaufmann, Los Altos, Calif., ed. 2, 1978. x, 284 pp. Cloth, \$11.95; paper, \$4.95.

Stars. Their Birth, Life, and Death. Iosif S. Shklovskii. Translated from the Russian edition (Moscow, 1975) by Richard B. Rodman. Freeman, San Francisco, 1978. xiv, 442 pp., illus. \$17.50.

Structure and Function of the Descending Systems of the Spinal Cord. P. G. Kostyuk. Translated from the Russian edition (Leningrad, 1973). Israel Program for Scientific Translations, Jerusalem, 1977 (U.S. distributor, Halsted [Wiley], New York). x, 200 pp., illus. \$32.50.

Student's Guide to Thesis Research. Thomas Eugene Avery. Burgess, Minneapolis, 1978. viii, 108 pp., illus. Paper, \$6.95.

Studies in History of Biology. William Coleman and Camille Limoges, Eds. Johns Hopkins University Press, Baltimore, 1978. viii, 210 pp. \$14.

Studies on the Development of Behavior and the Nervous System. Vol. 4, Early Influences. Gilbert Gottlieb, Ed. Academic Press, New York, 1978. xviii, 358 pp., illus. \$22.50. Systematische Anthropologie. Wolfgang

Rudolph and Peter Tschohl. Wilhelm Fink Verlag, Munich, 1977. 368 pp. Paper, DM 23.80. Uni-Taschenbücher 639.

Telecommunications in the 1980s and After. Papers from a meeting, London, Mar. 1977. The Royal Society, London, 1978. vi, 228 pp., illus. £17. First published in Philosophical Transactions of the Royal Society of London, Series A, Vol. 289, No. 1356.

Time as Conflict. A Scientific and Humanistic Study. J. T. Fraser. Birkhäuser Verlag, Basel, 1978 (U.S. distributor, Renouf USA, Brookfield, Vt.). 356 pp. \$29.50.

The Trauma of Time. A Psychoanalytic Investigation. Irvine Schiffer. International Universities Press, New York, 1978. vii, 280 pp. \$15.

The Triumph of Evolution. American Scientists and the Heredity-Environment controversy, 1900-1941. Hamilton Cravens. University of Pennsylvania Press, Philadelphia, 1978. xxiv, 352 pp., illus. \$17.50.

**Tropical Medicine and Parasitology.** Classic Investigations. B. H. Kean, Kenneth E. Mott, and Adair J. Russell, Eds. Cornell University Press, Ithaca, N.Y., 1978. Two volumes. xxviii, 678 pp., illus. \$50.

The Tropospheric Transport of Pollutants and Other Substances to the Oceans. Papers from a workshop, Miami, Dec. 1975. National Academy of Sciences, Washington, D.C., 1978. xii, 244 pp. Paper, \$11.75.

The University and the State. What Role for Government in Higher Education? Papers from a meeting, Washington, D.C., Dec. 1976. Sidney Hook, Paul Kurtz, and Miro Todorovich, Eds. Prometheus Books, Buffalo, N.Y., 1978. x, 296 pp. \$15.95.

Water Chlorination. Environmental Impact and Health Effects. Vol. 2. Proceedings of a conference, Gatlinburg, Tenn., Oct. 1977. Robert L. Jolley, Hend Gorchev, and D. Heyward Hamilton, Jr., Eds. Ann Arbor Science, Ann Arbor, Mich., 1978. xviii, 910 pp., illus. \$30.

Wood as an Energy Resource. David A. Tillman. Academic Press, New York, 1978. xiv, 252 pp., illus. \$13.50.

# Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising closing for a particular Friday issue is Wednesday,  $3^1/_2$  weeks **before**. Advertising is accepted only in writing; no abbreviations. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, or handicap.

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#### POSITIONS WANTED

**Biochemist**, M.S. 1972. Teaching. Clinical laboratory. Experience in protein isolation, radioimmunoassay, and structure-function studies. Previous work in cancer and cardiovascular disease. Publications. Seeks academic, industrial, or hospital position. G.H.K., 817 Walnut, Prescott, Arizona 86301. X

Biochemistry/Genetics, Ph.D. Years of research experience in protein synthesis enzymes, nucleic acids, and DNA virus work. Seeks position for independent or collaborative research with or without teaching. Academic or government position is preferred. Box 15, SCIENCE. X

Immunologist, Ph.D. 1969. Extensive expertise in cellular and humoral immunology, lymphokine evaluation, immunochemistry. Seeks industrial position. Experience qualifies coordinating research efforts at group leader level. Box 10, SCIENCE. X

Scientific Medium desires an organization or individual doctor, professor, or scientist to share profit of an interesting psychotherapy book and motion picture, for finance for first set of books published. Box 14, SCIENCE. X

**Ph.D. Zoology.** Cytochemical, electron microscopic research experience with CNS, liver, prostate, and leprous tissue. Teaching and postdoctoral research experience. Publications. Availability open. Write: A. Dabholkar, 535 North Michigan Avenue, Apartment 914, Chicago, Illinois 60611. X

#### POSITIONS OPEN

ASSISTANT PROFESSOR OF ANALYTICAL CHEMISTRY—Tenure-track, fall 1979. Send curriculum vitae with a 250-word outline of your research interests, and request that three letters of recommendation be sent to: Dr. D. H. Freeman (Chairman, Search Committee), Department of Chemistry, University of Maryland, College Park, Md. 20742. Equal Opportunity/Affirmative Action Employer.

12 JANUARY 1979

#### POSITIONS OPEN

#### AQUATIC BIOLOGY/LIMNOLOGY

Applications are invited for a tenure-track position as assistant professor (effective August 1979) in the Department of Biology at Creighton University. The position requires participation in instruction of (i) biology at the introductory level, (ii) an intermediate-level course in zoology or botany, and (iii) upper-division and graduate offerings in aquatic biology/limnology. In addition to teaching, the individual will be expected to develop an active research program. Subsequent promotion will depend on both scholarly and teaching performance.

scholarly and teaching performance. Applicants should send curriculum vitae (which includes a description of teaching experience and expertise), names of three references, and complete transcripts to:

> Search Committee Department of Biology Creighton University Omaha, Nebraska 68178

Deadline is 31 January 1979.

An Equal Opportunity/Affirmative Action Employer

#### ASSISTANT PROFESSOR OF PHARMACOLOGY

Applications are invited by the Department of Pharmacology at the University of Missouri-Columbia for the position of assistant professor. The applicant should possess the Ph.D. in pharmacology, biochemistry, or a related discipline, should have completed approximately 3 years of postdoctoral research experience, should have demonstrated excellence in research, and should have an active interest in teaching medical and graduate students. The area of research interest is of less importance than the applicant's ability. The position is available 1 June 1979. Closing date for receipt of applications is 15 February 1979. Please send complete curriculum vitae, list of publications, and at least two letters of reference to: Dr. Murray Heimberg, Chairman, Department of Pharmacology, University of Missouri, School of Medicine, Columbia, Missouri 65212. The University of Missouri is an Equal Opportunity/Affirmative Action Employer.

#### ASSISTANT PROFESSOR PHARMACOLOGY

A position is available immediately in the Department of Urology, The University of Texas System Cancer Center M.D. Anderson Hospital and Tumor Institute. A Ph.D. pharmacologist with postdoctoral experience and strong background in cancer chemotherapy drugs (analysis, metabolism, and toxicology) is required to support chemotherapy programs of urological tumors and perform independent research. Teaching of graduate students is also possible. Send curriculum vitae and three references to: Dr. Kenji Nishioka, Surgical Research Laboratory, BF-426, The University of Texas System Cancer Center M.D. Anderson Hospital and Tumor Institute, Houston, Texas 77030. An Equal Opportunity Employer.

The Department of Neurology at the University of California, Los Angeles (UCLA), School of Medicine, is seeking a qualified applicant for the position of **ADJUNCT ASSOCIATE PROFESSOR**. Applicant must have a Ph.D. degree and will conduct research on response properties of normal and abnormal hippocampal neurons in animals and men. Teaching requirements will include formal course presentation in the neurosciences and supervision of postdoctoral scholars. Applicants are requested to submit a curriculum vitae to: **Richard D. Walter, M.D., Chairman, Department of Neurology, UCLA School of Medicine, Los Angeles, California 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer and is desirous of receiving applications from minority and women candidates as well as other qualified persons.* 

ANATOMIST-PHYSIOLOGIST. Assistant professor, tenure-track. Primary teaching responsibility in human anatomy and physiology. Opportunity to develop course(s) in area of specialization. Research interests in comparative, organ system, or cellular physiology preferred. Salary negotiable based on experience and qualifications. Ph.D. required; postdoctoral desirable. Submit résumé, transcripts, research plan, and three letters of recommendation by 15 February to: Francis C. Rabalais, Department of Biological Sciences, Bowling Green State University, Bowling Green, Ohio 43403. An Affirmative Action/ Equal Opportunity Employer.

#### POSITIONS OPEN

#### UNIVERSITY OF MINNESOTA

ANTHROPOLOGIST, ASSISTANT PROFESSOR, tenure-track. Salary competitive. Begin September 1979—Ph.D. required for application. Up to 2 years of postdegree teaching experience desirable. Topical interests in nutrition, epidemiology, demography, the nature of health/disease, or related medical specialties. Research and teaching excellence sought. Send curriculum vitae, copies of published and unpublished work, three letters of reference, and graduate transcripts to: Search Committee, Department of Anthropology, 215 Ford Hall, University of Minnesota, Minneapolis 55455. Deadline for completed applications: 28 February 1979. The University of Minnesota is an Equal Opportunity/Affirmative Action Employer.

#### ASSISTANT PROFESSOR OF CHEMISTRY

The Department of Chemistry, Emory University, is seeking a recent Ph.D. to fill a tenure-track position in either **analytical** chemistry or **inorganic** chemistry. The candidate must have the ability to develop a grant-supported research program having national stature as well as a teaching capability at both the undergraduate and graduate levels.

Send résumés (including transcripts), names of three references, and an outline of research plans to:

#### Professor R. A. Day, Jr. Chemistry Department Emory University Atlanta, Georgia 30322

Applications must be received by 1 February 1979. An Equal Opportunity/Affirmative Action Employer

> DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS UNIVERSITY OF ALABAMA MEDICAL CENTER

MEDICAL CENTER Two tenure or tenure-track positions at the assistant or associate professor level for applicants with interests in: (i) reproductive neuroendocrinology and (ii) ovarian physiology. Successful applicants will be expected to participate in teaching of physiology courses for medical, dental, and optometry students, to develop graduate programs, and to develop independent research programs. The positions require a doctoral degree and postdoctoral training. Send curriculum vitae, a summary of future research plans, and names of three references to:

#### Professor J. D. Neill Department of Physiology and Biophysics University of Alabama Medical Center Birmingham, Alabama 35294

The University of Alabama in Birmingham is an Equal Opportunity/Affirmative Action Employer.

**BIOCHEMIST.** Applications are being sought from scientists, preferably with experience with tissue culture and study of proteins and glycoproteins, to investigate cell-to-cell interactions and nerve dysfunction. The work is to be done in a separate laboratory within a multidisciplinary Peripheral Neuropathy Clinical Center at Mayo Medical School and Mayo Clinic. Only the most highly qualified and recommended applicants will be considered. Funding for the research program is available. The position could become permanent. Curriculum vitae, reprints, and three letters of reference should be sent to: Chairman, Selection Committee, Peripheral Neuropathy Clinical Center, Room 812, Guggenheim Building, Mayo Clinic, Rochester, Minnesota 55901. Mayo is an Equal Opportunity Employer.

#### **BIOLOGICAL SCIENCES RESEARCH TECHNICIAN**

Immediate opening in biochemically oriented virology laboratory for a qualified microbiologist or biochemist. B.A. or B.S. required; M.A. or M.S. preferred. Salary commensurate with experience. Send résumés and inquiries to: Dr. Timothy Carter Department of Biological Sciences

Department of Biological Sciences St. John's University Jamaica, N.Y. 11439

An Equal Opportunity Employer, M/F

Department of Biology seeks a BOTANIST to fill tenure-track teaching/research position at assistant professor level. Appointment begins 16 August 1979. Salary range: \$14,000 to \$14,800. Primary responsi-bilities include teaching an undergraduate vascular plant systematics course, development of another undergraduate and graduate-level courses in area of expertise, curating the herbarium, and establishment expertise, curating the nerolarithm, and establishment of independent research/graduate program is ex-pected. Ph.D. required. Application deadline is 20 February 1979. Forward résumé and three letters of evaluation to: Dr. Syed M. Jalal, Department of Biol-ogy, University of North Dakota, Grand Forks, N.D. 58202. Affirmative Action/Equal Opportunity Em-ployer ployer.

# CHAIRMAN, DEPARTMENT OF MICROBIOLOGY, IMMUNOLOGY, AND PATHOLOGY

AND PATHOLOGY Applications are invited for this position which be-comes available 10 March 1979. Candidates should provide evidence of ongoing scholarly achievements in teaching and research, and have the ability to pro-vide administrative and academic leadership for a department of four full-time faculty and ten part-time faculty members. Send curriculum vitae and three letters of reference by 15 February 1979, to: Jean E. Turnquist, Ph.D., Chairman Search Com-mittee, Pennsylvania College of Podiatric Medicine, 8th and Race Streets, Philadelphia, Pa. 19107. An Equal Opportunity/Affirmative Action Employer.

AUDIOLOGY, CHAIRMAN, Nominations and ap-AUDIOLOGY, CHAIRMAN. Nominations and ap-plications for chairman of the Department of Audiol-ogy, Wayne State University School of Medicine, are being sought. This freestanding department has responsibilities in clinical service, in medical educaresponsibilities in clinical service, in medical educa-tion, and in graduate education and research. The successful candidate should have demonstrated ad-ministrative and leadership capabilities and have a strong background in audiology, as well as clinical consultation, research, and graduate training. Inter-ested parties should submit curriculum vitae and ref-erences by 15 February 1979 to: Dr. M. H. Bern-stein, Department of Anatomy, Wayne State Universi-ty, 540 East Canfield, Detroit, Mich. 48201. Wayne State University is an Affirmative Action/Eaual Op-State University is an Affirmative Action/Equal Opportunity Employer.

#### CHAIRPERSON, DEPARTMENT OF ANATOMY

The Pennsylvania College of Podiatric Medicine in-vites applications for the position of chairperson of the Department of Anatomy. We are seeking a qualithe Department of Anatomy. We are seeking a quali-fied anatomist with a doctoral degree and demon-strated capabilities in teaching, administration of a small department, and research. Experience in gross antomy and embryology desired but not required. Send applications, including a curriculum vitae and the names of three references, to: Howard S. Pitkow, Ph.D., Chairman, Anatomy Search Committee, Pennsylvania College of Podiatric Medicine, 8th and Race Streets, Philadelphia, Pa. 19107. An Equal Op-portunity/Affirmative Action Employer portunity/Affirmative Action Employer.

# DEAN, COLLEGE OF AGRICULTURE UNIVERSITY OF MARYLAND, COLLEGE PARK

The dean of the College of Agriculture is the chief administrative officer of the College of Agriculture at this 1862 land-grant university. The dean is respon-sible for overall administrative leadership and plan-ning for the teaching, research, and extension educa-tion functions of the college. Desired qualifications include an earned doctor-ate proven scholarly and professional competence

ate, proven scholarly and professional competence, experience in administration, and understanding of or experience in academic instructional programs, cooperative extension, and continuing education.

cooperative extension, and continuing education. Applications and nominations with résumés should be sent by 16 February 1979 to: Dr. George E. Dieter, Chairman, Dean of Agriculture Search Com-mittee, College of Engineering, University of Mary-land, College Park, Md. 20742. The University of Maryland is an Equal Opportu-nity/Affirmative Action Institution.

DEVELOPMENTAL BIOLOGIST-Assistant probevelormetrick position; teach embryology and comparative anatomy to undergraduates. Applicant should have strong background in molecular biol-ogy; active research program in developmental biol-ogy and teach graduate level course in field. Post-doctored evenement program data data and the stream. doctoral experience preferred. Available: Septem-ber 1979. Salary: \$15,000 for 9 months. Send curriculum vitae and three letters of recommendacatholic University, Washington, D.C. 20064. An Equal Opportunity/Affirmative Action Employer.

#### POSITIONS OPEN

### DEAN SCHOOL OF SCIENCE Indiana University-Purdue University at Indianapolis

Indiana University-Purdue University at Indianap-olis (IUPUI) invites applications and nominations for the position of dean of the School of Science. IUPUI, with an enrollment of over 20,000, is the third largest university in Indiana and includes pro-grams in allied health, art, business, dentistry, edu-cation, engineering and technology, law, liberal arts, radiaire auxising abusing dupating multi-

environmental affairs, science, and social work. The School of Science includes the Departments of Biology, Chemistry, Geology, Mathematical Sci-ences, Physics, and Psychology. Mathematical Sci-ences, Physics, and Psychology. The school enrolls approximately 1000 undergraduate majors and serves 12,000 students per semester. With a full-time faculty of 100, the school offers bachelor's degrees in the six departments and master's degrees in biology, chemistry, mathematical sciences, and psychology Oualifications include an earned doctorate, eligibility for appointment as a professor in one of the de-partments, significant experience in teaching and research, and demonstrated ability to work effectively with students, faculty, and administrators.

Salary negotiable depending upon experience and background. Please send résumé by 15 February 1979, to:

Scott Evenbeck, Secretary

Search and Screen Committee for Dean Indiana University-Purdue University at Indianapolis 1201 East 38 Street Indianapolis, Ind. 46205

IUPUI is an Affirmative Action/Equal Opportunity Employer.

# DEAN COLLEGE OF SCIENCE THE UNIVERSITY OF TEXAS AT EL PASO

The University of Texas at El Paso is seeking a The University of Texas at El Paso is seeking a person to lead, administratively and academically, its College of Science which is composed of five de-partments: Biological Sciences, Chemistry, Geologi-cal Sciences, Mathematics, and Physics. The college has 81 tenure-track faculty positions and offers B.S. and M.S. degrees in all of its departments and a doc-tor of geological sciences degree. Applicants must possess a Ph.D., demonstrated administrative abili-ty, and research and teaching experience at both the undergraduate and graduate levels so as to qualify undergraduate and graduate levels so as to qualify for the rank of professor in one of the college's de-partments. Closing date for application is 28 February 1979, with date of appointment to be 1 June 1979, or 16 July 1979.

Each applicant should send a résumé and the names of at least three persons qualified to evaluate his/her qualifications and accomplishments to: Chairman

# Chairman Search Committee for a Dean, College of Science Office of the Vice President for Academic Affairs The University of Texas at El Paso El Paso, Texas 79968

The University of Texas at El Paso is an Equal Opportunity/Affirmative Action Employer

#### DEVELOPMENTAL BIOLOGIST

Assistant professor. Ph.D. with advanced training in Assistant professor. Ph.D. with advanced training in developmental biology to teach a modern develop-mental biology course, cell biology laboratories, and participate in an introductory nonmajor biology course. Must have a proven record of teaching ex-cellence. Research encouraged. Salary: \$15,000 to \$16,500. Position open 1 January 1980. Send curricu-lum vitae and three recent letters of recommenda-tion by 1 March 1979 to: Search Committee, Biology Department, Southern Oregon State College, Ash-land, Oregon 97520.

An Affirmative Action/Equal Opportunity Employer

## DIRECTOR THE FLORIDA STATE MUSEUM

The Florida State Museum, a division of the Univer-sity of Florida, invites applications for director. Ap-plicants should have the Ph.D. and proven adminis-trative experience within natural history museums. Position opens 1 July 1979; salary range: \$35,000 to \$40,000. Curriculum vitae, the names of five persons who will write references for the candidate, and sup-porting documents should be sent to: Dr. Jerald T. Milanich, Search Committee, Florida State Museum, Gainesville, Florida 32611. Deadline for applications is 31 January 1979. An Equal Opportunity/Affir-mative Action Employer. The Florida State Museum, a division of the Univer-

#### POSITIONS OPEN

Anticipated opening for DIRECTOR, Coastal Ecol-Anticipated opening for DIRECTOR, Coastal Ecol-ogy Laboratory, with established record of research in coastal or wetland ecology to direct one of four departments within the Center for Wetland Re-sources. A high degree of professional competence with Ph.D. in ecology or related discipline required; administrative experience is mandatory. To super-vise about 30 professional-level ecologists, adminis-ter to evisiting research programs and develop new ter to existing research programs, and develop new programs, primarily through grants and contracts. A joint appointment and teaching duties in the gradu-Joint appointment and teaching duties in the gradu-ate Marine Sciences Department are encouraged. Send curriculum vitae and names of three references not later than 1 February 1979 to: Dean Jack Van Lopik, Center for Wetland Resources, Louisiana State University, Baton Rouge, La. 70803. Equal Op-portunity/Affirmative Action Employer.

# DIRECTOR, DEPARTMENT OF MICROBIOLOGY CASE WESTERN RESERVE UNIVERSITY

Nominations and applications are invited for the above position. The Department of Microbiology, Case Western Reserve University, has a strong tradition of excellence in research and in inter-disciplinary medical education. Candidates are sought with the ability to continue this tradition. An M.D. or Ph.D. degree in a relevant area is required. The candidate should be outstanding in research, be familiar with all areas of microbiology, and have a strong commitment to medical and graduate educastrong commence to medicar and graduate cutoa-tion. Applicants should submit curriculum vitae and the names of three references to: **Dr. R. W. Hanson**, **Director of Biochemistry**, **Case Western Reserve Uni-versity**, **Medical School**, **Cleveland**, **Ohio 44106**. *An Equal Opportunity*/*Affirmative Action Employer*.

# DIRECTOR, DIVISION OF COMPARATIVE MEDICINE, UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER

Responsible for directing a laboratory animal medicine program including management of a centralized laboratory animal facility and staff as well as particilaboratory animal facility and staff as well as partici-pating in graduate education and research. The posi-tion offers concurrent appointments in an academic department and affiliated institutions. Candidates must have a D.V.M. or equivalent degree plus train-ing and experience in laboratory animal medicine and management of a central laboratory animal facil-ity. Preference will be given to applicants certified or eligible for certification by the American College of Laboratory Animal Medicine.

A letter of application, including curriculum vitae, should be submitted to: Dr. O. Ray Kling, Chair-man, Search Committee for Director, Division of Comparative Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma 73190, before 1 February 1979.

This institution is an Affirmative Action/Equal Opportunity Employer.

ECOLOGIST-VERTEBRATE ZOOLOGIST. Assistant professor of life sciences to teach general ecology and vertebrate zoology and establish a re-search program in either or both areas. Ph.D. re-quired. Application deadline: 15 March 1979. Quali-fied applicants should send curriculum vitae, official transcripts, and three letters of recommendation to: Richard L. Myers, Ph.D., Chairman, Recruitment Committee, Southwest Missouri State University, Springfield, Mo. 65802. An Equal Opportunity/Af-firmative Action Employer, F/M.

## HOWARD UNIVERSITY AVAILABLE FACULTY POSITIONS

The Department of Anatomy invites applications for faculty positions in (i) histology and (ii) gross anatomy-embryology, beginning 1 July 1979. Can-didates must be qualified to teach in one of the above disciplines to medical, dental, and graduate stu-dents. The candidate should have a strong academic background in the anatomical sciences and an active and independent research program in a biomedical area. Prior medical or dental school teaching experiarea. Prior medical or dental school teaching experi-ence is highly desirable. The salary is competitive. The departmental and university environments are highly conducive to the pursuit of first-rate research and instruction. Qualified applicants are invited to submit curriculum vitae, transcripts, and four refer-ences to: Chairman, Department of Anatomy, Col-lege of Medicine, Howard University, 520 W Street, NW, Room 1105, Washington, D.C. 20059. Howard University is an Equal Opportunity/Af-firmative Action Employer.

#### FACULTY POSITIONS EPARTMENT OF ZOOLOGY UNIVERSITY OF HAWAII DEPA

The Department of Zoology, University of Ha-waii, invites applications for two faculty positions beginning fall 1979. Appointments are expected to be made at the assistant professor level. Candidates must have a Ph.D. degree and have a strong com-mitment to undergraduate and graduate level teach-ing and to the development of active research pro-grams. Appointees will be required to teach one or two of the following courses: comparative verte-brate anatomy, biometry, and fisheries science. They will be expected to participate in a team-taught core course or an advanced course in their specialty. Specialty areas are open but the following are desir-able: fisheries biology, fish biology, vertebrate biol-ogy, evolution, and sensory physiology. Applicants should send curriculum vitae, copies of publications, a detailed statement of teaching and research objec-tives, and names and addresses of at least three ref-erences to: Chairman, Department of Zoology, 2538 The Department of Zoology, University of Haerences to: Chairman, Department of Zoology, 2538 The Mall, University of Hawaii, Honolulu, Hawaii **96822.** All applications must be received by 15 February 1979. The University of Hawaii is an Equal Opportunity/Affirmative Action Employer.

#### FISHERIES BIOLOGIST/ECOLOGIST

Ph.D. with 1 to 4 years of postdoctoral experience and a background in fish population dynamics and production, statistical design, and field-sampling techniques. This position requires an individual with a wide range of interests who is able to work with an interdisciplinary team. Duties include participation in oppoing equironmental impact studies with superin ongoing environmental impact studies with super-vision of a small staff of fisheries biologists and the vision of a small staff of fisheries biologists and the development of an active research program. The Benedict Estuarine Research Laboratory, a research facility of the Academy of Natural Sciences of Phila-delphia, is located 30 miles south of Washington, D.C., on the Patuxent River Estuary, a subestuary of the Chesapeake Bay. Applicants should submit curriculum vitae and three letters of recommenda-tion to: Dr. Louis E. Sage, Academy of Natural Sci-ences of Philadelphia, Benedict Estuarine Research Laboratory, Benedict, Maryland 20612.

## TENURED FACULTY POSITION IN BIOCHEMISTRY

The Institute of Cancer Research and the Departapplications from qualified individuals for tenured faculty positions. The candidate must have a serious commitment to research in molecular biology with communer reference to molecular genetics and re-combinant DNA techniques. He or she should also be interested in and committed to the teaching of biochemistry. Applications should include curricu-lum vitae, bibliography, four names of references, and reprints and should be addressed to:

# I. S. Edelman, M.D. Chairman, Department of Biochemistry College of Physicians and Surgeons 630 West 168 Street New York, N.Y. 10032

Columbia University is an Equal Opportunity/Af-firmative Action Employer.

A FACULTY POSITION IN FLOWERING PLANT TAXONOMY AND BIOSYSTEMATICS. Appli-TAXONOMY AND BIOSYSTEMATICS. Appli-cations are invited for a tenure-track position as as-sistant or beginning associate professor of botany, effective 1 September 1979. The successful can-didate will be expected to teach undergraduate-level courses in higher plant taxonomy and local flora and a graduate course in biosystematics, to cooper-ate with other faculty members in offering graduate seminars, and to participate in other basic depart-mental courses. He/she will be expected to develop a vigorous, independent research program, to direct graduate students, and to seek extramural research support. The particular research emphasis should complement that of other members of the depart-ment, in general, and of those in taxonomy and mor-phology in particular. A Ph.D. degree is required; postdoctoral research and/or teaching experience is desired but not necessary. Send curriculum vitae, brief statement of teaching philosophy and research interests, and the names and addresses of three ref-erees to: Dr. Larry W. Jones, Search Committee, Botany Department, The University of Tennessee, Knoxville, Tenn. 37916. Applications will be accept-ed until 15 February 1979. The University of Tennessee is an Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer. cations are invited for a tenure-track position as as

12 JANUARY 1979

#### POSITIONS OPEN

Full-time academic FACULTY MEMBER in ANA-Full-time academic FACULTY MEMBER in ANA-TOMIC PATHOLOGY for established Department of Pathology. Title and salary commensurate with credentials. Applications will be received until posi-tion is filled. Must be eligible for licensure in the state of California. Send résumé and five references to: George Lundberg, M.D., Chair, Department of Pathology, Room 3453, M.S.I., University of Califor-nia, Davis, California 95616. The University of Califor-fornia is an Equal Opportunity/Affirmative Action Employer. Applications will be accepted until posi-tion is filled.

FIELD COORDINATOR. Northeast region IR-4 mi-nor-use-crop-registration program at the Regional Leader Laboratory. Duties will include: screening requests by northeastern states for pesticide clear-ances; assisting in development and evaluation of experimental design; securing commitments to con-duct field tests for efficacy, phytotoxicity and resi-due samples, and assisting the laboratory coordina-tor in maintaining the flow of residue samples to the laboratory. Ph.D. or equivalent in applied crop pro-tection required. Applications received until 2 Feb-ruary 1979.

#### John B. Bourke Pesticide Laboratory New York State Agricultural Experim Geneva, New York 14456 riment Station

**GENETICS.** Instructor or assistant professor. Duties include teaching introductory genetics, upper-division speciality course(s), and general biology. Ph.D. in genetics required; previous teaching experi-ence desirable. Successful candidate will be ex-pected to develop an active research program in ge-netics. Position begins 27 August 1979. Application deadline is 1 February 1979. Send complete frasume three letters of recommendation and complete tranthree letters of recommendation, and complete tran-scripts to: Dr. Robert Johnson, Chairperson, Depart-ment of Biology, Southeast Missouri State University, Cape Girardeau, Mo. 63701. An Equal Opportunity/ Affirmative Action Employer.

## GEOSCIENCE DEPARTMENT Hobart & William Smith Colleges

This private, liberal-arts institution invites appli-This private, liberal-arts institution invites appli-cations for a full-time, 1-year appointment to replace a staff member on sabbatical leave for the 1979–1980 academic year. Teaching responsibilities will include introductory geology and advanced courses in the general fields of sedimentary geology and/or pa-leontology. Applicants should have the Ph.D. degree or be in the final stages of completion of dissertation. While we expect to fill the position at the assistant While we expect to fill the position at the assistant professor level, applicants with more or less experience would be considered.

Applicants should send curriculum vitae and have three letters of reference sent to:

## Dr. William F. Ahrnsbrak, Chairman Geoscience Department Hobart & William Smith Colleges Geneva, New York 14456

The deadline for application is 1 February 1979. Hobart & William Smith Colleges encourage appli-cations from women and minorities.

## HYDROGEOLOGY—WATER CHEMISTRY— ENVIRONMENTAL GEOLOGY

Environmentally oriented undergraduate Earth Sci-ence Program at University of Wisconsin-Parkside has a tenure-track opening at the assistant professor level beginning August 1979, Research and teaching are emphasized; applicants must have the Ph.D. and have teaching and applied research interests in one or more of the following areas: hydrogeology, water chemistry, water resource management, or environ-mental geology. Forward résume and at least three mental geology. Forward résumé and at least three letters of recommendation by 15 February to: Dr. James H. Shea, University of Wisconsin-Parkside, Kenosha, Wis. 53141. The university is an Equal Op-portunity Employer and actively seeks applications from all qualified persons, whatever their sex, race, color, religion, age, martial status, handicap, or na-tional origin tional origin.

HISTOLOGIST—A faculty position at the assistant/ associate professor level is anticipated for 1979-1980—Department of Anatomy. Candidates must have teaching experience in histology and possibly neuroanatomy, plus an active research program. Submit curriculum vitae to: Chairperson, Anatomy Search Committee, COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY—New Jersey School of Osteopathic Medicine, P.O. Box 55, Piscataway, N.J. 08854. Equal Opportunity/Affirmative Action

#### POSITIONS OPEN

Highly qualified HEALTH PROFESSIONAL sought have M.D., D.D.S., Ph.D., or ED.D. Large teaching hospital with medical and allied health programs. Must have experience and interest in comprehensive health-related educational activities. Equal Opportu-nity/Affirmative Action Employer. Send inquiries to: Chief of Staff, VA Medical Center, North Chicago, III. 60064; telephone: 312-689-1900, extension 2841.

#### IMMUNOLOGIST/MICROBIOLOGIST

Assistant professor position for Ph.D. with post-doctoral experience in immunology. Candidate must be able to conduct an active research program com-plementing departmental interests in molecular and cellular biology. Teaching obligations include courses in immunology and a course in basic micro-biology. Starting date: fall 1979. Salary open. Send curriculum vitae and names of three references to: Chairman Search Committee Department of Battery Chairman, Search Committee, Department of Botany and Microbiology, 770 Van Vleet Oval, Norman, Oklahoma 73019, by 1 March 1979. The University of Oklahoma is an Equal Opportunity Employer.

#### IMMUNOLOGIST

The Laboratory of Immunology, National Institute of Allergy and Infectious Diseases, anticipates the filling of a position of senior investigator (medical ofof Alergy and Infectious Diseases, anticipates the filling of a position of senior investigator (medical of-ficer, research chemist, research biologist). Appli-cations from individuals with a Ph.D., M.D., or equivalent and a strong research background and record of achievement in membrane biochemistry, biochemistry of lymphocyte activation, regulation of immune response, molecular genetics, immuno-genetics, or somatic cell genetics are especially sought but inquiries from accomplished scientists in any field of immunology are welcome. Position will be filled through career Civil Service (salary range: \$27,453 to \$38,160); Commissioned Corps, U.S. Public Health Service; or through the NIH Staff Fel-lowship Program, depending upon qualifications. Send curriculum vitae, bibliography, statement of research interests, and names of three references to: Dr. William E. Paul, 9000 Rockville Pike, Building 10, Room 11N311, NIAID, National Institutes of Health, Public Health Service, Bethesda, Md. 20014. An Equal Opportunity Employer. An Equal Opportunity Employer.

## MARINE INVERTEBRATE ZOOLOGIST AND CURATOR

HARVARD UNIVERSITY is seeking to fill a ten-HARVARD UNIVERSITY is seeking to fill a ten-ured professorship in marine invertebrate zoology in The Department of Biology to be held conjointly with a curatorship in The Museum of Comparative Zoology. Preference will be given to applicants on the basis of (i) a strong research program in system-atics and/or comparative morphology and/or repro-ductive biology of marine invertebrates (*Mollusca* excluded), (ii) experience in curatorial management of systematic collections of marine invertebrates zo-and (iii) ability to offer instruction in invertebrate zoof systematic collections of marine invertebrates, and (iii) ability to offer instruction in invertebrate zo-ology at both undergraduate and graduate levels. Applicants should send curriculum vitae and state-ment of research interests to: Farish A. Jenkins, Jr., Chairman, Department of Biology, The Biological Laboratories, Harvard University, 16 Divinity Ave-nue, Cambridge, Massachusetts 02138. Harvard is an Equal Opportunity/Affirmative Action Employer.

MECHANICAL ENGINEERING—Professor and head of Department. September 1979. Responsible for administration, teaching, and research. Salary negotiable. Requires Ph.D. Must show evidence of distinguished teaching ability and scholarship, in-cluding experience as principal investigator on re-search. Industrial or equivalent experience ex-pected. Send reply to: Dr. Peter McFadden, U-37, University of Connecticut, Storrs, Conn. 06268. An Equal Opportunity Employer.

#### NEUROPHYSIOLOGIST

The Department of Neurosurgery is seeking a neurophysiologist at the assistant professor level. The candidate will be expected to be a competent central nervous system physiologist with consid-erable expertise in single-unit recording techniques. An interest in both basic and applied research is es-An interest in both basic and applied research is es-sential. Preference will be given to individuals with a quantitative background and experience in cerebel-lar and/or spinal cord physiology. Send curriculum vitae, including transcripts, together with the names of three references to: James R. Bloedel, Department of Neurosurgery, B590, Mayo, University of Minne-sota Medical School, Minneapolis, Minnesota 55455.

MICROBIAL ECOLOGIST—Ph.D. with 1 to 4 years of postdoctoral experience and a strong back-ground in microbial ecology, detrital processing, and detritus-based food webs. Research interests should be directed toward ecosystem dynamics and food web studies. Duties involve participation in ongoing multidisciplinary environmental impact studies, sumultidisciplinary environmental impact studies, su-pervision of a small primary productivity research group, and the development of an active research program. The Benedict Estuarine Research Labora-tory, a research facility of the Academy of Natural tory, a research facility of the Academy of Natural Sciences of Philadelphia, is located approximately 30 miles south of Washington, D.C., on the Patuxent River Estuary, a subestuary of the Chesapeake Bay. Applicants should submit curriculum vitae and three letters of recommendation to: Dr. Louis E. Sage, Academy of Natural Sciences of Philadelphia, Bene-dict Estuarine Research Laboratory, Benedict, Mary-wed 20612. land 20612.

MICROBIOLOGIST. Ph.D. required. Tenure-track appointment at assistant professor level. Position available August 1979. Duties include teaching un-dergraduate courses in microbiology and general biology and the development of an independent re-search program. Send letter of application, curricu-lum vitae, and three leters of reference to: **Dr. James** W. Smiley, Chairman, Department of Biology, Col-lege of Charleston, Charleston, South Carolina 29401. An Affirmative Action/Equal Opportunity Employer.

MOLECULAR VIROLOGIST for teaching and re-MOLECULAR VIROLOGIST for teaching and re-search. Opportunities for advancement and tenure consideration after appropriate service. Rank—as-sistant professor. Salary—competitive and depen-dent upon qualifications. Requirements—Ph.D. and postdoctoral research and teaching experience in molecular virology. An opportunity for an indus-trious and well-trained virologist to join a progres-sive interdisciplinary department. Contact: Robert B. Wilson, Head, Department of Veterinary Micro-biology and Pathology, Washington State University, Pullman, Washington 99164. Washington State Uni-versity is an Equal Opportunity/Affirmative Action Employer. In order to assist our efforts to meet Af-Employer. In order to assist our efforts to meet Af-firmative Action goals, minority, handicapped, and women candidates are encouraged to identify them-selves in their applications. Closing date: 31 March 1979.

# OCEAN MODELING POSTDOCTORAL VISITOR

The Mesoscale Air-Sea Interaction Group of The Florida State University has an opening for a 1-year postdoctoral scientist with a capability in ocean modeling beginning on or after 1 September 1979. Applicants should submit curriculum vitae and the Applicants should submit curriculum vitae and the names of three references to: Dr. James J. O'Brien, Meteorology Annex, Florida State University, Talla-hassee, Fla. 32306, before 1 March 1979. Applicants with interests in modeling oceanic fronts will re-ceive special consideration. The salary will be at least \$17,000 per year. The Florida State University is an Equal Opportunity/Affirmative Action Employ-er

PATHOLOGIST. Board-certified. Teaching/research Parthologist needed to teach first and sec-ond year medical students. Excellent facilities for research and clinical pathology available. Excellent fringe benefits, including malpractice. Candidates with research background and capability of securing extramural funding especially encouraged to apply. May possess D.O. or M.D. degree. Interested can didates please contact:

# Paul E. Benoit, Ph.D. Associate Dean for Pre-Clinical Affairs College of Osteopathic Medicine and Surgery 3200 Grand Avenue Des Moines, Iowa 50312

The University of Michigan-Dearborn expects to add a sixth **PHYSICIST** in September 1979. Contin-gent upon state funding, the position may be a lec-tureship or a tenure-track assistant or associate pro-fessorship. Candidates should have a Ph.D. with postdoctoral research experience; some prior teach-ing experience preferred. The applicant should have a strong commitment to undergraduate teaching and ing experience preferred. The applicant should have a strong commitment to undergraduate teaching and the ability to initiate and maintain a research pro-gram with limited time and space. Any area of exper-imental physics is acceptable, but preference will be given to those candidates who can teach courses in geology, geophysics, or the earth sciences. Send curriculum vitae, three letters of recommendation, and transcripts to: Faculty Search Secretary, College of Arts, Sciences, and Letters, The University of Michigan-Dearborn, Dearborn, Mich. 48128. A nondiscriminatory, Equal Opportunity/Affirmative Action/Title IX Employer.

#### POSITIONS OPEN

MICROBIOLOGY. Instructor or assistant profes-sor. Duties include teaching bacteriology, upper di-vision speciality course(s), and general biology. Ph.D. in microbiology required; previous teaching experted to develop an active research program in microbiology. Position begins 27 August 1979. Ap-plication deadline is 1 February 1979. Send complete résumé, three letters of recommendation, and com-plete transcript sto: Dr. Robert Johnson, Chairper-son, Department of Biology, Southeast Missouri State University, Cape Girardeau, Mo. 63701. An Equal Opportunity/Affirmative Action Employer.

MOLECULAR, CELLULAR, AND DEVELOP-MENTAL BIOLOGY OF EUKARYOTES. Our de-partment has an opening for an individual whose research is concerned with these areas, probably at the level of ASSISTANT PROFESSOR, to begin in September 1979. Excellence is the primary consid-eration; commitments to research, graduate training, eration; commitments to research, graduate training, and classroom teaching are essential. Candidates should request referees to write, and send an outline of their experience and proposed research to: Dr. Andrew G. Szent-Gyorgyi, Chairperson, Department of Biology, Brandeis University, Waltham, Mass. 02154. Applications must be received by 15 Febru-ary 1979 to assure consideration. An Affirmative Ac-tion/Eaul Opportunity Employer. tion/Equal Opportunity Employer.

The University of California, Berkeley, has a 1 July 1979 opening for an M.D. NUTRITIONIST at the as-1979 opening for an M.D. NUTRITIONIST at the as-sistant professor level for teaching and research in the Department of Nutritional Sciences. Applicants must have an M.D. degree and be licensed or be eli-gible for licensure for the practice of medicine in California. Preference will be given to applicants with the ability to be a leader in a strong research program in normal human nutrition, biochemistry, public health, metabolic disease, or other relevant specialization. Applications with biography, re-search interests, lists of publications, and names of three references should be sent to: K. J. Carpenter, Ph.D., Chairman of the Search Committee, Depart-Ph.D., Chairman of the Search Committee, Depart-ment of Nutritional Sciences, University of California, Berkeley, Calif. 94720. Further information can be obtained by writing to the above. The closing date for applications is 1 March 1979 or until the position is filled. The University of California is an Affir-mative Action/Equal Opportunity Employer.

#### POSTDOCTORAL APPOINTMENTS

The Ames Laboratory of the U.S. Department of Energy has a number of vacancies for postdoctoral fellows in the fields of chemistry, physics, metallur-gy, and engineering. The appointments would be for I year, renewable for a second year if mutually agreeable. In some instances there may be a possi-bility for continued employment beyond the 2-year postdoctoral appointment if circumstances warrant. Interested persons should submit a complete ré-sumé, along with names and addresses of three pro-fessional references, to:

fessional references, to:

### Ames Laboratory Personnel Office 127 Spedding Hall Iowa State University Ames, Iowa 50011

An Equal Opportunity Employer

California Institute of Technology is seeking can-California Institute of Technology is seeking can-didates with Ph.D. in chemistry, geochemistry, or chemical oceanography, and interested in the chem-ical oceanography of lead, for a **POSTDOCTORAL APPOINTMENT** in C. Patterson's laboratory. The position is conditional on approval of a proposal by NSF. Please write, with résumé, to: **Barclay Kamb**, **Chairman**, **Division of Geological and Planetary Sci-ences, California Institute of Technology, Pasadena, Calif. 91125. An Equal Opportunity/Affirmative Ac-tion Employer.** tion Employer.

Available immediately-two to four openings for POSTDOCTORAL ASSISTANTS. Requirements: biochemistry/biochemical pharmacology with minor in chemistry, organic chemistry with minor in bio-chemistry/biochemical pharmacology. Experience preferred. Apply to: Dr. H. L. Gurtoo, Department of Experimental Therapeutics, Roswell Park Memo-rial Institute, Buffalo, New York 14263.

POSTDOCTORAL BIOORGANIC. Isolation and characterization of cross-linked aromatic peptides. Modification, sequence, and biosynthesis of bridges and adjacent residues. Send curriculum vitae and two references to: Dr. H. Lipke, Biology Depart-ment, University of Massachusetts-Boston, Dorches-ter, Mass. 02125. An Equal Opportunity/Affirmative Action Employee Action Employer.

#### POSITIONS OPEN

PHYSIOLOGICAL PSYCHOLOGIST, tenure-track appointment: Ph.D. at beginning assistant professor level, starting August 1979.

Priority given to applicant having research interests in electrophysiology. Duties include undergraduate and graduate teaching and initiating research.

Tulane is an Equal Opportunity/Affirmative Action *Iulane is an Equal Opportunity/Agrimative Action Employer*. Send curriculum vitae and three letters of recommendation to: Chairperson, Physiological Psychology Search Committee, Department of Psychology, 2007 Stern Hall, Tulane University, New Orleans, La. 70118. Search closes 15 February 1979.

#### PHYSIOLOGIST

Position available in the Department of Basic Sci-ences, Peoria School of Medicine, one of the four clinical schools within the University of Illinois Col-lege of Medicine. Applicants must have a Ph.D. in physiology and at least 2 years of experience beyond the doctor's degree, preferably with subspecialty in pulmonary or exercise physiology, or other field closely related to clinical practice. Duties will in clude instructing medical and associated health sciclude instructing medical and associated health sci-ences students, and conducting an independent re-search program. Must have demonstrated potential for research. Salary to be commensurate with expe-rience and qualifications, with academic rank of asrience and qualifications, with academic rank of as-sistant or associate professor. Starting date: 1 Sep-tember 1979 or earlier. Send application and names of three individuals for references before 15 Febru-ary 1979 to: Dr. F. J. Grundbacher, Department of Basic Sciences, Peoria School of Medicine, 123 South-west Glendale Avenue, Peoria, Illinois 61605. The University of Illinois is an Affirmative Action/Equal Opportunity Employer and encourages applications from members of minority groups and women.

PHYSIOLOGY — Opportunity for extensive re-search training in human physiology in a diversified multidisciplinary department leading to Ph.D. Close student-faculty interaction; up-to-date facilities; in city providing fine recreational and cultural environ-ment. University stipends available on competitive basis basis.

For information and application form write to: Dr. H. F. Martin, Department of Physiology, Medical University of South Carolina, Charleston, S.C. 29403. Applicants considered without regard to sex or minority status.

## POLYMER PHYSICS/ENGINEERING UNIVERSITY OF FLORIDA

Senior faculty appointment in a leading Materials Science Department increasing polymer emphasis to complement highly regarded metal and ceramic ma-terials programs. Associate or full professor level depending upon experience. Key role for further development of polymer science and engineering cur-riculum and for research on physical properties of polymers, especially metal-polymer composites and biomedical polymer systems. Seek person from uni-versity or industrial research with outstanding record of accomplishment in mechanical and thermody-namic properties, morphology, rheology, and poly-mer processing with strong interest in fundamental property-structure relationships. The University of Florida is an Equal Opportunity/Affirmative Action

Employer. Please send résumé and references by 15 Febru-ary 1979 to: Dr. E. P. Goldberg, Department of Mate-rials Science and Engineering, University of Florida, College of Engineering, Gainesville, Florida 32611.

**POSTDOCTORAL FELLOW**-Position available in POSTDOCTORAL FELLOW – Position available in molecular biology of viruses. Strong background in cell culture and biochemistry required. Submit cur-riculum vitae and references to: Dr. Charlotte Friend, Center for Experimental Cell Biology. The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, N.Y. 10029. An Equal Oppor-turity Employer tunity Employer.

#### POSTDOCTORAL POSITION

Ph.D. in physiology, biochemistry, or related field for interdisciplinary research of salivary gland func-tion in ixodid ticks. Research will center on the role of cyclic nucleotides in the secretory process. Ex-cellent laboratory and animal rearing facilities. Pleasant medium-sized community with nearness to large cities. Starting salary: \$14,000 per annum plus The section of the se

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#### PLANT POPULATION ECOLOGIST

Department of Botany and Plant Sciences, Uni-Department of Botany and Plant Sciences, Uni-versity of California, Riverside, announces a posi-tion at the assistant professor level—with both an Experiment Station and academic title, available 1 July 1979. The position is a tenure-track, 11-month appointment in the College of Natural and Agricul-tural Sciences and in the Agricultural Experiment Station. Ph.D. required; postdoctoral experience preferred, but all qualified candidates will be consid-ered. The appointee is expected to teach an under-graduate course in quantitative plant population or community ecology and to develop a graduate graduate course in quantitative plant population or community ecology and to develop a graduate course in area of specialization. Must be willing to serve as major professor to M.S. and Ph.D. stu-dents. Must have commitment to research in quan-titative ecology of natural and agricultural plant communities and in the genetic changes associated with population dynamics. Must be able to interact with population dynamics.

with population dynamics. Must be able to interact with physiological plant ecologists. Send curriculum vitae and official transcripts and arrange to have at least three letters of recommenda-tion sent to: Dr. Giles Waines, Search Committee Chairman, Department of Botany and Plant Sciences, University of California, Riverside, Calif. 92521. Ap-plication deadline: 15 February 1979.

An Affirmative Action/Equal Opportunity Employer

**POSTDOCTORAL POSITIONS.** Interdisciplinary research program in pharmacology which includes studies carried out at the chemical, biochemical, biophysical, morphological, physiological, and clini-cal levels. Areas of research include studies on the role of vasoactive substances (for example, cate-cholamines, renin, kinins, and prostaglandins) in control of arterial pressure, the molecular and bio-physical basis for cardiac and vascular disease and cardiovascular drug action, metabolism of drugs, ac-tion of drug metabolites, new drug development, organoanalytical chemistry, and biomedical mass spectrometry.

Stipends are available and applications from individuals holding the Ph.D. and/or M.D. degree with backgrounds in the biomedical and/or physical sciences should be addressed to: Postdoctoral Training Committee, Department of Pharmacology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S.C. 29403. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately for a Ph.D. interested in engaging in research in the physical biochemistry of chromatin. Salary ne-gotiable depending on experience. Send curriculum vitae and three letters of recommendation to: Dr. G. Fasman, Graduate Department of Biochemistry, Brandeis University, Waltham, Mass. 02154. An Equal Opportunity/Affirmative Action Employer.

#### **POSTDOCTORAL POSITIONS**

Two fellowships for 2 to 3 years at a starting salary of \$10,000 or higher (depending upon experience) available to study: (i) biochemical regulatory mechanisms in the eye, and (ii) physiology of an ocular transport process. Send curriculum vitae, bibliogra-phy, a statement of research interests, and names of https://www.comment.or/feedaching.comments/signatures/s

#### POSTDOCTORAL RESEARCH ASSOCIATE

Study of receptors for insulin, estrogens, and progesterone from gynecologic tissues, purification by newly developed high-pressure affinity chromatography resins, characterization by physicochemical and immunological methods. Prior experience desirable. Position (1 to 2 years) available immediately. Salary not less than \$13,000. Please send (before 19 Febru-ary 1979) résumé and names of three references to:

John C. M. Tsibris, Ph.D. Department of Obstetrics-Gynecology University of Florida Gainesville, Florida 32610

**POSTDOCTORAL RESEARCH ASSOCIATE** position available July 1979. Biochemist or physiologist to study transport properties of plasma membrane vesicles isolated from renal cortex. Salary to \$13,000. Send curriculum vitae and three letters of reference to:

Dr. Peter Aronson Departments of Medicine and Physiology Yale School of Medicine New Haven, Connecticut 06510

POSITIONS OPEN

### POSITIONS OPEN

# **RESEARCH ASSOCIATE** EAST-WEST CENTER

The East-West Center is a national educational institution founded by the U.S. Congress in 1960 to promote better relations and understanding among nations through cooperative programs of study, research, and training. Applications and nominations for academic staff positions in the Environment and Policy Institute are being sought. The research associate positions are full-time and may be permanent (subject to successful probationary period) or fixed-term. Applications for research fellow appointments in these areas are also sought. All center programs are multinational and multi-disciplinary. Research associates, visiting scholars, professionals, and graduate degree students form teams which work on problems with significant mutual consequences for the United States and nations of Asia and the Pacific.

Candidates must have a Ph.D. or its academic equivalent plus at least 5 years of experience in areas relevant to the institute programs of natural resource and environmental assessment in development planning and assistance and of marine resource and environmental management issues in Asia and the Pacific. Positions are open in the following areas:

- Policy and management analysis, focusing on transnational marine resource and management issues or on environmental dimensions of sectoral policies, particularly energy, Geography and resource management, with emphasis on relating marine resources and activities
- to jurisdictional patterns or on the management and utilization of terrestrial systems such as forests,
- Economic analysis, focusing on current and evolving approaches of resource and environmental economics related to assessment of development activities or of ocean management policy options
- Water resources/quality analysis, focusing on quantification and assessment of water resources in economic development and regional planning in Asia, and
  Environmental health analysis, focusing on the direct and indirect effects of environmental factors on human health and welfare particularly in Asia.

Cover letter should give examples of demonstrated ability to: (i) discover knowledge about natural resource and environmental issues, especially at the international level; (ii) develop applications of this knowledge, for example, curricula, educational materials, and policy aids; and (iii) design and implement research and education projects and activities in a team context, preferably multinational. Experience in Asia/Pacific region preferred. Working proficiency in the English language required. Experience in natural resource and environmental analysis and assessment processes desirable. Familiarity with computer modelling and simulation desirable.

Salary commensurate with extent of experience and qualifications. Additional current cost-of-living allowance of 15 percent (subject to change). All nominees will be contacted to determine interest. Applications with cover letter, complete curriculum vitae, and names and addresses of three profes-sional references must be postmarked no later than 1 April 1979. Starting date flexible. Send to: Joseph J. Beisel, Personnel Officer, Personnel Division, Department 19, East-West Center, 1777 East-West Road, Honolulu, Hawaii 96848.

An Equal Opportunity Employer, M/F



### Academic Position Announcement **Massachusetts Institute of** Technology

Department of Aeronautics and Astronautics seeks candidates for position of Assistant Professor in biomedical engineering available July, 1979. Qualifications include strong background in control systems, experimental work in sensory physiology or psychology, and research experience in vestibular function. Position involves teaching in biomedical engineering with applications to aerospace medicine including life support systems, quantitative physiology and biomedical instrumentation. Individual will also conduct research and supervise student thesis work on problems of spatial orientation, flight simulator development, clinical or space bioinstrumentation, postural control or man-machine systems. Send detailed resume to, Professor J. L. Kerrebrock, Room 33-207, M.I.T., Cambridge, MA 02139. M.I.T. is an equal opportunity/affirmative action employer.

#### POSTDOCTORAL RESEARCH ASSOCIATES

Two postdoctoral positions available. Experience desired in (i) intracellular recording and dye injec-tions and/or (ii) ultrastructural studies on an in-vertebrate nervous system. Send curriculum vitae and names of three references to:

James G. Townsel, Ph.D. University of Illinois, College of Medicine 131 DMP 1853 West Polk Street Chicago, Illinois 60612

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL RESEARCH ASSOCIATE available immediately. Experience in nucleic acid en-zymology, recombinant DNA techniques, and/or mizymology, recombinant DNA techniques, and/or mi-crobiology with strong biochemical background. To work on mouse ribosomal RNA genes in recombi-nant DNA and to develop an in vitro transcription system for studying rRNA transcription. Send appli-cation and three letters of reference to: D. W. Staf-ford, Department of Zoology, University of North Carolina, Chapel Hill, N.C. 27514. An Affirmative Action/Equal Opportunity Employer.

#### POSTDOCTORAL STAFF ASSOCIATE

Position available immediately for recent Ph.D. in Position available immediately for recent Ph.D. in biochemistry or microbiology to work on the mecha-nism of action of the enzyme hydrogenase and regu-lation of its activity. Research involves determina-tion of enzyme quaternary structure, induced syn-thesis of enzyme, mapping the gene and its transfer, and isolation of modified forms of enzyme from mu-tant bacterial cells. Applicants should have experi-ence in enzymology and microbial genetics. Salary commensurate with experience, renewable for 2 or 3 vears. vears.

Send curriculum vitae, bibliography, and names of three references to: Dr. Alvin I. Krasna, Department of Biochemistry, Columbia University, College of Physicians and Surgeons, 630 West 168 Street, New York, N.Y. 10032.

Columbia University is an Equal Opportunity/Affirmative Action Employer.

PREDOCTORAL POSITIONS leading to research training in immunology (immunoglobulins; cellular immunity, lymphocyte biology, immunogenetics, immunity, lymphocyte biology, immunogenetics, complement); oncology (carcinogenesis, tumor im-munology); bacteriology (plasmids, genetics, bacte-rial membranes); molecular biology (gene DNA se-quencing, mRNA processing); cell biology (lipo-somes, membranes, cell fusion); virology (viral persistence, oncology). Available: July to Septem-ber 1979. Prerequisites: U.S. citizenship, B-plus av-erage, and high GRE scores. Inquiries to: Dr. Shel-don Dray, Head, Department of Microbiology and Immunology, University of Illinois Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

#### **RESEARCH ASSOCIATE**

The individual will be responsible for all phases of the operation in a tissue culture laboratory, includ-ing all isolation, media preparation, and so on. Will be expected to participate in studies concerned both with cell growth and metabolism and cellular ultra-structure. Must have a master's degree in biology or biochemistry with 2 years' experience. Contact:

Personnel Office The University of Texas Health Science Center at San Antonio 7703 Floyd Curl Drive San Antonio, Texas 78284

An Equal Opportunity/Affirmative Action Employer

VISUAL RESEARCHERS are invited to apply for a STAFF POSITION available in February 1979. Can-didates should hold a doctoral degree, preferably have had postdoctoral training, and have shown the excellence and originality in research expected of a potential leader in their field. Applicants should pref-erably be experienced with microelectrode and/or electroretinographic techniques. Applicants will be expected to contribute to ongoing research projects concerned with primate retinal information process-ing, as well as develop new research areas. Send ap-plication letter, statement of research interest, and curriculum vitae, with the names of three referees, to: Dr. William S. Baron, Manager Physiological Op-tics Program, Laboratory of Psychobiology and Physi-ology, SRI International, 333 Ravenswood Avenue, Menlo Park, Calif. 94025. Equal Opportunity Em-ployer. VISUAL RESEARCHERS are invited to apply for a ployer

#### POSITIONS OPEN

#### **RESEARCH ASSOCIATE**

**RESEARCH ASSOCIATE** A postdoctoral position is available in the laboratory of Dr. Thoru Pederson to participate in a program dealing with hnRNA  $\rightarrow$  mRNA processing, with particular reference to the ribonucleoprotein struc-ture of hnRNA. The position is initially for 2 years, at current NIH stipend levels. Candidates with strong academic backgrounds and training in con-temporary cell biology are specifically sought. Send curriculum vitae, the names of three references, and a brief synopsis of thesis research to: Personnel Of-fice, Dr. Thoru Pederson, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrews-bury, Mass. 01545.

An Equal Opportunity/Affirmative Action Employer

#### SOLAR PHYSICIST National Research Council-National Aeronautics and Space Administration

Space Administration Two postdoctoral or senior postdoctoral Resident Research Associateships at the Jet Propulsion Labo-ratory, California Institute of Technology, are being offered in the Space Physics Section. These appoint-ments are available in the general area of theoretical solar physics. Awards will be made on a competitive basis, with completed applications due by 15 Janu-ary 1979, 1 May 1979, or 1 September 1979. Further details on the research program can be obtained from: B. E. Goldstein (at 213-354-7589), or M. M. Neugebauer (at 213-354-4110), Jet Propulsion Labo-ratory, 4800 Oak Grove Drive, Pasadena, Calif. 91103.

General information and application materials can be obtained from:

> **National Research Council** Associateship Office (JH606-J) 2101 Constitution Avenue, NW Washington, D.C. 20418

#### SENIOR PROGRAM DIRECTOR

The National Academy of Sciences-National Research Council seeks a person who can provide strong leadership to the Postdoctoral Research Assuch leadership to the Postdoctoral Research As-sociateship Program, a major national program, of fering postdoctoral research opportunities in the sci-ences and engineering in federal laboratories. The successful candidate will exhibit significant experi-ence in working with graduate students and post-doctorate accountlick part on a scientific doctor doctorals, accomplishment as a scientist demon-strated by publication record, and skill in management and personnel matters. An earned doctorate or its equivalent, preferably in the physical or biological sciences, engineering, or mathematics, is re-quired, and strong academic ties and current knowl-edge of national trends in graduate education and postdoctoral work are desirable. The appointment will be for an indefinite term. Salary will be commensurate with experience. Reply to:

Box 79 Commission on Human Resources National Research Council 2101 Constitution Avenue, NW Washington, D.C. 20418

with a curriculum vitae and salary history. Closing date: 7 February 1979.

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#### TECHNOLOGY AND PUBLIC POLICY

The Department of Engineering and Public Policy of Carnegie Institute of Technology, and the School of Urban and Public Affairs and the College of Humani-ties and Social Science, Carnegie-Mellon Universi-ty, have one or more joint faculty openings: (i) for APPLIED SOCIAL SCIENTISTS interested in doing collaborative policy research with engineers or (ii) for ENGINEERS interested in doing collaborative policy research with social scientists. Problem areas of interest include social impacts of computers and telecommunications, product liability and safety, telecommunications, product hability and safety, electric power load management, retrospective tech-nology assessment, and energy and environmental systems. Desirable areas of skill include decision analysis, optimization techniques, organizational analysis, and regulatory process and law. Send ré-sumé with list of publications to:

Dr. M. Granger Morgan Department of Engineering and Public Policy, 19816 Carnegie-Mellon University Pittsburgh, Pa. 15213

#### POSITIONS OPEN

POSTDOCTORAL POSITION. Protein structure. stability, and assembly. Experience with protein and peptide purification methods desirable. Available 1 July; minimum salary: \$11,000 per annum, renew-able. Send résumé and reference letters to: Professor D. Wetlaufer, Department of Chemistry, University of Delaware, Newark, Del. 19711. An Equal Opportunity/Affirmative Action Employer.

The Department of Civil Engineering at Carnegie-Mellon University invites applications for the posi-tion of **PROFESSOR** and **DEPARTMENT HEAD**. Applicants should have a strong interest in under-graduate and graduate civil engineering education, administrative experience, and a proven research record in one of the following areas: structural, envi-ronmental, or transportation engineering. Appli-cations should be received prior to 1 February 1979 and should be addressed to: **Professor Steven J. Fen-**ves, Search Committee Chairman, Department of Civil Engineering, Carnegie-Mellon University, Schenley Park, Pittsburgh, Pa. 15213. An Equal Op-portunity/Affirmative Action Employer.

**RESEARCH ASSISTANT PROFESSOR** or **POST-DOCTORAL ASSOCIATE** with experience in pro-tein isolation/phosphorylation, cell genetics, tumor virology, or membranes is sought to work on reac-tion sequence in early G<sub>1</sub> (growth factors and pro-teins induced or altered), membrane receptors, transport mechanisms (bacterial/mammalian), or mutant isolation/characterization for membrane and G<sub>1</sub> traits, with: Dr. Joy Hochstadt, Department of Mi-crobiology, New York Medical College, Valhalla, New York 10595.

#### **RESEARCH ASSOCIATE**

Position available in the laboratory of Dr. Foteos Macrides, a multidisciplinary laboratory studying the neuroendocrinological, neuroanatomical, neu-rophysiological, and behavioral interrelationships of the olfactory system with the limbic and hypotha-lamic systems. Candidates should have research experience in immunochemical localization of various peptides/hormones in the hypothalamus, limbic system, and related areas; experience in electron mi-croscopy highly desirable; Ph.D. required. Send ré-sumé and request three referees to send letters of reference to: Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.

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RESEARCH ASSOCIATE, Ph.D., to study infant Research in associate, Fills, to study finant memory using operant conditioning techniques. Ac-tive research in animal memory, conditioning, or adult verbal learning preferred. Hiring immediately through 1 July 1979. Send résumé with phone num-bers of referees to:

Dr. Carolyn Rovee-Collier Psychology Department: Douglass College Rutgers University New Brunswick, N.J. 08903

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#### TRAINING PROGRAMS

PRE- AND POSTDOCTORAL STUDY IN DEVELOPMENTAL BIOLOGY AND TERATOLOGY, UNIVERSITY OF CINCINNATI

Predoctoral graduate teaching assistantships in de-velopmental biology and National Research Service Award Fellowships in teratology which pay stipends and tuition are currently available to qualified ap-plicants in an interdisciplinary program leading to a Ph.D. degree. Postdoctoral fellowships are also available. Major research interests include develop-mental genetics of mice, regulation of gene expression in animal cells, RNA structure and function, genetic control of enzyme biosynthesis, differentiation of cell surface antigens, cellular and tissue morphogen-esis and effects of teratogens, experimental and human teratology, inborn errors of human metabo-lism, and cell biology of intestinal absorptions. For details write to: Dr. Roger E. Ganschow, Institute for Developmental Research, Children's Hospital Medical Center, Cincinnati, Ohio 45229.

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### ASSOCIATE DIRECTOR CLINICAL RESEARCH

Research

We seek a bright, aggresive, action-oriented thought leader with strong research interests to fill a challenging position.

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PHARMACEUTICALS

**EMPLOYEE RELATIONS** 

CHAIRMAN, Dept. of Psychiatry, Wayne State University DIRECTOR, Lafayette Clinic

Wayne State University and the Michigan Dept. of Mental Health announce a search process for qualified candidates to fill this joint appointment.

Wayne State University Medical School is one of the largest in the United States, part of a multi-hospital complex. Lafayette Clinic is a psychiatric institute which serves as a research, educational and treatment center for the Department and the University.

The Search Committee is looking for an individual with a balanced background in education, research and administration and with demonstrated leadership skills. Applicants must be Board certified and be eligible for a license to practice in Michigan.

If you are interested in this attractive position, send a letter and C.V. to:

James Kipfer, Search Committee Chairman The Mental Health Association in Michigan 27208 Southfield Rd., Lathrup Village, Mich. 48076

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# Director of Coxicology

Wallace Laboratories, the ethical pharmaceutical division of Carter-Wallace, Inc., located in Central New Jersey, has an exceptionally fine position available in its Research Division for a Director of Toxicology. The individual we seek should possess a DVM or DVM/PhD (Toxicology, Pharmacology or Pathology), and a minimum of 4 years experience, preferably in an industrial environment. In addition, this individual should possess a good knowledge of Good Laboratory Practices and have some prior managerial background.

Reporting to the Vice President of Biological Research, this person will be responsible for all short and long term toxicity studies, reproductive studies and animal care. This individual must be capable of directing a staff of approximately 20 professional and technical personnel.

> Send resume in strict confidence to: Mr. Charles Newman, Employment Manager

## WALLACE LABORATORIES

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The National Institute of Neurological and Communicative Disorders and Stroke invites nominations and applications for the position of Chief, Medical Neurology Branch. The laboratory is located within the Intramural Clinical Research Program and utilizes laboratory and hospital facilities to conduct a range of basic and clinical research in neurological diseases. Candidates must meet the following mandatory qualifications requirements: an M.D. with 5 years experience (at least 1 year of which must be equivalent to the GS-15 level in the Federal service) in research work in one or more specialty areas such as pharmacology, virology, immunology, pathology, microbiology, biochemistry, and physiology; evidence of significant scientific research and/or clinical achievement in neuroscience, such as publications in leading scientific journals. service on editorial boards of professional journals, consultantships, lectures, etc.; experience in developing a basic biomedical or clinical research program and exercising effective administrative control over the work of professional and supporting staff, including the ability to implement EEO objectives. Desirable qualifications include a high degree of scientific peer recognition; training and education in addition to the M.D.; leadership of a basic or clinical research program; and honors and awards indicative of outstanding contributions to the field of neuroscience. Candidates will be evaluated by a panel of specialists on the extent to which they possess the desirable qualifications.

This position is designated for the Senior Executive Service (subject to the approval of the U.S. Civil Service Commission) with a current salary range of \$44,700 to \$47,500 per annum. The position could also be filled through the Commissioned Corps of the U.S. Public Health Service with the salary level being dependent upon length and breadth of experience.

Nominations and applications should include a Curriculum Vitae, bibliography, SF-171 (Personal Qualifications Statement) and the names of at least two references, and should be submitted by February 19, 1979 to: Dr. Donald B. Calne, Clinical Director, Intramural Research Program, NINCDS, National Institutes of Health, Public Health Service, Building 10, Room 6D-20, 9000 Rockville Pike, Bethesda, Maryland 20014. An Equal Opportunity Employer.

NATIONAL INSTITUTES OF HEALTH

#### COURSES

### MARINE BIOLOGICAL LABORATORY Woods Hole, Massachusetts woods Hole, Massachusetts will conduct a residential laboratory course ELECTRON MICROSCOPY in the BIOLOGICAL SCIENCES 13 to 25 May 1979

This program is intended primarily for scientists who have little or no experience with conventional

who have little or no experience with conventional transmission electron microscopy, but who require it as a research tool. The course emphasizes labora-tory practice in microscopy, specimen preparation, and micrograph interpretation. No more than 12 stu-dents will be accepted. The instructors-in-chief are Blair Bowers of NIH and Morton Maser of Marine Biological Laboratory. Guest lecturers include Keith Porter of the Universi-ty of Colorado (high-voltage EM), Lee Peachey of the University of Pennsylvania (quantitative EM), and Gwen Childs (Moriarty) or Northwestern Medi-cal School (EM cytochemistry). Other short courses on electron microscopy, scan-ning electron microscopy, freeze-etching, and diag-nostic microscopy will be offered by the laboratory in the spring. Application materials and ad-



Application materials and ad-ditional information are available from: Office of Admissions, Ma-rine Biological Laboratory, Woods Hole, Mass. 02543; telephone: 617-548-3705.

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#### GRADUATE STUDY

# GRADUATE TRAINING IN BASIC MEDICAL SCIENCES

The College of Medicine, University of South Ala-bama, invites applications from qualified individuals interested in pursuing the Ph.D. degree in basic medical sciences. Applications are now being accepted for June 1979 entrance into the graduate program leading to the doctorate with specialization in anatomy, biochemistry, microbiology/immunology, phar-macology, or physiology. This is a unique program designed to accept both qualified nondegree-holding students after only 3 years of appropriate under-graduate study, as well as applicants holding degrees. Fellowships are available which provide tuition and stingards stipends.

For further information write:

Edwin R. Hughes, M.D. Director of Graduate Program in Basic Medical Sciences Medical Sciences Building, Room 2152 University of South Alabama Mobile, Alabama 36688

**GRADUATE STUDIES.** Medical University of South Carolina. Predoctoral traineeships available for study leading to the Ph.D. degree in the Depart-ment of Anatomy, Basic and Clinical Immunology and Microbiology, Biochemistry, Biometry, Pathol-ogy, Pharmacology, Physiology, or the inter-disciplinary program in Molecular and Cellular Biol-ogy and Pathobiology. Stipends are \$3900 per year and are awarded on a competitive basis. For annliand are awarded on a competitive basis. For appli-cation and catalog, write to: Dean, College of Gradu-ate Studies, Medical University of South Carolina, 171 Ashley Avenue, Charleston, South Carolina 29403, The Medical University is an Equal Opportunity/Affirmative Action Employer.

# PREDOCTORAL RESEARCH ASSISTANTSHIPS— PLANT GENETICS AND DEVELOPMENT

A research assistantship leading to the Ph.D. degree will be available 15 August 1979 to qualified appli-cants in each of the following three areas: (i) genetic (ii) genetic, morphological, and embryo cultures; ies of defective kernel mutants of maize; and (iii) biochemical and ultrastructural studies of the meiotbiochemical and ultrastructural studies of the meiot-ic chromosomes and the synaptonemal complex in *Lilium*. Stipend for a 12-month period is \$5000 and includes payment of out-of-state tuition. Apply be-fore 1 March 1979. Candidates with an M.S. degree should send a résumé, GRE scores for aptitude and advanced tests, official transcripts, and three letters of reference to: Dr. William F. Sheridan, Department of Biology, University of North Dakota, Grand Forks, North Dakota 58202.

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#### GRADUATE STUDY

#### THE RAND GRADUATE INSTITUTE (RGI)

Invites applications for its doctoral degree program in policy analysis. Deadline for submitting appli-cations for 1979-1980 is 1 March 1979. RGI is part of The Rand Corporation. Its curriculum consists of in-terdesities of the submitted with the submitted set of the submitted se terdisciplinary study combined with compensated work leading to award of the Ph.D. in policy analy-

A master's degree or equivalent post-bachelor's degree training and experience is required for admis-

ston. For more information concerning application pro-cedures, write: The Rand Graduate Institute, 1700 Main Street, Santa Monica, Calif. 90406, or tele-phone: 213-393-0411.

# GRADUATE TRAINING IN MEDICAL COMPUTING FOR PHYSICIANS

The University of Illinois at Urbana-Champaign College of Medicine and Department of Computer Science are accepting applications for a 2-year program in medical computing, leading to the degree of master of computer science. All applicants must have an M.D. degree and pref-

erably some residency training. A basic stipend of \$15,000 per year will be provided to qualified appli-

The Department of Computer Science offers a well-established graduate program with 35 full-time faculty. Research interests include advanced instruinteraction information engineering, image process-ing, and artificial intelligence. The College of Medi-cine's Medical Computing Laboratory supports re-search in interactive medical consultation and other aspects of medical informatics, especially those in-

Aspects of medical informatics, especially those in-volved with manimachine interaction. Inquiries should be directed to: Allan H. Levy, M.D., 567 Medical Sciences Building, University of Il-linois, Urbana, Illinois 61801; telephone: 217-333-2284.

The University of Illinois is in full compliance with all federal and state nondiscrimination and Equal Opportunity laws, orders and regulations, and will not discriminate against any person in any of its ed-ucational programs and activities.

#### FELLOWSHIPS

POSTDOCTORAL RESEARCH FELLOWSHIP in an NIMH-University of Pennsylvania Program in psy-chopharmacology and the psychobiology of psychi-atric illness. Applicants should be M.D.'s with at least 2 years of psychiatric training or Ph.D.'s in pharmacology, neurophology, psychology, or a re-lated discipline. Candidates must be citizens or non-citizen nationals of the United States or be per-manent residents. Please send curriculum vitae and full details of interest to: **D. Brunswick, Ph.D.**, Veterans Administration Hospital (151E), Philadelphia, Pennsylvania 19104.

#### PREDOCTORAL FELLOWSHIPS

The Division of Experimental Pathology at the Uni-The Division of Experimental Pathology at the Uni-versity of Kentucky College of Medicine has pre-doctoral fellowships available to students seeking the Ph.D. degree. An interdisciplinary program is available with research opportunities in the areas of cellular immunology, immunochemistry, tumor im-munology, neuroimmunology, molecular and tumor virology, cell biology, and tumor cytogenetics. For further information contact: Dr. Thomas L. Roszman, Division of Experimental Pathology. Denoctment of Division of Experimental Pathology, Department of Pathology, University of Kentucky, Lexington, Ken-tucky 40506.

POSTDOCTORAL FELLOWS: CARDIOVASCU-LAR. Fellowships (\$10,000 and up) available 1 July LAR. Fellowships (\$10,000 and up) available 1 July 1979, as part of training grant in cardiovascular phar-macology. Areas of research include basic mem-brane biology and biophysics, study of subcellular organelles, hormone receptors, electropharmacolo-gy, vascular muscle contraction, Ca<sup>2+</sup>-Mg<sup>2+</sup>-ATPase mechanism, ionophores and drugs in hemodynamic studies. Active research group in many areas of car-diovascular research. For further information write: Dr. A. L. Bassett, Director of Training Grant, De-partment of Pharmacology, University of Miami School of Medicine, P.O. Box 016189, Miami, Florida 33101. 33101.

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#### **RADIATION ONCOLOGY TRAINING**

Postdoctoral fellowship training appointment in radi-ation oncology at NCI Radiation Cancer Center in the Bluegrass region. NRS fellowship includes clinithe Bluegrass region. NKS fellowship includes clini-cal and research training and clinical neutron therapy training. Must be U.S. citizen or have permanent im-migrant status. Must have M.D. degree, ECFMG, and minimum of 1 year of U.S. training. Three-year training program. Separate program in medical phys-ics for qualified Ph.D. applicants.

Applicants should send curriculum vitae, names of Applicates should send correction vitac, names of three references, and request application forms from: Chairman, Radiation Therapy Oncology Cen-ter, University of Kentucky Medical Center, 800 Rose Street, Lexington, Ky. 40506.

The University of Kentucky is an Equal Opportunity Employer.

FELLOWSHIPS IN REPRODUCTIVE BIOLOGY FELLOWSHIPS IN REPRODUCTIVE BIOLOGY (NIH-funded training program) with emphasis in the areas of endocrinology, fertilization, implantation, and placentation are available at both the pre-doctoral and postdoctoral levels. Predoctoral stu-dents may pursue academic programs in the dis-ciplines of anatomy, biochemistry, endocrinology, or physiology leading to the Ph.D. degree with re-search in the above areas of reproductive biology. Nine participating faculty in five departments in the College of Agricultural and Environmental Sciences, School of Medicine, School of Veterinary Medicine, and California Primate Research Center offer a mul-idisciplinary approach to problems in reproductive and California Primate Research Center orier a mut-tidisciplinary approach to problems in reproductive biology. For information, write: Dr. A. C. Enders, Director, Reproductive Biology Training Program, Department of Human Anatomy, School of Medicine, University of California, Davis, Calif. 95616.

NEUROIMMUNOLOGY POSTDOCTORAL FEL-NEUROIMMUNOLOGY POSTDOCTORAL FEL-LOWSHIP—One- or 2-year research fellowships available beginning July 1979 and July 1980, support-ed by NIH training grant. Contact: Dr. Barry G. W. Arnason, Professor and Chairman, Department of Neurology, The University of Chicago Hospitals and Clinics, 950 East 59 Street, Chicago, Illinois 60637. An Affirmative Action/Equal Opportunity Employer.

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