

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

CLASSIFIED ADVERTISING DEADLINES:

14 January issue (mailed 7 January): **23 December**
21 January issue (mailed 14 January): **30 December**
28 January issue (mailed 21 January): **7 January**
4 February issue (mailed 28 January): **14 January**

POSITIONS WANTED: 40¢ per word, plus \$4 for use of box number, per insertion. \$10 minimum, per insertion. Prepayment required. This rate is available only to individuals seeking jobs.

DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$9 per millimeter; \$225 minimum, per insertion (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing information required for all other advertising.

Send copy for all **Positions Wanted** ads and **Display** ads less than 1/6 page in size (125 millimeters) to:

SCIENCE, Room 107
1515 Massachusetts Avenue, NW
Washington, D.C. 20005
Telephone: 202-467-4456

Send copy for **Display** ads 1/6 page and larger to:

Scherago Associates, Inc.
1515 Broadway
New York, N.Y. 10036
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

Box (give number)
SCIENCE
1515 Massachusetts Avenue, NW
Washington, D.C. 20005

Effective 1 January 1983, the display rate for SCIENCE will be \$9.80 per millimeter, with a minimum charge of \$245 for 25 millimeters.

POSITIONS WANTED

Aquatic Biologist. M.S., benthos specialist, certified fisheries scientist: 11 years of consulting experience; technical and administrative expertise. Any position considered; prefers Midwest, but will relocate. Box 321, SCIENCE. 12/24: 1/7

Biochemist. Ph.D. 1972. Frustrated academic seeking career in industry/research institute. My expertise is in biochemical and genetic manipulation of yeast (and *Escherichia coli*), using antibiotics and gel electrophoresis. I enjoy developing and perfecting analytical equipment and techniques. Working in a stimulating team atmosphere with both bench and supervisory duties would be ideal. I would welcome the opportunity to pursue my product/research ideas to our mutual benefit. Box 336, SCIENCE. X

Cell Biologist. Research associate. M.A. Relocating to the Boulder/Denver area. Seeks research/teaching position. Competence in cell and developmental biology. Six years of research experience in reproductive biology, electron microscopy, histochemistry, biochemistry. Publications. Telephone: 714-787-3768, or write: Box 335, SCIENCE. X

Developmental Plant Morphologist/Anatomist seeks position in academics or industry. Teaching and overseas postdoctoral experience. Strong mathematical background. Computer familiarity. Publications. Box 333, SCIENCE. X

POSITIONS WANTED

Cytogeneticist. Ph.D. 1975. Seeks position in industry, university, or research institute. Eight years of research experience in United States, Germany, Egypt. Blood culture, leukocytes of various phenotypic of farm animals. Mutagenic action of drugs. Chemical and cytotoxic agents on the cell structure and chromosomes aberrations using Banding, the system of embryo culture in rotating bottles. Sister chromatid exchange in vivo and in vitro, embryonic and extraembryonic tissues of pregnant rats and mice. Box 332, SCIENCE. X

Endocrinologist. Ph.D. Seeks research/teaching position. Thesis on steroids and 2 years of postdoctoral work on neuropeptides, HPLC, bioassay, RIA, TEM techniques. Teach human anatomy/physiology. Box 339, SCIENCE. X

Immunologist. Ph.D. Extensive research experience on the serology of autoimmune diseases, ELISA development, and CIC assays. Seeks mid-level position in industry/academic research institute. Box 337, SCIENCE. X

Marrow Transplantation/Radiobiologist. Ph.D. Experienced researcher with excellent track record for grant support and publications, seeks change of environment to institute or medical center with a positive commitment to research. Hands-on laboratory experience in radiation effects on hematopoiesis, stem cell assays, murine leukemia viruses, immunology of marrow transplantation, GvH and GvL reactions, and monoclonal antibodies. Experience as a research section supervisor, in training of pre- and postdoctoral fellows, and teaching of radiobiology and cell physiology at graduate and undergraduate levels. Box 334, SCIENCE. 12/24: 1/7

Medical Technologist (ASCP): B.S. biochemistry and biology. Experience in all phases of general clinical laboratory diagnostic methods of analysis. Seeks medical laboratory position with hospital, clinic, medical team, or refugee relocation center located in Southeast Asia or South Pacific, especially Indonesia, Malaysia, Burma, or Philippines. Box 331, SCIENCE. X

Physiologist. Two years of postdoctoral training in biochemistry of basement membrane collagen, preparative, analytical, and HPLC techniques. Seeks teaching or research position nationwide or overseas. Box 338, SCIENCE. X

Translator. Scientific Russian. Options: bibliography, abstracts, full text. Also literature search. Science Ph.D., Russian minor. Box 330, SCIENCE. X

POSITIONS OPEN

The National Center for Intermedia Transport Research at University of California, Los Angeles (UCLA), has an immediate opening for an experienced Ph.D. **ANALYTICAL CHEMIST** to participate in studies of the sources of atmospheric aerosols using natural chemical tracers.

The candidate should have a strong background in modern techniques of organic chemical analysis, including HPLC, HRTLC, Capillary Column GC, and spectrofluorometry. A minimum of 2 years of hands-on experience is expected. Familiarity with GC/MS is highly desirable. Applicants should write to: **Professor S. K. Friedlander, Director, National Center for Intermedia Transport Research, 5531 Boelter Hall, University of California, Los Angeles, California 90024.** The University of California is an Equal Opportunity/Affirmative Action Employer.

ANIMAL PHYSIOLOGIST. The Department of Biology, Rutgers University-Camden, anticipates a tenure-track position available beginning fall 1983 which it expects to fill at the assistant or associate professor level. Teaching responsibilities will include undergraduate general physiology and introductory biology, a graduate course in animal physiology, and a course (undergraduate or graduate) in the applicant's area of specialization. A Ph.D. is required. Members of the Biology Department are expected to develop a strong research program and advise both undergraduate and graduate students.

Interested applicants should submit curriculum vitae, appropriate reprints, and three letters of recommendation to: **Dr. Robert W. Hastings, Chairman, Department of Biology, Rutgers University, Camden College of Arts and Sciences, Camden, New Jersey 08102,** before 1 February 1983.

Rutgers, The State University of New Jersey, is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT DIRECTOR OF RESEARCH. Applications are being accepted for Assistant Director of Research, North Carolina Agricultural Research Service, North Carolina State University, Raleigh, N.C. Individual is responsible to the director of the North Carolina Agricultural Research Service. The primary responsibilities include: coordination and supervision of the tobacco research program in several departments; serving as the primary administrative liaison with SALS departments responsible for field crops research; working closely with clientele and industry groups interested in tobacco and field crops; and cooperation with other SALS administrative personnel in the formulation of budgets and employment, evaluation and promotion of faculty. Candidates must have the Ph.D. degree and a strong interest in administration and demonstrated excellence in research. Closing date for applications is 1 March 1983, or until filled. Position open 1 July 1983. Letter of application should be submitted to: **Dr. Durward F. Bateman, Director, North Carolina Agricultural Research Service, P. O. Box 5847, North Carolina State University, Raleigh, N.C. 27650.** North Carolina State University is an Equal Opportunity Employer and operates under Affirmative Action Policy.

ASSISTANT PROFESSOR, tenure-track position in **CELL BIOLOGY**, starting August 1983. Ph.D. required; postdoctoral experience desirable. Appointee will teach undergraduate courses in cellular and molecular biology, offer a graduate course in his (her) field of specialization, and be expected to develop a strong research program. Send curriculum vitae, a statement of research interests and needs, and the names and addresses of three references to: **Dr. Richard D. Lumsden, Chairman, Cell Biologist Search Committee, Department of Biology, Tulane University, New Orleans, La. 70118.** Application closing date is 15 January 1983. Tulane University is an Equal Opportunity/Affirmative Action Employer.

The University of Manitoba, Faculty of Medicine, has positions available as **ASSISTANT PROFESSOR.** These positions are available in response to the development of a multi-disciplinary program in the area of recombinant DNA technology as applied to neuroscience, endocrinology, and molecular genetics. The successful applicant(s) will be expected to develop an independent research program utilizing recombinant DNA techniques. Send curriculum vitae, including a brief outline of future research interest, to: **Dr. Henry G. Friesen, Professor and Head, Department of Physiology, University of Manitoba, 770 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E 0W3.** In accordance with Canadian Immigration requirements priority will be given to Canadian citizens and landed immigrants of Canada.

DEPARTMENT OF CHEMISTRY UNIVERSITY OF CALIFORNIA, BERKELEY

Applications are invited for several anticipated positions at the level of **ASSISTANT PROFESSOR OF CHEMISTRY**, beginning fall 1983. We are interested in outstanding candidates, with exceptional promise in teaching and research. Our priorities include analytical, biophysical, inorganic, organic, physical, solid-state, and theoretical chemistry. Appointments with tenure are possible at **ASSOCIATE PROFESSOR** or **FULL PROFESSOR** for persons with outstanding qualifications and sufficient experience in analytical, biological, or organic chemistry.

Candidates should submit curriculum vitae (including a list of publications and a summary of their teaching and research objectives), and request three letters of reference, all to be sent to: **Chairman, Department of Chemistry, University of California, Berkeley, California 94720.** Deadline for receipt of applications is 1 February 1983. The University of California is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWS available immediately to investigate: (i) mechanism of action of growth hormone, prolactin, and/or placental lactogen (Dr. H. G. Friesen); (ii) hormonal regulation of gene expression in the prostate and prostatic cancer (Dr. R. J. Matusik). Training in membrane biochemistry and/or recombinant DNA technology, molecular endocrinology desirable. Stipends will be competitive. All applicants are requested to send their curriculum vitae and the names of three references to: **Dr. Robert J. Matusik, Department of Physiology, University of Manitoba, 770 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E 0W3.** Canadian citizens, permanent residents, and others eligible for employment in Canada are encouraged to apply.

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOCHEMISTRY. Full-time, starts 1 July 1983. Ph.D. in biochemistry required. Medical school teaching experience preferred. Applicants should be prepared to teach nucleic acids and other areas, and to assist with laboratories. Send curriculum vitae and three letters of reference by 15 February 1983 to: **Dr. Kenneth H. Woodside, Chairman, Department of Biochemistry, Southeastern College of Osteopathic Medicine, 1750 NE 168 Street, North Miami Beach, Fla. 33162.**

ASSISTANT PROFESSOR OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

Applications are invited for a faculty position in the Department of Biochemistry and Molecular Biology, Harvard University. Distinction in research and teaching is essential. Send curriculum vitae, three letters of recommendation, and a brief outline of future research plans before the end of March to: **Nancy Case, Department of Biochemistry and Molecular Biology, Harvard University, 7 Divinity Avenue, Cambridge, Mass. 02138.**

Harvard University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR OF PHYSIOLOGY. Available July 1983. Candidates must have a doctoral degree and prior teaching experience is highly desirable. Applicants should submit curriculum vitae, list of references, and statement of research and teaching experience by 15 February to: **H. Jay Lyons, Ph.D., Chairman, Department of Physiology, Southeastern College of Osteopathic Medicine, 1750 NE 168 Street, North Miami Beach, Florida 33162.**

ASSISTANT SCIENTIST—The Physical Oceanography Department plans to make a tenure-track appointment as assistant scientist. Applicants should have a degree in physical oceanography or a closely related field and, preferably, some postdoctoral experience. A candidate's area of expertise in oceanography is not specified, but a working knowledge of fluid dynamics is an important qualification. Please send curriculum vitae to: **Personnel Manager, Box 54P, Woods Hole Oceanographic Institution, Woods Hole, Mass. 02543.** *An Equal Opportunity Employer, M/F/H.*

BIOLOGICAL ANTHROPOLOGIST—ANATOMIST

The Departments of Cell Biology and Anatomy and Anthropology of Northwestern University invite applications for a tenure-track position at the assistant or associate professor level in human and/or primate morphology. Excellence in research and teaching is essential. This joint appointment would involve teaching both undergraduate and graduate students in anthropology, and first year medical and dental students. Particular attention will be paid to candidates with strong research interests in functional morphology, evolutionary biology, and hominid/primate paleontology, but other research areas will be considered. Applicants should send their curriculum vitae, statement of research interests, and names of three references to: **Anthro/Anatomy Search, Departments of Anthropology and Cell Biology and Anatomy, Northwestern University, 2006 Sheridan Road, Evanston, Ill. 60201.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS IN CELL BIOLOGY

Applications are invited for several tenure-track positions in the newly reorganized Department of Cell Biology and Anatomy at the Northwestern University Medical and Dental Schools. These positions are for assistant professors and, in exceptional cases, for associate professors. Applicants must have a Ph.D., M.D., or D.D.S. degree with research experience in cell biology, cellular neurobiology, structural biology, or related areas. Applicants should be able to demonstrate excellence or the potential for excellence in their respective fields. Successful applicants will be expected to carry on vigorous research programs and to participate in the teaching of graduate, medical, and dental students. Send complete curriculum vitae, brief description of previous and future research and teaching interests (three to four pages), and recommendations from at least three referees by 15 February 1983 to: **Dr. Robert D. Goldman, Chairman, Department of Cell Biology and Anatomy, Northwestern University Medical and Dental Schools, 303 East Chicago Avenue, Chicago, Illinois 60611.** *Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR OF PHYSIOLOGY. Applications are invited for a tenure-track position to begin no later than September 1983. Duties include teaching medical and graduate courses and conducting an independent research program. All areas of mammalian physiology will be considered, but preference will be given to neurophysiology, neuroendocrinology, and cardiovascular research. Qualifications include postdoctoral experience and a record of excellence and productivity in scholarly work. Send résumé and three references to:

**Dr. Charles D. Barnes
Chairman, Department of Physiology
Texas Tech University Health Sciences Center
School of Medicine
Lubbock, Texas 79430**

Deadline for application: 15 February. *An Equal Opportunity/Affirmative Action Employer.*

BIOCHEMIST: Postdoctoral position in lipids, protein chemistry, and molecular biology. Send application and three letters of recommendation by 1 February 1983 to: **P. E. Kolattukudy, Institute of Biological Chemistry, Washington State University, Pullman, Washington 99164.** *An Affirmative Action/Equal Opportunity Employer.*

BIOCHEMIST

Will develop procedures for automated commercial production of genetically engineered pharmaceuticals. Must have M.S. and at least two years of industrial experience in both solution and solid phase DNA synthesis. Salary is \$26,000 per year; job is located in the San Francisco area. Apply by résumé to: **Job Number 6070, P.O. Box 865, Sacramento, Calif. 95804,** by 8 January 1983. *Equal Opportunity Employer.*

BOTANIST

Assistant or associate professor, on the Denton campus of the Texas Woman's University. To teach undergraduate botany courses for biology majors, and popular botany courses for nonmajors. To train M.S. and Ph.D. students in molecular and/or radiation biology programs and to complement research of 16 faculty members in the areas of microbiology, developmental genetics, nucleic acid and protein biochemistry, cell biology, environmental radiation effects, and mycology.

Qualifications: Ph.D. degree required; applicants with postdoctoral and teaching experience are preferred.

PHYSIOLOGIST

Assistant professor. To teach physiology and pathophysiology courses in the health science programs at the Dallas centers of the Texas Woman's University.

Qualifications: Ph.D. degree in physiology required. Teaching experience, preferably in the health sciences.

Have curriculum vitae, three letters of recommendation, and transcripts, postmarked no later than 28 January 1983, mailed to: **Dr. Fritz Schwalm, Chairman, Department of Biology, Texas Woman's University, Denton, Texas 76204.** *Texas Woman's University is an Equal Opportunity Employer.*

FERMENTATION MICROBIOLOGIST

For the development of industrial fermentation programs for producing recombinant proteins in bacteria. Requires master's degree in microbiology and at least one year of experience relating to fermentation sciences, plus some training in biochemical engineering. The salary is \$28,600 per year and the job is located in the San Francisco area. Apply by résumé to: **Job Number 6071, P.O. Box 865, Sacramento, Calif. 95804,** by 8 January 1983. *Equal Opportunity Employer.*

Manager for Fermentation Operations

Relates to production of pharmaceutical and industrial products from recombinant DNA. Must have master's degree in microbial physiology and undergraduate degree in business management, plus 3 years of experience managing similar fermentation operation. Salary is \$50,000 and position is located in South San Francisco area. Reply by résumé to: **Job Number 2108, P.O. Box 865, Sacramento, Calif. 95804.** *Equal Opportunity Employer.*

THE ONTARIO CANCER INSTITUTE

MOLECULAR AND CELLULAR BIOLOGISTS

Candidates are invited to apply for two independent senior staff positions in the Division of Biological Research of the Ontario Cancer Institute. The Division comprises 14 senior staff investigators conducting research in molecular genetics, immunology, hemopoiesis, cell biology, and clinical epidemiology.

Candidates should have a doctorate and appropriate postdoctoral experience allowing for appointment to the Graduate Faculty of the University of Toronto. The successful applicant will be expected to carry out independent and collaborative research. Selection will be performed principally on the basis of excellence; however a commitment to cancer research compatible with the goals of the division is essential.

Salary negotiable, depending on experience. *In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

Applicants should submit curriculum vitae, bibliography, and the names of three referees, prior to 29 January 1983 to: **E. A. McCulloch, M.D., Head, Division of Biological Research, The Ontario Cancer Institute, 500 Sherbourne Street, Toronto, Ontario, Canada M4X 1K9.**

PURDUE UNIVERSITY HEAD, DEPARTMENT OF COMPUTER SCIENCES

Purdue University seeks a department head who will exert strong leadership as the university embarks on a \$5.7-million development effort to expand the faculty and improve the facilities and equipment in the computer sciences department, one of seven departments that comprise the School of Science.

The department currently consists of 30 faculty, and offers degrees at the bachelors, master's, and doctoral levels. The research computing facilities currently available to faculty include: two VAX computers, extensive interactive graphics equipment, and ARPANET and CSNET connections. An additional two VAX computers support the undergraduate program.

Research groups within the department are active in:

- Parallel computation
- VLSI systems
- Operating systems
- Networks
- Programming languages
- Data base systems
- Numerical computation
- Software engineering

Candidates must have an earned doctorate and should demonstrate significant accomplishment in computer research, experience in group leadership, and a continuing commitment to research and instruction in the context of scientific disciplines and traditions.

Letters of application should be mailed no later than 22 January 1983 to:

**Allan H. Clark, Dean
School of Science
Mathematical Sciences Building
Purdue University
West Lafayette, Ind. 47907**

Purdue University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

DEPARTMENT OF BIOLOGY MCGILL UNIVERSITY

Applications are invited for three tenure-stream positions at the assistant professor level, effective August 1983.

MOLECULAR BIOLOGY: Two positions. Principal areas of interest are human genome, neurobiology, plant biology, genome evolution.

PLANT ECOLOGY: One position. Area of specialization open.

Interested applicants should forward curriculum vitae, brief summary of current and anticipated research, reprints, and three letters of references to: **Dr. W. C. Leggett, Chairman, Department of Biology, McGill University, 1205 Avenue Dr. Penfield, Montreal, Quebec, Canada H3A 1B1.** Deadline is 28 February 1983.

McGill is an English language university and has a strong commitment to excellence in both teaching and research. *In accordance with Canadian Immigration regulations applicants who are Canadian citizens or landed immigrants will be considered first in these competitions.*

BIOLOGIST—PLANT TAXONOMIST to teach nonvascular plants, field botany, and general biology. One year sabbatical replacement, beginning July 1983. Ph.D., entry-level position. Curriculum vitae, transcripts, and three letters of reference should be received prior to 28 February by: **Professor Daniel J. McDonald, Biology Department, Dickinson College, Carlisle, Pa. 17013.**

An Affirmative Action/Equal Opportunity Employer

CANCER RESEARCH ASSOCIATE—Ph.D. or M.S. Experience in tumor immunology, virology, transplantations, tissue culture preferred. Applicants should send curriculum vitae to: **Harry L. Joachim, M.D., Director of Laboratories, LENOX HILL HOSPITAL, 100 East 77 Street, New York, N.Y. 10021.** *An Equal Opportunity Employer.*

CELL AND MOLECULAR BIOLOGY. A senior staff position is available in a Molecular Biology Department which has a comprehensive program in mammalian biochemical and molecular genetics. We are seeking a person with an established research program in cell genetics, or cell and molecular biology, who complements the present programs in our department. Established investigators with demonstrated ability to initiate and maintain a strong research program are invited to apply. Applicants should send curriculum vitae, a brief statement of research interests, and the names of references to: **Dr. Verne M. Chapman, Department of Molecular Biology, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263.** *An Equal Opportunity Employer, M/F.*

CELLULAR PHYSIOLOGIST. Teaching and research experience emphasized. For participation in current work on cell culture of transformed cells. Please apply to: **The Chairman, Physiology Department, Ponce School of Medicine, P.O. Box 7004, Ponce, P.R. 00732-7004.**

CHAIRMAN DEPARTMENT OF ANATOMY THE UNIVERSITY OF WESTERN ONTARIO

The Faculty of Medicine of the University of Western Ontario invites applications and nominations for the chairmanship of its Department of Anatomy. Candidates should have excellent leadership capabilities and a distinguished record in biomedical research. Demonstrated ability in the areas of administration, planning, and medical education is also essential.

Closing date: 31 January 1983. Interested individuals should submit a letter of application, curriculum vitae, and the names of three references to:

**Dr. M. J. Hollenberg
Dean of Medicine
Health Sciences Addition
The University of Western Ontario
London, Ontario, Canada N6A 5C1**

Canadian Immigration regulations require that Canadians and Landed Immigrants be given preference.

The University of Western Ontario is an Equal Opportunity Employer.

POSITIONS OPEN

BIOMOLECULAR CRYSTALLOGRAPHER. The Department of Biochemistry, University of Minnesota, anticipates an opening for a tenure-track assistant professor working on crystallography of proteins, nucleic acids, viruses, or similar biomolecular structures. Teaching responsibilities will include general and physical biochemistry. Ph.D. and 2 years of postdoctoral experience in biomolecular crystallography required. Send curriculum vitae, list of publications, brief description of research plans, and the names of three references whom we may contact to: **Professor I. E. Liener, Crystallography Search Committee, Department of Biochemistry, University of Minnesota, 1479 Gortner Avenue, St. Paul, Minn. 55108.** Applications must be received by 31 January 1983. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from qualified women and minorities.*

ENDOWED CHAIR IN MOLECULAR ONCOLOGY

The University of California, Los Angeles (UCLA) School of Medicine invites nominations and applications for the **Norman Sprague Professorship in Molecular Oncology.** This newly endowed chair is to be filled by an individual conducting highly meritorious basic research in cellular or molecular biology, immunology, biochemistry, or other fields broadly relating to fundamental aspects of abnormal cell growth leading ultimately to cancer. Nominees should be qualified for appointment in the professorial series, and would most probably be tenured in the Department of Microbiology and Immunology or the Department of Biological Chemistry. *The University of California is an Equal Opportunity Employer; applications from minority candidates and women are encouraged.*

Correspondence should be addressed to:

**Dohn Glitz
Department of Biological Chemistry
UCLA School of Medicine
Los Angeles, California 90024**

CHAIRMAN, DEPARTMENT OF PHYSIOLOGY Chicago College of Osteopathic Medicine

Applications are invited for the position of chairman, Department of Physiology. Applicants should have an interest and aptitude for teaching physiology to medical students, proven research ability, and commitment to an academic career in teaching and research. Qualifications should include leadership in promoting the development of research programs, including the ability to obtain extramural grant support, and in maintaining high standards and excellence in teaching. The College has a strong commitment to furthering research and affords ample opportunity and facilities for this purpose. The College is located in the academically and historically rich community of Hyde Park near the University of Chicago. Salary is competitive and negotiable. Send application, including curriculum vitae and names of three references, to: **Aaron D. Alexander, Ph.D., Chairman, Physiology Search Committee, Department of Microbiology, Chicago College of Osteopathic Medicine, 5200 South Ellis Avenue, Chicago, Ill. 60615.** *An Equal Opportunity/Affirmative Action Employer.*

The Department of Psychiatry and Human Behavior, University of California, Irvine, is seeking applicants for a position as an **ASSOCIATE/FULL PROFESSOR** to serve as **DIRECTOR OF THE PSYCHIATRIC RESEARCH UNIT** at the Long Beach Veterans' Administration Hospital. Duties will include: teaching of medical students and residents, clinical care, and research. Applicants should have 3 to 4 years of experience in clinical psychobiology. Demonstrated research experience in psycho-neuroendocrinology or psychopharmacology and national recognition are particularly sought. Applicant must have a clinical background in the evaluation and treatment of all major psychiatric disorders. Prefer candidates with a minimum of 5 years of experience in the administration of inpatient/outpatient psychiatric units. Applicant must have current California medical licensure. Interested parties should send curriculum vitae and three references to:

**Lawrence D. Sporty, M.D.
Clinical Professor and
Vice Chair, Clinical Services
University of California, Irvine Medical Center
101 City Drive South
Orange, California 92668**

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

POSITIONS OPEN

THREE POSITIONS

ECOLOGIST

Assistant professor, potential continuing position. Primary responsibilities: teaching undergraduate courses in ecology and assisting with general introductory courses.

VERTEBRATE BIOLOGIST

Assistant professor, potential continuing position. Primary responsibilities: teaching undergraduate courses in vertebrate biology and assisting with general introductory courses.

GENERAL BIOLOGIST

Assistant professor, temporary continuing position. Primary responsibilities: teaching undergraduate course laboratories and assisting with general introductory courses.

Candidates for any of the three positions must have Ph.D. degree before date of appointment. Commitment to research interests is strongly recommended. All positions begin in fall 1983. St. Olaf is a private coeducational college of the American Lutheran Church and has an enrollment of 3000 with 90 senior biology majors and a ten-person staff. Submit letter of application, résumé, and names of three references by 15 February 1983 to: **Dr. Marland L. Madson, Chairman, Biology Department, St. Olaf College, Northfield, Minn. 55057.**

An Affirmative Action/Equal Opportunity Employer

UNIVERSITY OF CALIFORNIA AT LOS ANGELES (UCLA) SCHOOL OF MEDICINE

Applications are invited to fill a tenured endowed professorship called the **JENNIFER JONES SIMON CHAIR IN BIOPHYSICS** within the **DEPARTMENT OF RADIOLOGICAL SCIENCES** at the UCLA School of Medicine. The endowment will be used to support the appointee's research which should be focused on both the normal and abnormal functioning of the human body involving, at least initially, the application of the nuclear medicine technique of positron emission tomography.

Highest priority will be accorded to applicants who have helped develop or have utilized emission tomographic and other comparably promising methods in nuclear medicine in the field of basic and/or clinical neuroscience research and who have demonstrated some of the potential that these methods may have for a better understanding of nervous and mental diseases. The Jennifer Jones Simon Professor is expected to qualify for appointment at the higher levels of the full professorship.

Applicants should forward a résumé or curriculum vitae and the names of at least three referees to the Search Committee chairman:

**Dr. Carmine D. Clemente
Director, Brain Research Institute
UCLA School of Medicine
Los Angeles, California 90024**

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

COMPARATIVE PHYSIOLOGY. The Department of Zoology, University of Florida, has a tenure-track position available for an assistant or associate professor, whose field of research is **COMPARATIVE PHYSIOLOGY OF MARINE OR FRESH-WATER INVERTEBRATES.** Individuals who are interested in an evolutionary and/or ecological approach are preferred. The department is determined to maintain close contact between its developing program in ecological physiology and its traditional strengths in ecology, behavior, and evolutionary zoology. The successful candidate will be expected to contribute to teaching in the undergraduate program and will be encouraged to develop a graduate course of his/her choosing. Candidates must submit curriculum vitae, a statement of research interests, a selected set of recent publications, and the names of at least three references to:

**Dr. Brian K. McNab
Physiology Search Committee
Department of Zoology
University of Florida
Gainesville, Fla. 32611**

by 15 February 1983.

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

POSITIONS OPEN

THE CHAIR OF MECHANICAL ENGINEERING AND APPLIED MECHANICS

Recommendations and nominations are being invited for the chair of the Department of Mechanical Engineering and Applied Mechanics at the University of Pennsylvania. The Department has current programs in: thermo-fluids and heat transfer, fluid mechanics, solid mechanics, mechanics of materials, and manufacturing systems engineering.

The department faculty is interested in finding a candidate with a distinguished research background in fluid mechanics preferably with some interest in experimental work or numerical analysis. Qualified candidates in other areas of mechanical engineering are also invited to apply.

Recommendations and nominations, accompanied by a résumé and appropriate supporting material, should be sent to: **Professor J. N. Zemel, Chair of Search Committee, Center for Chemical Electronics, Moore School, School of Engineering and Applied Science, University of Pennsylvania, Philadelphia, Pa. 19104.** The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.

CLINICAL CHEMIST: Applications are invited for a faculty position in the Clinical Chemistry Laboratory of the Department of Pathology at the University of Virginia School of Medicine. The position is that of associate director of the Clinical Chemistry Laboratory with responsibilities in both the routine and special chemistry sections. Applicants must possess a Ph.D. and/or M.D. degree with formal training in clinical chemistry preferred. Interested individuals should send curriculum vitae to: **John Savory, Ph.D., Director of Clinical Chemistry and Toxicology Laboratories, Department of Pathology, Box 168, University of Virginia School of Medicine, Charlottesville, Virginia 22908.** An Equal Opportunity/Affirmative Action Employer.

CLINICAL MICROBIOLOGIST: M.D. or Ph.D., Board-certified, with research interests in bacteriology/mycology, as associate director of a large hospital laboratory for 1 July 1983 appointment. Faculty appointment in Department of Pathology. Send inquiries with curriculum vitae and three references to: **Dieter H. M. Gröschel, M.D., Department of Pathology, Box 168, University of Virginia School of Medicine, Charlottesville, Virginia 22908.** An Equal Opportunity/Affirmative Action Employer.

CLINICAL PHARMACIST—RESEARCH

Pharm.D. with postdoctoral training in analytical techniques to join clinical pharmacology program in the Division of Hematology-Oncology. Research interest in pharmacokinetics and drug development. Eligible for appointment as assistant professor in the Department of Pediatrics at the University of South California (USC) School of Medicine and in the USC School of Pharmacy. *Members of minority groups and women are encouraged to apply.* Send curriculum vitae to: **John S. Holcenberg, M.D., Division of Hematology/Oncology, Childrens Hospital of Los Angeles, P.O. Box 54700, Terminal Annex, Los Angeles, Calif. 90054.**

ENZYMOLOGIST—An interdisciplinary team studying enzyme-catalyzed reactions by high-field NMR spectroscopy has an opening for a postdoctoral fellow with experience in enzyme purification, assay, and mechanism. Salary in the range of \$20,000 to \$22,000 per annum, depending on experience. Send curriculum vitae and the names of two referees to: **Professor A. I. Scott, Department of Chemistry, Texas A & M University, College Station, Texas 77843.** Texas A & M University is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS: The Department of Neurological Surgery in the School of Medicine at the State University of New York (SUNY) at Stony Brook is seeking candidates to fill faculty positions in basic neurosurgical research. Opportunity to be involved in developing new research facility and to interact with other neuroscientists in Departments of Neurology and Neurobiology. Research background should include, but is not limited to, cerebral blood flow and CSP/physiologic studies; autoradiographic techniques and animal surgery are desirable. Rank and salary will be dependent upon qualifications. Submit curriculum vitae, bibliography, and succinct outline of research experience and planned research to: **Albert B. Butler, M.D., Chairman, Department of Neurological Surgery, Health Sciences Center, T12-082, SUNY Stony Brook, Stony Brook, N.Y. 11794.** SUNY Stony Brook is an Equal Opportunity/Affirmative Action Employer. AK 474.

POSITIONS OPEN

THE UNIVERSITY OF TEXAS AT DALLAS DEAN, School of Human Development

The University of Texas at Dallas invites nominations and applications for the position of DEAN of the School of Human Development. The school is composed of upper-division undergraduate and M.S. programs in the areas of psychology, special education, and communication disorders. The Ph.D. degree is offered by the Program in Communication Disorders, which draws extensively from the resources of The Callier Center.

The dean is the chief budgetary officer of the school, and is expected to provide leadership in the development of academic programs, and in facilitating and expanding research: The Ph.D. degree and university teaching experience are required, but the fundamental qualifications are excellence in scholarly research, an outstanding record in administration, and demonstrated ability to think creatively about interdisciplinary research and education in human development.

In order to ensure full consideration, applicants should submit by 15 February 1983, a letter of interest, a résumé (indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required), and names of references to:

**Academic Search Number 519A
School of Human Development
The University of Texas at Dallas
P.O. Box 688
Richardson, Texas 75080**

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

DIRECTOR INSTITUTE ON GLOBAL CONFLICT AND COOPERATION UNIVERSITY OF CALIFORNIA

Applications and nominations are invited for the position of director for the proposed University of California multi-campus organized research unit, the Institute on Global Conflict and Cooperation. The Institute will be funded in part by a special appropriation from the state of California. The focus of the Institute's program will be the study of the reduction of situations which threaten escalation into large scale war, especially, but not exclusively, nuclear war. The Institute will seek to stimulate innovative and multidisciplinary research in this area, support ongoing studies, contribute to curricular development, coordinate the interests of faculty and students on the several campuses, establish ties with interested scholars outside the University, and publicize the results of scholarly research and study. The director should be, or have the qualifications to become, a tenured member of the University of California faculty. The director will be expected to stimulate and solicit innovative research proposals and, with the assistance of a Steering Committee and Advisory Board, to create task forces, colloquia and study groups, to conduct major conferences, raise extramural funds, promote the Institute's teaching and publicity programs, and coordinate programs and projects among the campuses. Please send applications, nominations, and supporting material to the Chair of the Search Committee: **Professor Marvin L. Goldberger, c/o H. Fishlow, 261 University Hall, UNIVERSITY OF CALIFORNIA, Berkeley, California 94720.** The material, which will be held in strict confidence, should be received no later than 15 February 1983 to be assured full consideration.

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

Applications are invited for a new full-time, tenure-track **FACULTY POSITION IN PHYSICAL STRATIGRAPHY, SEDIMENTOLOGY** beginning 1 September 1983. The position requires a Ph.D. and will be filled at the assistant or beginning associate professor level. Departmental facilities include: thin section laboratory, AA, IR, GC, DTA spectroscopy, seismic-station, and computing facilities. The successful candidate will be required to teach undergraduate courses in physical stratigraphy, sedimentology, field geology, and share introductory geology, while conducting a research program in his/her specialty.

Applicant should submit curriculum vitae, transcripts, and letter describing his/her teaching and research goals, and the names of three persons for reference to: **Dr. Bruce F. Rowell, Chairman/Department of Physical Sciences, Kutztown State College, Kutztown, Pa. 19530.** The closing date for applications is 28 February 1983. Kutztown State College is an Affirmative Action/Equal Opportunity Employer.

BIOLOGY FACULTY POSITIONS

The Department of Biology at Texas A&M University invites applications for the following tenure-track positions starting fall 1983.

PHYSIOLOGIST: Appointment will be at the assistant professor level. Applicants must have at least 2 years of research experience in neuroendocrinology or endocrinology, preferably at the comparative or molecular level. Teaching duties will include an undergraduate course in comparative physiology and a graduate course in the candidate's area of expertise.

VERTEBRATE EVOLUTIONARY BIOLOGIST: Appointment will be at the assistant professor level. Specific research focus is open; persons with interests in neurobiology and behavior are also encouraged to apply. Primary teaching responsibility will be a course in mammalian anatomy for nonmajors.

DEVELOPMENTAL PHYSIOLOGIST: Associate professor with 12-month appointment and will serve as associate department head. Area of research specialization is open, but preference will be given to candidates interested in cell and tissue interactions in development. He/she will be expected to assist with the administration of the department (approximately 40 faculty members; prior administrative experience is desired). Teaching duties will include honor sections of the freshman biology program.

The successful applicants for these three positions will be expected to develop a strong research program, to interact with other biology faculty members in related fields, and to obtain extramural funding. Send curriculum vitae, including statement of research interests and names of four references, to: **Dr. H. Sauer, Department of Biology, Texas A&M University, College Station, Texas 77843.** Closing date for applications is 31 January 1983. Texas A&M University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH AWARDS

Sponsored by the BALLISTIC RESEARCH LABORATORY in association with THE NATIONAL RESEARCH COUNCIL

The National Research Council will make awards in 1983 under the Resident Associateship Program, which provides awardees with opportunities to conduct experimental and theoretical research as visiting scientists and engineers in the fields of:

**Applied Computer Sciences
Applied Mathematics
Probability Theory and Stochastic Processes
Combustion Research
Fluid Mechanics
Continuum Mechanics
Materials Sciences
Nuclear and Radiation Physics
Physical Chemistry
Quantum Chemistry**

in the Ballistic Research Laboratory complex located in the beautiful Chesapeake Bay country of Maryland, within easy driving distance of the metropolitan centers of Baltimore, Philadelphia, and Washington, D.C.

Some programs are open to senior investigators as well as recent doctorates.

Further details on research programs may be obtained from: **Dr. L. J. Puckett, telephone: 301-278-6246, at the Ballistic Research Laboratory, Aberdeen Proving Ground, Md. 21005.**

For application materials and details on specific research opportunities, write promptly, giving areas of interest, to:

**Associateship Office (JH-610-P)
NATIONAL RESEARCH COUNCIL
2101 Constitution Avenue, NW
Washington, D.C. 20418**

Postmark deadline for application is 15 January.

POSITIONS OPEN

DIRECTOR, ENVIRONMENTAL PROGRAM DEVELOPMENT

The Iowa Department of Environmental Quality has a position open for director of the Department's Program Development Division. This division is responsible for development of rules, standards, and program activities in environmental control areas including hazardous waste, floodplain management, drinking water, dam safety, wastewater, solid waste, construction grants, and air quality. The selected individual will report to the Department's executive director.

Applicants must have a strong technical background in environmental science and substantial program management and personnel management experience. Salary range for this position is \$30,908 to \$41,704. Qualified individuals should send résumés and college transcripts to: **Personnel, Iowa Department of Environmental Quality, Henry A. Wallace Building, 900 East Grand Avenue, Des Moines, Iowa 50319.** Applications must be received by 21 January 1983.

An Equal Opportunity Employer

ENVIRONMENTAL SYSTEMS ANALYST AUSTRALIA

ESRI—Australia, the country's major proponent and supplier of environmental modeling and geographic information systems, seeks a highly qualified and motivated senior environmental systems analyst. The successful candidate will hold a graduate degree in an environmental, mathematical, engineering, or computing field, and will have at least 7 years of experience involving BOTH environmental analysis and modeling-information systems development. Duties will include environmental data base and systems design, development of simulation models for land use, forestry, agriculture and defence applications, supervision of major projects, and diverse R & D activities within the broader Associated Surveys Group. The position could be based in either Melbourne or Perth, with considerable interstate travel required. Commensurate with the senior nature of the position, an attractive remuneration package is offered. Send résumé and names of three references to: **Dr. S. R. Kessell, Managing Director, ESRA—Australia Pty. Ltd., 18 Prowse Street, West Perth, Western Australia 6005.**

EUKARYOTIC MOLECULAR GENETICIST

The Department of Biology, University of California, Riverside, seeks an eukaryotic molecular geneticist for a tenure-track position starting 1 July 1983. Appointment will be at the assistant professor level. Preference will be given to a geneticist interested in the structure, evolution, and/or regulation of eukaryotic genomes. The successful applicant will be expected to develop a vigorous research program, supervise graduate students in master's and doctoral programs, and teach at both the undergraduate and graduate levels. Postdoctoral experience is highly desirable. Applicants should send curriculum vitae, a brief description of research and teaching goals, reprints of scientific papers, and at least three letters of reference to:

**Professor Vaughan Shoemaker, Chairman
Department of Biology
University of California
Riverside, California 92521**

The University of California is an Equal Opportunity/Affirmative Action Employer. Applications are invited from all qualified individuals.

IMMUNOLOGIST

Assistant or associate professor, dependent upon qualifications. Tenure-track appointment. Ph.D., preferably in microbiology, required. Expertise to teach immunology to medical students and a graduate immunology course required. Research space provided in a new medical school building. A strong commitment to conduct independent research required. Prefer research interests to include hybridoma methodology, bacterial antigen isolation and purification, and/or cellular immunity of infectious diseases. Inter- and intra-departmental research is encouraged. Postdoctoral experience desirable. Position begins 1 July 1983. An earlier starting date is negotiable. Salary dependent upon rank and qualifications. Submit curriculum vitae, three letters of reference, and a statement of research interests to: **Dr. D. W. Lambe, Jr., Chairman, Department of Microbiology, P.O. Bx 19,870A, College of Medicine, East Tennessee State University, Johnson City, Tennessee 37614.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITION Princeton University Department of Geological and Geophysical Sciences Princeton, N.J. 08544

We are looking for an exceptionally creative individual in the general area of paleontology-stratigraphy-sedimentology for tenure-track appointment as assistant professor. Rapid increases in understanding of the processes and history of the earth's surficial environment have come about through analytical and theoretical advances in many specialties, such as magnetic stratigraphy, clay mineralogy and geochemistry, seismic stratigraphy, isotopic and microanalytical studies of fossils and sediments, sedimentation related to crustal tectonics, and mathematical analysis of stratigraphic and paleontological data. We seek candidates with strong interdisciplinary research interests in areas such as those listed, with the analytical skills and foresight to work effectively on the frontier. Within the department, the appointee should be able to take responsibility for an area such as stratigraphy, paleontology, or sedimentology, and provide a broad historical perspective. We plan to back up this appointment by our program for a general expansion of laboratory facilities, as appropriate.

Inquiries should be made to: **R. A. Phinney, chairman, at the above address, or by telephone: 609-452-4100.** While later applications will be considered, we would like to have them by 31 January 1983, or earlier, if possible. Applicants should submit résumé, names of at least three references, and a statement of research plans and priorities.

Princeton University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION VERTEBRATE BIOLOGY

The Department of Biology of Oberlin College seeks to fill a 1-year sabbatical replacement position for the academic year 1983-1984. Teaching responsibilities include two courses in vertebrate biology at advanced and introductory levels and one or more additional courses such as vertebrate evolution, systematics, reproduction, or endocrinology. Candidates with the Ph.D. degree and some postdoctoral experience are preferred but those in the last stages of completion of the Ph.D. will be considered. Academic rank and salary are dependent upon background and experience. Openings are normally filled at the assistant professor level.

Applications should include curriculum vitae and copies of transcripts of both undergraduate and graduate work. Three letters of recommendation should be sent by the respondents directly to the chairman. To be assured of consideration, completed applications should be received by 15 February 1983. Materials should be sent to: **Dr. Anna Ruth Brummett, Chairman, Department of Biology, Oberlin College, Oberlin, Ohio 44074.**

IMMUNOLOGIST. The Department of Biology at Georgia State University invites applications for an anticipated tenure-track position (assistant professor) in immunology (starting date: January 1984). Candidates should have postdoctoral experience and demonstrated potential for independent research. The successful candidate will be expected to teach undergraduate and graduate courses in immunology. Graduate degrees offered are: M.S. in biology and Ph.D. in microbial and biochemical sciences. Salary will be commensurate with qualifications. Applications, including curriculum vitae, reprints, a statement of research plans, and names of three references, should be sent to: **Chairperson, Department of Biology, Georgia State University, University Plaza, Atlanta, Ga. 30303.** Deadline for receipt of application is 15 March 1983. *Georgia State University, a unit of the University System of Georgia, is an Equal Opportunity/Affirmative Action Employer.*

M.E./PHYSICIST. We are a manufacturer of radiation detection equipment, looking for the right person to improve the productiveness of our operation. This would include but not be limited to product design, tooling design, process analysis, material analysis, and yield analysis. Prior experience in a manufacturing environment (5 years minimum), performing similar tasks, is absolutely required. A B.S. level of education or more is also required. Experience with plastic injection molding parameters, mold design, and molding materials is a definite plus. Please send résumé with salary requirements to: **Dosimeter Corporation, 11286 Grooms Road, Cincinnati, Ohio 45242.**

POSITIONS OPEN

UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE

Applicants are solicited for **FACULTY POSITIONS** in the following departments:

ANATOMICAL SCIENCES (Number 430 and Number 431—two positions): **Assistant professor(s).** To teach microanatomy/gross anatomy to medical, dental, and health-related students. These faculty members are expected to take an active part in graduate education and to carry out independent research projects. Ph.D. in anatomical sciences and teaching experience in microanatomy/gross anatomy is a must. Experience in research with electron microscopy and postdoctoral fellowship for 1 or 2 years is desirable. Closing date for application for both positions is 1 February 1983.

PATHOLOGY (Number 404) **Professor and head.** To serve as head of the academic department of Pathology in the College of Medicine, as well as director of the Pathology Laboratories. M.D. Board-certified in pathology with capabilities in undergraduate and graduate teaching, as well as experience in operating hospital laboratories and an interest in research.

PHYSIOLOGY AND BIOPHYSICS (Number 432) **Assistant professor.** Seeking individual with research experience in cardiovascular physiology with a behavioral emphasis. The successful candidate will be expected to develop an independent research program and participate in teaching of dental, medical, and graduate students. Must have a Ph.D., M.D., or D.V.M. and at least 2 years of postdoctoral experience. Deadline for application: 31 January 1983.

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

FT/NMR RESEARCH SPECTROSCOPIST (Ph.D.). Supervision/maintenance/operator training/hardware-software development involving departmental NMR equipment (Nicolet Widebore 300-Multinuclear, Nicolet/Bruker 90-Multinuclear, JEOL 200FX-¹³C/¹H, Varian EM 390-¹H). Position also involves research collaboration with faculty in several departments, and could, for example, involve studies of biological/biochemical samples and rapid organometallic kinetics. Background in FT/NMR spectroscopy required. Salary range: \$26,616 to \$32,076, plus University of California benefits package. *The Department of Chemistry, University of California, Riverside, is an Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae and names and addresses of three references to: **Tilden Sprague, Staff Personnel Office, The University of California, Riverside, Calif. 92521.**

GENERAL ENDOCRINOLOGIST: One-year, temporary for 1983-1984; instructor or assistant professor; salary and rank dependent on qualifications and experience. Duties must be assumed 16 August 1983 and include: teaching general comparative endocrinology, general zoology, and possibly, comparative vertebrate anatomy; advising undergraduate zoology majors; and participating in department affairs. Submit résumé to: **Dr. R. A. Brandon, Department of Zoology, Southern Illinois University, Carbondale, Ill. 62901.** *An Equal Opportunity/Affirmative Action Employer.* Deadline for applications: 15 March 1983.

HEMATOLOGIST—Tenure-track opening fall 1983. Assistant or associate professor. Successful applicant will develop research program involving M.S. graduate students, teach six units per semester in area of expertise, and contribute lectures to medical technology training program. By 15 February 1983 send résumé, three letters of reference, reprints, and statement of research and teaching interests to: **W. N. Bigler, Director, CAMT, San Francisco State University, San Francisco, Calif. 94132.** *An Equal Opportunity/Affirmative Action Employer.*

WETLAND ECOLOGIST: Tenure-track, open fall 1983, assistant professor; salary dependent on experience and scholarly record. Duties include: teaching wildlife biology, general zoology, specialty courses, graduate and undergraduate student advisor, contributing to active wildlife research program. Excellent facilities available. Candidate should have publication record and interest in seeking outside research funding. Submit résumé to: **Dr. Ronald A. Brandon, Department of Zoology, Southern Illinois University, Carbondale, Ill. 62901.** *An Equal Opportunity/Affirmative Action Employer.* Deadline for applications: 15 March 1983.

POSITIONS OPEN

Ph.D. IMMUNOLOGIST/MICROBIOLOGIST with special interest in host defense against infection. To manage and co-direct Surgical Immunobiology Laboratory with special interests in infections, nutrition, immunomodulators, and burns. Salary negotiable. Send curriculum vitae to: J. Wesley Alexander, M.D., University of Cincinnati, Department of Surgery, ML Number 558, Cincinnati, Ohio 45267.

MICROBIOLOGIST—IMMUNOLOGIST. Academic research position for Ph.D. scientist to collaborate with group studying bacterial infections of children. Relevant areas include immunochemistry, immune regulation, bacterial pathogenesis, host defenses, bacterial genetics; research plans flexible according to individual interests. Excellent initial support. Candidate must be qualified to develop an independent program. Appointment will be at postdoctoral, research associate, or assistant professor level with possible joint appointment in Department of Molecular Biology and Microbiology. Please send curriculum vitae and names of referees to: Dr. Paul A. Shurin, Department of Pediatrics, Case Western Reserve University, Cleveland Metropolitan General Hospital, 3395 Scranton Road, Cleveland, Ohio 44109.

MICROBIOLOGIST—Postdoctoral position is available for a recent Ph.D. in microbiology or biochemistry. Program involves the use of microbiological and biochemical techniques to study phosphate uptake and regulation by bacteria. Send curriculum vitae and names of references to:

Dr. H. O. Halvorson
Rosenstiel Basic Medical Science Research Center
Brandeis University
Waltham, Mass. 02254
Equal Opportunity/Affirmative Action Employer

NEUROPHYSIOLOGY

The Department of Physiology and Biophysics of the University of Southern California School of Medicine invites applications for two tenure-track appointments available 1 September 1983. Areas of interest include developmental, cellular, or mathematical neurobiology. Applicants must have recent doctorate and postdoctoral experience. Duties include teaching and research; appointees will be expected to establish an independent research program. Send curriculum vitae, list of publications, and names of three references to:

Donald J. Marsh, M.D., Chairman
Department of Physiology and Biophysics
University of Southern California
School of Medicine
2025 Zonal Avenue
Los Angeles, Calif. 90033

An Equal Opportunity/Affirmative Action Employer

PLANT MOLECULAR OR DEVELOPMENTAL BIOLOGIST. The Department of Botany, University of Minnesota, invites applications for a tenure-track position at the assistant professor level beginning fall 1983. Preference will be given to qualified candidates with a molecular or developmental orientation working in the following areas: developmental biology of chloroplasts, nitrogen fixation, or gene regulation. Candidates with experience in vascular or non-vascular plant systems are encouraged to apply. Applicants must have 2 years of postdoctoral training and a strong biochemical background. Responsibilities include development of a creative research program and participation in undergraduate and graduate level teaching in plant cell or developmental biology or plant physiology. Please submit curriculum vitae, undergraduate and graduate transcripts, reprints, a statement of professional goals/research interests, and names of three references by 1 March 1983 to: Dr. T. K. Soulen, Department of Botany, University of Minnesota, St. Paul, Minn. 55108. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

POSTDOCTORAL RESEARCH ASSOCIATE—Position currently available. Research to study gene regulation in yeast at level of mRNA and protein synthesis and protein secretion. Should have background in molecular genetics and biochemistry, preferably including recombinant DNA techniques. Send curriculum vitae and names of three references to:

Daniel Perlman
Rosenstiel Basic Medical Science Research Center
Brandeis University
Waltham, Mass. 02254

Equal Opportunity/Affirmative Action Employer

How do glycopeptide immunogens interface with the mammalian immune system to confer longstanding protective immunity?

As Molecular Genetics moves to the animal health care marketplace with novel subunit recombinant DNA vaccines, we search for innovative answers to these and related experimental questions. We plan to expand our professional staff of PhD level:

Immunochemists Immunologists

We present the opportunity to explore the fundamentals of basic immunology while creating important commercial products.

Applicants must possess a PhD degree in immunochemistry or immunology and have several years postdoctoral experience in vaccine chemistry, immunogens, adjuvants, or related subjects.

We are located in the pleasant environs of Minnesota offering easy access to some of the country's authentic wilderness areas and an excellent quality of life in Minneapolis.

Applicants can apply in confidence to:
Department of Immunology, Molecular Genetics, Inc., 10320 Bren Road East, Minnetonka, Minnesota 55343.

An Equal Opportunity Employer M/F/Hc



Molecular Genetics Inc

10320 Bren Road East
Minnetonka, Minnesota 55343
612, 935-7335

DIRECTOR OF A RESEARCH DEPARTMENT OF MICROBIOLOGY

The Southwest Foundation for Research and Education is seeking an established scientist to lead the development of a microbiology department. Candidates should hold a Ph.D. or M.D. degree, have research achievements in microbiology, and have administrative experience.

Southwest Foundation is a privately endowed, independent biomedical research institution. It has extensive laboratory and animal care facilities for all types of animals, including nonhuman primates. Scientific staff members have close working relationships with the faculty of the nearby University of Texas Health Science Center.

Salary is competitive. A comprehensive benefits program is provided. Applications, including curriculum vitae and salary history, should be sent to:

Chairman, Search Committee
Southwest Foundation
for Research and Education
P.O. Box 28147
San Antonio, Texas 78284

*An Affirmative Action/
Equal Opportunity Employer*

CSIRO

SENIOR FISHERIES SCIENTIST
A\$35,630 to A\$46,870 per annum
DIVISION OF FISHERIES RESEARCH
CRONULLA, NSW, AUSTRALIA

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

GENERAL: The CSIRO Marine Laboratories, which include the Divisions of Fisheries Research and Oceanography, is Australia's principal marine research institution, employing about 200 scientists and support staff to investigate the physical, chemical, and biological features, including fisheries, of the oceans around Australia. The main laboratory is at Cronulla in Sydney and there are smaller laboratories in Brisbane and Perth. Two well-equipped chartered vessels (53m and 43m) and on line access to a Cyber 76 computer are available for research.

The Sydney activities will be transferred to new laboratories being constructed on a deep water-front site in Hobart, Tasmania, and the appointee must be prepared to transfer to Hobart any time after June 1984. The Australian Government has also agreed to the acquisition by CSIRO of a modern oceanographic ship to replace the presently chartered "Sprightly".

Collaboration between the Division of Fisheries Research and the Division of Oceanography is actively encouraged and facilitated by the sharing of support resources such as ships, library, and computer systems.

The interests of the Division of Fisheries Research encompass marine biology and ecology, ocean productivity and population dynamics of commercial and potentially commercial fish, crustaceans, and molluscs. The Australian Fishing Zone receives special attention.

DUTIES: The appointee will lead the Tuna Research Group whose prime research objective is to provide a scientific basis for management of the Southern Bluefin Tuna Fishery, mainly through quantitatively oriented studies based on fisheries statistics and mark-recapture data. A new intensive tagging program will start in 1983. Biological studies leading to advances in the theory of tuna management will also be undertaken.

The appointee will initiate and carry out a personal research program on some facet of the biology or population dynamics of Southern Bluefin Tuna and will also act as an adviser on management of Tuna Resources.

QUALIFICATIONS: For this senior appointment a fisheries scientist of outstanding achievement in biology and with experience in population dynamics is required. He or she must be capable of research leadership of a high order, must have a Ph.D. degree or equivalent qualifications in a relevant science with training in fisheries biology and statistics, and have at least 12 years of postdoctoral experience. A substantial record of significant research publications is essential.

TENURE: Indefinite with Australian Government Superannuation (pension) benefits available.

APPLICATIONS: In writing, quoting reference A2392 and giving full personal particulars, including details of qualifications and experience, copy of academic transcripts, and the names of at least two professional references, should reach: **The Acting Chief, Division of Fisheries Research, CSIRO, P.O. Box 21, CRONULLA, NSW 2230, AUSTRALIA**, by 28 January 1983.

POSITIONS OPEN

MOLECULAR GENETICS. A staff position is available in a Molecular Biology Department which has a comprehensive program in mammalian biochemical and molecular genetics. We are seeking a person with experience in molecular biology and/or retroviruses interested in mammalian genetics to develop a research program in our department. Applicants should send curriculum vitae, a brief statement of research interests, and the names of references to: **Dr. Verne M. Chapman, Department of Molecular Biology, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263. An Equal Opportunity Employer, M/F.**

ORGANOMETALLIC OR INORGANIC CHEMIST

Tenure-track position at the assistant professor level starting fall 1983. Ph.D. required. Applicants should have a strong commitment to research as well as to teaching at both introductory and advanced levels. Applications, curriculum vitae, outline of research plans, three reference letters (submitted in confidence), and covering letter should be sent to: **Professor Thomas Schleich, Chairperson, Department of Chemistry, University of California, Santa Cruz, Santa Cruz, Calif. 95064.** Complete application materials should be received by 1 February 1983. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

PHYSICIST/PROJECT ENGINEER: We are a manufacturer of Direct Reading Dosimeters (DRD's) and portable radiation detection instrumentation. We require an experienced (5 to 10 years) physicist to support R & D and manufacturing. Minimum of a B.S. degree in physics is required. (Familiarity with Ion Chamber design and Beta Dosimetry is a definite plus.) Will interface closely with electronic design. Send all responses with salary history to: **Dosimeter Corporation, 11286 Grooms Road, Cincinnati, Ohio 45242, attention: Ed Shernoff.**

POSITION IN PLANT GENETICS HARVARD UNIVERSITY

The Department of Organismic and Evolutionary Biology invites applications and nominations for a position in the genetics of plants at either the assistant or associate professor level. The position involves both teaching and research. Preference will be given to candidates who are (i) addressing problems unique to plant life or for which plants are particularly amenable and (ii) who are working at organismal or population levels, and/or who are evolutionary biologists.

Letters of application, curriculum vitae, and names and addresses of three references should be sent by 31 January 1983 to: **Professor Peter S. Ashton, Harvard University Herbaria, 22 Divinity Avenue, Cambridge, Massachusetts 02138.**

Harvard is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOW: 2-year appointment available immediately for basic and clinical studies of physiology of endorphin-related peptides in pain, stress, and mental disorders. Background in peptide biochemistry is required, including familiarity with radioimmunoassay, gel chromatography, ion exchange chromatography, and/or high pressure liquid chromatography. Salary: \$18,000. Send curriculum vitae and three letters of reference to: **R. S. Kiser, M.D., Department of Psychiatry, University of Texas Health Science Center, 5323 Harry Hines Boulevard, Dallas, Texas 75235. Equal Opportunity Employer.**

POSTDOCTORAL SCIENTIST position available for participation in studies of hormonal regulation of prostate cell function in aging. We are seeking an individual trained in molecular biology/immunology and having predoctoral experience with in vitro translation. The position is in the Department of Cellular and Molecular Biology at Southwest Foundation for Research and Education. The Department has established programs of in vitro and in vivo studies of prostate physiology. The initial appointment is for 2 years with opportunity for extension or conversion to a staff position. This is an unusual opportunity for a creative scientist. Send résumé, statement of research interests, and names of three references to: **Personnel Manager, Southwest Foundation for Research and Education, P.O. Box 28147, San Antonio, Texas 78284.**

We are an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

QUEEN'S UNIVERSITY KINGSTON, ONTARIO

The Department of Biology invites applications for a tenure-track position in plant molecular biology. Applicants should have research experience with recombinant DNA technology and be prepared to develop a vigorous research program in plant molecular genetics. The successful candidate will be expected to teach in the undergraduate program and teach and supervise graduate students. The position requires a Ph.D. degree and published evidence of excellent research ability. Candidates of both sexes are equally encouraged to apply. The appointment will be effective 1 September 1983 and is expected to be at the rank of assistant professor with salary commensurate with qualifications (floor—\$23,100). *Preference will be given to Canadian citizens or landed immigrants.* Application deadline is 1 April 1983 or until a suitable candidate is selected. Send applications, which should include curriculum vitae, statement of future research interests, and names and addresses of three referees, to: **Professor D. T. Canvin, Head, Department of Biology, Queen's University, Kingston, Ontario, Canada K7L 3N6.**

PLANT PATHOLOGY SPECIALIST LOCATION: DAVIS CAMPUS

Career position, 100 percent Extension, to plan, initiate, coordinate, and conduct off-campus education and adaptive research programs in deciduous fruit, grape, and small-fruit crops. Graduate degree and demonstrated competence in plant pathology are required; Ph.D. preferred. Contact: **Cooperative Extension Personnel, 331 University Hall, University of California, Berkeley, Calif. 94720.** Refer to Number 8118-R. Closes: 21 January 1983.

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

A POSTDOCTORAL POSITION will be available soon for suitably qualified applicants interested in studying immunity to cancer. The research program of the Trudeau Institute involves the use of animal models of infectious diseases and cancer to analyze mechanisms of protective immunity at the physiological, cellular, and molecular levels. Applicants should have some training in immunobiology. The starting salary is \$14,500 and campus housing may be available. Send résumé to: **Dr. Robert J. North, Director, Trudeau Institute, Inc., P.O. Box 59, Saranac Lake, N.Y. 12983.**

An Equal Opportunity Employer

POSTDOCTORAL POSITION available immediately for studying the structure and organization of the chick myosin heavy chain gene family. Clones were obtained by screening a Charon 4A lambda gene library. Applicants interested in biochemical aberrations in the genetic muscular dystrophies are also encouraged to apply. Familiarity with basic techniques in cell biology, biochemistry, and recombinant DNA research is highly desirable. Send credentials, specific research interests, and three letters of reference to: **Dr. Ronald B. Young, Department of Biological Sciences, University of Alabama, Huntsville, Alabama 35899. The University of Alabama in Huntsville is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS available in Departments of Biochemistry, Molecular and Medical Microbiology, Pharmacology, and Physiology. Applicants must have a Ph.D. or M.D. degree. Positions available during 1982-1983.

Send application to appropriate department head, **University of Arizona, Arizona Health Sciences Center, Tucson, Ariz. 85724.**

An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.

POSTDOCTORAL POSITION available immediately for Ph.D. in cellular biology or biochemistry to study cellular response to trauma. Research involves in vitro and in vivo labelling of proteins, two-dimensional electrophoresis, subcellular fractionation, radioautography, immunohistochemistry, and tissue culture. Send curriculum vitae, names of three references, and summary of recent research activities to: **Dr. F. P. White, Faculty of Medicine, Memorial University of Newfoundland, St. John's, Newfoundland, Canada A1B 3V6.**

POSITIONS OPEN

POSTDOCTORAL POSITION to study transcriptional regulation of mouse mammary tumor virus gene expression. Research will include selection and molecular characterization of variant tissue culture cell lines. Among the techniques to be used are recombinant DNA, DNA transfection, and somatic cell genetics. Send curriculum vitae and names of three references to: **Dr. David Peterson, Department of Biochemistry and Biophysics, Texas A&M University, College Station, Texas 77843.**

POSTDOCTORAL POSITION, 2 to 3 years, begin at \$15,000 per year. Research is concerned with the dynamic structure of proteins, monitored by the hydrogen exchange kinetics of assigned proton resonances in the high resolution NMR spectrum. Ph.D. in chemistry or biochemistry required. Experience in biophysical chemistry of biopolymers preferred. Contact: **Dr. Clare Woodward, Department of Biochemistry, University of Minnesota, 140 Gortner, St. Paul, Minn. 55108. Telephone: 612-373-1766.**

POSTDOCTORAL POSITION available immediately, to study thalamic and cortical mechanisms of pain. Opportunity exists to combine neuroanatomical, physiological, and behavioral techniques. Send curriculum vitae, a brief statement of research interests, and the names of two references to: **Dan R. Kenshalo, Jr., Ph.D., Division of Neurobiology, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, 350 West Thomas Road, Phoenix, Ariz. 85013.**

POSTDOCTORAL POSITIONS available to study T4 DNA replication. Focus will be on developing mutator DNA polymerases as reagents for in vitro mutagenesis. Experience in protein purification, enzymology and/or molecular genetics desirable. Send curriculum vitae and have three letters of reference sent to: **Dr. Linda J. Reha-Krantz, Department of Genetics, University of Alberta, Edmonton, Alberta, Canada T6G 2E9.**

POSTDOCTORAL RESEARCH ASSOCIATE POSITION is available for studies on the control of keratinocyte differentiation using viral agents as probes. Starting date: July 1983, with salary to be arranged. Interested individuals with experience in virology and/or cell culture are asked to send curriculum vitae and names of references to: **Dr. Lorne Talchman, Department of Oral Biology and Pathology, School of Dental Medicine, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794. SUNY Stony Brook is an Equal Opportunity/Affirmative Action Employer. AK Number 481B.**

POSTDOCTORAL OR RESEARCH ASSOCIATE position is available in the Department of Obstetrics and Gynecology in the area of perinatal physiology. The area of study includes regulation of uterine blood flow, hypertension in pregnancy, and fetal oxygenation. Applicants should have a Ph.D. in physiology, pharmacology, or endocrinology and have a strong interest in hemodynamic regulation. Send curriculum vitae and names of two references to: **Kenneth E. Clark, Ph.D., Department of Obstetrics and Gynecology (ML 526), University of Cincinnati Medical Center, Cincinnati, Ohio 45267. An Equal Opportunity Employer, M/F/H.**

POSTDOCTORAL RESEARCH ASSOCIATE. Seek recent Ph.D. in experimental physics with an interest in radiation/atomic physics and experience in FORTRAN programming, to join Radiological and Chemical Physics Group. Duties include the measurement of fundamental radiation dosimetry parameters, and the development of radiobiological dose response functions. Apply with résumé and names of three references, to: **M. N. Varma, Safety and Environmental Protection Division, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973. An Equal Opportunity Employer, M/F.**

RESEARCH ASSISTANT PROFESSOR

Applications are invited for a 3-year research faculty appointment. Applicant must have Ph.D. or equivalent and at least 2 years of postdoctoral research. Experience in single-unit recording from dorsal horn somatosensory neurons, intracellular HRP injection, and computer data analysis is required. Salary: \$25,000 per annum. Send curriculum vitae and names of three references before 20 January 1983 to: **Dr. Paul B. Brown, Physiology Department, West Virginia University Medical Center, Morgantown, W. Va. 26506. West Virginia University is an Equal Opportunity/Affirmative Action Institution.**

AFOSR

SCEEE

Summer Research Opportunities Faculty & Graduate Students 1983

The USAF Summer Faculty Research Program (SFRP), sponsored by the Air Force Office of Scientific Research (AFOSR) and conducted by the Southeastern Center for Electrical Engineering Education (SCEEE), provides research opportunities for qualified faculty and graduate students of U.S. Colleges and Universities. These opportunities consist of ten week summer research periods at one of 20 USAF Laboratories/Centers throughout the U.S. with follow-on research opportunities being available through other AFOSR and SCEEE programs. Under exceptional circumstances the ten week research period may be during the regular academic year. Prerequisites for appointment: (1) U.S. Citizenship, (2) Faculty or graduate student status at an accredited U.S. College or University. All qualified applicants will receive consideration without regard to race, color, religion, sex, or national origin. Preference will be given to applicants having no previous research sponsored by the Air Force. SCEEE Supports equal opportunity/affirmative action. Application Deadline: February 1, 1983

For Further Information Contact:

SCEEE Management Office
1101 Massachusetts Ave.
St. Cloud, FL 32769

OR CALL:
(305) 892-6146

TASMANIAN COLLEGE OF ADVANCED EDUCATION AQUACULTURE LECTURER 1/11/SENIOR LECTURER 11 (Reference Number 14882)

The Tasmanian College of Advanced Education is a multidisciplinary college situated in Launceston (population: 84,000, in the Greater Launceston Area) on the Tamar River. Degree or diploma level studies are offered in administration, applied science, art, education, engineering, environmental design, general studies, music, nursing, and social work. Current enrollments are in excess of 2,100 and this is expected to rise to 2,500 by 1984.

The successful applicant will lecture and demonstrate in his/her area of expertise within the associate diploma of applied science (aquaculture) and B.App.Sc. (general science), and contribute to the School's research programme in aquaculture. Liaison with aquaculture industries and professional associations will also be required. If an appointment is made at senior lecturer level, the successful candidate could be asked to co-ordinate the associate diploma in aquaculture.

Applicants should possess a higher degree, preferably a Ph.D., in one of the following areas: vertebrates, particularly trout, or molluscs, particularly oysters, or crustacea. Lecturing and consulting experience would be an advantage.

Initially the appointment will be for a 3-year contract, supported by a grant from the Rural Credits Development Fund. The position will then be examined with a view to offering a tenurable post.

The successful candidate will be expected to commence duties by July 1983.

SALARY:

Lecturer II—A\$22,430 to A\$25,648, per annum.

Lecturer I—A\$26,251 to A\$29,467, per annum.

Senior Lecturer II—A\$30,096 to A\$32,226, per annum.

Enquiries of an academic/professional nature should be directed to the Head of the School of Applied Science, Dr. A. Osborn, telephone: 003-26-0214.

Applications quoting the above reference number, and including the names and addresses of three referees, should be forwarded to:

The Registrar
Tasmanian College of Advanced Education
P.O. Box 1214
Launceston, Tasmania 7250
AUSTRALIA

CLOSING DATE: 1 February 1983.

DIRECTOR INSTITUTE FOR ADVANCED BIOMEDICAL RESEARCH

The Oregon Health Sciences University is seeking a director of exceptional caliber for its newly established and endowed Institute for Advanced Biomedical Research. The research of the institute will focus on basic approaches to a frontier field of biomedical investigation with an emphasis on the techniques of molecular biology. A new building of 60,000 square feet on the university campus is being planned to house the institute. It will be an integral part of the university, and there will be excellent opportunities for interactions with existing departments and graduate programs. The director will be expected to define specific research goals and focus, to identify appropriate staff and to help in the internal design of the building and the establishment of appropriate administrative and fiscal control.

Qualifications for this position include a very strong current record of creative research, willingness and aptitude to handle the necessary administrative aspects and particularly the ability to attract and nurture an exciting group of research colleagues.

All applications submitted by Feb. 15, 1983 will be considered.

Interested persons or nominators should address enquiries for additional information to

Professor Howard S. Mason, Chairman
Search Committee for the Director/IABR

THE OREGON
HEALTH SCIENCES UNIVERSITY
3181 S.W. Sam Jackson Park Road
Portland, Oregon 97201

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Grey Recruitment 10082

Department Of Mathematics ADDITIONAL CHAIR OF MATHEMATICS

Applications are invited from suitably qualified persons, regardless of sex, race, religion, colour or national origin, for appointment to the above post. The successful applicant will be expected to participate fully in both the teaching and research activities of the Department. Master of Science programmes by course work and dissertation are encouraged.

The incumbent may be expected to assume the Headship of the Department on a rotation basis with other professors of the Department. The salary attached to the post will be within the range: R23 109 – R30 255 per annum. A contract appointment could be negotiated.

Intending applicants should obtain the information sheet relating to this post from the Registrar (Planning and Staffing), University of the Witwatersrand, 1 Jan Smuts Avenue, Johannesburg 2001, South Africa, with whom all applications should be lodged not later than 15 January 1983.

**UNIVERSITY OF THE WITWATERSRAND,
JOHANNESBURG**

POSITIONS OPEN

POSTDOCTORAL POSITIONS

(i) **TROPICAL ECOLOGIST** to coordinate and implement field studies on the role of environmental limiting factors in the growth of tropical forest tree seedlings on Barro Colorado Island, Panama. Must have experience in plant growth studies. Background in physiological plant ecology is preferred. Tropical experience is desirable but not essential. (ii) **PHYSIOLOGICAL ECOLOGIST** to work with interdisciplinary research team investigating water use, nitrogen fixation, and plant productivity in woody desert legumes. Must have extensive experience in plant water relations studies. Familiarity with CO₂ gas exchange techniques desirable. Send letter describing research experience with curriculum vitae and three letters of recommendation by 31 January 1983 to: **Dr. Philip W. Rundel, Laboratory of Biomedical and Environmental Sciences, University of California, Los Angeles, 900 Veteran Avenue, Los Angeles, Calif. 90024.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available March 1983 for a Ph.D. in biochemistry. Experience in enzymology and protein chemistry is desirable. Research focuses on molecular properties of phosphofructokinase relevant to modulation of its function and the effect of hormones on enzyme activity. Send curriculum vitae, list of publications, and names of three references to: **Dr. Tag E. Mansour, Department of Pharmacology, Stanford University, Stanford, Calif. 94305.**

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately for studies in transplantation immunology. Primary project involves immunoregulation by anti-idiotypic antibody. Candidates must have experience in this area. Position includes academic appointment to the University of Connecticut Medical School. Send curriculum vitae to: **Robert T. Schweizer, M.D., Hartford Hospital, 80 Seymour Street, Hartford, Conn. 06115.**

POSTDOCTORAL RESEARCH ASSOCIATE funded by NIH beginning March 1983. This individual will be involved in the cloning of genes from *Drosophila* and will work in a well-equipped small laboratory. There is an active molecular biology group at Michigan State University with whom to interact; \$14,000 per year and fringe benefits. Send curriculum vitae, copy of publications, and two letters of recommendation to:

**Dr. Thomas B. Friedman
Biology Research Center
Michigan State University
East Lansing, Mich. 48824-1115**

POSTDOCTORAL RESEARCH FELLOW—Position available for work on the purification and structural analysis of transfer factor and other lymphokines. Applicants with an interest in molecular biology and experience in peptide or nucleic acid chemistry preferred. Salary approximately \$16,000 and negotiable, depending on experience. Send curriculum vitae and three letters of recommendation to: **Dr. Gregory B. Wilson, Department of Basic and Clinical Immunology and Microbiology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, South Carolina 29425.**

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RECOMBINANT DNA TECHNOLOGIST

Immediate opening in molecular genetics research laboratory for individual with B.S. or M.S. degree in biochemistry, plant pathology, microbiology, or genetics. Full-time, permanent position. Responsibilities include: induction, selection and maintenance of mutant bacteria and fungi; isolation and manipulation of nucleic acids; and performing pathogenicity assays on plants. Salary commensurate with experience in bacterial or fungal genetics, DNA cloning, and macromolecule purifications. Send current résumé, transcripts, and three letters of reference to: **Dr. Dean W. Gabriel, Department of Plant Pathology, Oklahoma State University, Stillwater, Okla. 74078.** *An Affirmative Action/Equal Opportunity Employer.*

REPRODUCTIVE TOXICOLOGISTS AND TERA-TOLOGISTS—Unit Head scientists with B.S. or M.S. plus experience conducting skeletal and visceral evaluations on rodent and rabbit fetuses. Salary dependent upon experience. Send complete résumé with salary requirements to: **V. G. Jordan, The Pharmaceuticals Division of CIBA-GEIGY Corporation, 556 Morris Avenue, Summit, N.J. 07901.** *Equal Opportunity Employer, M/F.*

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for person with expertise in protein purification and/or cell biology to join group in study of regulation of hemopoiesis and of leukemia. Restricted to U.S. citizens. Send curriculum vitae and names of three references to: **Dr. Dodge, Bowman Gray School of Medicine, Winston-Salem, North Carolina 27103.** *Equal Opportunity/Affirmative Action Employer*

POSTDOCTORAL RESEARCH ASSOCIATE position available to study neurological differentiation and myelin formation in normal animals and in myelin deficient mutants. Opportunity to learn electron microscopy, immunocytochemistry, autoradiography and to interact with multidisciplinary faculty using biochemical and immunological techniques to study myelin. Applicants with background in tissue culture, endocrinology, immunology, and neuroanatomy are encouraged. Send curriculum vitae and names of three references to: **R. P. Skoff, Department of Anatomy, Wayne State University School of Medicine, Detroit, Mich. 48201.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCHER

The applicant will participate in projects dealing with the regulation of growth of normal and neoplastic cells. The specific skills required are: protein purification techniques; anti-sera production and radioimmunoassays; the use of high-speed centrifuges, spectrophotometers and scintillation counters, growth of cells in tissue culture. Must have Ph.D. in microbiology and 1 year of experience. Also, must have knowledge in growing mammalian cells and in preparing monoclonal antibodies. Forty hours per week; \$6.25 per hour. Please contact: **Mississippi State Employment Service, 502 Yazoo Street, Jackson, Miss. 39205.** *An Equal Opportunity Employer. Job Order Number 1121403.*

RESEARCH ASSOCIATE. Peptide chemist, Ph.D., February 1983. Peptide synthesis, insulin hybrids. Send résumé and two letters of recommendation to: **Dr. Christian Schwabe, Department of Biochemistry, Medical University of South Carolina, Charleston, S.C. 29403.** *An Equal Opportunity/Affirmative Action Employer, M/F.*

RESEARCH/TEACHING POSITION IN PHYSICAL THERAPY. Appointment for the 1983-1984 academic year available in Department of Physical Therapy. Areas of research must be in field related to physical therapy. Ability to establish independent research project(s) and to obtain extramural funding desirable. Areas of teaching should be in area of expertise and complementary to present faculty. Position provides opportunity for those seeking location to do research while on sabbatical leave or as a postdoctorate. Salary negotiable; academic staff rank. Send curriculum vitae and three letters of reference to: **Dr. A. J. Santisteban, Department of Physical Therapy, 243 Cowley Hall, University of Wisconsin-La Crosse, La Crosse, Wis. 54601.** Telephone: 608-785-8470. *An Equal Opportunity/Affirmative Action Employer.*

SENIOR TENURE-TRACK PROFESSORIAL POSITION AT THE INSTITUTE OF PARASITOLOGY OF MCGILL UNIVERSITY. Applicants must have an established international reputation with acknowledged expertise in one or more biological disciplines of particular importance in modern parasitology. The successful applicant will also be a candidate for the directorship of the Institute, and therefore should have a demonstrated administrative ability. Latest date of appointment is 1 September 1983. *Preference will be given to Canadian citizens.* Applications, accompanied by curriculum vitae, should be sent by 28 February 1983 to: **Professor G. A. MacLachlan, Dean, Faculty of Graduate Studies and Research, McGill University, Dawson Hall, 853 Sherbrooke Street West, Montreal, Quebec, Canada H3A 2T6.**

TECHNOLOGY TRANSFER

UNIVERSITY PATENTS, INC. is seeking a senior professional (M.D., D.V.M., or Ph.D.) with broad experience in life sciences. Activities include on-site investigator interviewing and technology tracking at client universities, disclosure evaluation, invention presentation and licensing. Patent familiarity a plus. Entrepreneurial proclivities welcome. Candidates from academia and industry will be considered. Salary commensurate with experience. Send curriculum vitae to: **L. W. Miles, President, P.O. Box 6080, Norwalk, Connecticut 06852.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE position in new and growing College of Medicine available for cloning, sequencing, and characterizing of DNA from hemotropic parasites. The Applied Biosystems protein sequencer and DNA synthesizer will be available shortly. Opportunity to obtain teaching experience with medical students available if desired. Subsequent promotion to assistant research scientist, a nontenure-stream faculty position, or to assistant professor is possible. Send curriculum vitae and name of references to: **Dr. Garret Ihler, M.D., Ph.D., Head, Department of Medical Biochemistry, Texas A&M College of Medicine, College Station, Texas 77843.** *An Equal Opportunity/Affirmative Action Employer.*

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Chemistry, is seeking **PROGRAM OFFICERS** for the following programs to fill rotational assignments for (one year) 1983-1984: chemical instrumentation; chemical dynamics; structural chemistry and thermodynamics; chemical physics; and also a program director position in chemical analysis.

These positions are excepted from the competitive civil service at the GS-14/15 level (equivalent to GS-14/15). Salary ranges from \$41,277 to \$63,115 (limited by statute to \$57,500) per annum, based on professional qualifications and experience. Applicants should have a Ph.D. or equivalent research experience and 6 to 8 years of research experience beyond the Ph.D. Administrative experience is desirable. Résumés should be submitted to: **National Science Foundation, Personnel Administration Branch, Room 212, 1800 G Street, NW, Washington, D.C. 20550, attention: E. Paul Broglie.** For further information, contact: **Mr. Broglie, telephone: 202-357-7840.** *NSF is an Equal Opportunity Employer.*

RESEARCH ASSISTANT, full-time to assist in analysis of lipoproteins and metabolic aspects during experimental diabetes. B.S. required. Salary negotiable depending on experience. Six credit hours free tuition benefits included. Contact: **Dr. G. V. Vahouny, Ph.D., Department of Biochemistry, The George Washington University School of Medicine and Health Science, 2300 Eye Street, NW, Washington, D.C. 20037.** Telephone: 202-676-3519.

RESEARCH ASSOCIATE for studies on transduction mechanism in the corneal nerve terminals. Experienced in electrophysiological techniques; a background in neuropharmacology or psychophysics would be an advantage. Send curriculum vitae to: **D. Maurice, Division of Ophthalmology, Stanford Medical Center, Stanford, Calif. 94305.** Telephone: 415-497-5844. *Stanford is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH FACULTY POSITION IN PHYSICAL OCEANOGRAPHY

The School of Oceanography invites applications for a research faculty position in physical oceanography. The successful applicant is expected to have a strong background in theoretical oceanography, though applications from qualified persons with other specializations may be considered. Candidates with Ph.D. or equivalent qualifications will be expected to develop a funded research program. Some teaching at the graduate level may be expected. Applications must be received by 1 March 1983. Supporting data and four letters of reference should be sent to: **Chairman, Recruitment Committee, School of Oceanography, WB-10, University of Washington, Seattle, Wash. 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

VIROLOGIST

Applications are invited for two tenure-track positions in virology at the assistant professor level. Preference will be given to persons doing research in the molecular tumor virology and bacteriophage areas, but outstanding applicants in other areas of animal virology will also be considered. Successful applicants will be expected to mount a high quality research program. Teaching duties are very light. Applications, including the names of three references, should be sent by 14 January 1983 to: **Dr. W. K. Joklik, Chairman, Department of Microbiology and Immunology, Duke University Medical Center, Durham, N.C. 27710.** *Duke University is an Equal Opportunity/Affirmative Action Employer.*

The MX Missile and the Strategic Balance of Power

A collection of recent articles from *SCIENCE* on contemporary strategic ideology is now available for use by professionals, teachers, and researchers interested in the nuclear arms race.

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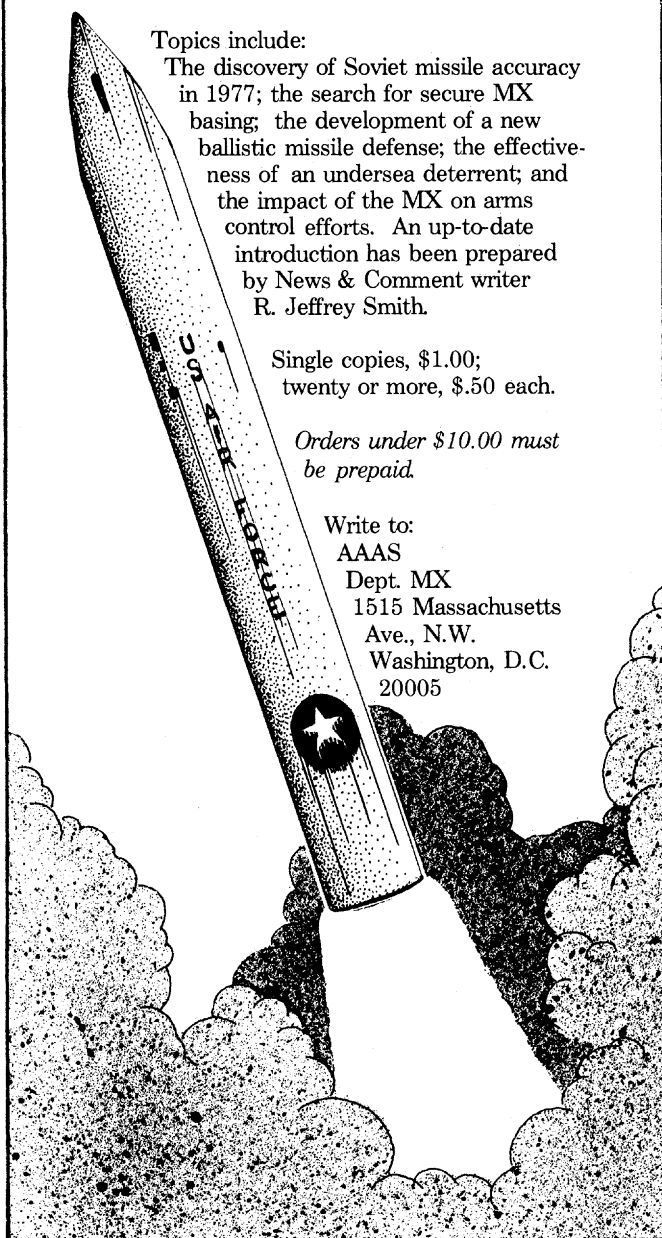
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Springborn Institute For Bioresearch, Inc., an expanding contract service laboratory, seeks a sales professional capable of initiating and closing the sale of toxicological testing services to the pharmaceutical, chemical, and personal care products markets. This position requires excellent verbal and written communication skills; a working knowledge of the concepts and terminology of the toxicological testing/services business; and provides salary commensurate with experience, company car, and an excellent benefits package.

Springborn Institute For Bioresearch, Inc., Spencerville, Ohio is a subsidiary of Springborn Group, Inc., an international firm providing services to the plastics and chemicals industries in R&D, testing, analytical and market research.

Resumes specifying salary requirements may be forwarded to: C.S. Cridler-Smith, Manager of Human Resources, Springborn Group, Inc., One Springborn Center, Enfield, CT 06082. An equal opportunity/affirmative action employer m/f.



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POSITIONS OPEN

SENIOR FACULTY POSITION LOUISIANA STATE UNIVERSITY (LSU)

The Department of Geology invites applications for a tenure-track appointment at the full professor level beginning September 1983 or earlier. Preference will be given to applicants in the fields of seismology, organic geochemistry, basin analysis, and geohydrology. We are seeking an individual with a proven research record who will develop vigorous research and teaching programs at LSU.

The department presently has 16 full-time faculty members, including two geophysicists in the areas of geodynamics and applied geophysics, four geochemists in the areas of low-temperature inorganic sedimentary geochemistry and ore deposits, stable isotope geochemistry, argon dating, and clay geochemistry, and three sedimentologists and sedimentary petrologists in the general fields of carbonate sedimentology and diagenesis, ancient clastic deposits, and modern coastal sedimentation. Department facilities include a seismic data processing computer, automated XRD, 12-inch solid-source and 6-inch gas source mass spectrometers, AA, SEM with EDAX, infrared spectrophotometer, and ARL-EMX microprobe. Induction coupled plasma emission spectrometer, tandem gas chromatograph/mass spectrometer, and neutron activation analytical facilities are available on campus.

Applicants should send a résumé, statement of research record and interests, and the names of at least three references to: **Donald R. Lowe, Department of Geology, Louisiana State University, Baton Rouge, Louisiana 70803.**

The position will remain open until filled. Applications will be reviewed as they are received, but preference will be given to persons whose materials are received before 1 February 1983.

Louisiana State University is an Equal Opportunity/Affirmative Action Employer.

URBAN AND REGIONAL PLANNING. August 1983. Assistant professor, tenure-track. (Land use and environmental planning, public policy relating to natural resources and citizen involvement.) Ph.D. in planning or other appropriate field, evidence indicating Ph.D. completion by date of employment will be considered. **Clyde W. Forrest, Search Chair, telephone: 217-333-3020.** Closing date: 1 February 1983. Competitive salary negotiable. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

VETERINARY VIROLOGIST. The Department of Microbiology and Environmental Health, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, seeks candidates for a 12-month, tenure-track faculty position in animal virology at the assistant or associate professor level. Responsibilities include teaching in professional veterinary medicine and graduate programs. Candidate will be responsible for the development of an independent research program. Level of appointment and salary commensurate with training and experience. D.V.M. or equivalent professional degree and research training in virology (Ph.D. preferred and postdoctoral research experience desirable). Appointment date by 20 August 1983. Applications should consist of curriculum vitae, statement of personal goals and objectives, and three letters of reference. The closing date of 1 March 1983 may be extended. Applications and inquiries should be directed to: **Dr. Leonard D. Pearson, Chairman of Search Committee, Department of Microbiology and Environmental Health, Colorado State University, Fort Collins, Colo. 80523.**

Colorado State University is an Equal Opportunity/Affirmative Action Employer. Equal Opportunity office: 314 Student Services Building.

TRAINEESHIPS

POSTDOCTORAL RESEARCH TRAINEESHIP IN HEMOSTASIS—THROMBOSIS FOR M.D. OR Ph.D., 1, 2 or 3 years, starting 1 July 1983 or after. U.S. citizen or permanent resident. Stipend according to NIH guidelines. Areas of study include platelet-vessel wall interactions, platelet prostaglandin and phospholipid metabolism, platelet preservation and kinetics, genetic abnormalities of coagulation proteins, carbohydrate biosynthesis in fibrinogen, and acquired inhibitors of coagulation. Send curriculum vitae to: **Dr. Sandor Shapiro, Cardeza Foundation, Thomas Jefferson University, 1015 Walnut Street, Philadelphia, Pa. 19107.** *An Affirmative Action Employer.*

ADVANCED STUDY INSTITUTE

Applications are solicited from members of NATO countries for a NATO ADVANCED STUDY INSTITUTE on "Brain Mechanisms and Spatial Vision" (16 to 25 June 1983 in Lyon, France). Submit: a personal résumé, a one-page summary of current research, and (for students) a letter of recommendation from a professor to: **Professor D. Ingle, Psychology, Brandeis University, Waltham, Mass. 02254** or to: **Professor M. Jeannerod, 16, ave. du Doyen Lepine, 69500 Bron, France** by 15 February 1983.

TRAINING PROGRAM

PREDOCTORAL TRAINING PROGRAM IN ANATOMY AND CELLULAR BIOLOGY

The Department of Anatomy and Cellular Biology, Tufts University Schools of Medicine, Dental Medicine, Veterinary Medicine, and the Sackler Graduate School of Biomedical Sciences, invites applications for its Ph.D. training program. Major research areas in the department include pulmonary cell biology and metabolism, reproductive biology and neuroendocrinology, neurobiology, comparative immunology and the effects of stress on immunosuppression, effects of stress and aging on the musculoskeletal system, and cell biology including secretory mechanisms, cell motility, cellular interactions with extracellular macromolecules, tumorigenesis, and control of cell multiplication. All students admitted to the program receive tuition waivers; stipends may also be available for qualified trainees. Applications should be completed by 1 March for entrance to the program in September 1983.

For application materials, write:

**Karen R. Hitchcock, Ph.D.
Professor and Chairman
Department of Anatomy and Cellular Biology
Tufts University School of Medicine
136 Harrison Avenue
Boston, Massachusetts 02111**

FELLOWSHIPS

MARINE POLICY AND OCEAN MANAGEMENT RESEARCH FELLOWSHIPS

Woods Hole Oceanographic Institution offers 1-year fellowships to professionals in social sciences, law, or natural sciences who will apply their training to problems that involve the use of the oceans, including coastal zone management, fisheries management, marine mineral management, marine policy problems and opportunities in developing countries, implications of the Law of the Sea Treaty for ocean management, use of scientific information in decision-making and policy planning, and U.S./Canada marine resource management issues. Other research topics may also be appropriate. Recipients of awards are selected on a competitive basis with primary emphasis placed on research promise.

Applicants must have completed a doctoral level degree or possess equivalent professional qualifications through career experience.

Fellowship stipend is \$21,500. Recipients are encouraged to pursue their own research interests independently or in association with resident staff. Completed applications must be received by 1 March 1983 for 1983-1984 awards. (A second year's appointment may be possible.) Awards announced in April. Write for application forms to:

Dean of Graduate Studies, Education Office, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543.

Equal Opportunity/Affirmative Action Institution

HARVARD UNIVERSITY DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY POSTDOCTORAL FELLOWSHIPS

A limited number of postdoctoral research positions become available from time to time. Appointments are funded through research grants awarded to faculty members, are for 1 year, and are renewable. For a list of faculty members who have postdoctoral positions available, write, but do not send applications, to: **Judith Schlessinger, Department of Biochemistry and Molecular Biology, Harvard University, 7 Divinity Avenue, Cambridge, Mass. 02138.**

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FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS—The Cancer Research Center of the University of North Carolina (UNC) at Chapel Hill will have openings 1 July 1983 for persons completing graduate studies to train with investigators in basic cancer-related research in tumor virology, chemical carcinogenesis, drug development, cancer cell biology, and tumor immunology. Training available in projects dealing with characterization of receptors; protein phosphorylation; nucleic acid hybridization, gene cloning, molecular genetics of systems including herpesviruses and retroviruses; mechanisms of DNA replication, mutagenesis and repair; molecular enzymology of antiviral and anticancer drugs; immunogenetics; macrophage activation; flow cytometry; cell cycle regulation; epithelial cell systems and combined programs. Unique resources and departmental affiliations. Candidates must be U.S. citizens or permanent residents. Send for brochure and apply with curriculum vitae, three letters of recommendation, a statement of research interests, and graduate school records to: **Director, Cancer Research Center, Box 30, MacNider Building, Chapel Hill, N.C. 27514.** *UNC's Cancer Research Center is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIP

Position is available immediately to study the biology of bovine coronavirus. The emphasis is on characterization of antigens involved in immune recognition, the identification of genes coding for these antigens and their expression in suitable prokaryotes. A strong background in biochemistry is essential and experience in cloning is preferred. Salary: \$21,000 per annum. *Canadian citizens and landed immigrants will be given first consideration but others are encouraged to apply.* Send curriculum vitae and the telephone numbers of three references to:

**Dr. Geoffrey Hudson
Veterinary Infectious Disease Organization (VIDO)
124 Veterinary Road
University of Saskatchewan
Saskatoon, Saskatchewan, Canada S7N 0W0**

POSTDOCTORAL FELLOWSHIP to study molecular pathogenesis of the slow infection caused by visna virus. Available 1 January 1983; U.S. citizens with Ph.D., M.D., or equivalent degree, and training in DNA recombinant technology and virology, are invited to submit curriculum vitae, two letters of support, and a brief description of background and research interests to: **A. T. Haase, M.D. (151F), Veterans Administration Medical Center, 4150 Clement Street, San Francisco, California 94121.** Stipend: \$18,000 to \$22,000, depending on qualifications. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW to study the mechanism of graft v. host disease in murine models. Successful candidate will focus on in vitro assessment of cytotoxic T lymphocyte function, the regulation, and the mechanism of transplantation tolerance. Candidate should have a relevant Ph.D. and research experience. Available 1 January 1983. Candidate should be a U.S. citizen or a permanent resident. Send curriculum vitae and names of three references to: **Robertson Parkman, M.D., Head, Division of Bone Marrow Transplantation and Research Immunology, Childrens Hospital of Los Angeles, P.O. Box 54700, Los Angeles, Calif. 90054.** *Qualified candidates from minority groups and women are encouraged to apply.*

POSTDOCTORAL FELLOWSHIP available immediately for Ph.D. with strong background in cellular immunology. Research involves investigation of immunogenetic aspects of resistance to parasitic diseases. Funded position.

Send curriculum vitae and three letters of reference to: **Dr. Mark Boyer, Department of Tropical Public Health, Harvard School of Public Health, 665 Huntington Avenue, Boston, Mass. 02115.** *An Affirmative Action/Equal Opportunity Employer.*

GRADUATE FELLOWSHIPS. The Department of Biology at George Mason University offers a Ph.D. in Environmental Biology-Public Policy stressing the involvement of environmental biologists in public policy issues. In fall 1983 graduate fellowships of \$8500 per year will be awarded to outstanding applicants. Interested persons should send inquiries, a résumé, and a summary of professional and research goals by 15 February 1983 to: **Director, Program of Environmental Biology-Public Policy, Department of Biology, George Mason University, Fairfax, Va. 22030.**

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This is a Civil Service position. A job announcement and application may be obtained by contacting **Miss Evelyn L. Hunt, Chief, Recruitment and Placement at the Pennsylvania Department of Health, Bureau of Personnel, P.O. Box 90, Harrisburg, Pennsylvania 17108; telephone (717) 787-2160.** Applications will be accepted until January 14, 1983.

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Applicants should have a distinguished research record in one or more of the areas relevant to the School, demonstrated leadership and administrative experience appropriate to chairing a strong department, and an earned doctorate in a related field of engineering or science. Applications including a complete curriculum vita and the names of three references who may be contacted should be sent no later than March 1, 1983 to Dr. W. M. Stacey, Jr., Chairman of the Search Committee, School of Nuclear Engineering and Health Physics, Georgia Institute of Technology, Atlanta, Georgia 30332.

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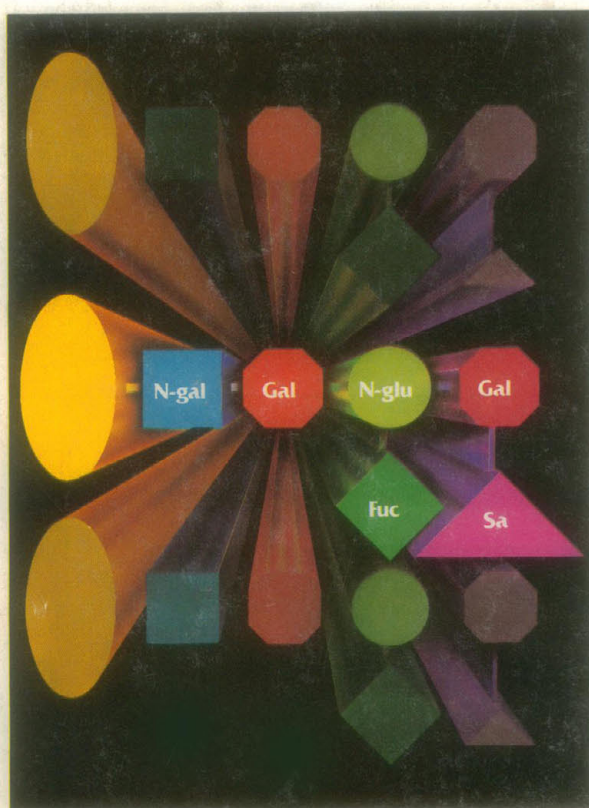
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