

BARRIER FREE MEETINGS

a guide for professional associations

- Do you attend meetings?
- Do you arrange meetings?
- Do you host meetings?

Do some people who should be at your meetings encounter barriers to their attendance? Then **BARRIER FREE MEETINGS: A Guide for Professional Associations** is a AAAS publication you need.

BARRIER FREE MEETINGS, produced by the AAAS Project on the Handicapped in Science, is based on our experiences at the 1976 AAAS National Meeting. We removed barriers for our physically disabled colleagues—to the benefit of all attendees—and we can show you that making a meeting accessible is not that difficult.

The **Guide** gives you step-by-step directions on how to provide easy access to all phases of a meeting. A detailed time-line takes you through the four basic stages of meeting planning: *Initial Preparation*, to *Pre-Meeting Activities*, through *The Meeting* itself and the essential *Follow-Up*. Appendixes provide many examples of forms, publicity pieces, resource lists, and drawings that illustrate accessibility modifications for meeting facilities.

Join us
**MAKE YOUR MEETINGS ACCESSIBLE TO ALL
YOUR MEMBERS**

The **Guide** is available for \$4.00 per copy; \$3.75 to AAAS members. (Checks payable to AAAS.)
Remittance must accompany orders under \$5.00.)

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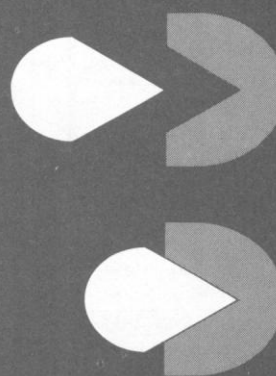
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1. Harper, J. F. and Brooker, G., *J. Cyclic Nucleotide Res.* 1, 207 (1975).



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Personnel Placement

POSITIONS WANTED

Biochemist-Nutritionist. Ph.D. Seeks full-time research position in academia, industry, or government. Box 58, SCIENCE. X

Biologist/Psychologist. Ph.D. 1973, postdoctorate. Broad interdisciplinary background in social behavior of mammals, taste, olfaction, biopsychology. Publications. Knowledge of rodenticides and registration procedures. Seeks challenging position in industry, government, or academia. Box 59, SCIENCE. X

Human Geneticist (Ph.D.), with 3 years of experience in all phases of medical genetics, seeks challenging position. Box 41, SCIENCE. X

Medical Entomologist-Parasitologist. M.S., Ph.D., M.P.M.P.H.; experience in teaching, research, and administration; publications; 12 years of overseas experience in tropical medicine research. Desires senior academic position. Box 33, SCIENCE. X

Mycologist/Botanist/Microbiologist. Ph.D. 1970, 1-year postdoctoral, university faculty. Excellent teacher, extensive publications, aggressive and resourceful in obtaining grants. Draws students into fundable, publishable research; effective in placing students. Seeks academic position with opportunity for rapid advancement. Available June 1977 or June 1978, as desired. Box 60, SCIENCE. X

Pharmaceutical Chemist, expecting Ph.D. fall 1977. Isolation, identification of natural products (alkaloids). Screening of natural products, anti-inflammatory screening. Biometrics and bioassay. Good synthetic medicinal chemist. Experience in GC, HPLC, TLC, and so forth. Interpretation of ^{13}C NMR, ^1H NMR, MS, IR, UV, and so forth. Good industrial pharmacy background. Pilot plant studies. Seeks postdoctorate/industry/teaching position. Box 61, SCIENCE. X

Translator. Scientific articles written in German or French expertly translated into English. D. Blair, B.A., M.A., M.Sc. Box 62, SCIENCE. X

Experienced biomedical and geological literature translator. Chinese to English. Charges reasonable. Advertiser, 80 Sussex Street, Hamilton, Ontario, Canada L8S 2E3. X

Vertebrate Biologist/Ichthyologist/Aquatic Ecologist, Ph.D. 1973. Experience, publications; desires relocation and new challenge. W. J. Hauser, 1267 Wensley Avenue, El Centro, California 92243; telephone: 714-352-0111. X

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR: Life sciences; teaching specialist for elementary and nursing physiology and biology. Develop lab program, media generated (computer software or other programmed) instructional materials. Instruction of 300 students per semester. Research in academic area desirable; creativity in pedagogy mandatory; innovative proposals for educational extramural resources. Salary and rank competitive. Send curriculum vitae and three letters by 5 March to **R. H. Meints, Director, School of Life Sciences, University of Nebraska, Lincoln, Nebraska 68588.** An Equal Opportunity Employer.

GRASSLAND COMMUNITY ECOLOGIST with strong theoretical background (community energetics and dynamics) to teach systems ecology and introductory courses; expected to develop research program utilizing recently acquired grassland natural areas; evidence of research success (publications/grants) desirable. Salary and rank competitive; send curriculum vitae, reprints, and three reference letters by 1 March to: **R. E. Ballinger, Chairman of Ecology Search Committee, School of Life Sciences, University of Nebraska-Lincoln, Lincoln, Nebraska 68588.** University of Nebraska-Lincoln is an Equal Opportunity Employer.

POSITIONS OPEN

Marquette University School of Dentistry is seeking an **ANATOMIST** for its basic science faculty. Must have Ph.D. responsibilities including teaching and research. Send curriculum vitae to **Dr. Joseph Abramowitz, Associate Dean, Marquette University School of Dentistry, 604 North 16th Street, Milwaukee, Wisconsin 53233.** An Equal Opportunity Employer.

ASSISTANT DIRECTOR-FISCAL AFFAIRS, Ohio Agricultural Research and Development Center, Wooster, Ohio. Opening 1 July 1977. Requirements: ability in fiscal matters and research administration; Ph.D. degree or equivalent in agriculture, home economics, natural resources, or economics; legal training desirable but not required. Forward nominations or letters of interest with résumé by 1 March to **Dr. Francille M. Firebaugh, Ohio Agricultural Research and Development Center, 1787 Neil Avenue, Columbus, Ohio 43210.** An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR POSITION

Department of Geological Sciences
The University of Texas at Austin

An assistant professor position is available in the field of structural geology, preferably with specialization in either analytical structural geology or rock mechanics.

The successful applicant for this position will be expected to participate in undergraduate teaching programs that include structural geology and field geology, in addition to graduate courses in the individual's specialty.

Applicants for this position must hold the Ph.D. degree. Qualified persons should send a complete résumé including names of references and a statement of research interests and planned research projects to:

Dr. Robert E. Boyer
Department of Geological Sciences
The University of Texas at Austin
Austin, Texas 78712

ASSISTANT PROFESSOR OF BIOLOGY AT UCLA

The Department of Biology invites applications from highly qualified individuals with a commitment to teaching and research in plant morphology. Teaching responsibilities include participation in the introductory biology course, and advanced undergraduate course in plant morphology plus advanced courses and seminars in the area of the applicant's research interests. Research may range from cellular to organismic approaches involving morphogenetic problems in multicellular systems. A curriculum vitae, list of publications, names of three references to be used for letters of recommendation, and a summary of research interests should be sent to: **Chairman, Search Committee, Department of Biology, University of California, Los Angeles, Calif. 90024.** Closing date for application is 1 March 1977.

An Equal Opportunity/Affirmative Action Employer

DEPARTMENT OF RADIOLOGICAL SCIENCES UNIVERSITY OF CALIFORNIA, IRVINE COLLEGE OF MEDICINE

Applications are invited for a post at the associate professor level in the Section of Therapeutic Radiology at the University of California, Irvine, College of Medicine. This will be a full-time position with responsibilities for teaching at undergraduate and graduate levels and for clinical research and service in the University of California, Irvine Medical Center. The applicant should be a Board-certified radiologist with postcertification experience in therapeutic radiology in a university medical school, and must be prepared to engage in ongoing research and to develop new research protocols. *Applications from all qualified candidates are welcome; minorities and women are encouraged to apply.* Applications, including a short biography and copies of any publications, should be sent to:

Eric N. C. Milne, M.B., Ch.B., F.F.R.
Professor and Chairman
Department of Radiological Sciences
University of California, Irvine
College of Medicine
Irvine, California 92717

Closing date: 1 April 1977.

Note: This supersedes a previous position available at the assistant professor level.

POSITIONS OPEN

ANATOMIST. Faculties of Medicine and Dentistry. Applications invited for position in Department of Anatomy (oral biology). Available immediately. Dental qualification, teaching and research experience. Excellent research facilities. Send curriculum vitae and names of three referees to **Dr. R. E. Grahame, Department of Anatomy, University of Manitoba, 730 William Avenue, Winnipeg, Manitoba, Canada, R3E 0W3.**

ASSISTANT PROFESSOR OF BOTANY. Primary responsibility will be to develop and teach a large introductory botany course on a long-term basis. Candidate must be able to document interest and excellence in introductory teaching. Also to teach an advanced course in her/his specialization, which should complement existing research/instructional programs. Desire to work with graduate students in modest research program required. Qualifications: Ph.D. and teaching excellence. Application deadline: 1 March 1977. Position effective 1 September 1977. Submit curriculum vitae, including concise description of teaching and research background, reprints, future research program, transcripts of undergraduate and graduate grades, and three letters of reference to: **Dr. A. Linn Bogle, Chairman, Department of Botany and Plant Pathology, University of New Hampshire, Durham, New Hampshire 03824.** The University is an Affirmative Action/Equal Opportunity Employer.

The University of Illinois at Urbana-Champaign, has a tenure track position at the **ASSISTANT PROFESSOR** level in **DIFFERENTIAL PSYCHOLOGY** for fall 1977, and is seeking applications and nominations. Applicants should have research/teaching interests in psychological tests and measurements of ability and personality. Further, applicants should be knowledgeable in theory of mental tests and in psychological statistics. Scholarly work of applicants may be in cognate areas such as human abilities, personality traits, information processing, concept formation, and behavior genetics. Applications will be accepted immediately; the closing date is 1 April 1977. *The University of Illinois is an Equal Opportunity/Affirmative Action Employer.* All inquiries and nominations, as well as complete applications (curriculum vitae and three or four letters of recommendation) should be sent to **Professor Ledyard R. Tucker, Department of Psychology, University of Illinois, Champaign, Illinois 61020; telephone: 217-333-3486.**

ASSISTANT OR ASSOCIATE PROFESSOR OF PHYSIOLOGY

The Department of Physiology, University of Arizona, College of Medicine, invites applications from individuals trained in the area of endocrinology to teach and carry on an active program of research. Responsibilities include teaching the endocrine section of a human physiology course for medical and graduate students, advanced courses and supervision of Ph.D. candidates in physiology. Full-time tenure track position. Salary negotiable. Apply with curriculum vitae and names of three references to: **Dr. Paul Johnson, Department of Physiology, Arizona Health Sciences Center, Tucson, Arizona 85724.** An Equal Opportunity/Affirmative Action Employer under state and federal laws and regulations including Title IX, 1972 Education Amendment. Applications must be received by 15 March 1977.

CELL BIOLOGIST

We are seeking applicants in the area of cell biology to fill a full-time teaching position. Appointment will be made at the level of assistant or associate professor. Candidate must possess a Ph.D. in cell biology with major emphasis in eukaryotic organisms. Must be qualified in both animal and plant cell physiology. Strong background in botany desirable. Responsibilities include participation in an introductory biology course, an undergraduate course in cell biology with laboratory, and the opportunity to develop an elective offering in the biology program. Send curriculum vitae, three letters of recommendation, and transcripts by 28 February 1977 to:

Dr. Walter Rathkamp, Chairman
Department of Biology
Saginaw Valley State College
2250 Pierce Road
University Center, Michigan 48710

Saginaw Valley State College is an Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR. Applications are invited for a position as assistant professor starting July or September 1977. We seek a biochemist who will establish a vigorous, significant research program, and who will excel as a teacher. Participation in the teaching of other undergraduate chemistry courses in addition to biochemistry will be expected. Applicants should submit résumé (including research plans and teaching interests), transcripts, and three letters of recommendation to **Professor D. M. Lemal, Chairman, Department of Chemistry, Dartmouth College, Hanover, New Hampshire 03755.** Dartmouth College is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR IN PHARMACOLOGY. Applications are invited for a research/teaching position in the Department of Pharmacology, Yale University School of Medicine. Preferred qualifications include a Ph.D. degree with experience in nucleic acid biochemistry, and a desire to work closely with clinicians interested in pathogenesis and treatment of malignant disease. Submit résumé to **Dr. Joseph R. Bertino, Department of Pharmacology, Yale University School of Medicine, New Haven, Connecticut 06510** by 15 February 1977. Yale University is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

ASSOCIATE DEAN-BASIC SCIENCES. School of Medicine at Mercer University in Macon, Georgia. Developing, community-based school with major goal of educating primary care physicians seeks a person to assume administrative responsibility for recruitment of basic science faculty, for coordination and implementation of the basic science curriculum, and for planning other health-related education programs. Ph.D. and/or M.D., minimum of 6 years of experience in medical/health education required. Salary and fringe benefit package competitive. Appointment on or before 1 July 1977. Mercer University is an Equal Opportunity Employer. No age limitations. Nominations and applications should be sent to **Search Committee, Associate Dean-Basic Sciences, School of Medicine at Mercer University, 1400 Coleman Avenue, Macon, Georgia 31207.** Applications must include up-to-date curriculum vitae, appropriate documentation, and list of five references.

BIOCHEMIST-MOLECULAR BIOLOGIST

The Department of Biochemistry is seeking a junior faculty member to be appointed as an assistant professor for the 1977-78 academic year. Candidates must have a doctoral degree and postdoctoral experience. Research interests in the molecular biology of mammalian cells are desirable but not mandatory. Interested individuals should forward a curriculum vitae with complete bibliography, summary of future research interests, and the names of three references no later than 1 March 1977 to: **Dr. E. G. Sander, Chairman, Department of Biochemistry, West Virginia University School of Medicine, Morgantown, West Virginia 26506.** The University is an Affirmative Action/Equal Opportunity Employer.

BIOSTATISTICIAN

Research biostatistician to plan and conduct studies, to provide consultation to faculty and students in research design. This position is funded for 1977-78 and continuing funding is anticipated. Qualifications are at least a master's degree. Salary open. Contact: **Dr. Richard Seiden, Professor of Behavioral Sciences, University of California School of Public Health, Berkeley, California 94720.** Closing date for applications: 1 March 1977. Position to begin either 1 July or 1 September 1977, depending upon convenience for applicant. The School of Public Health and the University of California at Berkeley are committed to a strong Affirmative Action hiring policy. Women and minorities are urged to apply.

PATHOLOGY CHAIRMAN: The University of Mississippi Medical Center invites applications for the position of chairman of the Department of Pathology. Candidates should send current curriculum vitae and three references to **Dr. James D. Hardy, Chairman, Department of Surgery, and Chairman, Pathology Search Committee, University of Mississippi Medical Center, 2500 North State, Jackson, Miss. 39216.** Equal Opportunity Employer, M/F.

POSITIONS OPEN

CARDIOVASCULAR PHYSIOLOGY

Persons with a doctoral degree interested in a 1-year postdoctoral fellowship to study reflex control of the peripheral circulation in man should please send a résumé, including references, to **Dr. Loring B. Rowell** at the address below.

MUSCLE PHYSIOLOGY

Persons with a doctoral degree interested in a 2-year postdoctoral fellowship to study the calcium and enzymatic control of cardiac and skeletal muscle contraction should please send a résumé, including references, to **Dr. Glenn L. Kerrick** at the address below.

MICROCIRCULATION PHYSIOLOGY

Persons with a doctoral degree interested in a 2-year postdoctoral fellowship to study microcirculation should please send a résumé, including references, to **Dr. Curt A. Wiederhielm** at the address below.

CORONARY PHYSIOLOGY

Persons with a doctoral degree interested in a two-or-more-year research associate position to study the control of the coronary circulation should please send a résumé, including references, to **Dr. Eric O. Feigl** at the address below.

**Department of Physiology and Biophysics SJ-40
University of Washington Medical School
Seattle, Wash. 98195**

An Equal Opportunity Affirmative Action Employer

CHAIRMAN DEPARTMENT OF ENGINEERING AND PUBLIC POLICY

The Department of Engineering and Public Policy of Carnegie Institute of Technology is seeking a chairman. Candidates must hold a Ph.D. or its equivalent in engineering, applied science, applied mathematics, or statistics, and have an outstanding record of research and administrative accomplishment in the field of technology and public policy. Also desired are experience and demonstrated skill in undergraduate and graduate teaching, and policy experience in metropolitan, state, or federal government. Send résumé with full list of publications to:

**Professor Francis C. McMichael
Engineering and Public Policy Search Chairman
Carnegie-Mellon University
Pittsburgh, Pa. 15213**

Carnegie-Mellon University is an Equal Opportunity Employer.

CHIEF OF ANGIOGRAPHY

Applications are invited for the position of chief of angiography at the University of California, Irvine, Medical Center. The successful candidate will be appointed associate or full professor in the Department of Radiological Sciences. The department is presently undergoing expansion and the new chief will have responsibility for designing and selecting equipment for the angiographic laboratories and of instituting a fellowship program. A separate suite of developmental labs for medical imaging is presently under construction on campus in association with the new medical sciences building and unique opportunities exist for both basic and applied interdisciplinary research.

The duties of the position include responsibility for the angiographic service, film reporting, and teaching at graduate and undergraduate levels.

Candidates must have had specialized training in angiography and must be well versed in the latest catheterization techniques, in the use of sophisticated imaging modalities (including magnification) and in the use of "therapeutic" angiography, and should have an extensive bibliography which documents original contributions to the field of angiography and superior abilities as a researcher.

Applications from all qualified candidates are welcome; minorities and women are encouraged to apply. If you are interested in this position please write to the address below including a curriculum vitae, an autobiographical letter, and copies of publications.

Closing date: 1 April 1977.

**Eric N. C. Milne, M.B., Ch.B., F.F.R.
Professor and Chairman
Department of Radiological Sciences
University of California, Irvine
College of Medicine
Irvine, California 92717**

QUEEN ELIZABETH II FELLOWSHIPS PHYSICAL AND BIOLOGICAL SCIENCES

To commemorate the Royal Visit to Australia in 1963 the Australian Government established the Queen Elizabeth II Fellowships Scheme. Under this scheme up to ten fellowships may be awarded each year for full-time research by young scientists of exceptional promise and proven capacity for original work. These are postdoctoral awards tenable in an Australian university or approved research institution normally for 2 years. Tenure of a fellowship is expected to commence within 9 months of the announcement of the award.

QUALIFICATIONS: Queen Elizabeth II Fellows must be either Australian or United Kingdom citizens. They should have a Ph.D., or equivalent qualifications, in one of the physical or biological sciences (which are deemed to include mathematics and the scientific aspects of statistics, engineering, metallurgy, agriculture, and medicine). Awards will, in general, be restricted to applicants who are not more than 30 years of age on the date when applications close.

STIPEND: \$15,082 (Australian) per annum; increased to \$16,248 per annum at age of 28 years.

ALLOWANCES: are payable in respect of a Fellow's dependent spouse (\$500 per annum), each dependent child (\$200), superannuation payments (up to 10 percent of stipend), appropriate insurance coverage, and necessary travel expenses.

APPLICATIONS: persons interested in applying for the above fellowships should obtain application forms and a statement of the conditions of award from the **Secretary, Queen Elizabeth Fellowships Committee, Department of Science, P.O. Box 449, Woden, A.C.T. 2606, Australia; The Minister (Scientific) Canberra House, 10-16 Maltravers Street, London, WC2R 3EH, U.K.; or the Consul General, Australian Consulate General, 636 Fifth Avenue, New York, N.Y. 10020.** Applications for the next round of awards, which will be announced in June 1977 close at the Canberra address on 11 March 1977.



OAK RIDGE ASSOCIATED UNIVERSITIES announces a conference on MARMOSETS IN EXPERIMENTAL MEDICINE

**Oak Ridge, Tennessee
March 16-18, 1977**

The meeting will consider the current status of conservation efforts, evaluation of breeding potential, and the value of the marmoset in a variety of biomedical disciplines, including viral oncology, immunology, infectious diseases, cytogenetics, teratology, and oral pathology. Partial list of speakers: P. Hershkovitz, R. Thorington, J. P. Hearn, R. D. Hunt, R. H. Purcell, M. Hilleman, W. Montagna, H. Rabin, L. W. Wolfe, B. M. Levy.

Organized by N. Gengozian of Oak Ridge Associated Universities, and F. Deinhardt, Rush-Presbyterian-St. Luke's Medical Center; supported by NIH and ERDA. Registration fee: \$120. Includes 3 motel nights, 7 meals, banquet, and social hours.

For information and registration forms write **Marmoset Conference, ORAU, P.O. Box 117, Oak Ridge, TN 37830.**

POSITIONS OPEN

BIOLOGY CHAIRPERSON

Associate professor or professor, beginning 1 September 1977, to coordinate and administer affairs of 29-member department offering bachelor's and master's degrees. Demonstrated ability in teaching and research essential. Administrative experience and evidence of ability to work with faculty desirable. Send résumé, citing three references, by March 1977, to **Dr. Richard Draper, Biology Chairperson Search Committee, Department of Mathematics, George Mason University, Fairfax, Virginia 22030.** George Mason University is a state university near Washington, D.C.

An Affirmative Action/Equal Opportunity Employer

COMPARATIVE ENDOCRINOLOGIST UNIVERSITY OF OREGON

The Department of Biology seeks an assistant or associate professor of comparative endocrinology with Ph.D. for a regular faculty position, September 1977. Postdoctoral experience desirable. Responsibilities are to develop a research program using either invertebrates or vertebrates and to teach endocrinology and physiology. Ample research space is available in a recently constructed building. Salary negotiable. Write for application forms, and send curriculum vitae, a description of research interests, names of three referees, and copies of publications by 15 March to: **Dr. S. S. Tepfer, Head, Department of Biology, University of Oregon, Eugene, Oregon 97403.** The University of Oregon is an Equal Opportunity/Affirmative Action/Title IX Institution.

CURATORIAL POSITION IN MAMMALS: Field Museum is searching for a mammalogist to head its Division of Mammals. Duties include the administration, acquisition, organization, care, and identification of collections. Three or more years of experience with collection management is preferred. A research program of one's own choosing is expected. Salary and rank will be based on qualifications. Appointment effective summer or fall 1977. Initiate application procedures prior to 1 March 1977. Send curriculum vitae and statement of research objectives to: **Harold K. Voris, Division of Reptiles, Field Museum of Natural History, Chicago, Ill. 60605.** Field Museum is an Equal Opportunity Employer.

DEVELOPMENTAL BIOLOGIST

Applications are invited for an assistant professorship in vertebrate developmental biology beginning September 1977. Preference will be given to candidates with postdoctoral experience and who have demonstrated ability to conduct independent research. The successful candidate will be expected to participate in the teaching of embryology, to develop an advanced course in an area of specialization, and to supervise M.S. and Ph.D. students. Applications, including curriculum vitae and letters from three references should be sent to: **Dr. Stanley K. Shapiro, Head, Department of Biological Sciences, University of Illinois, Box 4348, Chicago, Illinois 60680.** Closing date for applications is 7 March 1977. The University of Illinois is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR, OFFICE OF LABORATORY ANIMAL RESOURCES University of Illinois at Urbana-Champaign

The Office of Laboratory Animal Resources (OLAR) is responsible for campus-wide Programs of Laboratory Animal Medicine and Laboratory Animal Care-taking and will supervise development of the new program of Laboratory Animal Resources.

Qualifications: credentials and experience necessary for effective leadership in an academic institution; managerial experience; knowledge and experience in laboratory animal science; familiarity with federal regulations; organization and communication skills. Salary: negotiable; commensurate with experience and achievements.

Starting date: preferably about 1 July 1977.

Deadline for applications: 31 March 1977.

Applicants should submit résumé and names of three references to: **Dr. J. E. Corbin, Office of Vice-Chancellor for Research, University of Illinois, 338 Administration Building, Urbana, Ill. 61801.** Telephone 217-333-3132.

The University of Illinois is an Affirmative Action/Equal Opportunity Employer and encourages applications from minorities and women.

POSITIONS OPEN

DEAN, SCHOOL OF MEDICINE

The University of Texas Medical Branch is seeking candidates who are experienced educator-academics to continue leading the school's vigorous academic growth. Candidates should submit curriculum vitae and references to: **William P. Deiss, Jr., M.D., Chairman, Department of Medicine, University of Texas Medical Branch, Galveston, Texas 77550.** The University of Texas is an Equal Opportunity, M/F, Employer.

DIRECTOR, Infectious and Chronic Disease Division, Diagnostic Laboratory, New York State College of Veterinary Medicine. Duties and responsibilities: (i) organize and direct the infectious and chronic disease division which includes 7 professional and 15 support personnel, and laboratories of virology, bacteriology, parasitology, mycology, and immunology; (ii) coordinate research programs designed to improve both the understanding and diagnosis of animal disease; and (iii) pursue an active, independent research program in an area relevant to animal health. Qualifications: D.V.M., advanced degree, or equivalent experience in either microbiology or pathology, strong research record in field of specialization, and evidence of interest in applying research skills to the problems of diagnostic laboratory medicine. Title and salary will be commensurate with ability and experience. Starting date: immediately. Direct inquiries (curriculum vitae, bibliography, and at least three references) to: **Dr. R. H. Cypess, Director, Diagnostic Laboratory, New York State College of Veterinary Medicine, Cornell University, Ithaca, New York 14853.** An Equal Opportunity Employer.

DIRECTOR, Laboratory Animal Facilities, and CHAIRMAN, Department of Laboratory Animal Science, for major university center supporting five professional schools, five affiliated hospitals, and four research centers. Qualifications include ACLAM certification or equivalent, and experience in research management. Salary commensurate with qualifications and experience. Submit curriculum vitae and references to **Dr. Donald A. Larson, Chairman, Search Committee, State University of New York at Buffalo, 424 Kimball Tower, Buffalo, N.Y. 14214.** Closing date for application is 15 April 1977. State University of New York at Buffalo is an Equal Opportunity/Affirmative Action Employer.

ECOLOGY WEST VIRGINIA UNIVERSITY

The Biology Department anticipates an opening at the assistant professor level for a systems ecologist beginning fall 1977. The person will be in charge of a core course in ecology and present courses for beginning graduate students in biomathematics and his systems specialty. An active research program is expected. Vacancy is dependent upon funding. Applications close 15 April 1977. Send résumé and letter of reference to:

**John DeCosta, Chairman
Biology Department
West Virginia University
Morgantown, W.Va. 26506**

An Equal Opportunity/Affirmative Action Employer

EXPERIMENTAL EMBRYOLOGIST

Applications are invited for the position of assistant professor in the Department of Biology for September 1977. Applicants with Ph.D. degrees should be qualified to teach undergraduate courses in animal embryology, comparative anatomy, and be involved in graduate teaching. Strong commitment to research and postdoctoral experience are required. Please submit résumé to:

**Chairman, Department of Biology
Villanova University
Villanova, Pa. 19085**

Villanova University is an Equal Opportunity/Affirmative Action Employer.

CORNELL UNIVERSITY DEPARTMENT OF GEOLOGICAL SCIENCES

Applications are invited for two junior level **FACULTY POSITIONS**, one to begin in fall 1977, the other in fall 1977 or 1978. Specialties of interest are **exploration geophysics**, particularly **reflection seismology, petrology, and economic geology.** Teaching and research in growing department. Some experience beyond Ph.D. desirable. Send curriculum vitae and names of three references to **Jack Oliver, Chairman, Department of Geological Sciences, Cornell University, Ithaca, New York 14853.** Cornell University is an Equal Opportunity Employer.

POSITIONS OPEN

ENTOMOLOGISTS

A wide variety of positions in field research or administration of pest control programs is available in such countries as Afghanistan, Colombia, El Salvador, Ghana, Mali, and Upper Volta. Appropriate 2-year assignments as Peace Corps Volunteers are open for persons with entomology degrees ranging from bachelor to Ph.D. Write to **Smithsonian-Peace Corps Environmental Program, Department S-4, Smithsonian Institution, Washington, D.C. 29560.**

McMASTER UNIVERSITY McMASTER FELLOWS IN ARTS, SCIENCE, AND ENGINEERING

Applications are invited for a limited number of appointments as McMaster Fellows beginning in the academic year 1977-78. Appointments will normally be made for 2 years with possible renewal for a third year. Fellows will be expected to undertake full-time scholarly research either individually or in collaboration with faculty members in the University. The stipend will be \$16,000 and modest grants will be available to support the research.

Applicants should submit detailed descriptions of their proposed research and should supply the names of three referees who would be willing to provide supporting letters if requested to do so.

Applications should be sent by 31 March 1977 to:

**Dr. A. A. Lee
Vice-President, Academic
McMaster University
1280 Main Street West
Hamilton, Ontario, Canada L8S 4K1**

HEADSHIP, DEPARTMENT OF PHARMACOLOGY

Applications are invited for the recently vacated headship of the Department of Pharmacology in the College of Medicine, University of Arizona. Interested applicants should possess an M.D., Ph.D., or both; have an established record in research; and have a sincere interest in medical and graduate education. Applications, including a complete curriculum vitae, should be sent by 15 March 1977 to:

**Dr. William H. Dantzier
Chairman, Search Committee
Department of Physiology
College of Medicine
University of Arizona
Tucson, Arizona 85724**

An Equal Opportunity/Affirmative Action Employer

MICROBIOLOGIST

The Department of Biology invites applications for a faculty appointment in microbiology beginning September 1977. Duties include teaching an undergraduate course in general microbiology and graduate courses in their area of expertise. Applicants must have a doctorate and are expected to conduct an active research program. Résumés and reference letters should be forwarded to **Dr. Marvin J. Rosenberg, Chairman, Department of Biology, California State University, Fullerton, California 92634.** The University is an Affirmative Action/Equal Opportunity Employer.

NEUROHISTOLOGISTS with appropriate postdoctoral training are invited to apply for the position of assistant research histologist in the Cardiovascular Research Institute beginning 1 July 1977. Applicants currently should be investigating the nervous system with modern neurohistological techniques including electron microscopy. Special consideration will be given to neurobiologists studying the mammalian peripheral nervous system. The applicant chosen will be expected to collaborate full time in interdisciplinary research on motor and sensory innervation of the airways and lungs. *University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.* Send curriculum vitae, reprints of publications, and names of three references by 1 April 1977 to: **Dr. S. R. Sampson, Cardiovascular Research Institute, University of California, San Francisco, Calif. 94143.**

PHYSICIST, Ph.D. experimentalist, computer science background. Main responsibility: pre-engineering physics and mathematics. Salary commensurate with experience. Contact **Professor John M. Daly, Chairman, Department of Science, Bellarmine College, Louisville, Kentucky 40205.** Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ORGANIC Ph.D. Experienced in group supervision to manage a program on Environmental Oxidation of Aromatics. Writing up program reports essential component. Experience with GC, MS, and LC preferred. Salary negotiable but not to exceed \$13,000 per year. *An Equal Opportunity Employer.* Contact either:

Dr. John Laseter
Department of Biological Sciences, or
Dr. Gary W. Griffin
Department of Chemistry
University of New Orleans
New Orleans, La. 70122

PLANT PHYSIOLOGIST

The Department of Botany at the University of Wisconsin-Madison invites applications for an assistant professorship in any area of plant physiology for fall 1977. Candidates should be well qualified to teach undergraduate and graduate courses in this area and will be expected to establish a strong independent research program. Postdoctoral training desirable. Salary negotiable. Curriculum vitae including transcripts, copies of publications, a brief summary of research plans, description of teaching experience, and three letters of reference should be sent to: **Dr. Eldon H. Newcomb, Chairman, Search Committee, Department of Botany, University of Wisconsin, Madison, Wisconsin 53706.** Deadline for receipt of applications is 21 March 1977. *The University of Wisconsin is an Affirmative Action/Equal Opportunity Employer; applications from minorities and women are encouraged.*

POSITION open in Cholesterol Metabolism Laboratory. Studying effect of diabetes on cholesterol synthesis and excretion in humans and rats. Duties include overseeing three technicians, and setting up analytical techniques as well as pursuing original laboratory-based research. Prefer postdoctoral Ph.D. level; salary depends on qualifications. Send résumé to **C. D. Saudek, M.D., Department of Medicine, Cornell University Medical College, New York, N.Y. 10021.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ORNITHOLOGIST: Field Museum of Natural History has an opening for an **ASSISTANT CURATOR OF BIRDS.** Appointment effective 1 September 1977. Duties include curation of a large, worldwide systematic collection of birds, conduct of an active research program, and participation in education and exhibition functions of Field Museum. A Ph.D. and demonstrated experience in the maintenance and use of systematic collections of birds are required. Closing date for applications is 15 March 1977. Send résumé promptly to: **Dr. Robert K. Johnson, Division of Fishes, Field Museum of Natural History, Chicago, Illinois 60605.** *Field Museum is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION. Two-year fellowship available immediately involving high-resolution electron microscopy of photoreceptor membranes and the relationship of the pigment epithelium to receptor cells. Send curriculum vitae and names of three references to: **Dr. Frank Kretzer, Department of Ophthalmology, Baylor College of Medicine, Houston, Texas 77030.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION in clinically applicable tumor cell kinetics. Immediately available. Experience in cell biology desired. Send curriculum vitae and references to:

Lewis M. Schiffer, M.D.
Cancer Research Unit
Allegheny General Hospital
320 East North Avenue
Pittsburgh, Pa. 15212

An Equal Opportunity Employer

POSTDOCTORAL POSITION: aquatic toxicologist to participate in 5-year study on coal conversion process wastewaters. Experience with algal and fish bioassays required. Research interest in mammalian effects of environmental pollutants desirable. Starting date approximately 1 March 1977. Send curriculum vitae, including names of references, and representative publications to

Box 63, SCIENCE

POSITIONS OPEN

PLANT ECOLOGIST. Responsibilities include teaching field biology for general education (broad natural history background desirable), upper level plant ecology, and conducting plant-focused ecological research, preferably aquatic. Temporary appointment for two academic years beginning fall 1977 plus spring 1977 at the rank of assistant professor. Ph.D. and publications required. Send curriculum vitae, transcripts, and three letters of recommendation to: **Dr. Richard W. Pippen, Acting Chairperson, Biology Department, Western Michigan University, Kalamazoo, Michigan 49008.**

An Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL POSITION IN BIOCHEMISTRY AND MEDICINE

Position available immediately in renal metabolism. Strong background in intermediary metabolism or membrane biochemistry desirable. Research focuses on amino acid and lipid metabolism in the kidney and on biochemical relationships between liver and kidney. Submit résumés, including names of references, to: **Dr. Leah M. Lowenstein, Departments of Medicine and Biochemistry, Boston University School of Medicine, 80 East Concord Street, Boston, Massachusetts 02118.**

Boston University is an Equal Opportunity/Affirmative Action Employer.

"Ettore Majorana" Centre for Scientific Culture

INTERNATIONAL SCHOOL OF BIOPHYSICS

Subject: Noise in Biological Membranes

ERICE-TRAPANI-SICILY: 10 to 20 March 1977

Sponsored by the: E.M.B.O.; Italian Ministry of Public Education; Italian Ministry of Scientific and Technological Research; N.R.C.; N.A.T.O.; Sicilian Regional Government.

Lecturers: F. Conti (C.N.R.); L. J. DeFelice (Emory); M. G. F. Fuortes (NIH); A. L. Hodgkin (Cambridge); H. A. Kolb (Konstanz); H. Lecar (NIH); W. Nonner (I. Saarland); K. Peper (II. Saarland); J. R. Segal (V.A. Hospital, N.Y.); R. Stämpfli (I. Saarland); C. F. Stevens (Yale); A. A. Verveen (Leyden); and E. Wanke (C.N.R.).

Topics: random variables and stochastic processes; random data acquisition and analysis; theoretical models of membrane noise; electrical noise in nerve and muscle cells; chemical transmitters and synaptic noise; noise in photo- and mechano-sensory systems; electrical noise in epithelia; conductance fluctuations in model membranes; and effect of noise on sensory mechanisms and neural processing.

Discussants: A. Borsellino (C.N.R.); L. Cervetto (C.N.R.); B. Lindemann (II. Saarland); W. Moolenaar (Leyden); E. Neher (Göttingen); B. Neumcke (I. Saarland); V. Torre (Genova); R. J. van den Berg (Leyden); and M. L. Wiederhold (NIH).

General information: persons wishing to attend the course should write to the secretary of the course:

L. Cervetto
Laboratorio di Neurofisiologia, C.N.R.
56100 Pisa, Italy

They should specify: (i) date and place of birth together with their present nationality; (ii) degree and other academic qualifications; (iii) list of publications; (iv) present position and place of work; and include (v) a letter of recommendation from their research group leader or from a professor of biophysics, physics, physiology, or psychology.

The total fee, including full board and lodging (arranged by the school), is \$250. Thanks to the generosity of the sponsoring institutions, partial support can be given to some deserving students who need financial help. This must be specified and justified in the application letter. Closing date for application: 20 February 1977. No special application form is required.

Directors of the course: F. Conti, L. J. DeFelice

Director of the school: A. Borsellino

Director of the centre: A. Zichichi

RESEARCH POSITIONS TRANSNATIONAL ENVIRONMENTAL POLICY

The East-West Center, a national educational institution founded by the U.S. Congress in 1960 to promote better relations and understanding among nations through cooperative programs of study, research, and training, is seeking staff for a new Environmental Policy Institute, to be inaugurated in October 1977. Positions are full-time and permanent (subject to successful probationary period). All Center programs are multinational and multidisciplinary. Staff, visiting scholars, professionals, and graduate degree students form teams which work on problems with significant mutual consequences for nations of East and West. In its staff, the Center seeks excellence in team research, commitment to the development of educational products and practical applications of such research, and ability to work cooperatively with those from other cultures and disciplines. For its Environmental Policy Institute, the Center is seeking physical, natural, and social scientists from universities, research and development organizations, and government or other agencies and institutions who have been working on environmental problems and who are qualified to bring their scientific knowledge to bear on related transnational policy issues.

Candidates must have a Ph.D. or its academic equivalent in a scientific discipline relevant to the program and evidence of ability and accomplishment in three primary areas: (i) discovery of knowledge about environmental problems and policies, especially at the transnational level, as evidenced by published and unpublished research; (ii) development of applications (for example, curricula, educational materials, physical models or prototype equipment design, policy aids) of this knowledge; and (iii) cooperative (team, preferably multinational) design and implementation of related research, education, and training projects and activities. Cover letter must provide two examples of achievements demonstrating ability in each of these three areas. This statement will be evaluated along with curriculum vitae to determine degree of accomplishment and related salary placement. Subsequent promotion is based on continued contribution and growth of accomplishment in each area.

Salary range begins at \$17,056 and ends at \$37,347, plus current cost-of-living allowance of 17.5 percent (subject to change) for those eligible. Cover letter and complete curriculum vitae with name and address of three professional references must be postmarked no later than 31 March 1977. Starting date preferably no later than October 1977. Send to **Personnel Division, Office of Administration, Department 19, East-West Center, 1777 East-West Road, Honolulu, Hawaii 96822.**

An Equal Opportunity Employer, M/F

POSITIONS OPEN

POSSIBLE POSTDOCTORAL POSITION IN PLANETARY SCIENCES

Applications are invited for a possible postdoctoral research associateship in planetary sciences in the Lunar and Planetary Laboratory at the University of Arizona beginning 1 June 1977. The associate will collaborate with Dr. Bradford A. Smith in ongoing research based on photometric analyses of planetary images. Current activities include analysis of both conventional photographs and images produced by electronic area detectors. Research facilities include the observatories of the University of Arizona and several computers. The successful candidate will have experience in one or more of the following areas: (i) astronomy, (ii) use of telescopes and associated instrumentation, (iii) planetary image analysis, and (iv) computer programming.

Applications, accompanied by a résumé and statement of research interests, should be sent to: **Dr. Bradford A. Smith, Lunar and Planetary Laboratory, University of Arizona, Tucson, Arizona 85721** before 31 March 1977. Letters of recommendation, directed as above, should be requested from at least three persons who are well acquainted with the applicant's accomplishments and potential.

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

POSTDOCTORAL POSITIONS IN PHYSIOLOGY

In anticipation of requested grant funding, applications are being invited for postdoctoral research positions in a program on the molecular aspects of myonal differentiation as influenced by the innervation and functional activity. It is hoped that appointments can be made in some of the following fields: (i) protein sequencing and myosin structure studies, (ii) control of myosin synthesis on polysomes, and characterization of messenger RNA, (iii) nuclear control of selective protein synthesis, and (iv) histological and neurophysiological investigations in order to elucidate the neurogenic influence. Salary depends upon qualifications.

If you are interested in this position, please send your letter of application and résumé to:

**Dr. Wilfried Mommaerts, Chairman
University of California
Department of Physiology
53-259 Center for the Health Sciences
Los Angeles, California 90024**

Affirmative Action/Equal Opportunity Employer. Minority and women candidates are encouraged to apply.

POSTDOCTORAL RESEARCH ASSOCIATE. Ph.D. with previous experience in the growth of mammalian cells in culture. Project involves the investigation of various characteristics of cells obtained from central nervous tissue as a function of culture conditioning. Specific relationships of problems of multiple sclerosis are emphasized. Please forward a brief description of experience, future plans, curriculum vitae, and three letters of recommendation to the **Department of Biochemistry, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, Canada R3E 0W3.**

THE PSYCHOLOGY DEPARTMENT OF BRIGHAM YOUNG UNIVERSITY is seeking applications and nominations for an appointment in experimental psychology in the area of cognition. Letters of inquiry, applications with curriculum vitae, and nominations should be addressed to: **Professor Donovan E. Fleming, Department of Psychology, Brigham Young University, 1240-B SFLC, Provo, Utah 84602.** An Equal Opportunity Employer. As a church-sponsored institution, all employees of BYU are required to conform to the standards of conduct of the Church of Jesus Christ of Latter-Day Saints (Mormons). A statement of the standards is available upon request.

RESEARCH ASSISTANT: B.S. The department has an immediate opening for a highly experienced person in instrumentation. The individual will be responsible for properly maintaining and operating such instruments as amino acid analyzer, sequencer, gas chromatograph, and so forth. Prospective candidates should have a workable knowledge of analytical and quantitative methodologies. Interested candidates should write to **Dr. John E. Mole, Department of Microbiology, University of Alabama, Birmingham, University Station, Birmingham, Alabama 35294,** or telephone 205-934-3618. *University of Alabama, Birmingham, is an Equal Opportunity Employer.*

POSITIONS OPEN

PSYCHOLOGIST. Ph.D. Animal motivation with interest and competence in behavior genetics. Demonstrated teaching and research ability required. Excellent laboratory facilities. Visiting assistant professor. Appointment up to 2 years. Submit curriculum vitae, statement of research plans, and names of three references to: **Dr. Charles N. Stewart, Chairman, Department of Psychology, Franklin & Marshall College, Lancaster, Pa. 17604.** An Equal Opportunity Employer, M/F.

RESEARCH ASSOCIATE: a postdoctoral research position is available immediately to study the role of proteolytic enzymes in lung disease. Experience in protein structure and function is highly desirable. Support is for 2 to 3 years. Send curriculum vitae to: **Dr. James Travis, Department of Biochemistry, University of Georgia, Athens, Georgia 30602.** The University of Georgia is an Equal Opportunity/Affirmative Action Employer.

The Australian National University invites applications for appointment as **RESEARCH FELLOW** (three posts) in the Department of Biochemistry, John Curtin School of Medical Research. Applicants should have had experience in bacterial genetics and should state their preferences among the following areas of work: (i) **Biochemical genetics of bacterial respiration** (G. B. Cox, J. A. Downie, and F. Gibson). Mutants of *Escherichia coli* affected in electron transport and oxidative phosphorylation are being studied to elucidate the pathways of electron transport and the coupling process. (ii) **The mechanism of enzyme action** (J. F. Morrison, E. Heyde, and R. G. Duggleby). This group is studying the kinetic mechanism and regulation of the enzymes involved in the biosynthesis of aromatic amino acids in *E. coli*. It is intended to develop the use of plasmids to give elevated yields of enzymes and also to isolate new mutants with altered enzymes. (iii) **Metabolite transport in E. coli.** (H. Rosenberg). A number of aspects of active transport (for example, transport of phosphate, iron, and organic acids), energy coupling to the transport process, and the involvement of membrane components are under study. Further details of the research work may be obtained from Dr. H. Rosenberg, Acting Head of the Department. Appointment is for 3 years in the first instance with possible extension to 5 years. Salary: A\$13,850 to A\$18,269 per annum; exchange rate A\$1 = U.S.\$1.08. Reasonable travel expenses; assistance with housing. Superannuation benefits available. Further information from **Academic Registrar, Australian National University, P.O. Box 4, Canberra, ACT, 2600, Australia** with whom applications close 1 March 1977.

RESEARCH SCIENTIST. Ph.D. degree preferable, to study primate neuroendocrinology and behavior. Assistant professor level with permanent career prospects. Interest in either neuroscience, physiological psychology, or endocrinology essential. Apply to **Dr. Richard P. Michael, Department of Psychiatry, Emory University, Atlanta, Georgia 30322.** Telephone: 404-894-5947. An Equal Opportunity/Affirmative Action Employer.

SENIOR RESEARCH POSITION

The Personal Care Division of the Gillette Company has an opportunity for a scientist with a proven record of accomplishments to participate in and direct a multidisciplinary group engaged in research programs related to physics and chemistry of hair and skin. Our emphasis is on versatility coupled with self-motivating enthusiasm for basic research and a strong desire to reach a product endpoint.

This senior level position calls for an innovative, energetic individual with a strong background in materials science and physical chemistry of biopolymers. Industrial experience in hair and skin research and surface chemistry are a great advantage.

Please send résumé, complete with salary history and requirements, in confidence, to: **Ann Marie Joyce, Personnel Department.**



The Gillette Company

**Gillette Park
Boston, Mass. 02106**

Gillette is an Equal Opportunity Employer, M/F

POSITIONS OPEN

STAFF SURGEON Veterinary Medical Teaching Hospital

The applicant will be responsible as a member of a team for the soft tissue surgery program of the Veterinary Medical Teaching Hospital. The incumbent will participate in the teaching program designed for professional students in the D.V.M. curriculum. Specific duties include class lectures, clinical teaching, and operation of the soft tissue surgery service in the small animal clinic.

The applicant will share responsibility for patient care and student instruction in the soft tissue surgery service in the small animal clinic. Support of other faculty will allow the incumbent time for scholarly research, self-improvement, and extension activities.

The candidate must have a D.V.M. degree with special training and/or experience in surgery of small animals. Board-eligibility or -certification is highly desirable, but not required. Completion of a surgical residency training program is required. Salary, faculty rank, and title are dependent upon the applicant's background and qualifications.

Send complete curriculum vitae, personal bibliography, and references to **Dr. A. deLahunta, Director, Veterinary Medical Teaching Hospital, New York State College of Veterinary Medicine, Cornell University, Ithaca, New York 14853.** An Equal Opportunity Employer.

STORED-PRODUCT ENTOMOLOGIST. Ph.D. with training in management of stored-product insects for 2-year position as research associate. Primary responsibilities will be to develop a program to survey insect problems in relation to grain storage in Minnesota. Salary minimum: \$12,504. Résumé and three letters of recommendation to **Dr. Phillip K. Harein, Department of Entomology, Fisheries and Wildlife, 219 Hodson Hall, 1980 Folwell Avenue, University of Minnesota, St. Paul, Minnesota 55108,** by 31 March 1977. Position to be filled by 1 July 1977. *Equal Opportunity/Affirmative Action Employer.*

SYSTEMATIC ENTOMOLOGIST HARVARD UNIVERSITY

Applications are invited from systematic entomologists (hymenopterist or coleopterist preferred) for an assistant professorship of biology and an assistant curatorship in the Museum of Comparative Zoology. To begin 1 July 1977 (Ph.D. required by then). Duties include general management of collections and teaching; strong program of research expected and required.

Harvard University is an Equal Opportunity/Affirmative Action Employer.

Please submit applications with curriculum vitae, publications, and three letters of reference by 1 March to **Professor Stephen Jay Gould, Chairman, Search Committee, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts 02138.**

THEORETICAL BIOLOGIST

Applications and nominations are invited for a position beginning in September 1977. Application for this position is open to biologists in any area of biology who show strong theoretical interests and a mathematical approach to biological problems. The successful applicant will be expected to develop a vigorous research program. Teaching duties will include one or more specialty courses and some participation in the undergraduate biology program. Rank and salary will be commensurate with qualifications and experience. Postdoctoral experience desirable. Deadline for applications is 1 March 1977. To apply, send complete curriculum vitae and names of three references to: **Dr. Robert A. Paterson, Head, Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.**

An Affirmative Action/Equal Opportunity Employer.

VERTEBRATE ZOOLOGIST: assistant professor, beginning August 1977. Emphasis will be in mammalogy; however, there should be competence in complete vertebrate zoology area. Would be expected to teach vertebrate zoology, biology, and histology. Candidates must be excellent teachers and have outstanding academic records at the undergraduate and graduate levels. Can contact **Dr. Dean Roseberry at AAAS Meeting in Denver, 21 to 25 February, at Cosmopolitan Hotel.** To apply, send (i) copies of undergraduate and graduate transcripts, (ii) curriculum vitae, and (iii) list of three references. Send to: **Head, Division of Science, Northeast Missouri State University, Kirksville, Missouri 63501.** An Equal Opportunity/Affirmative Action Employer.

Microbiologists

We're a leading international health care corporation, known for our constant quality and innovation. Right now, we're seeking two highly qualified Microbiologists for challenging positions in our laboratories.

FERMENTATION MICROBIOLOGIST

This position requires a Ph.D. or equivalent Microbiologist with experience in increasing fermentation yields of antibiotics using laboratory scale submerged fermentation equipment. A background in various aspects of fermentation biochemistry and intermediate metabolism as well as analytical methods used in fermentation processes will be essential.

SOIL MICROBIOLOGIST

Strong experience in the isolation and study of microorganisms from varied sources for a microbial product discovery project will be essential. A Ph.D. in Microbiology or the equivalent is also required and skill in electron microscopy is desirable.

The professionals who join us will find an excellent salary program, full company benefits and the enthusiastic support of a cooperative and competent professional group. For consideration, send your detailed resume in strictest confidence to:



ABBOTT
NORTH CHICAGO, ILL. 60064

Brad Herbeck
Corporate
Placement

Abbott is an Affirmative Action Employer

BIOENGINEER

Environmental Engineering Challenge

Detroit Edison, one of the nation's major power generation utilities, is expanding its environmental engineering staff. An MS in Biology plus 4 years' experience in areas such as the direction of field studies in aquatic biology; bioassays, and power plant biology are required.

Under the direction of the Principal Biological Scientist, the Bioengineer will conduct environmental field work, assist in the planning of aquatic investigations, review contractor programs in aquatic and terrestrial biology, and direct a technical staff in the implementation of solutions to problems resulting from the discharge of aquatic wastes. Excellent communications skills are a must.

We offer a very competitive salary and comprehensive benefits. For confidential consideration, please forward your resume to:

DETROIT EDISON
2000 Second Avenue
Detroit, Michigan 48226

An Equal Opportunity Employer

Detroit Edison

REQUESTS FOR PROPOSAL TUMOR IMMUNOLOGY

The National Cancer Institute (NCI), National Institutes of Health, is interested in contracting for the following projects:

IMMUNOBIOLOGY

Reference No. NCI-CB-74147-31—APPLICATION OF HYBRIDIZATION TECHNIQUES TO DEVELOP LARGE QUANTITIES OF FUNCTIONALLY ACTIVE HOMOGENEOUS T-CELLS—NCI seeks proposals for studies designed to produce the expansion of functional T cell populations (such as specific antigen binding helper, memory, cytotoxic or suppressor cells) by cell fusion techniques. Deadline for receipt of proposals is 5:00 p.m., Bethesda, Maryland, time on April 19, 1977.

Reference No. NCI-CB-74148-31—ANIMAL MODELS FOR BONE MARROW TRANSPLANTATION—The NCI seeks proposals for animal models for bone marrow transplantation. Studies should include factors controlling susceptibility/resistance to bone marrow grafts and/or mechanisms of stem cell differentiation to immunocompetent cells and/or immunologic reactivities in the chimeric state. Deadline for receipt of proposals is 5:00 p.m., Bethesda, Maryland, time on April 19, 1977.

Reference No. NCI-CB-74149-31—ISOLATION AND CHEMICAL CHARACTERIZATION OF ANTIGEN-BINDING T-CELL RECEPTORS—NCI seeks proposals utilizing innovative approaches for obtaining antigen binding T-cell receptors in quantity based upon (1) a suitably sensitive assay system for antigen binding T-cell receptors and (2) a means for obtaining receptors in sufficient yield for analysis. Deadline for receipt of proposals is 5:00 p.m., Bethesda, Maryland, time on April 19, 1977.

Reference No. NCI-CB-74150-31—STUDIES OF IN VITRO INDUCTION OF FUNCTIONAL DIFFERENTIATION OF T-CELLS IN SYSTEMS RELEVANT TO TUMOR IMMUNOLOGY—NCI seeks proposals for studies of cellular and cell-free factors that influence *in vitro* functional differentiation of T-cells. Primary emphasis shall be on syngeneic tumor associated antigens as the stimulus for T cell differentiation. Deadline for receipt of proposals is 5:00 p.m., Bethesda, Maryland, time on April 19, 1977.

Reference No. NCI-CB-74151-31—GENETIC CONTROL OF SUSCEPTIBILITY AND/OR IMMUNE RESPONSE TO TUMORS—NCI seeks proposals to study genetic control of susceptibility and/or immune response to tumors. Studies are sought determining number of genes involved in immune responses to syngeneic tumors of recent origin, genetic linkage and genetic control of response to tumors or their antigens. Deadline for receipt of proposals is 5:00 p.m., Bethesda, Maryland, time on April 19, 1977.

Reference No. NCI-CB-74152-31—BIOCHEMICAL AND/OR BIOPHYSICAL APPROACHES TO STUDYING MECHANISMS OF SPECIFIC CELL-MEDIATED CYTOTOXICITY—NCI seeks proposals designed to increase understanding of the process of cell-mediated cytotoxicity. Proposals must be in the area of biochemical and/or biophysical studies of mechanisms whereby immunocompetent effector cells kill specific target cells by direct contact. Deadline for receipt of proposals is 5:00 p.m., Bethesda, Maryland, time on April 19, 1977.

Reference No. NCI-CB-74153-31—IMMUNOBIOLOGY OF METASTASES—NCI is soliciting proposals utilizing immunologic techniques to study relationships between tumors and their metastases at the cellular and/or biochemical level. Experience with metastatic tumor systems is required. Deadline for receipt of proposals is 5:00 p.m., Bethesda, Maryland, time on April 19, 1977.

A request for proposal for each project listed above is available on or after February 3, 1977, by *written* request to Contracting Officer, CBDCS, Tumor Immunology, Research Contracts Branch, National Cancer Institute, Landow Building, Room C-425, National Institutes of Health, Bethesda, Maryland 20014. Request for RFP must cite the reference number(s) of the desired project(s) as shown above. Requests or inquiries must be in writing.

POSITIONS OPEN

SENIOR SCIENTIST

Federal research facility with stable funding for the past 30 years is seeking a top-level research investigator to assume direction of animal metabolism programs. Chosen individual must possess proven administrative capabilities as well as an excellent scientific background in biochemistry/physiology. Interests of applicant will determine percentage of effort directed toward research and administration. Rank and salary commensurate with qualifications. Position open after 1 July 1977. Send curriculum vitae and three letters of reference to **J. W. Brown, Comparative Animal Research Laboratory, 1299 Bethel Valley Road, Oak Ridge, Tennessee 37830. An Equal Opportunity Employer.**

VETERINARY PATHOLOGIST—The Sloan-Kettering Institute for Cancer Research invites applications for the position of veterinary pathologist from individuals holding certification (A.C.V.P.) and desiring a career in cancer-related laboratory animal science. Responsibilities will consist of disease surveillance, maintenance of a diagnostic laboratory, and histopathological evaluation of diseases occurring in the Institute's animals. There will be opportunity for independent research in laboratory animal science or in specific cancer research programs.

Please send application, résumé, and references to:

**Dr. Mark H. Friedman
Head, Animal Facilities
Sloan-Kettering Institute for Cancer Research
410 East 68th Street
New York, N.Y. 10021**

An Equal Opportunity/Affirmative Action Employer

The Department of Physiological Optics of the School of Optometry, the University of Alabama in Birmingham is seeking a person with a Ph.D. in an area of **VISION SCIENCE**. Responsibilities will include: teaching courses within the physiological optics curriculum to both optometry students and graduate students, and conducting research.

Evidence of scholarly research activities in the form of published articles in refereed journals and papers presented at professional meetings will be heavily weighted, as will evidence of teaching ability. Postdoctoral research experience is desirable.

Rank and salary commensurate with experience. Résumés will be accepted until 15 March 1977. Send curriculum vitae and the names of three professional references to **Dr. Jerry L. Christensen, Department of Physiological Optics, School of Optometry/The Medical Center, University of Alabama, Birmingham, Birmingham, Alabama 35294. Equal Opportunity/Affirmative Action Employer.**

ZOOLOGIST

Visiting assistant professor appointment August 1977; renewable for second year; Ph.D.; major emphasis in ecology; to teach environmental biology. Closing 18 March 1977. Send curriculum vitae and three letters of reference to: **Dr. Charles M. Vaughn, Department of Zoology, 282 Upham Hall, Miami University, Oxford, Ohio 45056.**

An Equal Opportunity/Affirmative Action Employer

PROGRAMS

DIET, NUTRITION, AND CANCER PROGRAM

The Diet, Nutrition, and Cancer Program of the National Cancer Institute is now defining its research program for the current fiscal year. The program is oriented to developing and disseminating information on the relationship of diet and nutrition to cancer etiology and to the therapy and subsequent rehabilitation of the cancer patient. The DNCP is a coordinated multidisciplinary research program with projects funded through contract and Cancer Research Emphasis Grant mechanisms. Proposed research projects include animal, laboratory, and human studies relative to the study of cancer and nutrition in the following major areas: anthropology, dietary excesses and deficiencies in cancer etiology, epidemiology, host-tumor metabolism, food science, artificial alimentation, dietetics, sensory perception, psychology, information dissemination, and education. Detailed information on the program and potential projects can be obtained by writing to: **Dr. Glo B. Gori, Deputy Director, Division of Cancer Cause and Prevention, National Cancer Institute, Building 31, Room 11A03, Bethesda, Maryland 20014.**

ASSISTANTSHIPS

GRADUATE RESEARCH ASSISTANTSHIPS in the Department of Biochemistry at Clemson University for Ph.D. students to work with the aminoacyl-tRNA synthetase complex. Apply to **Dr. R. H. Hilderbrand, Department of Biochemistry, Clemson University, Clemson, S.C., 29631. An Equal Opportunity Employer.**

FELLOWSHIPS

PREDOCTORAL AND POSTDOCTORAL FELLOWSHIPS IN CRANIOFACIAL BIOLOGY. Predoctoral and postdoctoral fellowships are now currently available in the Graduate Program of Craniofacial Biology at the University of Southern California. Fellowships are available for highly qualified applicants in a training program consisting of either postdoctoral research or of graduate study leading to the Ph.D. in craniofacial biology. Although the program includes work in various aspects of cellular, molecular, and developmental biology, we are especially interested at this time in individuals whose interests may be in the etiology, detection, diagnosis, improvement of treatment or genetic counseling of congenital craniofacial malformations, and in studies of normal and abnormal mammalian craniofacial development. Applications must be received by April 1977 for the 1977-1978 academic year. For further information and applications write to: **Dr. Harold C. Slavkin, Program Director, Department of Biochemistry, School of Dentistry, Gerontology Center, University of Southern California, Los Angeles, California 90007.**

POSTDOCTORAL RESEARCH FELLOWSHIP available 1 July 1977, in lens biochemistry or biophysics at the Jules Stein Eye Institute, University of California at Los Angeles. The salary range is \$10,000 to \$14,000 per year, depending upon experience. Eligibility limited to U.S. citizens and permanent residents only. Submit curriculum vitae and statement of research interest to **Dr. Joseph Horwitz, Jules Stein Eye Institute, UCLA Center for the Health Sciences, Los Angeles, Calif. 90024. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH FELLOWSHIP available 1 July 1977, in cell biology of the retina at the Jules Stein Eye Institute, University of California at Los Angeles. The salary range is \$10,000 to \$14,000 per year, depending upon experience. Eligibility limited to U.S. citizens and permanent residents only. Submit curriculum vitae and statement of research interest to **Dr. Dean Bok, Jules Stein Eye Institute, UCLA Center for the Health Sciences, Los Angeles, Calif. 90024. An Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS IN CARDIOVASCULAR RESEARCH. Openings for postdoctoral research fellowships in biochemistry, physiology, pharmacology, and experimental pathology relating to atherosclerosis and hypertension. Fellowships supported by an NIH training grant. Send résumé and names of three references to **Dr. Philip A. Khairallah, 9500 Euclid Avenue, Cleveland, Ohio 44106. The Cleveland Clinic Foundation is an Equal Opportunity Employer.**

GRADUATE FELLOWSHIPS IN BIOCHEMISTRY AND BIOPHYSICS GUARANTEED FOR FOUR YEARS BY THE DEPARTMENT OF BIOCHEMISTRY AND BIOPHYSICS UNIVERSITY OF PENNSYLVANIA

We are seeking outstanding candidates for the Ph.D. degree, in either biochemistry or biophysics, who have superior undergraduate records in chemistry, biochemistry, or physics, and GRE records to match. Significant research accomplishment is also desirable. The stipend for the first year will be \$3900 and all tuition expenses are covered. Applicants should arrange to send (i) undergraduate transcripts, (ii) GRE records, (iii) three letters of reference dealing specifically with the accomplishment and potential of the candidate in biochemistry or biophysics, and (iv) a cogent personal statement of research interests, to

**Dr. Harold J. Bright
Department of Biochemistry and Biophysics
School of Medicine
University of Pennsylvania
Philadelphia, Pa. 19174
Telephone: 215-243-4639**

FELLOWSHIPS

MOLECULAR ANATOMY PROGRAM DIVISION OF BIOLOGICAL AND MEDICAL RESEARCH ARGONNE NATIONAL LABORATORY

Postdoctoral fellowships: a number of postdoctoral fellowships are available in the multidisciplinary molecular anatomy program under Dr. Norman Anderson. The central objective is the development of methods for fractionating human cells and tissues down to the molecular level to detect and measure alterations produced by ionizing and nonionizing radiation, and by energy-related pollutants including chemical carcinogens. Work ranges from basic and theoretical to clinical studies, and encompasses cell separation, subcellular fractionation, automatic and automated bioanalytical systems including centrifugal fast analyzers and two-dimensional electrophoresis, affinity chromatography and immunosubtraction, isolation of embryonic and fetal antigens associated with cancer, and techniques for data reduction. Backgrounds in biochemistry, pathology, immunology, oncology, physics and engineering of high-speed rotational systems, separations technology, molecular biology, electronics, clinical chemistry, and optical and electronic techniques for data reduction are of interest. Send résumé to: **W. McFall, Department 100 D, Argonne National Laboratory, 9700 South Cass Avenue, Argonne, Ill. 60439.**

COURSES

MARINE SCIENCE DUKE UNIVERSITY MARINE LABORATORY

Summer Courses—undergraduate: 10 May to 11 June—introduction biological oceanography, invertebrate zoology, introduction marine geology. Graduate/advanced undergraduate: 13 June to 15 July—marine ecology, physiological ecology, chemical oceanography, marine phycology, introduction mathematical models in biology, comparative and evolutionary biochemistry, geological oceanography. 18 July to 19 August—vertebrate embryology, membrane physiology and osmoregulation, biological oceanography, marine invertebrate zoology, environmental oceanography, introduction marine geophysics. Write: **Director, Duke University Marine Laboratory, Beaufort, North Carolina 28516.**

EMBRYOLOGY COURSE MARINE BIOLOGICAL LABORATORY (MBL) WOODS HOLE, MASS. 02543

The theme of the 1977 course (20 June to 26 August) will be "Extracellular Signals in Cell Growth and Differentiation." Course faculty will include Stanley Cohen (Vanderbilt), David Epel (California), Tom Humphreys (Hawaii), R. K. Hunt (Johns Hopkins), and Tim Hunt (Cambridge, U.K.). Tuition and stipend expenses may be available through a grant from the National Science Foundation. Further information and applications for this graduate and postdoctoral level course can be obtained from the Laboratory. Deadline for receipt of applications for this course will be 15 March.

MBL admits students of any race, color, and national or ethnic origin.

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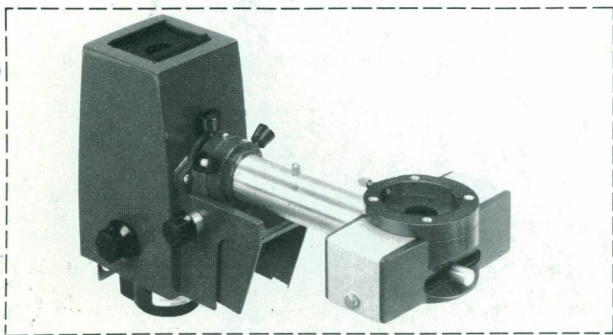
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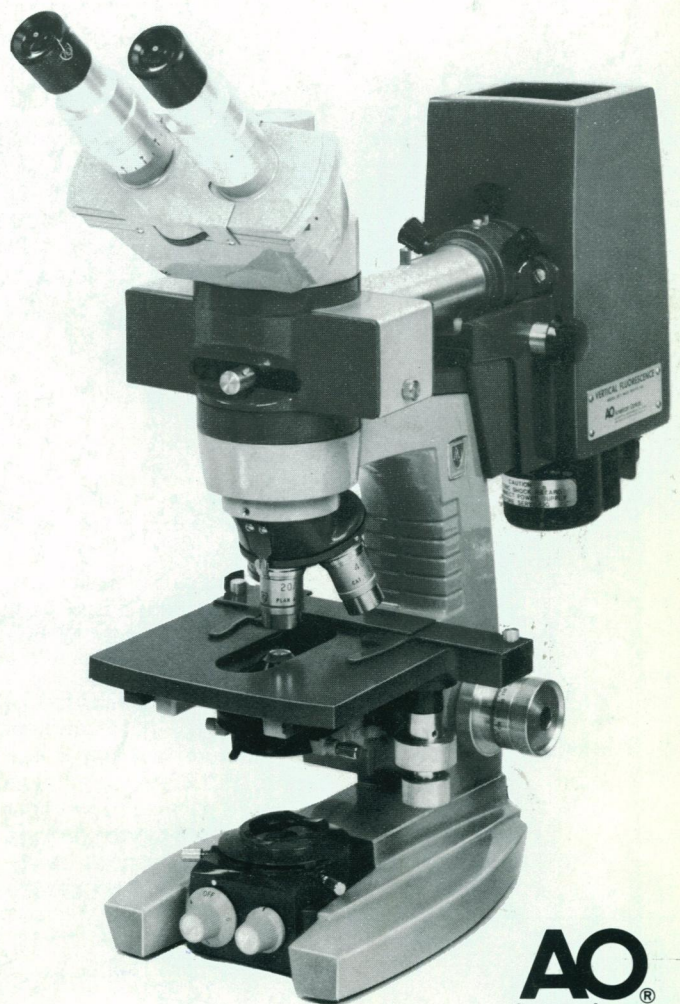
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