

The Last Chance Energy Book. Owen Phillips. Johns Hopkins University Press, Baltimore, 1979. xii, 142 pp., illus. \$9.95.

Late Reconstructions of Injured Ligaments of the Knee. K.-P. Schultz, H. Krah, and W. H. Stein, Eds. Springer-Verlag, New York, 1978. viii, 122 pp., illus. \$27.

The Leasing of Federal Lands for Fossil Fuels Production. Stephen L. McDonald. Published for Resources for the Future by Johns Hopkins University Press, Baltimore, 1979. xvi, 184 pp., illus. \$15.95.

Levels of Processing in Human Memory. Papers from a conference, Rockport, Mass., 1977. Laird S. Cermak and Fergus I. M. Craik, Eds. Erlbaum, Hillsdale, N.J., 1979 (distributor, Halsted [Wiley], New York). xvi, 480 pp., illus. \$24.95.

Long Range Order in Solids. Robert M. White and Theodore H. Geballe. Academic Press, New York, 1979. xii, 414 pp., illus. \$39.50. Solid State Physics, Supplement 15.

Mathematics for Physical Geographers. Graham N. Sumner. Halsted (Wiley), New York, 1979. xvi, 236 pp., illus. \$15.95.

Medicine, Mind and Man. An introduction to Psychology for Students of Medicine and Allied Professions. John Cohen and John H. Clark. Freeman, San Francisco, 1979. xviii, 402 pp. Cloth, \$19.95; paper, \$9.95.

Organizations Are People. The Art of Person-to-Person Management. Harold G. Wilm. Christopher Publishing House, North Quincy, Mass., 1979. 188 pp. \$7.95.

Origins of Molecular Biology. A Tribute to Jacques Monod. André Lwoff and Agnes Ullmann, Eds. Academic Press, New York, 1979. xiv, 246 pp., illus. \$17.50.

Patent It Yourself! How to Protect, Patent, and Market Your Inventions. David Pressman. McGraw-Hill, New York, 1979. x, 210 pp. \$14.95.

The Pathologic Physiology of Dementia. With Indications for Diagnosis and Treatment. Richard M. Torack. Springer-Verlag, New York, 1978. viii, 158 pp., illus. \$31.90. Psychiatry Series, 20.

Perspectives on Memory Research. Essays in Honor of Uppsala University's 500th Anniversary. Papers from a conference, Uppsala, June 1977. Lars-Göran Nilsson, Ed. Erlbaum, Hillsdale, N.J., 1979 (distributor, Halsted [Wiley], New York). xiv, 400 pp., illus. \$24.95.

Philosophy of Geometry from Riemann to Poincaré. Roberto Torretti. Reidel, Boston, 1978 (distributor, Kluwer Boston, Hingham, Mass.). xiv, 462 pp. \$49. Episteme, vol. 7.

Physical Chemistry. Robert A. Alberty and Farrington Daniels. Wiley, New York, ed. 5, 1979. xiv, 682 pp., illus. \$19.95.

Physical Properties. A Guide to the Physical, Thermodynamic and Transport Property Data of Industrially Important Chemical Compounds. Carl L. Yaws. McGraw-Hill, New York, 1979. xii, 240 pp., illus. \$39.50. A Chemical Engineering Publication.

The Politics of Health Care. Ballinger (Harper and Row), New York, 1978. xviii, 154 pp. \$15.

Solar Energy in Developing Countries. An Overview and Buyers' Guide for Solar Scientists and Engineers. A. Eggers-Lura. Pergamon, New York, 1979. vii, 206 pp., illus. \$40. The Pergamon European Heliostudies, vol. 1.

Spacecraft Attitude Determination and Control. James R. Wertz, Ed. Reidel, Boston, 1978 (distributor, Kluwer Boston, Hingham, Mass.). xviii, 862 pp., illus. \$44. Astrophysics and Space Science Library, vol. 73.



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Mathematical Scientist, presently professor, seeks position in mathematical or environmental psychology, neuroscience, applied or systems science, or similar multidisciplinary area, with scope for combined theoretical-experimental research. Broad range of expertise in the mathematical, statistical, physical sciences, and psychobiology. Originator of Lie group theory of neuropsychology. Many publications and professional activities. Box 309, SCIENCE. X

Quantitative Geneticist/Biostatistician, Ph.D. 1972, seeks teaching/research position in agriculture/biology; 1 1/2 years of postdoctoral experience in computer simulation; 4 years of experience in data maintenance and statistical analysis computer programming. Several publications. Desires position on East Coast. Available after 1 January 1980. Box 315, SCIENCE. X

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Veterinarian, Ph.D. student in pharmacology/toxicology seeks employment with institution, private research laboratory. P.O. Box 12104, Washington, D.C. 20005. X

POSITIONS OPEN

ACADEMIC PHYSICIAN

The University of Michigan School of Medicine is seeking a full-time plastic surgeon at the assistant professor level. Broad training is required along with expertise in microsurgery, hand surgery, and research. Applicants must be certified or eligible for examination by the American Board of Plastic Surgery.

Direct replies to: **Box 316, SCIENCE.** A non-discriminatory, Affirmative Action Employer. Code 300 FO.

HOWARD UNIVERSITY ANATOMY FACULTY POSITION

The Department of Anatomy at Howard University invites applications from qualified individuals for a position in **human gross anatomy.** The Department of Anatomy is seeking an individual with a doctoral degree and postdoctoral experience in contemporary biomedical research techniques. Applicant should have demonstrated interest, aptitude, and experience in teaching human gross anatomy, as well as the other areas of anatomical science. The applicant should have demonstrated aptitude to develop independent research programs.

Applicant should send curriculum vitae, bibliography, and reference names and addresses to: **Dr. Lee V. Leak, Department of Anatomy, College of Medicine, Howard University, 520 W Street, NW, Washington, D.C. 20059.**

Howard University is an Equal Opportunity/Affirmative Action Employer.

HOWARD UNIVERSITY COLLEGE OF MEDICINE FACULTY POSITION IN ANATOMY

The Department of Anatomy is seeking applications for a faculty appointment from individuals with research interest in **reproductive biology.** The candidate should have demonstrated aptitude to develop independent research programs. Applicant should have interest and experience in the teaching of gross anatomy, histology, or neuroanatomy to freshmen medical, dental, and graduate students.

Applicant should send curriculum vitae, including a statement of teaching and research goals and bibliography. References from three individuals supporting both research and teaching capabilities should be sent to: **Chairman, Department of Anatomy, College of Medicine, Howard University, 520 W Street, NW, Washington, D.C. 20059.**

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ANATOMIST—Cochlear and Auditory Brainstem

A tenure-track position at the rank of assistant or associate professor should become available in the Department of Otolaryngology effective 1 July 1980. A joint appointment with the Department of Anatomy is also possible. Applicants should have demonstrated competence in anatomical studies of the cochlea and brainstem, have experience in auditory neurophysiology, and expect to make significant research contributions in the future. Teaching of medical students and residents is required. Qualified applicants should send curriculum vitae and names of three references before 15 December 1979 to: **J. H. Mills, Ph.D., Department of Otolaryngology, Medical University of South Carolina, Charleston, S.C. 29402.** The University is an Affirmative Action/Equal Opportunity Employer and complies with section 504 of the Rehabilitation Act.

ASSISTANT PROFESSOR. Radiation biologist, beginning 1 September 1980. Candidates should have postdoctoral training, demonstrated excellence in research, and interest in medical radiation effects. Primary responsibilities are research and training graduate students, with minimum of teaching allied health science students and radiology residents. Applications accepted until position filled. Send letter of application, curriculum vitae, and three letters of recommendation to: **Dr. M. E. Gaulden, Radiology Department, University of Texas Health Science Center, Dallas, Texas 75235.**

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POSITIONS OPEN

ANATOMIST. Tenure-track position at assistant professor level to teach gross anatomy. Active research program essential; grant record desirable; area of research open. Send curriculum vitae, current research and grant status, and names of three potential referees to: **Dr. L. Russell, Search Committee Chairperson, Physiology, Southern Illinois University, Carbondale, Ill. 62901; telephone: 618-536-2033.** Application deadline: 31 January 1980. Appointment date: 15 August 1980. *An Equal Opportunity/Affirmative Action Employer.*

AQUATIC BIOLOGIST. An assistant or associate professor of biology is sought to share in teaching undergraduate, including freshman, courses and to participate in the development of a graduate program in environmental sciences. Average teaching load is 12 contact hours per week. The person employed will be expected to establish a research program and on occasion function as a contributing member of an Environmental Sciences Research Group. A candidate for the position must have, at the time of appointment, a Ph.D. with emphasis in aquatic biology of plant and/or animal communities, be well versed in quantitative and limnological techniques, and have field experience. The successful applicant will be offered a 9-month contract, on a track leading to continuing appointment, beginning 1 September 1980. Processing of applications will begin on 1 December but applications will be accepted until interviewing begins in January. Salary is negotiable.

Send curriculum vitae with representative publications and three letters of recommendation to:

**Dr. Barbara Shirley
Aquatic Biology Search Committee
Faculty of Natural Sciences
University of Tulsa
Tulsa, Oklahoma 74104**

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ASSISTANT PROFESSOR

Seeking M.D. or Ph.D. with demonstrated ability in laboratory research in developmental cell biology in comprehensive Cancer Center with broad laboratory research programs including cellular genetics and development, tumor immunology, viral oncology, and chemical carcinogenesis. Joint appointment between Cancer Center and appropriate academic department. Salary negotiable dependent on experience level. Send curriculum vitae to:

**Deputy Director for Administration
Columbia University
Cancer Center/Institute of Cancer Research
701 West 168 Street
New York, New York 10032**

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UNIVERSITY OF VICTORIA VICTORIA, BRITISH COLUMBIA, CANADA DEPARTMENT OF BIOCHEMISTRY AND MICROBIOLOGY

Applications are invited for the position of **ASSISTANT PROFESSOR** beginning 1 July 1980. Candidates should have strong teaching and research interests in one or more of the following fields: protein biochemistry, molecular genetics (recombinant DNA), and eukaryotic cell membrane receptors. The successful applicant will be required to teach biochemistry at the undergraduate and graduate levels and carry on an active research program. A Ph.D. is required and postdoctorate experience desirable.

Applications with curriculum vitae, list of publications, a brief statement of research plans, and the names of three references, who have been requested to send letters of recommendation, should be sent to: **Professor A. T. Matheson, Chairman, Department of Biochemistry and Microbiology, University of Victoria, P.O. Box 1700, Victoria, British Columbia, Canada V8W 2Y2,** as soon as possible.

MAMMALIAN PHYSIOLOGIST. Assistant professor prepared to teach department's courses in animal surgery. Tenure-track position. Active research program essential; grant record desirable. Area of research open. *An Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae, current research and grant status, and names of three referees who may be contacted at a future date. Write: **Dr. Howard Winet, Search Committee Chair, Physiology, Southern Illinois University, Carbondale, Ill. 62901.** Application deadline: 31 January 1980. Appointment date: 15 August 1980.

POSITIONS OPEN

ANALYTICAL CHEMISTS

Analytical chemists sought for challenging positions in newly created corporate environmental laboratory located in Memphis. Experience in GC and/or GC/MS analysis of low level pesticide and organic chemicals in air, water, and soil using EPA protocols desirable. Laboratory equipped with latest GC/MS, GC, HPLC, and other instrumentation.

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ANIMAL CELL BIOLOGIST

ASSISTANT PROFESSOR, Ph.D. Preference to applicants with postdoctoral experience who combine biophysical, biochemical, or immunological techniques with electron microscopy. Undergraduate and graduate teaching expected. Send résumé, reprints, and three reference letters to: **Cell Biology Search Committee, Zoology Department, Arizona State University, Tempe, Arizona 85281**. Deadline: 15 January 1980.

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UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

The University of Michigan Medical School is seeking a full-time faculty person at the rank of **ASSISTANT PROFESSOR** in the Department of Surgery Section of Urology.

Duties to be performed:

- 1) Perform fundamental research in urologic oncology.
- 2) Develop laboratory and clinical projects, independently and in cooperation with other oncology services, and
- 3) Function as staff person in General Clinical Urology Program.

Desired qualifications: M.D. degree with residency and Board-certification in urology, at least 2 years of training or experience in urologic cancer research; and, also, background in immunology. Please send curriculum vitae to: **Box 317, SCIENCE**. Code 100 DO. *A nondiscriminatory, Affirmative Action Employer.*

ASSISTANT PROFESSOR, biochemist, tenure-track, beginning January 1980. Applicants must have the Ph.D. in biochemistry and two or more years of postdoctoral training, with a record of productivity in research areas related to insect or plant biochemistry. Teaching duties will include an advanced course in one of the above areas. Send résumé, brief description of research interests, and three letters of recommendation to: **Dr. W. A. Deutsch, Department of Biochemistry, Louisiana State University, Baton Rouge, La. 70803**. *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF BIOLOGY. Wilmington College of Ohio, a Quaker, liberal arts institution, has an opening for the 1980-1981 academic year. Teaching competence in microbiology, genetics, and biochemistry is required. Personal research involving undergraduates is encouraged, but not required for tenure. Applicant must have terminal degree by starting date. Send curriculum vitae and names of three references by 1 December 1979, to: **Donald Troike, Ph.D., Biology Department, Wilmington College, Wilmington, Ohio 45177**.

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

A tenure-track faculty position is available for a **CELLULAR PHYSIOLOGIST** in the Department of Physiology. Duties include: conducting research in the area of cellular/molecular physiology; and teaching physiology to medical, other health professional students, and graduate students. Necessary qualifications: Ph.D. or M.D. degree, at least 2 years of postdoctoral research training, and record of published work dealing with physiological mechanisms at the cellular or molecular level. Reply to: **Box 318, SCIENCE**. *A nondiscriminatory, Affirmative Action Employer.* Code 1300 BO.

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR

Two tenure-track positions available August 1980. Active research programs required.

DEVELOPMENTAL BIOLOGIST, INVERTEBRATE, EXPERIMENTAL. Preference will be given to candidates working with marine species.

PLANT POPULATION GENETICIST/BOTANICAL EVOLUTIONARY BIOLOGIST. Preference will be given to candidates working with tropical terrestrial species.

Apply before 10 January with curriculum vitae, a recent reprint, and a description of research interests. Have four references send letters. Competitive salary based on qualifications and experience.

Search Committee for (position sought)
Department of Biology
P.O. Box 249118
University of Miami
Coral Gables, Florida 33124

An Equal Opportunity/Affirmative Action Employer

Two tenure-track positions at the assistant professor level to begin September 1980. **BEHAVIORAL ECOLOGY**—Teaching interests in ecology, animal behavior, and entomology preferred; publication record in ecology/behavior of vertebrates-insects. **PHYSIOLOGY**—Will participate in teaching in a broadly based biology and allied health program. Interests in mammalian and comparative physiology desirable, with research interests that complement present strengths in neurobiology. Some postdoctoral experience desirable for each position. Submit curriculum vitae, statement of research interests, and names of references by 15 January 1980 to: **Dr. Wayne E. Magee, Director, Division of Allied Health and Life Sciences, The University of Texas at San Antonio, San Antonio, Texas 78285**.

The University of Texas at San Antonio is an Affirmative Action/Equal Opportunity Employer.

The Biochemistry Department at the University of California, Berkeley, invites applications for an anticipated appointment, pending budgetary approval, at the level of **ASSISTANT PROFESSOR**. Candidates should have demonstrated excellence, originality, and productivity in research, and they should possess a relevant background in biochemistry and a strong commitment to teaching. The department is particularly interested in persons whose research is relevant to the biochemical understanding of eucaryotic processes, including differentiation, development, or regulation. Applicants should submit curriculum vitae, a bibliography, a two-page outline of research objectives, a summary of teaching interests, copies of two representative publications, and names of three referees to: **C. E. Ballou, Chairman, New Staff Committee, Department of Biochemistry, University of California, Berkeley, Calif. 94720**. Applications should be received prior to 15 January 1980. *The University of California is an Affirmative Action Employer.*

ASSISTANT PROFESSOR IN BIOCHEMISTRY

The Department of Physiological Chemistry at the Johns Hopkins University School of Medicine seeks one faculty member with a commitment to excellence in research and teaching in biochemistry. Applicants should submit curriculum vitae, list of publications including representative reprints, three letters of recommendation, and a summary of research plans to: **Dr. Paul T. Englund, Chairman of Search Committee, Department of Physiological Chemistry, The Johns Hopkins University School of Medicine, Baltimore, Maryland 21205**. Deadline for applications is 31 December 1979. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOSTATISTICS

Immediate opening. Research, teaching, and consulting. Doctoral level preparation in biostatistics with experience and extensive training in mathematical aspects of population and quantitative genetics with research interested in application to major epidemiologic and biomedical studies. Send résumés to: **M. Anthony Schork, Department of Biostatistics, School of Public Health, University of Michigan, Ann Arbor, Michigan 48109**. Telephone: 313-764-5450. *A nondiscriminatory, Affirmative Action Employer.*

ASSISTANT PROFESSOR, BOTANY

The Department of Biology, Vassar College, invites applications for a tenure-track position beginning in 1980-1981. Expertise in organismal and evolutionary botany. Teaching areas will include intermediate and advanced undergraduate courses in botanical sciences as well as participation in the departmental introductory course. Applicant will be expected to conduct research in the botanical sciences. Departmental resources include greenhouses, herbarium, and 250-acre ecological preserve with on-site field laboratory. Send letter of application, résumé, and three letters of reference to: **Dr. Patricia Johnson, Chairman, Box 377, Department of Biology, Vassar College, Poughkeepsie, New York 12601**.

Vassar College is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSORSHIP, EMBRYOLOGY. Tenure-track position beginning September 1980. Ph.D. with teaching experience and an active research program. To teach descriptive and experimental vertebrate embryology and another course in her/his field of special interest, for example, comparative vertebrate or invertebrate embryology, comparative morphology, genetics of developmental pathology, or biology of reproduction. Send résumé by 10 January to: **P. L. Dudley, Chairperson, Department of Biological Sciences, Barnard College, 606 West 120 Street, New York, N.Y. 10027**. *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF ENTOMOLOGY. A tenure-track position for an entomologist to conduct research on insect pest management in floricultural crops, nursery stock, and turf will be available 1 July 1980. The position is an 11-month appointment with about 90 percent research and 10 percent teaching. Applicants must have a Ph.D. in entomology, with in-depth training in applied entomology and training in such related areas as plant sciences, ecology, insect toxicology, and statistics. Send detailed curriculum vitae, transcripts, names and addresses of five referees, bibliography, doctoral dissertation summary, reprints, and manuscripts in press to: **Dr. Robert D. Brown, Search Committee Chairman, Department of Entomology, University of California, Riverside, Calif. 92521** before 15 January 1980. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK ASSISTANT PROFESSOR—Ph.D. in PHYSICS required. Flexibility to teach allied health students electronics, ultrasound and/or nuclear medical technology. Send résumé, transcripts, three letters of reference, and research plans to: **Albert D. Notation, Ph.D., Chairman, Department of Chemistry and Physical Sciences, Quinnipiac College, Hamden (New Haven) Conn. 06518**. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF SURGERY in Section of Thoracic Surgery. Position will involve development of new fully supported cardiothoracic program at the Ann Arbor Veterans Administration Hospital. Active participation in university program. Excellent research facilities. Competitive salary depending on experience. *The University of Michigan is a nondiscriminatory, Affirmative Action Employer.* Code 300 DO. Send curriculum vitae and names of three references to: **Box 313, SCIENCE**.

ASSISTANT RESEARCH BIOCHEMIST for research on mouse mammary tumor virus. Expertise with restriction endonuclease mapping, nucleic acid hybridization, RNA sequencing and RNA tumor viruses required. Knowledge of protein chemistry required. Salary from \$19,800 to \$23,000, depending on experience. Ph.D. required. Send curriculum vitae and three letters of recommendation to: **Dr. George Lundberg, Department of Pathology, School of Medicine, University of California, Davis, Calif. 95616** by 15 December 1979. *The University of California is an Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHYSIOLOGY AND BIOPHYSICS

The Department of Physiology and Biophysics, University of Louisville Health Sciences Center, Louisville, Kentucky, has a faculty opening (Ph.D.) at the assistant professor level. Teaching responsibilities will include participation in graduate courses and team-taught courses for medical, dental, and nursing students.

Evidence of research ability and productivity is necessary. The field of training and of research should be in the area of microcirculation with particular interest in the central nervous system or the GI tract. Successful applicant is expected to conduct independent research programs and guide graduate students.

The Department of Physiology and Biophysics occupies relatively new facilities and has extremely well-equipped laboratory and office space. *The University of Louisville is an Affirmative Action/Equal Opportunity Employer.*

Individuals interested in this position should send curriculum vitae and three letters of recommendation to:

Thomas B. Calhoun, Ph.D., Professor and Chairman
Department of Physiology and Biophysics
University of Louisville School of Medicine
Health Sciences Center
P.O. Box 35260
Louisville, Kentucky 40232

ASSISTANT PROFESSOR, PHYSIOLOGY

Applications invited for a tenure-track appointment beginning academic year 1980-1981 as an assistant professor in physiology. The applicant will teach both general physiology at the undergraduate level and graduate cell physiology. The applicant is expected to develop a strong research program with a cellular-biophysical emphasis. Send curriculum vitae, résumé of past and present research, and the names of three referees by 15 January 1980 to: **Dr. C. H. Page, Chairman, Search Committee, Department of Physiology, Rutgers University, Piscataway, N.J. 08854.** *Rutgers is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF PLANT BIOLOGY

A well-equipped modern Department of Biological Sciences located outside Baltimore is seeking a plant biologist with postdoctoral experience, who has demonstrated an ability to initiate a vigorous research program and has a commitment to quality graduate and undergraduate teaching. Candidates should have a strong background in physiology and/or biochemistry of plant systems, specializing in areas such as morphogenesis, tissue culture, plant hormones, water relations, algology, or virology. Submit curriculum vitae, bibliography, names of suggested referees, and a description of research interests to: **Dr. Thomas F. Roth, Chairman, Faculty Search Committee, Department of Biological Sciences, University of Maryland Baltimore County, Catonsville, Maryland 21228.** *An Equal Opportunity/Affirmative Action Employer.*

Junior faculty position (tenure-track) in **BIOMEDICAL ENGINEERING**. Ph.D. in E.E. or B.M.E. with postdoctoral research experience will be considered. Major responsibilities include teaching of biomedical instrumentation at graduate level and research in some aspects of instrumentation. Apply before 7 December to:

Chairman, Biomedical Engineering
University of Virginia
Box 377, Medical Center
Charlottesville, Va. 22908

Affirmative Action/Equal Opportunity Employer

University of Pennsylvania School of Medicine Department of Biochemistry and Biophysics

The department is undertaking a search for a relatively senior **BIOPHYSICIST** (associate to full professor level) with rather broad interests and expertise in the general area of spectroscopy with possible, but not necessary, emphasis on nuclear magnetic resonance.

Prospective candidates should send their curriculum vitae and bibliography to: **Dr. J. Kent Blasie, Chairman, Search Committee, Department of Chemistry, 550 Chemistry Laboratories/D5, University of Pennsylvania, Philadelphia, Pa. 19104.**

The University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR PLANT BIOLOGY

TUFTS UNIVERSITY BIOLOGY DEPARTMENT Available starting 1 September 1980

PLANT BIOLOGIST, broadly trained. Preference will be given to candidates conducting experimental work with either terrestrial or marine flora at the organism or population level. Candidates should have demonstrated excellence in teaching and in research. Postdoctoral experience desirable. Teaching duties include sharing instruction in an introductory biology course, teaching an intermediate-level course in area of training, and offering an advanced course in research specialty.

Please send curriculum vitae, brief statement of research plans, and representative reprints, and arrange to have three letters of recommendation sent to:

Mary Ella Feinleib, Chairman
Biology Department
Tufts University
Medford, Mass. 02155

Application deadline: 15 December 1979.

Tufts University is an Equal Opportunity/Affirmative Action Employer. Applications from women, minorities, and the handicapped are encouraged.

ASSISTANT RESEARCH PHYSICIST

There is an opening in the Department of Physics, University of California, Irvine, for an assistant research physicist with background in the theory of electron/surface interactions, surface response, and the theory of energy transfer processes in condensed matter. *Applications from all qualified candidates are welcome; women and members of minority groups are encouraged to apply.* Send résumé to: **Professor D. L. Mills, Department of Physics, University of California, Irvine, California 92717.**

The University of Minnesota, Duluth, School of Medicine, is seeking a person to join the **BASIC SCIENCE FACULTY** on a tenure-track. A Ph.D. in any of the basic science areas is required. Responsibilities will include working with the American Indian staff at the University of Minnesota, Duluth, School of Medicine to develop a reservoir of American Indian students for careers in medicine, research, and other health-related fields. In addition, depending upon the person's academic credentials, teaching and research responsibilities will also be assumed. Salary is negotiable. Closing date is 15 December 1979.

Send letters of inquiry to:

Search Committee
American Indian Programs
University of Minnesota, Duluth
School of Medicine
Duluth, Minnesota 55812

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CHAIRMAN OF BIOLOGICAL SCIENCES

To administer a department that offers baccalaureate majors in environmental health, medical technology, and biological sciences, as well as a graduate program (M.S.) in biology. The chairman must work closely with related Departments of Biological Chemistry, Physiology, Anatomy, and Microbiology and Immunology in a jointly sponsored Biomedical Ph.D. Program. Ph.D. with demonstrable research, teaching, and administrative leadership required. Salary and area of specialization open. Send application with résumé by 1 December 1979 to: **Dr. Jerry H. Hubschman, Biology Search Committee, Wright State University, Dayton, Ohio 45435.**

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CHEMICAL TOXICOLOGIST—Position for tenure-track assistant professor. Available August 1980. Ph.D. required; postdoctoral experience preferred. Applicant expected to develop a strong research program in one of the areas related to environmental or industrial toxicology. Responsibilities will include research and teaching, including courses in his/her area of expertise in support of the B.S. and M.S. programs in chemistry at Old Dominion University and the Ph.D. program administered jointly with the Eastern Virginia Medical School. Send résumé, proposed research projects, and three letters of recommendation by 15 January 1980 to: **Dr. R. L. Williams, Chairman, Search Committee, Department of Chemical Sciences, Old Dominion University, Norfolk, Va. 23508.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

THE UNIVERSITY OF CHICAGO BIOLOGIST

Applications are solicited for a position in the Anatomy Department, which is now completing a shift in research emphasis and role within the university community. Current interests focus on adaptation at the tissue and whole organism level, in both vertebrates and invertebrates, and include study of morphology from developmental, functional, and evolutionary perspectives. We are seeking an additional colleague whose research interests lie in such areas as the mechanical properties of biological materials, mechanisms of morphogenesis at the tissue or organ level, the functional morphology of animal adaptations, or related areas. Applicants should have demonstrated skill with experimental approaches; research organisms may be invertebrates or vertebrates. Academic rank is open. Applications, including curriculum vitae, statement of research interests, and three letters of recommendation, should be sent to: **Search Committee, Anatomy Department, The University of Chicago, Chicago, Illinois 60637**, by 1 January 1980.

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

BIOMETRICIAN to collaborate with the staff biologists in design and analysis of a wide variety of ecological and environmental studies. Candidates should have an interest in experimental design, time series analysis, and data analysis techniques. Applicants should have at least an M.S. with experience in statistics or biometry. Send résumé with salary history and requirements as well as references to:

Dr. Michael Hirschfield
Academy of Natural Sciences of Philadelphia
Benedict Estuarine Research Laboratory
Benedict, Maryland 20612

CARDIOVASCULAR PHARMACOLOGIST

Applications are invited for a position in pharmacology at the assistant or associate professor level, starting July 1980. Applicants should be prepared to conduct a strong research program in the area of cardiac electrophysiology and to take an active role in the medical and graduate teaching in the department. Excellent facilities are available in a fully equipped laboratory. The position is funded by the state of New York with a competitive salary scale. Send curriculum vitae, list of publications, and two letters of recommendation to: **I. M. Weiner, Chairman, Department of Pharmacology, Upstate Medical Center, Syracuse, N.Y. 13210.** Deadline for receipt of applications: 15 January 1980.

An Equal Opportunity/Affirmative Action Employer

KLEIDERER/PEZOLD CHAIR IN CHEMISTRY UNIVERSITY OF NOTRE DAME

The Department of Chemistry is seeking an outstanding scholar to occupy the recently endowed

KLEIDERER/PEZOLD PROFESSORSHIP

The individual's research interests should be related to organic chemistry. Résumés and/or nominations should be addressed to:

Professor Francis J. Castellino
Dean, College of Science
University of Notre Dame
Notre Dame, Indiana 46556

Notre Dame is an Equal Opportunity Employer.

DEVELOPMENTAL PSYCHOLOGIST. The Psychology Department, University of California, Santa Barbara, anticipates a position at the assistant professor level in social development or personality development. A strong interest in teaching and research in developmental psychology is required. Candidates with research interests in the biological substrates of social behavior (including ethology or behavior genetics) are preferred but other candidates are encouraged to apply. The department offers a Ph.D. in developmental psychology, but has no clinical program. The applicant should have experience appropriate for teaching both at the graduate level and in our undergraduate major in developmental psychology. The undergraduate program includes both lectures and practice in developmental psychology.

Send curriculum vitae, copies of publications, and direct four letters of recommendation to: **Professor Daphne Bugental, Search Committee, Department of Psychology, University of California, Santa Barbara, California 93106.** Deadline for completed application is 15 January 1980.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

DIABETES-ENDOCRINOLOGY RESEARCH CENTER University of Iowa ASSOCIATE RESEARCH SCIENTIST

Position available immediately in the Iowa Diabetes-Endocrinology Center for a person with four or more years of postdoctoral experience in molecular endocrinology, especially insulin action on adipose metabolism. Ability to direct a tissue culture core required. Salary negotiable, from \$16,750. Send curriculum vitae and three letters of recommendation to: **Daryl K. Granner, 3E-48, VA Hospital, Iowa City, Iowa 52240. The University of Iowa is an Equal Opportunity Employer.**

CHAIRMAN OF PHYSIOLOGY. Applications are invited for chairman of the Department of Physiology at the Oral Roberts University School of Medicine. Candidates should have an M.D. or Ph.D. degree and minimally have held the rank of associate professor or its equivalent. The committee is seeking candidates who have demonstrated excellence in teaching and research and who would be compatible with the unique life style at Oral Roberts University. Administrative experience is desirable. Please send curriculum vitae and accompanying letter to: **Donald R. Tredway, M.D., Ph.D., Oral Roberts University School of Medicine, 7777 South Lewis, Tulsa, Okla. 74171. Equal Opportunity/Affirmative Action Employer.**

DIRECTOR OF CYTOGENETICS LABORATORY UNIVERSITY OF WASHINGTON Experienced Cytogeneticist (Ph.D. or M.D.)

Position requires management of established prenatal and postnatal diagnostic laboratory and independent research experience in experimental cytogenetics. Early starting date desirable. Send curriculum vitae and the names and addresses of at least three references to: **Dr. George M. Martin, Division of Genetic Pathology, Department of Pathology, SM-30, University of Washington, Seattle, Washington 98195. The University of Washington is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

BIOLOGICAL OCEANOGRAPHER HARVARD UNIVERSITY

Harvard University seeks to appoint a tenured professor in the field of biological oceanography. Preference will be given to oceanographers with: (i) a strong field and laboratory program dealing with the pelagic realm and encompassing work on the interaction between organisms and their environment or on groups of organisms, possibly including emphasis on a specific group; and (ii) the ability to offer high-quality instruction in biological oceanography at both graduate and undergraduate levels.

Applicants should send curriculum vitae and statement of research interests to: **Farish A. Jenkins, Jr., Chairman, Department of Biology, The Biological Laboratories, Harvard University, 16 Divinity Avenue, Cambridge, Massachusetts 02138.**

Harvard is an Equal Opportunity/Affirmative Action Employer.

ECOLOGIST

ASSISTANT PROFESSOR. Ph.D., vertebrate behavioral ecologist or community/ecosystems ecologist. Tenure-track, beginning 15 August 1980. Send curriculum vitae, reprints, and three letters of reference before 1 February 1980 to: **Dr. John Alcock, Ecology Search Committee, Department of Zoology, Arizona State University, Tempe, Arizona 85281.**

Affirmative Action/Equal Opportunity Employer

FACULTY POSITION in synthetic organic chemistry, assistant or associate professor, tenure-track position in synthetic organic chemistry starting early 1980. Ph.D. and several years of postdoctoral experience required. The candidate is expected to teach graduate and undergraduate organic chemistry and develop a strong research program in synthesis. Candidates should supply a graduate transcript, curriculum vitae, résumé of future research plans, and have three letters of recommendation sent to: **Dr. Pierre Crabbe, Chairman, Department of Chemistry, University of Missouri, Columbia, Mo. 65211 before 30 November 1979. An Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF PHYSIOLOGY

Applications are invited from qualified Ph.D.'s and/or M.D.'s for this position at the University of Puerto Rico, School of Medicine.

Attractive 12-month salary with possibility of salary supplement from own research grants. Please send curriculum vitae, including summary of qualifications (including grant support), a brief description of research plans or research in progress, reprints of your most important articles, and three reference letters to:

**L. A. Le Zotte, Jr., M.D., Ph.D.
G.P.O. Box 4462
San Juan, Puerto Rico 00936**

ECOLOGIST. The Kellogg Biological Station of Michigan State University invites applications for a tenure-track position at the assistant professor level in aquatic or terrestrial ecology. Applicants should show potential for developing and maintaining strong basic experimental research and graduate training programs. Submit résumé, statement of research interests, publications, and other supporting documentation by 15 December to:

**Search Committee
Kellogg Biological Station
Hickory Corners, Mich. 49060**

An Equal Opportunity/Affirmative Action Employer

FACULTY POSITION in physical chemistry or chemical physics. Applications or nominations are invited for an opening in the Department of Chemistry at Massachusetts Institute of Technology (MIT). Applicants should have demonstrated ability to do exceptional independent research in chemistry. Appointment will probably be at the assistant professor level, but applications and nominations for other levels will be considered. Candidates should submit curriculum vitae, a publications list, a description of research interests, and have three letters of recommendation sent not later than 15 February 1980, to: **Professor J. L. Kinsey, Room 18-399, MIT, Cambridge, Mass. 02139. MIT is an Equal Opportunity/Affirmative Action Employer.**

CHAIRPERSON DEPARTMENT OF ENTOMOLOGY

Washington State University, College of Agriculture, invites applications and nominations for the position of **CHAIRPERSON**, available 15 April 1980.

Qualifications include: Ph.D. degree in entomology; evidence of administrative competence or potential; outstanding record of quality research accomplishments; proven ability to attract extramural funding; commitment to excellence in research, extension, and education, including teaching experience in entomology or related field; and appreciation for the philosophy of the land grant system. Rank and salary commensurate with qualifications and experience.

Major responsibilities are for dynamic leadership and effective administration of entomology research, teaching, and extension programs. The chairperson also coordinates diversified applied and basic research entomology programs throughout the state, including several branch research centers. The appointee will be expected to serve on graduate student research committees and will have opportunities for a personal research program and teaching responsibilities commensurate with administrative duties.

Nominations and applications with current résumé, five professional letters of recommendation, list of publications, and available reprints must be submitted to:

**Dr. Roger D. Akre
Search Committee Chairman
Department of Entomology
Washington State University
Pullman, Wash. 99164
Telephone: 509-335-3681**

Application deadline is 15 January 1980, or until suitable candidate is found.

Washington State University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, and handicapped candidates are encouraged to apply and to identify themselves as such on their applications.

CSIRO POSTDOCTORAL RESEARCH FELLOWS (Two Positions) DIVISION OF ENVIRONMENTAL MECHANICS CANBERRA, ACT, AUSTRALIA

CSIRO has a broad charter for research into primary and secondary industry areas. The organization has approximately 7000 employees, 2400 of whom are research and professional scientists, located in divisions and sections throughout Australia.

GENERAL: research in the division is centered on processes of heat and mass transfer in the natural environment. Transport of energy, water, salts, and gases in the soil-plant-atmosphere system are explored. The division has 26 staff members at present, including ten research scientists, working in the areas of soil physics, solar radiation, fluid mechanics, micrometeorology, and physical aspects of plant physiology. The division is well equipped and has facilities for computing, mobile laboratories for study of the field environment, and an experimental field site located 45 km from Canberra.

1) Reference Number 416/039

Field: PHYSICS OF FERTILIZER USE

Duties: the division's Physical Ecology Programme is investigating the exchange of gaseous nitrogen compounds between soils, plants, and the atmosphere. This research is being broadened to embrace various physical aspects of fertilizer use: the efficacies of fertilizer placement; the transport of nutrients in soils by leaching and dispersion; nutrient absorptior by plants and soils; the effects of the soil microclimate on microbiological activity and chemical transformations in soils. The work aims at improving agronomic techniques for fertilizer use.

The appointee will investigate, through theory and experiment, physical processes involved in the transport, absorption, and loss of fertilizers applied to the soil.

2) Reference Number 416/040

Field: SOIL PHYSICS AND FIELD HETEROGENEITY

Duties: the division's Soil Physics Programme is concentrating on studies of the interaction between water and soil. The appointee will work within this framework, in a study of the variability of field soils and its consequences in terms of the field application of the theory of infiltration and redistribution of water in soil.

The following conditions apply to both positions:

QUALIFICATIONS: a Ph.D. degree in an appropriate experimental field, a capacity for independent research, and an ability to apply the approaches and methods of physics and mathematics.

SALARY: research scientist: \$A15,916 to \$A19,509 per annum. In exceptional circumstances an appointment may be offered at a higher level of salary.

TENURE: a fixed-term appointment of 3 years is envisaged.

APPLICATIONS: stating full personal and professional details, the names of at least two professional referees, and quoting the appropriate reference number should reach:

**The Acting Chief
CSIRO Division of Environmental Mechanics
P.O. Box 821
Canberra City, ACT 2601, Australia**

by 14 December 1979.

POSITIONS OPEN

CLINICAL PSYCHOLOGY DIRECTOR Rhode Island Department of Mental Health, Retardation and Hospitals

CLINICAL PSYCHOLOGY DIRECTOR to develop Psychology and Neuropsychology Program at University-affiliated hospital. The Rhode Island Institute of Mental Health is seeking a senior and experienced clinical neuropsychologist to develop a program in clinical psychology including neuropsychological assessment, research, training, and supervision of a laboratory for clinical and basic electrophysiology. In addition to the director's position, there are six Ph.D.'s with faculty appointments presently on staff and five other faculty-level Ph.D. positions for which the director can recruit. University traineeships are available, as well. There is support for full participation of clinical psychology in the treatment program and for the assumption of administrative leadership by clinical psychologists. Successful candidate will receive a senior appointment in the Department of Psychology at the University of Rhode Island and with the Department of Psychiatry at Brown University. Salary: \$29,064 to \$33,874. Excellent fringe benefits. Application period closes 8 December 1979. This is a classified position under the Merit System Laws of the State of Rhode Island and is subject to a future examination. Submit letter reviewing interests and curriculum vitae to:

Robert B. Becker, M.D.
Medical Director
Institute of Mental Health
Box 8281
Cranston, R.I. 02920

An Equal Opportunity Employer

DIRECTOR, DIVISION OF COMPARATIVE PATHOLOGY—The University of Florida, Department of Pathology, serving the Colleges of Veterinary Medicine and Medicine, seeks a director for its Division of Comparative Pathology. Division has responsibility for service pathology and teaching programs of College of Veterinary Medicine, joint graduate programs, research, and research training in experimental pathology. Applicants should have D.V.M. degree, established research productivity in some area of experimental pathology, and appropriate leadership skills. Recruiting deadline: 1 December 1979; starting date: 20 December 1979; salary negotiable. Apply to: **Richard T. Smith, M.D., Department of Pathology, Box J-275, College of Medicine, University of Florida, Gainesville, Florida 32610.**

Equal Opportunity/Affirmative Action Employer

ENVIRONMENTAL MICROBIOLOGY

The Department of Biological Sciences, Drexel University, is seeking candidates for two postdoctoral positions to be filled before January 1980. The positions are primarily for research on drinking water microbiology and the sampling of water distribution systems. Some participation in the teaching of basic and environmental microbiology is required. Appointments will be made at rank and salary commensurate with the candidates' experience and will be renewable at the end of the 1979-1980 academic year. Send applications with curriculum vitae and names of three references to: **W. O. Pipes, Department of Biological Sciences, Drexel University, Philadelphia, Pa. 19104**

Drexel University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS (THREE) IN MICROBIOLOGY. The Genetics and Cell Biology Group in the Department of Microbiology, University of Alabama in Birmingham, has three vacancies for assistant professorships (tenure-track) for individuals with research expertise in one or more of the following areas: microbial physiology and biochemistry, genetic and biochemical aspects of pathogenicity of nonviral agents of dental or medical significance, and microbial and molecular genetics. Preference will be given to those who have strong credentials for and commitment to developing an independent research program working with prokaryotic or lower eukaryotic organisms and who have interest and aptitude for teaching graduate, medical, and dental students. Positions available during 1980. Salary commensurate with experience but not less than \$22,000 for a 12-month appointment. Send letter outlining current and future research interests, curriculum vitae, bibliography, and names and addresses of three references to: **Roy Curtiss III, Department of Microbiology, Box 11 SDB, The Medical Center, The University of Alabama in Birmingham, Birmingham, Ala. 35294.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITION. Available fall 1980.

The Department of Bacteriology and Public Health at Washington State University invites applications from highly qualified individuals who have demonstrated research competence in the areas of host-parasite or cell-cell interactions. Emphasis should be placed on cell surface interactions which might include recognition, attachment and/or communication events. Applicants must have a Ph.D., strong background in microbiology, and postdoctoral experience.

The successful candidate will be expected to share in the teaching of departmental courses and establish a productive research program. The position is tenure-track at the assistant or associate professor level. Review will begin 1 December 1979. Applicants should submit curriculum vitae, summary of research objectives, and names of three references to: **K. D. Spence, Search Committee Chairman, Department of Bacteriology and Public Health, Washington State University, Pullman, Washington 99164.**

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

FACULTY POSITIONS

The Department of Zoology at the University of Texas at Austin is recruiting to fill two vacancies.

- 1) **GENETICIST** whose research deals with the eucaryotic genome and its structure and/or function. This opening is at the senior level. The areas of greatest interest are: somatic cell, molecular and/or developmental genetics.
- 2) **REPRODUCTIVE PHYSIOLOGIST** whose research is on the vertebrate central nervous system investigated anatomically and/or biochemically. This individual should be able to relate neural processes to reproduction with an emphasis on the former. This position is open at the assistant professor level; however, senior applicants will be considered.

Applicants should submit curriculum vitae, selected reprints, a brief statement of research plans, qualifications for graduate and undergraduate instruction, and names of five references.

Applications should be sent by 1 December 1979 to: **Chairman, Department of Zoology, University of Texas at Austin, Austin, Texas 78712.**

The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN RESPIRATORY PHYSIOLOGY. The Section in Physiology, The University of South Dakota School of Medicine, invites applications for a faculty position in physiology at the assistant professor level. The position is on a non-tenure track with a maximum duration of 4 years; however, the opportunity for a tenure track could be available at that time. The position is available immediately. The duties of this position include working with existing physiology faculty to develop and teach a strong course in medical physiology, to develop a research program in the individual's area of interest, and to participate in the Ph.D. graduate training program. Applicants must have a Ph.D. degree and have completed 1 year of postdoctoral experience in respiratory physiology. Applicants must send curriculum vitae, including bibliography, brief description of research interests, teaching experience, career objectives, and names of three references to: **Joseph D. Welty, Ph.D., Head, Section on Physiology, Division of Biochemistry, Physiology and Pharmacology, The University of South Dakota School of Medicine, Vermillion, South Dakota 57069; telephone: 605-677-5479.** Closing date for receipt of application is 1 January 1980.

Equal Education and Employment Opportunity/Affirmative Action Institution

FACULTY POSITION, ORGANIC CHEMISTRY

Applications are invited for a tenured senior appointment which the Department of Chemistry at Stanford University expects to be able to make in the near future. Applicants must have outstanding research credentials in organic chemistry and a strong commitment to teaching undergraduates as well as graduates. In applying, send curriculum vitae and bibliography to: **Professor K. O. Hodgson, Department of Chemistry, Stanford University, Stanford, California 94305.** *Stanford is committed to Equal Opportunity through Affirmative Action in employment and we are especially eager to identify women and minority persons with appropriate qualifications.* Applications should be received by 15 December 1979.

POSITIONS OPEN

FACULTY POSITION IN MEDICINAL CHEMISTRY AND PHARMACOLOGY—The College of Pharmacy at The University of Michigan—Ann Arbor is considering applications for a tenure-track position at the assistant professor level with the appointment to be effective 1 July 1980. The applicant should have a strong background in synthetic organic chemistry and natural product chemistry with a Ph.D. degree in medicinal chemistry, organic chemistry, pharmacology, or a related discipline. The position will require a high degree of competence and interest in teaching at both the graduate and undergraduate levels. Preference will be given to applicants with postdoctoral experience and the potential for establishing a vigorous research program. All applicants should submit detailed curriculum vitae (including a complete list of publications), a detailed summary of research interests, and three letters of recommendation to: **Dr. Leroy B. Townsend, Chairman and Program Director, Interdepartmental Program in Medicinal Chemistry, College of Pharmacy, The University of Michigan, Ann Arbor, Michigan 48109.** Applications should be received and completed by 20 December 1979.

A nondiscriminatory, Affirmative Action Employer

TWO FACULTY POSITIONS ASSISTANT PROFESSOR

One position for a person with a background in animal virology and a research interest in pathogenesis of virus diseases, host-parasite relationships, and immune response to virus infections.

A second position for an individual with a background in eucaryotic cell biology with a research interest in regulation of cell proliferation, the molecular biology of cell surface, and immunogenetics.

Candidates are expected to develop an active research program with excellent opportunities for collaboration. Teaching responsibilities include clinical health sciences and graduate education.

Send curriculum vitae and the names of three references by 15 February to:

Dr. Lawrence A. Caligiuri
Department of Microbiology/Immunology
Albany Medical College of Union University
Albany, New York 12208

An Equal Opportunity/Affirmative Action Employer

FACULTY POSITION IN PLANT BIOLOGY

The Department of Botany, University of Minnesota, invites applications for a faculty position in one of the following areas: (i) developmental biology of vascular plants, (ii) experimental plant anatomy, and (iii) cell biology of vascular plants.

Examples of areas of interest to the department include cell interactions, cell surfaces, tissue culture, and protoplast research. The position will start 16 September 1980, and is for an assistant professor, although there is a possibility that it might be filled at the associate professor level. Teaching will include an introductory course, an advanced course in area of specialty, and guidance of graduate and undergraduate students. Postdoctoral experience is preferred. Screening will begin 5 January 1980, although applications will continue to be accepted after that date. Send curriculum vitae, transcript of graduate courses, reprints, description of teaching and research objectives and interests, and three letters of reference to: **Chairperson, Search Committee, Department of Botany, 220 Biological Sciences Center, 1445 Gortner Avenue, University of Minnesota, St. Paul, Minn. 55108.**

An Affirmative Action/Equal Opportunity Employer

INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGIST. Position in the Senior Executive Service (SES) of the Federal Civil Service, with the U.S. Army Research Institute for the Behavioral and Social Sciences, Alexandria, Va. **Position:** director, Organizations and Systems Research Laboratory. **Duties:** plan and direct research programs in human factors related to man's role in computerized information systems, intelligence and command and control systems, and engagement simulation. **Minimum qualifications:** Ph.D. (or equivalent professional experience) in one of the technical disciplines of the behavioral and social sciences. Write for Announcement Number SES 14-80 and application forms to: **HQ Military District of Washington Civilian Personnel Directorate (Attn: ANCIV-MPL), Building 305, Ft. Myer, Va. 22211.** Closing date for reply to announcement and submission of application forms is 14 December 1979.

Department of the Army is an Equal Opportunity Employer.

POSITIONS OPEN

FACULTY/STAFF POSITIONS

Several faculty-staff level positions are available in the Division of Natural Sciences/Mathematics at Clark College. Applicants with either a Ph.D. or M.S. with teaching experience in science should send their résumé to: **Dr. O. P. Puri, Divisional Chairman, Clark College, Atlanta, Ga. 30314**, no later than 17 December 1979.

An Equal Opportunity/Affirmative Action Employer

STANFORD UNIVERSITY GEOCHEMIST—PETROLOGIST

The Department of Geology in the School of Earth Sciences invites applications for a faculty position beginning September 1980. Areas of interest include (but are not limited to) geochemical processes in the crust and mantle of the earth including isotope geochemistry, thermodynamics, kinetics, element distribution and phase equilibria studies. Teaching responsibilities might include graduate and undergraduate courses in geochemistry and igneous petrology. Level of appointment is open, but we are particularly interested in a creative person, with a well-established record in research. Applications should include (i) a résumé of education, professional experience, and published research, (ii) a brief statement of plans for future research, and (iii) the names of four references. Send to: **Professor J. G. Liou, Department of Geology, Stanford University, Stanford, Calif. 94305**, by 1 December 1979. *Stanford University is an Equal Opportunity/Affirmative Action Employer.*

GREENHOUSE RESEARCH ASSISTANT

To assist in conducting seed treatment and foliar application studies on a fermentation product being evaluated as a plant growth regulator. Requires a B.S. or M.S. in an appropriate area of plant science, preferably with greenhouse experience. Send résumé to: **Dr. S. D. Bryant, TransAgra Corporation, 1355 Lynnfield Road, Memphis, Tennessee 38138**.

DEPARTMENT HEAD. The Department of Range Science at Colorado State University (CSU) invites applications and nominations for the position of department head. The department has extensive teaching and research programs in range science and related disciplines. Eleven full-time faculty members are involved in undergraduate and graduate teaching, research, and extension. The candidate should have strong interest and/or experience in administration, undergraduate and graduate teaching, basic and applied research and public service. A doctoral degree in range science or related field is required. Send letter of application, résumé, and three letters of reference to: **Dr. E. T. Bartlett, Search Committee, Range Science Department, Colorado State University, Fort Collins, Colorado 80523**. Applications must be received by 15 March 1980. *CSU is an Equal Opportunity Employer and complies with Title IX requirements. Complaints should be filed with the Office of Equal Opportunity, Student Services Building.*

HEAD—DEPARTMENT OF BIOLOGY

Georgia Southern College, a 6800 student, comprehensive college of the University System of Georgia, invites nominations and applicants for position of head, Department of Biology, fall 1980. Sixteen resident departmental faculty; four adjunct faculty at Skidaway Institute of Oceanography; 180 majors; baccalaureate and master's degrees offered. Primary duties administrative, but teaching or research also required.

Please request three confidential letters of recommendation and send résumé and transcripts by 15 January to: **Dr. James H. Oliver, Chairman, Department Head Search Committee, Department of Biology, Georgia Southern College, Statesboro, Georgia 30458**.

An Equal Opportunity/Affirmative Action Employer

VERTEBRATE PHYSIOLOGIST—ANATOMIST. Ph.D. Tenure-track assistant professor appointment; salary commensurate with training and experience; available 1 September 1980. Teaching responsibilities will be in the introductory courses in human anatomy and physiology, and in two general biology lecture courses. Apply before 1 March 1980. Send curriculum vitae and three letters of evaluation to: **Dr. Sturgis McKeever, Chairman, Faculty Search Committee, Department of Biology, Georgia Southern College, Statesboro, Georgia 30458**. *An Equal Opportunity Employer.*

UNIVERSITY OF MAINE AT ORONO STRUCTURAL GEOLOGY-TECTONICS

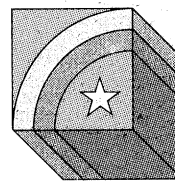
The Department of Geological Sciences invites application for a teaching-research position in structural geology-tectonics. Currently the department has an established focus in Quaternary geology and is developing a second focus in the reconstruction of ancient orogens. We are seeking a person both experienced and active in field work and one who has an established reputation for applying field studies to the solution of fundamental problems of Appalachian-Caledonide geology. The candidate's research should be independent but complementary to that of the department. Success in developing or continuing competitive, nonuniversity sources of research funding is essential. Primary consideration will be given to hiring at the associate or full professor level, although candidates with less experience but with exceptional potential will also be considered. Courses to be taught would be consistent with the successful candidate's background and interests and would include upper level undergraduate and graduate courses in structural geology and tectonics. Potential exists for a program relationship with the geotechnical and environmental faculty of the Civil Engineering Department.

The starting date of the position is 1 September 1980. The Ph.D. is required. Rank, salary, and conditions of employment will be commensurate with qualifications and are negotiable. Application deadline: 31 December 1979. Interested candidates should send curriculum vitae and the names of three referees to:

**Chairman
Department of Geological Sciences
University of Maine at Orono
Orono, Maine 04469**

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

Clinical Associate in Genetics at NIH



The Genetics and Biochemistry Branch, National Institute of Arthritis, Metabolism and Digestive Diseases, National Institutes of Health, is offering a two-year clinical associateship in Genetics. Applicants should be M.D.s with two years of clinical experience. Research experience is preferred. Applications are being accepted now for appointments which begin July 1980.

The Clinical Associate will participate in the NIH Inter-institute Genetics Clinic as well as carry out research in basic molecular genetics involving recombinant DNA techniques.

A competitive salary is available for candidates qualifying for appointment in the Commissioned Corps, United States Public Health Service. A portion of the salary is tax exempt, moving and travel expenses are paid and health care is free in the Corps. A comparable civilian fellowship is also available.

For further information and an application form, write to:

The Associate Program
Bldg. 31, Room 4B04
National Institutes of Health
Public Health Service
9000 Rockville Pike
Bethesda, MD 20205.

*An NIH Associate Training Program
An Equal Opportunity Employer*

BIOTECHNOLOGY OF BIOMASS PROCESSING

SOLAR ENERGY - COLORADO

The SOLAR ENERGY RESEARCH INSTITUTE located 15 miles west of Denver in the foothills of the Rockies is forming a multidisciplinary R&D group in the Biological and Chemical Conversion Branch. This group will be responsible for the biological conversion of biomass to produce fuels and chemical feed stocks. An integrated tripartite set of disciplines will be formed.

Resulting positions available:

1. Chemical/Biochemical Engineering:

- CHEMICAL/BIOCHEMICAL ENGINEERING task leader - Senior Position - Ph.D., 5-12 years of fermentation experience, (pilot-or full-scale), sound knowledge of chemical engineering unit operations and industrial process economic evaluation experience is required.
- CHEMICAL ENGINEER-MS/PhD, 3-5 years experience with process flow sheeting including graphic interactive techniques, process design and economic evaluations required.
- BIOCHEMICAL ENGINEER-PhD, 3-5 years fermentation technology experience.

2. Microbial Genetics:

- MICROBIAL GENETICS, task leader - Senior Position-PhD, 6-12 years experience in eukaryote and prokaryote genetics, yeast specialization is helpful.
- MICROBIAL PHYSIOLOGIST/GENETICIST-MS/PhD, 3-5 years research experience with physiology and genetics of industrial micro-organisms.

3. Biochemistry:

- MOLECULAR GENETICIST-MS/PhD, 3-5 years research in recombinant DNA work required, eukaryote genetics experience helpful.
- ENZYMOLOGIST-PhD, 3-5 years experience in enzyme isolation, enzyme kinetics and mechanism, cellulases and/or hemicellulases required.

Qualified applicants are invited to submit resumes in confidence (no phone calls) including salary history, publications and professional references to:



ALL REPLIES ARE CONFIDENTIAL

Personnel Services R-DL,
**SOLAR ENERGY
RESEARCH INSTITUTE**
A Division of Midwest
Research Institute
1617 Cole Blvd.
Golden, Colorado 80401

A DOE Contractor

An Equal Opportunity Employer M/F/H/V

POSITIONS OPEN

GENETICIST (Assistant Professor)

Tenure-track position to begin 1 September 1980. Responsibilities include teaching courses in introductory zoology and in area of specialization. Ph.D. required; postdoctorate and previous teaching experience desired. Productive research in developmental genetics preferred; other subspecialties of genetics considered. Send curriculum vitae and three letters of reference by 7 January 1980 to: **Dr. Robert C. Bullock, Genetics Search Committee, Department of Zoology, University of Rhode Island, Kingston, Rhode Island 02881.**

An Affirmative Action/Equal Opportunity Employer

IMMUNOLOGIST/IMMUNOCHEMIST

Lancer, a rapidly growing division of Sherwood Medical Industries engaged in the development and manufacture of laboratory supplies, reagents, and medical diagnostic devices, has a unique opportunity for an experienced research-oriented immunologist or immunochemist to direct our research and development effort in the area of cancer immunodiagnostics.

Candidates should have a Ph.D. in biochemistry, microbiology, or immunology with experience in the cancer immunodiagnostic field and a demonstrated ability to organize and direct the research activity of subordinates.

Knowledge of FDA approval procedures is helpful.

This person is responsible for the evaluation and development of new cancer immunodiagnostic products in cooperation with the product management and manufacturing functions and serves as liaison with outside research facilities, clinics, and hospitals.

Located in a modern facility in the Bay area, this position, reporting to the Division Director of Research and Development, offers a competitive salary, excellent benefits, and an opportunity to work with an innovative, highly technical peer group.

If you are qualified and interested, please send résumé, complete with salary history in confidence, to: **The Industrial Relations Manager, 1149 Chess Drive, Foster City, Calif. 94404.**

**LANCER DIVISION
SHERWOOD MEDICAL INDUSTRIES
A BRUNSWICK COMPANY**

Equal Opportunity Employer, M/F/H

MICROBIOLOGY LABORATORY INSTRUCTOR

Doctorate required, to supervise beginning and service course microbiology laboratories starting August 1980. Nontenure-track position; salary dependent upon training, experience, and availability of funds; appointment will be 50 percent assistant professor, 50 percent research microbiologist. Appointee will be encouraged, but not required, to join an existing research program within the department, and if qualified, can be involved in graduate research supervision. Send résumé and names of three references to: **R. D. DeMoss, Department of Microbiology, 131 Burrill Hall, University of Illinois, Urbana, Ill. 61801, by 10 January 1980.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

MICROBIOLOGIST. Tenure-track position beginning September 1980. Ph.D. required; teaching experience desired. Share in the teaching of microbiology, immunology, and general biology. Rank open; salary competitive. Submit résumé, graduate and undergraduate transcripts, and three recent letters of recommendation to: **Dr. Steve D. Chalgren, Chairman, Department of Biology, Radford University, Radford, Virginia 24142.** Application deadline: 3 December 1979. *An Equal Opportunity Employer.*

MICROBIOLOGIST

The Department of Biology, University of Nevada, Reno, announces an opening for a microbiologist at the assistant professor level. Responsibilities include the teaching of introductory microbiology and advanced courses in an area of specialty and general biology courses (general biology or plant biology). The successful candidate must have an earned Ph.D. in an area of microbiology and is expected to direct graduate students as well as develop a strong research program.

Application deadline: 2 January 1980. Application forms and details from: **Chairman, Search Committee, Department of Biology, University of Nevada, Reno, Nevada 89557.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

MASS SPECTROMETRY MICHIGAN STATE UNIVERSITY

The Department of Biochemistry invites applications and nominations for a tenure-track faculty position with responsibility as co-director of the Michigan State University Mass Spectrometry Facility. The successful applicant will have a Ph.D. degree with academic training in mass spectrometry and a strong background in organic chemistry and will have demonstrated an interest in collaboration with basic and clinical science colleagues in the applications of mass spectrometry to medical and biochemical problems. Evidence of an ability to develop an independent, funded research program in mass spectrometry is also essential. Teaching responsibilities will be in the area of bioorganic chemistry for graduate students and special topics in mass spectrometry. The salary and level of appointment will be commensurate with the individual's academic qualifications and experience. Send curriculum vitae and bibliography to: **Dr. Charles C. Sweeley, Department of Biochemistry, Michigan State University, East Lansing, Michigan 48824.** *An Equal Opportunity/Affirmative Action Employer.*

MOLECULAR GENETICIST

ASSISTANT PROFESSOR, Ph.D., molecular genetics, tenure-track, beginning 15 August 1980. Postdoctoral experience preferred. Research in animal systems, teaching in general genetics and area specialty. Send curriculum vitae, reprints, and three reference letters before 15 January 1980 to: **Professor W. W. Doane, Chairperson, Search Committee, Department of Zoology, Arizona State University, Tempe, Arizona 85281.**

Affirmative Action/Equal Opportunity Employer

NEUROPSYCHOLOGIST. Two tenure-track positions at senior and junior professional rank, effective September 1980. The positions involve teaching, supervision of Ph.D. students, and ongoing experimental research. Research experience is required in a relevant specialty in adult or developmental neuropsychology. Clinical experience is desirable. Send curriculum vitae, summary of research, teaching, and clinical interests along with names for recommendations to: **John Stamm, Search Committee, Department of Psychology, State University of New York, Stony Brook, N.Y. 11794.**

Equal Opportunity/Affirmative Action Employer

The **DEPARTMENT OF PATHOLOGY** at the University of Pittsburgh School of Medicine wishes to recruit a member for its Division of Experimental Pathology. The position will entail research and teaching to medical students and to graduate students. There are ample clinical opportunities for research programs needing them. The major areas of interest in the division are immunology and tumor biology. The level of academic appointment will be commensurate with the candidate's qualifications. Reply with curriculum vitae to: **Thomas J. Gill, M.D., Department of Pathology, University of Pittsburgh School of Medicine, Room 716 Scaife Hall, Pittsburgh, Pa. 15261.** *An Equal Opportunity/Affirmative Action Employer.*

PHYSICAL CHEMISTRY

An academic research position is available for a person interested in the problem of describing the behavior of solutions in molecular terms. Duties include collaboration on experimental studies of the interaction of small organic molecules with lipid bilayers, supervision of an exceptionally well-equipped laboratory funded by three major research grants, and a limited amount of teaching. Applicant should have a Ph.D. in physical or surface chemistry or closely related fields and two or more years of postdoctoral training. Title, rank, and salary are dependent upon qualifications and experience. An appointment will be made no later than 1 July 1980. *Minorities and women are encouraged to apply.* Applicants should submit curriculum vitae, representative publications, and the names of three references to: **Professor Stephen H. White, Chairman, Department of Physiology, University of California, Irvine, California 92717.**

PHYSIOLOGIST, ASSISTANT PROFESSOR, tenure-track, open September 1980. Teach physiology course(s) in specialty and human anatomy. Maintain research program with involvement at cellular level. Ph.D. required; postdoctoral experience desirable. Submit résumé, transcripts, research plan, and three letters of recommendation before 15 January 1980 to: **Dr. Lee Meserve, Biological Sciences, Bowling Green State University, Bowling Green, Ohio 43403.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

PLANT ECOLOGIST

Terrestrial plant ecologist to develop and teach a basic (sophomore/junior) course in plant ecology as well as upper-division and graduate-level courses in ecology. Excellence in teaching must be demonstrated. The successful candidate is expected to develop an active research program in his/her area of specialization which should complement existing research and instructional programs of the department.

Applicants should send curriculum vitae, transcripts, details of research interests, reprints, and letters of reference from three people qualified to evaluate the applicant's teaching and research abilities to:

**Dr. Alan L. Baker, Acting Chairman
Department of Botany and Plant Pathology
University of New Hampshire
Durham, New Hampshire 03824**

Closing date for completed applications is 15 December 1979. *The University of New Hampshire is an Equal Opportunity/Affirmative Action Employer.*

STATE UNIVERSITY OF NEW YORK AT BUFFALO Department of Biological Sciences POPULATION GENETICIST

Beginning September 1980, a tenure-track position will be available in the Department of Biological Sciences at the assistant professor level in the area of population genetics. Applicants must have 2 to 3 years of postdoctoral experience in their area of expertise and be able to demonstrate the potential for setting up an independent research program and demonstrate the potential for superior teaching.

To apply, submit curriculum vitae, including bibliography, statement of research interests, teaching background, and have at least four referees send references directly to: **Dr. Om P. Bahl, Chairman, Department of Biological Sciences, State University of New York at Buffalo, 109 Cooke Hall, Amherst, N.Y. 14260.**

Application deadline: 15 December 1979.

State University of New York at Buffalo is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL CHEMIST. Anticipated 2-year position, 1 February 1980 to 31 January 1982. Ph.D. in organic or biochemistry for research on the chemistry and microbiology of sea-surface films. Experience in amino acid chemistry is preferred. Salary: \$16,300 (11 months). Send curriculum vitae and names of three references to: **Dr. P. M. Williams, Institute of Marine Resources, Scripps Institution of Oceanography, University of California, San Diego, A-018, La Jolla, California 92093.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOWS

Positions available for Ph.D. or M.D. in cancer related research in: (i) cell kinetic effects of irradiation, drugs, and radiation-drug combinations on normal and malignant cell populations, (ii) human tumor biology, (iii) virus leukemias, and (iv) cancer immunobiology. Positions (up to 3 years) available immediately. Cancer Research Unit is closely associated with Divisions of Radiation Oncology and Medical Oncology. Send curriculum vitae, summary of past research, and names of references to: **Dr. Samuel W. Leshner, Cancer Research Unit, Allegheny-Singer Research Corporation, 320 East North Avenue, Pittsburgh, Pa. 15212.**

POSTDOCTORAL POSITION available immediately for work on the interaction of radiation-induced amino acid radicals with proteins and peptides, and the identification of binding sites of protein-amino acid adducts. Previous experience with amino acid analysis, chemical modification of proteins, peptide mapping, and sequencing desirable. Salary: \$13,000. Please contact: **Dr. L. K. Mee, Department of Radiology, Harvard Medical School, 50 Binney Street, Boston, Mass. 02115.** Telephone: 617-732-2185.

POSTDOCTORAL POSITION-NEUROSCIENTIST to join active group in sensorimotor integration for collaboration in study of mammalian respiratory rhythmogenesis. Experience with single unit recording essential. Salary starting at \$12,000, commensurate with experience. Send curriculum vitae to: **J. L. Feldman, Department of Physiology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Ill. 60611.**

Department Head Position

Nominations and applications are invited for the position of Head, Electrical Engineering Department, Carnegie-Mellon University. Qualifications sought include earned doctorate, established reputation in Electrical Engineering, experience in teaching and education, leadership and administrative abilities. Candidates should qualify for the rank of Full Professor. Applications, including resume, list of publications and references should be received prior to November 15, 1979.

Contact:

Dr. M.H. Kryder
Chairman, Search Committee
Electrical Engineering
Department
Carnegie-Mellon University
Pittsburgh, PA 15213

Carnegie-Mellon University is an Equal Opportunity Employer.

Physician/Scientist

Exceptional opportunity to contribute to important research programs in the Department of Clinical Pharmacology/International at Merck Sharp & Dohme Research Laboratories.

Reporting to the Sr. Director of Clinical Pharmacology, the successful candidate will be responsible for the early (Phase I-II) clinical evaluation of new compounds.

An M.D. is required and a Ph.D. would be an advantage. A record of scientific scholarship and achievement must be demonstrated, and experience in academic or industrial clinical pharmacology is desirable, but not essential.

Merck is a pacesetter in the growing health care industry and a world leader in the manufacture of ethical pharmaceuticals, nutritional products, biologicals and related chemicals for human and animal use. We offer a commensurate salary plus outstanding benefits. Our location: a campus like setting 25 miles from New York City. For further information, please reply in confidence to Susan B. Jenkins,



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DEAN

XAVIER UNIVERSITY OF LOUISIANA COLLEGE OF PHARMACY

Applications are now being accepted for the position of Dean of the College of Pharmacy at Xavier University of Louisiana in New Orleans, La. As the chief administrative officer, the individual is expected to give constructive leadership, participate in the affairs of pharmaceutical organizations, demonstrate progressive interest in the educational process, encourage development of research, be involved in public affairs as needed, manage the budget, and act as director of pharmacy grants.

The applicant should have demonstrated leadership and administrative ability, capacity to generate funds from both private and public sources, and successful experience as a college or university teacher. An initial degree in pharmacy is preferred. He or she should be known and active in national pharmaceutical circles and should have an understanding of the function of an urban inner city institution of higher education and the present and future challenges to be confronted in the delivery of health care services and the role of pharmacy in expanded responsibilities therein. He or she must have a commitment to minority education.

The salary shall be negotiated commensurate with the candidate's qualifications and experience. Interested individuals should submit a letter of application and résumé to:

Emile J. LaBranche, Chairman
College of Pharmacy
Dean Search Committee
Xavier University of Louisiana
7325 Palmetto Street
P.O. Box 65
New Orleans, Louisiana 70125

Equal Opportunity/Affirmative Action Employer

PHARMACOLOGY LABORATORY SCIENTIST (M.S.)

Boehringer Ingelheim Ltd. has an opening in its new and expanding Pharmaceutical Research and Development Center in Ridgefield, CT. The preferred candidate will have a B.S., M.S. in Immunology or equivalent plus several years industrial experience in cell-mediated immunology and classical anti-inflammation research.

Competitive salary and benefits package combined with a period of long term corporate growth create a unique environment for individual contribution and reward.

Interested candidates should forward detailed resumes with salary history to:

William G. Kuchta



**Boehringer
Ingelheim**

90 East Ridge, P.O. Box 368, Ridgefield, CT 06877

An Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL, OCEANOGRAPHY—THREE POSITIONS

Three postdoctoral positions in physical oceanography to work on numerical modeling of linear and nonlinear wave processes and air-sea interaction for interpretation of remote sensing information. Three positions available by January 1980. Analytical and computational experience applied to oceanography desirable. Send résumé and names of references before 1 December 1979 to: Erik Mollo-Christensen, Room 54-1726, Massachusetts Institute of Technology, Cambridge, Mass. 02139. Telephone: 617-253-6281. *Massachusetts Institute of Technology is an Equal Opportunity/Affirmative Action Employer.*

Three POSTDOCTORAL POSITIONS are available in the Cooperative Institute for Marine and Atmospheric Studies (CIMAS) for research in climate related ocean variability. Applications are encouraged particularly from persons interested in numerical ocean modeling, statistical processing of satellite and conventional data, and the relevant aspects of boundary layer dynamics. Salary dependent on background and qualifications. CIMAS is located on the marine campus of the University of Miami next to the NOAA Atlantic Oceanographic and Meteorological Laboratories. Close cooperation is maintained with both NOAA and university scientists. Please send résumé, names of three references, and statement of interests to: E. B. Kraus, Director, CIMAS, 4600 Rickenbacker Causeway, Miami, Fla. 33149.

POSTDOCTORAL POSITION at the University of Colorado in Boulder is available immediately. Research training in endocrine pharmacology and interest in perinatal toxicity and carcinogenicity. Strong background in steroid hormone action and modern biochemical and immunochemical techniques recommended. Salary: \$12,000 and up. Applicants should send their curriculum vitae and names of three references to:

Dr. Leland W. K. Chung
Pharmacology/School of Pharmacy
University of Colorado
Boulder, Colo. 80309

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

POSTDOCTORAL POSITION for BIOCHEMIST with an interest in genetic and evolutionary problems. Work will involve enzyme purification, characterization and other biochemical studies using *Drosophila*. Skills in enzyme purification and immunological techniques are desirable. Position is available immediately. Send résumé, summary of previous research experience, and names of three references to: Dr. David Sullivan, Department of Biology, Syracuse University, Syracuse, New York 13210. Deadline for applications is 15 December 1979.

Syracuse University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL (RESEARCH ASSOCIATE) POSITIONS available after 1 January 1980, for persons with interest in bacterial parasite-host interactions, pathogenesis, immunology, particularly at mucosal (enteric) surface(s). Background and experience in genetics, plasmids, outer membrane antigens, proteins, polysaccharides, and toxins desirable. Salary competitive. Send curriculum vitae, statement of current interests and goals, recent reprints, and three letters or recommendation to: Dr. Richard A. Finkelstein, Department of Microbiology, School of Medicine, University of Missouri-Columbia, Columbia, Mo. 65212. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE to study the biosynthesis of extracellular glycoproteins involved in articular cartilage lubrication. A strong background in cell culture and molecular biology techniques preferred. Please send curriculum vitae and the names of three references to: Dr. David A. Swann, Massachusetts General Hospital, Fruit Street, Boston, Massachusetts 02114.

POSTDOCTORAL RESEARCH ASSOCIATE—Position available for study of the immunological and biochemical characterization of a nonpathogenic variant of *Candida albicans*. A Ph.D. with background in biochemistry and molecular biology is desirable. Send résumé and names of three references to: Dr. H. R. Buckley, Department of Microbiology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for a recent Ph.D., to study the quantitative morphology of bone. Research areas include disuse osteopenia, treatment of osteoporosis, bone cell kinetics, and radiation-induced bone cancers. Salary: \$12,000 to \$14,000. Send résumé and three letters of recommendation to: Dr. Webster S. S. Jee, Radiobiology Division, Pharmacology Department, Building 522, University of Utah, Salt Lake City, Utah 84112. *An Equal Opportunity/Affirmative Action Employer.* Deadline for applications: 31 December 1979.

POSTDOCTORAL POSITION IN REPRODUCTIVE ENDOCRINOLOGY for chemical and structural studies of the initiation of spermatogenesis, in conjunction with ongoing program involving studies of gonadotropin and steroid controls of steroidogenic pathways, de novo steroid synthesis and induction of gonadotropin receptors in isolated testicular cells. Contact: Dr. J. P. Wiebe, Hormonal Regulatory Mechanisms Laboratory, Zoology Department, University of Western Ontario, London, Ontario, Canada N6A 5B7.

IMMEDIATE POSTDOCTORAL POSITIONS in molecular contractility. Background in biochemistry/biophysics or related area required, experience in general biochemical procedures desirable. (i) For study of transient kinetics of ATPase, experience in fast kinetics helpful. (ii) For study of protein-protein and protein-metal interactions by fluorescence methods, experience with fluorescence, other spectroscopic methods and/or on-line computers desirable but not essential. Stipend: \$11,000 to \$13,000 per year, with possibility of renewal for 1 or 2 years. Send curriculum vitae and names of two references to: Dr. H. C. Cheung, Box 104, DSB, University of Alabama Medical Center, Birmingham, Ala. 35294. *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately for studies on the regulation of intracellular protein degradation by hormones and nutrients. Requires Ph.D. in biochemistry or related area and experience with mammalian cell culture. Funding is available through an NIH postdoctoral training grant for at least 2 years. Please send curriculum vitae and names and addresses of three references to: Dr. J. Fred Dice, Department of Physiology, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115.

FOUR POSTDOCTORAL POSITIONS. The Departments of Pharmacology and Physiology, Medical College of Virginia, have four postdoctoral/research associate positions available to study the effects of chronic hypertension on the pharmacology (Dr. R. J. Freer), biochemistry (Dr. G. D. Ford), metabolism (Dr. R. N. Pittman), and mechanical properties (Dr. S. P. Driska) of vascular smooth muscle. Interested investigators should send curriculum vitae and names of three references to: Dr. Richard J. Freer, Department of Pharmacology, MCV Station, Box 613, Medical College of Virginia, Richmond, Virginia 23298. *Medical College of Virginia is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately to study the regulation of ovarian gonadotropin receptors and adenylate cyclase activity in vivo and in cultured cells. Background in cell culture and biochemistry or cell biology are required. Experience in reproductive endocrinology is desirable. Send curriculum vitae and references to: Dr. C. Y. Lee, Department of Pathology/Laboratory Medicine, The University of Texas Medical School at Houston, Houston, Texas 77030. *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Available 1 January 1980, for a recent Ph.D. in biochemistry or related discipline. The project involves purification and study of proteases of macrophages. Interaction of cellular proteases with protease inhibitors will be emphasized. Annual salary: \$12,000, plus fringe benefits. Please send curriculum vitae to: Dr. Eileen Remold-O'Donnell, Center for Blood Research, 800 Huntington Avenue, Boston, Mass. 02115. *An Affirmative Action/Equal Opportunity Employer*

POSTDOCTORAL RESEARCH ASSOCIATE

Position available to investigate role of mixed function oxidase and related metabolites in chemically induced lung disease. Salary: \$14,500. Send résumé, transcripts, and names of three references to: James R. Carlson, Department of Animal Sciences, Washington State University, Pullman, Wash. 99164.

Washington State University is an Equal Opportunity/Affirmative Action Employer, M/F/H.

POSITIONS OPEN

POSTDOCTORAL POSITION available now for ellipsometric studies of films at fluid interfaces. This experimental research comprises part of a program that addresses critical issues in the fundamental nature of the transition region between fluid phases at equilibrium. Laboratory experience with optics, liquid solutions, and computer analysis desirable. Contact: Professor Ben Widom, Department of Chemistry, Baker Laboratory, or Professor Watt W. Webb, Applied Physics, Clark Hall, Cornell University, Ithaca, New York 14853. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN MOLECULAR IMMUNOLOGY. For research on the involvement of mouse histocompatibility antigens in the immune response using purified, liposome-incorporated H-2 antigens as in vitro probes for cytotoxic T cell recognition structures and as in vivo probes for their tolerizing and immunizing capabilities. Knowledge of immunology required. Initial appointment for 1 year and may extend to 3 years if the individual can obtain outside fellowship support. Available salary: \$12,000 per year. Effective 1 January 1980. Send curriculum vitae and three letters of recommendation to: Duane W. Sears, Department of Biological Sciences, University of California, Santa Barbara, Santa Barbara, Calif. 93106. *An Equal Opportunity/Affirmative Action Employer.*

A position is immediately available in the Institute for Biotechnological Research Ltd. (Gesellschaft für Biotechnologische Forschung mbH, Braunschweig, Germany) for a

POSTDOCTORAL RESEARCH ASSISTANT

for work on diagnosis of leucoses by cell surface markers, and monoclonal antibodies against serum components. Applicants should hold a degree in biochemistry or medicine.

Salary will be from DM40,880 to DM48,250 per annum. Applications, with curriculum vitae and publication list, should be sent not later than 1 December 1979 to: The Gesellschaft für Biotechnologische Forschung mbH, Mascheroder Weg 1, D 3300 Braunschweig-Stöckheim, Germany.

The University of California, Irvine, College of Medicine, has POSTDOCTORAL RESEARCH POSITIONS available in the Department of Microbiology in the areas of immunology, regulation of mammalian cell growth, enzyme regulation in bacteria and mammalian cells, and development, genetics, and nucleic acid metabolism of microorganisms. Applicants must have a Ph.D. and a background in the quantitative aspects of biochemistry, microbiology, or genetics. Stipends are provided from several sources, including research and training grants. Interested individuals should write: Chairman, Department of Microbiology, College of Medicine, University of California, Irvine, California 92717. *An Affirmative Action Employer.*

POSTDOCTORAL RESEARCH POSITION. Glycoprotein and glycolipid membrane biochemists are wanted to study the immunochemical structure of a parasite which causes malaria. Send curriculum vitae, appropriate publications, and three letters of reference to:

Dr. Robert T. Reese
Rockefeller University
1230 York Avenue
New York, N.Y. 10021

POSTDOCTORAL RESEARCH POSITION

Available immediately for M.D./Ph.D. investigating behavioral and metabolic aspects of human food and water intake regulation in diabetes and obesity. Strong interest and/or background in intermediary metabolism, catecholamine metabolism, physiologic psychology, neuropharmacology and/or neuroendocrinology is desirable. Send curriculum vitae and references to: Dr. Dean A. Thompson, University of Rochester School of Medicine, Monroe Community Hospital, Rochester, New York 14603. Telephone: 716-473-4080, extension 368.

A limited number of POSTDOCTORAL RESEARCH POSITIONS become available from time to time. Appointments are funded through research grants awarded to faculty members and are usually for 1 year, sometimes renewable. For a list of faculty members who have postdoctoral positions available, write, but do not send applications, to:

Office of the Chairman
16 Divinity Avenue
Cambridge, Mass. 02138

Harvard University is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR

Center for Human Growth And Development The University of Michigan

The University of Michigan seeks a director for its Center for Human Growth and Development. This nationally known, multidisciplinary research unit has 18 scientists with supporting facilities for laboratory and field investigations in the biological and behavioral sciences. Current research areas include physical growth and nutrition, developmental biology, developmental psychology and craniofacial biology. The director's responsibilities involve leadership in establishment and enhancement of the center's programs, budget and personnel management, and representation of the unit to the university community and public. Qualifications include a distinguished record of research accomplishment in an area within the center's interests; proven ability in personnel and fiscal management, staff development, and communication; and academic credentials justifying a tenured faculty appointment in The University of Michigan. The appointment will be joint between the center and an appropriate academic department. Applications, supporting letters, and nominations should be sent to:



The University of Michigan

Dr. William R. Dawson, Chairman
Division of Biological Sciences
Ann Arbor, Michigan 48109

Closing date: 15 January 1980.

A non-discriminatory, affirmative action employer.

SPECIAL ASSISTANT FOR RISK ASSESSMENT

National Institute of Allergy and Infectious Diseases, National Institutes of Health, Public Health Service is seeking a senior outstanding microbiologist or infectious diseases expert to develop a program in risk assessment for recombinant DNA research. The primary responsibility will be to work with NIH staff, the Recombinant DNA Advisory Committee, and the scientific community to assess risk areas of DNA research and to determine the needs for a program of experiments to obtain data not otherwise available. The appointee will work as a special assistant to the Director of the Institute who has responsibility for the HEW Program of Risk Assessment.

Because the long-range need for a permanent full-time Director of Risk Assessment cannot be foreseen at this time, the initial appointment will be made through an Intergovernmental Personnel Act Agreement with the parent educational or research institution. This agreement will provide reimbursement to the institution for salary and fringe benefits for a two-year period. Alternately, an expert appointment for two years could be available. Moving expenses are payable by the government.

Inquiries or applications can be addressed to the Director, National Institute of Allergy and Infectious Diseases, NATIONAL INSTITUTES OF HEALTH, Bethesda, MD 20205. Applications should be by letter and accompanied by a curriculum vitae and bibliography by January 2, 1980. An Equal Opportunity Employer.

NATIONAL INSTITUTES OF HEALTH

Range Animal Nutritionist

Overseas Assignment

The Kuwait Institute for Scientific Research is a rapidly expanding institute for applied science and technology. We are currently seeking a Researcher who is interested in a challenging career in range animal nutrition.

You should have a Ph.D. and previous experience in range animal nutrition, preferably dealing with sheep. We also require a minimum of 2-4 years' experience in range animal studies and academic training in an arid region plus a thorough knowledge of laboratory and field techniques of range/sheep studies.

Kuwait Institute offers attractive salaries commensurate with qualifications and experience, furnished housing, liberal fringe benefits including round trip air tickets and free medical benefits.

Please airmail your complete resume by **January 1, 1980** to: **Mr. Habib Al-Sahhaf, Personnel Manager, Kuwait Institute for Scientific Research, P.O. Box 24885, Safat, Kuwait, State of Kuwait.**

**Kuwait Institute for
Scientific Research**

Odense University Denmark

PROFESSOR IN PHOTOSYNTHESIS

We again invite applications for the new position as professor in Photosynthesis at the Institute of Biochemistry. The position is available for occupation as soon as possible.

It is desired to appoint a person, whose research activities are experimental investigations of the functions of the photosynthetic membrane systems in eukaryotes and/or prokaryotes. A part of the current research in the Institute is concerned with electron transport in respiratory and photosynthetic systems, and the Institute is well equipped with special apparatus for this type of work.

The successful applicant will be expected to participate in the teaching programme of the Institute, which includes elementary courses common to science and medical students, advanced courses for science students and supervision of advanced project work.

Further information is obtainable from Institute of Biochemistry, Odense University, telephone (09) 15 86 00, ext. 2441.

The application should contain information about the candidate's teaching experience.

The employment field covers the Ministry of Education and the institutions under it. The wage frame is 37, and the salary amounts to Danish Kroner 230.520,24 a year inclusive of bonuses as per the 1st October, 1978.

A professional selection committee will discuss the applications and their recommendation will be sent out to all applicants in its complete form.

Applications received until now will be taken into consideration if they are not withdrawn.

Application in 5 copies, marked "Position No. 745" enclosing curriculum vitae and documentation for professional and pedagogical activities must be made to the Queen and sent together with all enclosures also in 5 copies to: Journalkontoret, Odense University, Campusvej 55, DK 5230 Odense M, Denmark, so that we will receive it on the 2nd January, 1980 as the latest.

POSITIONS OPEN

PREDOCTORAL AND POSTDOCTORAL TRAINING IN NEUROBIOLOGY AND MEMBRANE BIOPHYSICS UNIVERSITY OF MIAMI SCHOOL OF MEDICINE

The Department of Physiology and Biophysics emphasizes cellular and molecular approaches to biological problems and offers training in neurobiology, developmental neurobiology, and membrane biophysics. Traineeships, fellowships, and assistantships are available. For details write: **Dr. S. J. Socolar, Department of Physiology and Biophysics, R430, University of Miami School of Medicine, Box 016430, Miami, Fla. 33101. An Equal Opportunity/Affirmative Action Employer.**

DEPARTMENT OF ANESTHESIOLOGY WASHINGTON UNIVERSITY SCHOOL OF MEDICINE (BARNES HOSPITAL, ST. LOUIS)

Searching for **PROFESSOR AND HEAD** of Department of Anesthesiology at Washington University School of Medicine and **ANESTHESIOLOGIST-IN-CHIEF** at Barnes Hospital. Research accomplishments particularly important. Submit curriculum vitae with complete bibliography to:

M. K. King, Dean
Washington University School of Medicine
Box 8106
660 South Euclid Avenue
St. Louis, Missouri 63110

PROFESSOR/ASSOCIATE PROFESSOR IN PHYSIOLOGICAL/COMPARATIVE PSYCHOLOGY. The Department of Psychology at the University of Florida seeks a faculty member with an active research program, teaching capabilities in the physiological/comparative area, and strong interests in interacting with other members of our active and extensive neurobiological science community. The position is available immediately; salary is highly competitive. Applicants should send curriculum vitae, a summary of research plans, and three letters of reference to: **Dr. Carol Van Hartsveldt, Psychology Department, University of Florida, Gainesville, Florida 32611. An Equal Opportunity/Affirmative Action Employer.**

DISTINGUISHED PROFESSORSHIP AT THE UNIVERSITY OF PITTSBURGH

A **Chair of Molecular Biology** is to be established within the Department of Biological Sciences. Conditions of employment, that is, salary, laboratory space, funds for equipment and remodeling, and teaching load, are exceptionally attractive. Consideration will be given to truly outstanding investigators, regardless of present rank, working in diverse fields (that is, neural and endocrine function, cell biology, gene regulation, and so forth). Curriculum vitae should be sent by individuals applying directly or by nominators to: **Maurice Sussman, Professor and Chairman, Department of Biological Sciences, University of Pittsburgh, Pittsburgh, Pa. 15260.**

The University of Pittsburgh, acting in the spirit and the letter of Affirmative Action regulations, actively encourages applications from women, minority members, and other individuals covered by the mandates of Title IX.

TENURED PROFESSOR position available fall 1979 in Department of Human Oncology. M.D. degree and academic experience required. Develop laboratory and clinical pharmacology program in oncology. Duties include conducting own laboratory research program, advising junior faculty in pharmacological research, conducting clinical phase I trials, attending on oncology service, and supervising graduate students and fellows in pharmacological research. Send curriculum vitae and references to: **Director, Wisconsin Clinical Cancer Center, K4/614 Clinical Science Center, 600 Highland Avenue, Madison, Wis. 53792.**

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RESEARCH ASSISTANT POSITION

Opportunity to participate in basic research project investigating the regulation of growth and metabolism of cultured human fibroblasts. Applicants should have a bachelor's degree with emphasis in chemistry and a desire to learn modern biochemical and cell culture techniques. Annual stipend: \$8500. Send curriculum vitae and names of three references to: **Dr. James D. Russell, Division of Genetics and Molecular Medicine, School of Graduate Studies, Meharry Medical College, Nashville, Tennessee 37208.**

An Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

BARNARD COLLEGE OF COLUMBIA UNIVERSITY, DEPARTMENT OF PSYCHOLOGY, has two openings for 1980-1981, one at the assistant and the other at the associate professor level. We are seeking candidates who can teach two or more of the following courses: sensation and perception with laboratory, statistics, physiological psychology with laboratory, and personality. Computer skills are desirable. For one individual, facilities are available in the animal research area, and for the other individual, facilities for working with human subjects are available. An active research program is essential. Candidates should send curriculum vitae and letters of recommendation by 31 January 1980 to: **Dr. Rae Silver, Chairman, Psychology Department, Barnard College of Columbia University, 606 West 120 Street, New York, N.Y. 10027. Barnard College is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE POSITION

Available 1 December 1979. Recent Ph.D. or M.S. with extensive laboratory experience, preferably with background in collagen biochemistry, to study the regulation of collagen metabolism during the process of cellular senescence in human diploid fibroblasts. Funding currently available for 3 years with an annual stipend of \$12,000. Persons demonstrating exceptional ability in this position will be considered for a permanent appointment. Send curriculum vitae and names of three references to: **Dr. James D. Russell, Division of Genetics and Molecular Medicine, School of Graduate Studies, Meharry Medical College, Nashville, Tennessee 37208.**

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RESEARCH ASSISTANT with training in microsurgery and master's degree or 7 years of experience needed to join project utilizing intracellular recording techniques in turtle spinal cord during the production of rhythmic motor neuron activity in the laboratory of Dr. Paul S. G. Stein. Duties will include surgical preparation of spinal cord and peripheral nerves for electrophysiological recordings. Send résumé to: **Personnel Office, Washington University, St. Louis, Mo. 63130; telephone: 314-889-5990. An Equal Opportunity Employer.**

RESEARCH ASSOCIATE POSITIONS open immediately in the fields of molecular biology and cellular and molecular immunology. Please send résumé and a list of three references to: **Search Committee, Department of Microbiology and Immunology, University of Illinois at the Medical Center, 836 South Wolcott Street, Chicago, Ill. 60612.**

RESEARCH ASSOCIATE. Analysis of carbohydrate structure and conformation in glycoproteins, with emphasis on instrumental physical chemistry. The research will involve such techniques as gas chromatography, HPLC, mass spectrometry of oligosaccharides, circular dichroism, and NMR. Salary range: \$11,000 to \$15,000, depending on qualifications and experience. Send curriculum vitae and three letters of recommendation to: **Dr. C. Allen Bush, Department of Chemistry, Illinois Institute of Technology, Chicago, Ill. 60616. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE, WATER RESOURCES RESEARCH, in Civil Engineering Department of Massachusetts Institute of Technology (MIT). Position requires advanced degree in water resources and hydrology, experience in hydropower systems, probabilities and random processes, system optimization and control theory, and stochastic hydrology. Salary: \$18,000 to \$21,000 per year; 40-hour week. A knowledge of Spanish is helpful.

Please submit résumé to: **MIT Personnel Office, 400 Main Street, Cambridge, Mass. 02139. Attention: Job Number R79-304. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH POSITION IN PHARMACOLOGY, available immediately, to direct the Physical Dependence Evaluation Unit of the Drug Abuse Basic Research Program. Appointee will evaluate the effects of new drugs in morphine-dependent rhesus monkeys and will collaborate with other senior investigators in related interdisciplinary research projects. Ph.D. degree and experience in handling primates are highly desirable. Send curriculum vitae and the names of three references to: **Henry H. Swain, M.D., Department of Pharmacology, The University of Michigan Medical School, Ann Arbor, Mich. 48109. The University of Michigan is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE POSITION for a Ph.D. to study the disposition of radon daughters in simulated uranium mine environment. Experience in one or more of these areas: turbulent flow fluid dynamics, radioactivity counting techniques, heterogeneous adsorption kinetics. Position of up to 3 years starting immediately; salary of \$12,500 to \$13,500. Send résumé and three names of references to: **Dr. Philip K. Hopke, Environmental Research Laboratory, University of Illinois, Urbana, Ill. 61801. The University of Illinois is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE/STAFF SCIENTIST positions for Ph.D. and M.S. degree holders with specialties in the fields of toxicology, geochemistry, hydrology, and atmospheric sciences in small consulting firm specializing in multidisciplinary, technically complex, regulatory problems of the mining and petroleum industries. Salaries based on education and applicable experience. Telephone for interview or send résumés and transcripts to:

Everett and Associates
416 Hungerford Drive
Rockville, Maryland 20850
Telephone: 301-279-2606

RESEARCH SPECIALIST IN PLANT PATHOLOGY. Full-time position. Beginning salary: \$14,500. Conduct research program on plant inhabiting spiroplasmas. Ph.D. in plant pathology required, with demonstrated research productivity. Knowledge of and experience with spiroplasma and familiarity with techniques such as electrophoresis, DNA-DNA hybridization, and radioisotopes preferred. Contact: **Dr. R. A. Cappellini, Chairman, Department of Plant Pathology, Cook College, Rutgers University, New Brunswick, New Jersey 08903.**

SENIOR SCIENTIFIC PROGRAMMER

A Washington University research program in molecular modeling and graphics has a position available for a senior staff member to assist in the development of application software and support of a National Collaborative community. The community currently involves ten research groups who are using the MMS-X Computer Graphics System, developed by the Computer Systems Laboratory, for research on the structure and function of biologically important molecules.

Candidates should have a graduate research degree with experience in crystallographic computing and in the use of both high performance graphics and minicomputer systems. The salary will depend on qualifications and experience. Applications should include a résumé and should be supported by letters of reference directed for the attention of:

Dr. C. D. Barry
Director, MMS-X National
Collaborative Research Program
Computer Systems Laboratory
724 South Euclid Avenue
St. Louis, Mo. 63110

UNIVERSITY OF MINNESOTA STRATIGRAPHER/ SEDIMENTARY PETROLOGIST

Permanent tenure-track position starting fall 1980 at the assistant professor level. The candidate must have a Ph.D. with interest in stratigraphy of sedimentary petrology and is expected to teach in those fields at the undergraduate and graduate level. Submit résumé, academic records, and three letters of recommendation by 30 January 1980 to: **Dr. Thomas C. Johnson, Department of Geology and Geophysics, 108 Pillsbury Hall, University of Minnesota, Minneapolis, Minn. 55455; telephone: 612-376-1167. The University is an Equal Opportunity/Affirmative Action Employer.**

VISITING SCIENTIST POSITION

**The Joint Institute for the Study
of the Atmosphere and Ocean (JISAO)
University of Washington**

Visiting scientist with background in physical oceanography and interests in dynamical and/or geochemical aspects of climate variability including large-scale air-sea interaction. Term of appointment: 1 year. Closing date: 15 December 1979. Send curriculum vitae and a brief research prospectus to: **John M. Wallace, Interim Director, JISAO c/o Department of Atmospheric Sciences AK-40, University of Washington, Seattle, Wash. 98195.**

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This position will be responsible for new product development in the physiological research area. Background in physiological research plus a mechanical or electrical engineering discipline required. Advanced degree helpful.

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We are currently seeking candidates in the following areas:

- **Cell Biology/Immunology:** for new product development; Ph.D. required. Should have experience with GMP requirements.
- **Protein Purification Utilizing HPLC:** two positions to expand research capabilities. M.S. required.
- **Microbial Genetics:** several positions available to assist in broadening our current capabilities. M.S. degree and experience with cloning and plasmids required.
- **Immunodiagnostic Production:** B.S./M.S. with minimum of 4 to 5 years of immunochemistry, specializing in production of anti-serum products, human reference standards and controls, and related immunodiagnostics. Supervisory position. GMP.

Salary commensurate with background and experience. Full benefits package offered. Interested candidates should submit résumé in complete confidence to:

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6715 Electronic Drive
Springfield, Virginia 22151
Attention: Code R30

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MELOY

Meloy Laboratories, Inc.
6715 Electronic Drive-R30
Springfield, Virginia 22151

U.S. PUBLIC HEALTH SERVICE TRAINING IN EPIDEMIOLOGY

The U.S. Public Health Service (USPHS) invites applications for a new training program in medical epidemiology. Up to fifteen (15) persons per year, who already have M.D. or equivalent health professional degrees, may be accepted as Commissioned Officers in the USPHS for a three-year period of duty. Applications received by January 4, 1980 may be considered for service to begin July 1, 1980. During the first year, each successful applicant will attend a university of his/her choice, at government expense, as a candidate for the M.P.H. or equivalent degree. During the subsequent two years, trainees will work in association with senior epidemiologists in the participating USPHS agencies (Alcohol, Drug Abuse, and Mental Health Administration, ADAMHA, Center for Disease Control, CDC; Food and Drug Administration, FDA; National Center for Health Statistics, NCHS; National Center for Health Services Research, NCHSR; and the National Institutes of Health, NIH), primarily in research studies. A matching procedure akin to the national internship matching will be employed to assure that each trainee is assigned to a preceptor whose area of expertise is of interest to the trainee, and consistent with his/her further career plans.

Pay and allowances for trainees will be those established for USPHS Officers. The normal starting rank will be Senior Assistant (O3), corresponding to an annual salary of \$23,000 for a medical officer with dependents. During the second and third years, qualified officers will have the option of receiving variable incentive pay (\$9,000 to \$12,000 per annum) in addition to normal salary increases.

Basic requirements for admission to the program are: (1) M.D. or equivalent health professional degree, and one or more years of post-doctoral clinical training; (2) U.S. citizenship, and ability to satisfy physical and other ancillary requirements for a USPHS Commission; (3) Acceptability to an accredited university offering an M.P.H. or equivalent degree.

For further details of the program, and for application forms, send inquiries to: Robert S. Gordon, Jr., M.D., Special Assistant to the Director, NIH, NATIONAL INSTITUTES OF HEALTH, Building 1, Room 216, Bethesda, MD 20205. Equal Opportunity Employer.

NATIONAL INSTITUTES OF HEALTH

TRAINING PROGRAMS

RESPIRATORY PHYSIOLOGY TRAINING PROGRAM funded by NHLBI. Postdoctoral traineeships available for 1 to 3 years. Areas of research include gas transport, red blood cells, microcirculation, neonatal physiology, aortic body and carotid body chemoreceptors, lung metabolism, lung cells (type II and pleural), smooth muscle, lung innervation, tissue oxygenation, mitochondrial function, and control of respiration. Write to: **Education Officer, Respiratory Physiology Group, Department of Physiology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania 19104.**

MYCOLOGY—Predoctoral training program in medical mycology for research orientation into immunologic or biochemical problems associated with a pathogenic fungus. The program offers a broad background in microbiology, biochemistry, and training in medical mycology. Supported by a National Service Award in Medical Mycology. Personal stipend and full tuition provided. Interested graduate and undergraduate students should apply to: **Dr. H. R. Buckley, Department of Microbiology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140. Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS

CARDIOVASCULAR SURGERY FELLOWSHIP—Available starting July 1980 at the Miami Heart Institute; opportunities for 1 or 2 years of clinical and research training. The experience includes Clinical Vascular Laboratory, experimental and clinical research, and cardiovascular surgery. Send curriculum vitae and statement of career goals to: **Dr. Jeff Raines, Miami Heart Institute, 4701 North Meridian Avenue, Miami Beach, Fla. 33140.**

POSTDOCTORAL FELLOWSHIP in membrane biology with application to cancer chemotherapy. Positions available for Ph.D.'s who desire a comprehensive background in membrane biology with application to the study of anti-cancer agents. The program is multidisciplinary and involves faculty in biophysics, physiology, and pharmacology. Experimental models include mammalian cells, membrane vesicles, and liposomes. Network thermodynamic modeling is employed to characterize drug-cell interactions that encompass transport, drug-target interactions, and the effects of drugs on cellular biochemical processes. American citizenship or permanent visa required. For further information, send curriculum vitae to: **Dr. I. David Goldman, Department of Medicine, Box 663, Medical College of Virginia, Richmond, Virginia 23298.**

POSTDOCTORAL OR RESEARCH ASSOCIATE. Janice Gram Fellowship established for study of motor neuron disease. Position available January 1980 for M.D. or Ph.D. Neuron-neuron and neuron-glia relationships in vitro; emphasis on neuroendocrinology and receptor autoradiography. Background in neuroanatomy and/or neuroendocrinology preferred. Salary to \$15,000. Submit curriculum vitae and three references to: **Dr. L. P. Weiner, Department of Neurology, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles, California 90033. Equal Opportunity/Affirmative Action Employer.**

RESEARCH FELLOWSHIP

A postdoctoral cytogeneticist or molecular biologist, with experience in human karyotyping, is required to participate in a project on the analysis of chromosomes from human solid tumours.

The appointment is for 3 years. Salary with entry according to qualifications and experience within range £5990 to £7434 including L.A. For further information telephone: **Dr. E. Solomon on 242-0200 extension 426.** Applications with curriculum vitae and names of two referees should be sent to: **The Secretary, Imperial Cancer Research Fund, Lincoln's Inn Fields, London W.C.2, England, quoting reference 408/79.**

SMITHSONIAN FELLOWSHIPS

Predoctoral/postdoctoral fellowships in anthropology, biology, and earth sciences. Tenable at Smithsonian's museum, laboratory, field, and research facilities for 6 to 12 months. Deadline: 15 January 1980. Contact: **Office of Fellowships and Grants, Smithsonian Institution, L'Enfant Plaza 3300, Washington, D.C. 20560.** Awards are based upon merit, without regard to race, color, religion, sex, national origin, or age of any applicant.

FELLOWSHIPS

POSTDOCTORAL RESEARCH FELLOWSHIPS

Available in respiratory physiology beginning July 1980. Send résumé plus the names of two references to:

**Dr. S. M. Tenney
Department of Physiology
Dartmouth Medical School
Hanover, N.H. 03755**

PREDOCTORAL FELLOWSHIPS IN PHYSIOLOGY. Training in cardiovascular, cell, endocrine, muscle, neuro-, renal, and respiratory physiology. Applicants must submit GRE scores (verbal, quantitative, and one advanced test). Deadline for applications is 16 April 1980. For application materials, write: **Department of Physiology, West Virginia University Medical Center, Morgantown, W.Va. 26506.**

POSTDOCTORAL FELLOWSHIP Environment and the Lungs

Postdoctoral fellowship (M.D. or Ph.D.) of 1- to 3-year duration is available for a candidate with a strong background in chemistry (preferably with some experience in geology) and biochemistry. Position open immediately.

Please send curriculum vitae, bibliography, and other information to:

**William S. Lynn, M.D.
Department of Biochemistry
Box 3711
Duke University Medical Center
Durham, North Carolina 27710**

POSTDOCTORAL FELLOWSHIP

Applications are invited for a NRSA postdoctoral fellowship in association with a multidisciplinary Hematology Training Program at the Sloan-Kettering Institute for Cancer Research. The primary goals of the program are to train and conduct research in the following areas:

- 1) Identification and characterization of erythropoietin responsive cells,
- 2) Refinement of clinical bone marrow transplantation,
- 3) Genetic disorders in red cell enzymes,
- 4) Interaction of leukocytes with other hematopoietic elements, and
- 5) Fundamental research of HLA.

The awards, for 1 year with the possibility of renewal, are open to U.S. citizens or permanent residents who have an M.D., Ph.D., or equivalent degree, and who have had no more than 3 years of postdoctoral experience. Please submit curriculum vitae and at least three letters of reference to:

**Dr. Malcolm A. S. Moore
Director, Hematology Training Program
Sloan-Kettering Institute for Cancer Research
1250 First Avenue
New York, N.Y. 10021**

BIOCHEMICAL PHARMACOLOGY. Postdoctoral fellowship, early 1980. Enzymology and HPLC background desirable. Studies of biosynthesis and inhibition of formation of pyrimidine-containing nucleotides by extracts, cultured cells, and murine and human neoplasms in mice. Coordination with collateral synthetic programs. Send curriculum vitae and names of three references to: **A. D. Welch, St. Jude Children's Research Hospital, Box 318, Memphis, Tenn. 38101. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH FELLOWSHIPS

**Simpson Memorial Research Institute
University of Michigan Medical School**

NIH training positions available July 1980, for M.D.'s or Ph.D.'s in broad field of hematology/oncology. Major research programs in: (i) immunology (macrophage/lymphocyte studies), (ii) leucocyte biochemistry, (iii) hematopoiesis, (iv) clinical and laboratory pharmacology, (v) tumor cell kinetics and biochemistry, (vi) gene expression in normal and malignant cells, (vii) corticosteroid receptor modulation in lymphoid cells, (viii) coagulation, (ix) platelet function and metabolism, (x) red cell biochemistry, (xi) hemoglobinopathies, and (xii) biochemical mechanisms of immunodeficiency states.

Applications should include curriculum vitae, two letters of recommendation, and indication of major research interests. Send application or letter of inquiry to: **Dr. Albert F. LoBuglio, Simpson Memorial Research Institute, University of Michigan, 102 Observatory Road, Ann Arbor, Mich. 48109.**

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FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP IN EXPERIMENTAL HEMATOLOGY/ONCOLOGY—A postdoctoral position is immediately available for an individual to investigate in vitro aspects of normal and malignant hematopoiesis. Experience desired in tissue culture, cell separatory procedures, and biochemical characterization of biologically active molecules. Send résumé and request that three letters of recommendation be sent to:

**Dr. Martin J. Murphy, Jr., Director
The Bob Hipple Laboratory for Cancer Research
Wright State University School of Medicine
3525 Southern Boulevard
Dayton, Ohio 45429**

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ASSISTANTSHIPS

GRADUATE ASSISTANTSHIPS. The Division of Cell and Molecular Biology, Department of Biological Sciences, offers assistantships carrying a 12-month stipend of \$5000, plus tuition waiver. A firm grounding in chemistry, genetics, or biochemistry is desirable. Information and application forms may be obtained from: **Division of Cell and Molecular Biology, Department of Biological Sciences, State University of New York at Buffalo, Amherst, N.Y. 14260.**

ASSOCIATESHIPS

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Competitive applications are now being accepted for postdoctoral research associateships, starting 1 October 1980, in the areas of behavioral sciences, environmental stress, immunology, microbiology, parasitology, pathology, toxicology, and underwater biomedical research. Candidates must have received their doctoral degree (M.D., Ph.D., D.V.M., or Sc.D.) within the last 5 years. Salary will be \$19,263 per annum. Completed application forms are due not later than 15 January 1980. Information and application forms may be obtained by writing to: **The National Research Council Associateship Office (JH 608-N2), 2102 Constitution Avenue, NW, Washington, D.C. 20418. An Equal Opportunity Employer.**

TRAINEESHIPS

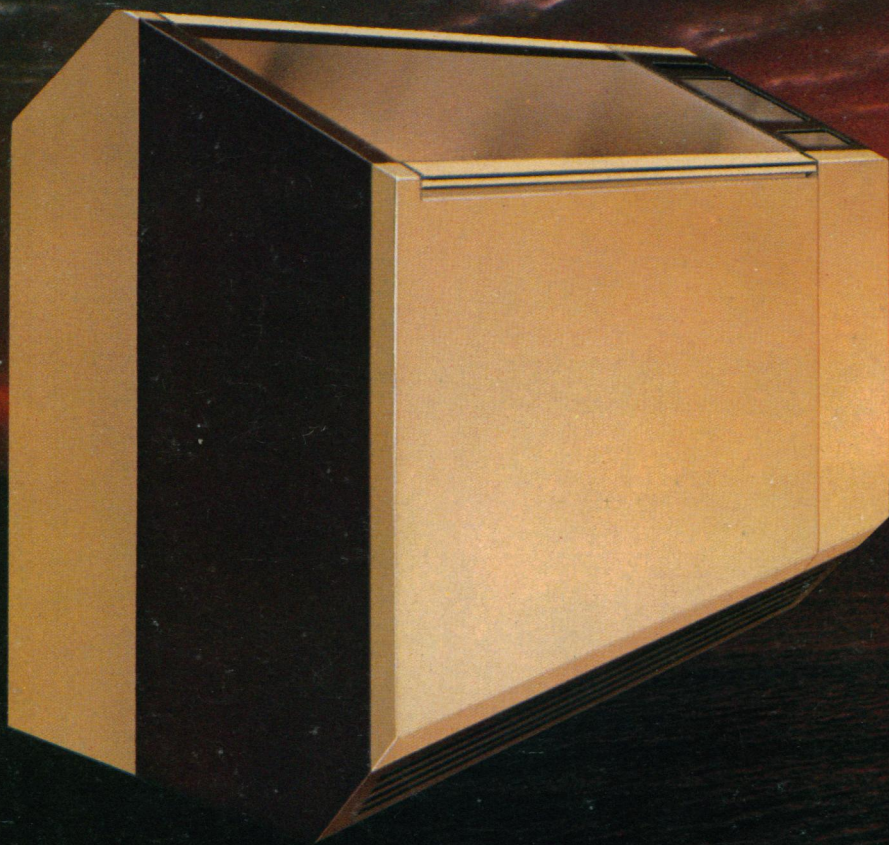
NIH PRE- AND POSTDOCTORAL TRAINEESHIPS IN REPRODUCTIVE BIOLOGY. Traineeships will be sponsored by the Departments of Anatomy and Physiology at the University of Oregon Health Sciences Center (UOHC) and the Oregon Regional Primate Research Center (ORPRC). Applications from pre- and postdoctoral students with backgrounds in all basic science areas are welcome; applicants must be U.S. citizens or permanent residents. Send inquiries to: **Dr. H. M. Weitlauf, Department of Anatomy, University of Oregon Health Sciences Center, Portland, Oregon 97201; telephone: 503-225-7811. UOHC and ORPRC are Equal Opportunity Employers.**

POSTDOCTORAL TRAINEESHIP

Pulmonary Training Program funded by NHLBI. Available July 1980 for 1 to 3 years. Program will provide training in biochemical, cellular, and immunological approaches to the lung. Research includes: enzymes of the pulmonary vasculature, oxidant damage to lung, cell cultures from trachea, alveolar epithelium and vascular endothelium, regulation of surfactant synthesis and secretion, cell-mediated immunity, innervation of airways and lung vasculature, and regulation of contractile proteins in vascular smooth muscle. Contact: **Barry Fanburg, M.D./William Douglas, Ph.D., Tufts-New England Medical Center, 171 Harrison Avenue, Boston, Mass. 02111.**

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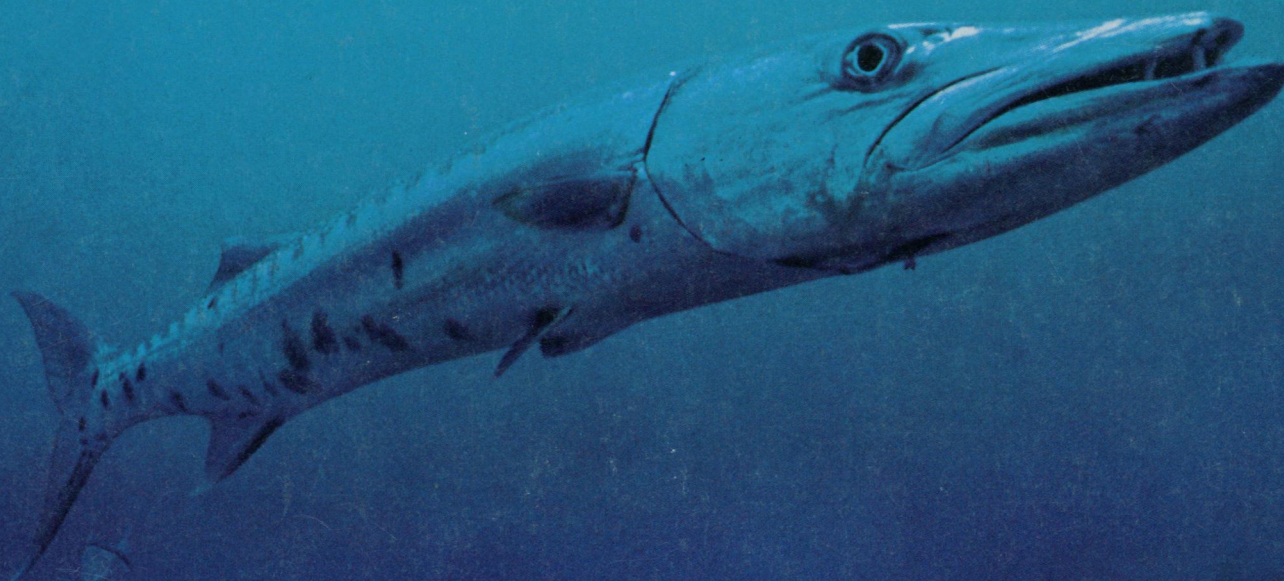
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