

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least two weeks after date of issue in which ad appears. 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.

LINE CLASSIFIED ADVERTISING DEADLINES:

13 January issue (mailed 6 January): **23 December**
20 January issue (mailed 13 January): **30 December**
27 January issue (mailed 20 January): **6 January**
3 February issue (mailed 27 January): **13 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.

LINE DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$10.40 per millimeter; \$260 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 address required for all other advertising.

Send copy for all **Positions Wanted** ads and **Line 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 **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads 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

POSITIONS WANTED

Twenty-seven years of experience: HPLC, GC, EM, TLC, MS, IR, UV, enzymology, virus purification, forensic toxicology, GLP, GMP, NDA, BDD, QA. Publications. Seeks research position or fellowship. Box 347, SCIENCE. X

Immunologist. Ph.D. Publications in transplantation, immunogenetics, autoimmunity, and reproductive immunology. Desires to relocate to a strong immunology group with projects in molecular immunogenetics and/or immune regulation. Competitive renewal at \$100,000 per year. Fiscal year 1984. Box 326, SCIENCE. X

M.D.; in surgical residency, desires research fellowship for two or more years (may consider training toward Ph.D.) in vestibular physiology or temporal bone study related research. Excellent references. Available July 1984. Box 348, SCIENCE. X

12/23; 1/6, 13

Physiologist. Extensive research experience in electrophysiology, CNS, VNS, sleep stress, dreams, Structuro-logical models of cortico-subcortical relations. Seeking research position in academia or industry. Box 349, SCIENCE. X

Plant Physiologist/Biochemist: Ph.D. (1971). Established research program with \$200,000 in grants (1981-1983), \$350,000 (1979-1983). Publications, excellent references, teaching experience. Laboratory and grants transferable. Box 350, SCIENCE. X

Zoologist (Ph.D.): Former college/university teacher of undergraduate/graduate biology courses desires to return to teaching after 9 years of high-tech and government experience. Wants to teach the subject matter of vertebrate biology using lectures, laboratories, and microcomputers. Box 351, SCIENCE. X

POSITIONS OPEN

AGRICULTURE/AQUACULTURE. The Oceanic Institute, Waimanalo, Hawaii 96795—a nonprofit research organization—and OI Consultants, Inc., are taking applications for research scientists with Ph.D.'s or M.S.'s in the following fields: (i) ALGEOLOGY/BOTANY—blue-green algae, *Spirulina*; (ii) INVERTEBRATE PHYSIOLOGIST/BIOLOGIST—*Artemia salina*; (iii) PROTEIN BIOCHEMIST—protein digestion techniques; (iv) BIOGAS DIGESTION/CHEMICAL ENGINEER—engineering aspects of digestors and reactors. Each applicant will be expected to contribute in an administrative, analytical, and supervisory capacity. Applicants should contact: **Dr. Paul C. Magarelli, telephone: 808-259-7951**, or mail résumé by 30 January 1984.

SPANISH-SPEAKING AGRICULTURAL SCIENTISTS specializing in phytopathology, forestry photogrammetry, agrometeorology, pedology, agronomy, and genetics are needed in Costa Rica. M.S. and Ph.D. holders interested in these and other positions in **Central America** should submit résumés for placement and financial assistance to: **Intergovernmental Committee for Migration, 1346 Connecticut Avenue, NW, Washington, D.C. 20036.**

ANALYTICAL BIOCHEMIST position available for an individual to be responsible for the management of an analytical laboratory supporting a clinical metabolism and nutrition staff. The individual sought is expected to support protocols utilizing stable isotopes to identify and quantify concentrations of natural products and to examine pharmacokinetics of drugs. Must have proven experience with gas chromatography-mass spectroscopy, liquid chromatography, and separation and derivatization techniques, as well as with standard laboratory methods. Experience with instrumentation development is desired. Candidate should have doctorate in related field or equivalent. Salary is commensurate with experience and training. Please send curriculum vitae and names of three references to:

Dr. Cleon W. Goodwin
Department of Surgery
The New York Hospital—Cornell Medical Center
525 East 68 Street
New York, New York 10021

Cornell University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR

The Department of Laboratory Medicine and Pathology, University of Minnesota Medical School, announces an open position at the level of assistant professor in the Divisions of Clinical Chemistry and of Medical Technology. Candidates must have a Ph.D. degree, 2 years of experience in a clinical laboratory, and certification or eligibility with ABCC or NRCC. Teaching experience is necessary. Responsibilities include teaching clinical chemistry, assisting in the service activities of the clinical chemistry laboratory, and establishing an independent research program. Applications consisting of curriculum vitae and three letters of recommendation will be received until 15 February 1984 and may be addressed to: **Karen Karni, Ph.D., Department of Laboratory Medicine and Pathology, Box 198 Mayo Memorial Building, University of Minnesota, Minneapolis, Minn. 55455.** *The University of Minnesota is an Affirmative Action Employer and specifically invites and encourages applications from women and minorities.*

ASSISTANT PROFESSOR OF OCCUPATIONAL HEALTH. Will perform teaching and research duties in the field of occupational health, with emphasis on occupational lung disease. Must hold Ph.D. or M.D. Particular expertise is required in the areas of occupational lung disease and pulmonary physiology, with 5 years of postgraduate experience in these areas. Must have established research capabilities in lung mechanics relating to normal and diseased states, and be able to apply this experience to developing new investigative and analytic methods for use in epidemiologic studies of workers. Past experience with the supervision of epidemiologic studies of occupational lung diseases is also required. Salary: \$29,680 per annum. Send curriculum vitae and bibliography to: **Division of Employment Security, Hurley Building, Government Center, Boston, Mass. 02114**, and refer to job reference number 4095.

POSITIONS OPEN

The Unit for Laboratory Animal Medicine, University of Michigan, Ann Arbor, is seeking applications for an academic position at the level of **ASSISTANT OR ASSOCIATE PROFESSOR**. Candidates must have a D.V.M. degree, advanced training and evidence of productivity in research, and Board certification or eligibility in laboratory animal medicine, internal medicine, or comparative pathology. Duties include the training of resident veterinarians in laboratory animal medicine, participation in graduate and medical education, provision of clinical care for research animals, and participation in collaborative research. Development of an effective independent research program is expected in the candidate's area of expertise. Rank and salary are commensurate with training and experience. Deadline for applications is 15 February 1984 or until the position is filled. Applicants should send curriculum vitae and names of three references to: **Bennett J. Cohen, Unit for Laboratory Animal Medicine, University of Michigan, Ann Arbor, Michigan 48109-0010.** *The University of Michigan is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR—BIOCHEMISTRY. The Department of Chemistry of Atlanta University seeks applicants with a background in chemistry for a tenure-track position in the area of membrane biochemistry or immunochemistry. Applicants must have a Ph.D. with appropriate postdoctoral experience. The University is solely a graduate institution and will look for evidence of a strong research potential. Applicants should submit a résumé, outline of research plans, and three letters of recommendation to: **Dr. Frank Cummings, Department of Chemistry, Atlanta University, Atlanta, Ga. 30314**, by 1 February 1984. *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION

ASSISTANT PROFESSOR. Three tenure-track positions are available in the Biology Department at Atlanta University. Applicants should have a Ph.D. and postdoctoral experience in plant biochemistry or genetics, molecular genetics, toxicology, or immunology (monoclonal antibody). Atlanta University is a predominantly Black graduate institution offering both M.S. and Ph.D. degrees. Application deadline is 1 February 1984. Applicants should send curriculum vitae, three letters of recommendation, and a statement of career goals to: **Dr. Judith Rae Lumb, Biology Department, Atlanta University, Atlanta, Ga. 30314.** *The University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION—Applications are invited for an appointment at the rank of **assistant professor of biological chemistry** in the Department of Internal Medicine. Research experience in recombinant DNA techniques is essential with emphasis on eukaryotic gene expression and regulation. This is a nontenure-track appointment. Salary negotiable. Send detailed résumé and a list of three references. Direct responses to: **William N. Kelley, M.D., Chairman, Department of Internal Medicine, University Hospital, Ann Arbor, Michigan 48109.** *The University of Michigan is a nondiscriminatory, Affirmative Action Employer.* 145B0.

JUNIOR FACULTY POSITION

The Psychology Section in the Department of Psychiatry at the University of Michigan has a junior-level faculty position open for a clinical psychologist on the Adult Service. This position requires that the applicant have a Ph.D. from an APA-approved clinical program and be eligible to be fully licensed in the state of Michigan. This position is on the Clinical Studies Unit, a research unit specializing in the investigation of affective disorders. The applicant must have experience doing diagnostic and therapeutic work with adult patients. The applicant must have training in psychodynamic psychology and must be trained in neuropsychological assessments. A strong commitment to programmatic research in an area of relevance is an important consideration. This position is available as of 1 September 1984 with a base salary of \$29,500 commensurate with level of appointment. Please submit curriculum vitae, several recent reprints, preprints and/or manuscripts, and three letters of reference to:

Bettie Arthur, Ph.D.
Chief of Psychological Services
Psychology Section
Box 052

University of Michigan Medical Center
Ann Arbor, Michigan 48109

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

**DEAN, SCHOOL OF NATURAL
SCIENCES AND MATHEMATICS**

The University of Texas at Dallas

The University of Texas (UT) at Dallas invites nominations and applications for the position of Dean of the School of Natural Sciences and Mathematics. UT-Dallas, a component of The University of Texas System, offers upper division and graduate education in six schools. The School of Natural Sciences and Mathematics is composed of 76 full-time faculty members, and offers eight master's programs and six doctoral programs.

The dean is expected to exercise leadership in the area of faculty recruitment, curriculum planning, community relations, budget planning and administration, and long-term planning for the School. The dean reports directly to the Vice President for Academic Affairs.

Qualifications:

A doctoral degree related to one of the School's disciplines and university teaching experience are highly desired, but the fundamental qualification is excellence, whether it be in academic scholarship, public service, or scientific leadership. The candidate should have an outstanding record of performance in administration, a capacity to communicate effectively with colleagues, and, above all, a demonstrated ability to think creatively about the problems of education in the sciences. The candidate's record should justify appointment at a tenured level in one of the disciplines in the School.

The term of office as dean will presumably begin on or before 1 September 1984. In order to ensure full consideration, applicants would submit, by 15 February 1984, a letter of interest, a résumé, and the names of referees to:

**Chairman, Search Committee Number 265
School of Natural Sciences and Mathematics
The University of Texas at Dallas
P.O. Box 830688
Richardson, Texas 75083-0688**

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

POSITION VACANT

**CHAIRMAN, DEPARTMENT
OF ENVIRONMENTAL BIOLOGY
ONTARIO AGRICULTURAL COLLEGE
UNIVERSITY OF GUELPH**

Applications are invited for the position of **chairman** of the Department of Environmental Biology at the University of Guelph, effective 1 September 1984.

The Department of Environmental Biology is one of nine administrative units in the Ontario Agricultural College. It has close working relationships with the other units in the College, as well as with various departments in other Colleges of the University, and with the Ontario Ministry of Agriculture and Food. The department currently is made up of 30 faculty members and 37 other staff. It is responsible for undergraduate majors in entomology/apiculture, plant pathology, environmental biology, and applied microbiology.

The department has a strong commitment to research and graduate studies at the M.Sc. and Ph.D. level. There are currently 65 students registered in the M.Sc. and Ph.D. programs offered by the department.

Applicants must have a Ph.D. in one of the above fields of biological science and an established record of scholarly achievement.

The closing date for applications is 1 March 1984. Applications should include curriculum vitae and the names and addresses of three persons who may be contacted for reference purposes.

Enquiries and applications, which will be treated in confidence, should be addressed to:

**The Dean
Ontario Agricultural College
University of Guelph
Guelph, Ontario, Canada N1G 2W1**

In accordance with Canadian Immigration regulations, priority will be given to Canadian citizens and permanent residents of Canada. Appointment is subject to final budgetary approval.

CSIRO

PHYSICAL CHEMIST

A\$23,340 to A\$28,800

DIVISION OF PLANT INDUSTRY

CANBERRA, A.C.T., AUSTRALIA

CSIRO conducts scientific and technological research in laboratories located throughout Australia and employs about 7,500 staff, of whom some 2,900 are professional scientists. The Organization's research activities are grouped into five Institutes: Animal and Food Sciences, Biological Resources, Energy and Earth Resources, Industrial Technology, and Physical Sciences. The CSIRO Division of Plant Industry is a member of the Institute of Biological Resources.

FIELD OF INTEREST: Gaseous losses of nitrogen/fertilizer efficiency.

The CSIRO Division of Plant Industry conducts research on problems fundamental to plant biology and agricultural production. One of the division's programs involves research on nitrogen in agricultural systems. The objective of this research is to improve the utilization of nitrogen in soils through an increased understanding of the processes involved in biological nitrogen fixation and nitrogen loss. A new facet of this research is a project funded by the Australian Centre for International Agricultural Research. It involves collaborative research with several research Institutes in Asia on the factors, such as ammonia volatilization, which affect the efficiency of urea as a fertilizer in Asian cropping systems.

DUTIES: To undertake research aimed at developing techniques and equipment which will facilitate the field study of the factors influencing ammonia loss from urea applied to flooded rice. The appointee will be based in Canberra but will be expected to work for short periods at experimental sites in Australia and, as the project develops, within Asia to test the equipment and determine the extent of ammonia loss under different environmental conditions.

QUALIFICATIONS: Applicants should have a Ph.D. degree or equivalent qualifications and experience in studying the physical and chemical processes occurring in plant-soil-atmosphere systems. A knowledge of micrometeorology, electronics, data logging, and processing by microcomputer would be an advantage.

TENURE: Term appointment for 3 years with Australian Government superannuation benefits available.

APPLICATIONS: Stating full personal and professional details, the names of at least two referees, and quoting reference number M9008, should be directed to:

**The Chief
CSIRO Division of Plant Industry
G.P.O. Box 1600
CANBERRA A.C.T. 2601, AUSTRALIA**

by 20 January 1984.

CSIRO

RESEARCH FELLOW

A\$24,344 to A\$35,806

DIVISION OF SOILS

**ADELAIDE, S.A.
AUSTRALIA**

FIELD: Soil Chemistry/Clay Weathering.

CSIRO conducts scientific and technological research in laboratories located throughout Australia and employs about 7,500 staff, of whom some 2,900 are professional scientists. The Organization's research activities are grouped into five Institutes: Animal and Food Sciences, Biological Resources, Energy and Earth Resources, Industrial Technology, and Physical Sciences. The CSIRO Division of Soils is a member of the Institute of Biological Resources.

GENERAL: The CSIRO Division of Soils studies the physics, chemistry, and biology of soils and other porous media, together with the integrative disciplines of pedology and geomorphology. It also seeks to establish principles for the application of soil science to agriculture, forestry, hydrology, engineering, and conservation. The appointee will be located in the Chemistry Section of the Division of Adelaide. This laboratory has facilities for conventional soil physical chemistry and radioisotope research, and in addition has Inductively Coupled Plasma and Fourier Transform Infrared Spectrophotometers. The division also operates electron microscope, x-ray fluorescence, x-ray diffraction, and electron microprobe microanalyser facilities.

DUTIES: In collaboration with other research staff, the appointee will study soil forming and clay weathering processes under a range of soil conditions, thus contributing to a better understanding of soil profile development, nutrient retention, and the formation of cementing materials. The research team with which the appointee will be associated is also concerned with the application of infrared spectroscopy to solid phases and molecular bonding in soils. In particular, the appointee will examine the relationships between dissolution and synthesis of clay particles and their precursor phases, including prediction of the composition of solid phases that separate from soil solutions. These basic studies seek better understanding of the roles of the solution and solid phase reaction products of clay weathering in the stabilization of soil aggregates and the interstratification of soil clays.

QUALIFICATIONS: Applicants should have a Ph.D. degree or equivalent qualifications with a demonstrated experimental research ability in physical and inorganic chemistry, a high degree of theoretical competence, and mathematical fluency. Experience with clays or soils systems and spectroscopy should be indicated.

TENURE: Three years with the possibility of a further term not exceeding 2 years. Australian Government superannuation benefits are available.

APPLICATIONS: Stating full personal and professional details, the names of at least two scientific referees, and quoting reference number A5240, should be directed to:

**The Chief
CSIRO Division of Soils
Private Bag No. 2
Glen Osmond, S.A. 5064
Australia**

by 20 January 1984.

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR—IMMUNOLOGY

The Department of Microbiology and Immunology in the Faculty of Health Sciences of the University of Ottawa invites application for a tenure-track position at the rank of assistant or associate professor.

Candidates should have doctoral training (M.D. and/or Ph.D.) in cellular and molecular immunology, postdoctoral research experience in an academic setting, and evidence of research productivity. Duties will include teaching medical students, advanced courses in immunology at the graduate level, and supervision of graduate students. The applicant will be required to establish an independent research programme with external grant support. Salary will be commensurate with experience and qualifications of the candidate and will be competitive. *In accordance with Canadian Immigration regulations, preference will be given to Canadian citizens and landed immigrants of Canada.*

Applicants are requested to submit a statement of research interests, complete curriculum vitae including grants awarded in the past 5 years, if any, and three letters of recommendation to: **Dr. C. Y. Kang, Chairman, Department of Microbiology and Immunology, Faculty of Health Sciences, University of Ottawa, Ottawa, Ontario, Canada K1H 8M5.**

Application deadline: 15 March 1984.

ASSISTANT PROFESSOR IN MICROBIOLOGY

The Department of Microbiology and Immunology in the Faculty of Health Sciences of the University of Ottawa seeks a tenure-track assistant professor with strong and proven research interests in the area of molecular biology of viruses, prokaryotes, or eukaryotic microorganisms.

Candidates should have doctoral training (M.D. and/or Ph.D.) in molecular biology, postdoctoral experience in an academic setting, evidence of research productivity, and skills in teaching. Applicants will be required to establish an independent research programme with external grant support and supervise graduate students.

Applicant should send curriculum vitae, a brief description of research plans or objectives, and three letters of recommendation to: **Dr. C. Y. Kang, Chairman, Department of Microbiology and Immunology, Faculty of Health Sciences, University of Ottawa, Ottawa, Ontario, Canada K1H 8M5.**

In accordance with Canadian Immigration regulations, preference will be given to Canadian citizens and landed immigrants of Canada.

Application deadline: 15 March 1984.

The University of Michigan Medical School, Department of Pediatrics, offers a 3-year term faculty appointment at the **ASSISTANT PROFESSOR** academic level available 1 July 1984. Responsibilities include patient care, teaching of house officers and medical students, and basic research in the field of hematology/oncology. Board-eligible/Board-certified applicants may inquire to: **Robert P. Kelch, M.D., Chairman, Department of Pediatrics, University of Michigan, Ann Arbor, Mich. 48109.** *The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 900TP.*

ASSISTANT STAFF INVESTIGATOR

An opening exists for a Ph.D. biochemist with at least 2 years of postdoctoral training to study the contact activation of blood coagulation, using kinetic and fluorescence techniques. Experience with protein purification and characterization, enzyme kinetics, and physical techniques is necessary. Salary commensurate with background and experience. Send curriculum vitae and names of three references to: **Dr. Joseph D. Shore, Division of Biochemical Research, Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, Michigan 48202.** *An Affirmative Action/Equal Opportunity Employer.*

BIOCHEMIST: One-year sabbatical replacement in the Chemistry Department of Whitman College, a private liberal arts college offering ACS-certified B.A. Begin September 1984. Assistant professor level, for recent Ph.D. in biochemistry. Teach undergraduate general and biological chemistry lecture and laboratory, including a one-semester advanced lecture in applicant's area of special interest. Direct undergraduate research. Apply by 29 February 1984. Send résumé, three letters of recommendation, transcripts, and description of teaching interests and philosophy and research plans to: **Gale Rhodes, Chemistry Department, Whitman College, Walla Walla, Wash. 99362.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

DUKE UNIVERSITY ASSISTANT/ASSOCIATE PROFESSOR OF MICROBIOLOGY

Applications are invited for a tenure-track position in microbiology at the assistant or associate professor level. Preference will be given to prokaryotic molecular geneticists whose research relates to the pathogenesis of infectious diseases, but outstanding applicants in other areas of prokaryotic molecular biology will also be considered. Teaching duties will be light. The Department of Microbiology and Immunology, together with the other Basic Science Departments at Duke University Medical Center, provides an intellectually stimulating environment conducive to the development of independent yet interactive high caliber research programs. Furthermore, Duke University is located in close proximity to the North Carolina Research Triangle Park, as well as to the University of North Carolina, Chapel Hill, and North Carolina State University. Applications, including the names of three references, should be sent by 13 January 1984 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.

DUKE UNIVERSITY ASSISTANT/ASSOCIATE PROFESSOR OF VIROLOGY

Applications are invited for two tenure-track positions in virology at the assistant or associate professor level. Preference will be given to persons doing research in the molecular tumor virology/oncogene and bacteriophage areas, but outstanding applicants in other areas of animal virology will also be considered. Teaching duties will be light. The Department of Microbiology and Immunology, together with the other Basic Science Departments at Duke University Medical Center, provides an intellectually stimulating environment conducive to the development of independent yet interactive high caliber research programs. Furthermore, Duke University is located in close proximity to the North Carolina Research Triangle Park, as well as to the University of North Carolina, Chapel Hill, and North Carolina State University. Applications, including the names of three references, should be sent by 13 January 1984 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.

ASSISTANT PROFESSOR—PHARMACOLOGY

The Morehouse School of Medicine (MSM) invites applications for the full-time academic position of assistant professor of pharmacology to be filled by 1 July. MSM is a new 4-year medical school associated with the Atlanta University Center, a consortium of historically Black universities and colleges. The candidates should present evidence of strong teaching credentials and the ability to initiate or transfer a vigorous and independent research program. Send curriculum vitae, statement of research goals, and three letters of reference by 1 April to: **Dr. David W. Hein, Department of Pharmacology, Morehouse School of Medicine, 720 Westview Drive, SW, Atlanta, Ga. 30310-1495.** *An Equal Opportunity/Affirmative Action Employer.*

ASSOCIATE RESEARCH BIOCHEMIST (3-year appointment available) with at least 2 years of postdoctoral experience and with training in cell biology, cellular immunology, or molecular biology. The project concerns the cellular and molecular biology of endocrine regulation of active transport systems. Send curriculum vitae, bibliography, and names of three references to: **Dr. Isidore S. Edelman, Department of Biochemistry, College of Physicians and Surgeons, 630 West 168 Street, New York, N.Y. 10032.**

Columbia University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH FELLOW (3-year appointment) with training in cell biology, cellular immunology, or molecular biology. The project concerns the cellular and molecular biology of endocrine regulation of active transport systems. Send curriculum vitae, bibliography, and names of three references to: **Dr. Isidore S. Edelman, Department of Biochemistry, College of Physicians and Surgeons, 630 West 168 Street, New York, N.Y. 10032.**

Columbia University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA, DAVIS Position Available: Assistant Professor of Toxicology

Applications are invited for the position of **assistant professor of toxicology** in the Department of Pharmacology and Toxicology in the School of Veterinary Medicine. This faculty position will be associated with a new program based in the School of Medicine and funded by the Northern California Occupational Health Center. The appointee will be expected to participate in the teaching of the professional courses in veterinary toxicology and to contribute to both teaching and research activities of the Pharmacology-Toxicology Graduate Group. A strong interest in collaborative research with investigators in occupational and environmental disease is a requirement.

A Ph.D. and postdoctoral experience in toxicology are essential, and D.V.M. (or M.D.) is highly desirable. Preference will be given to candidates with research experience in one or more of the following areas: inhalation toxicology, immunotoxicology, neurotoxicology, or genetic toxicology. Send curriculum vitae, reprints of three to five articles, and the names of three referees to: **Dr. J. Desmond Baggot, Veterinary Pharmacology and Toxicology, School of Veterinary Medicine, University of California, Davis, Calif. 95616.** Closing date for receipt of applications is 30 January 1984. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

Applications are invited for the position of **ASSOCIATE DIRECTOR** of the Crump Institute for Medical Engineering at University of California, Los Angeles (UCLA). The associate director must be a chemical engineer with a distinguished research record preferably in fields related to the transport phenomena. The appointment will be as associate or full professor in the Department of Chemical Engineering. The associate director is expected to conduct his/her own research program involving applications of chemical engineering to medical or biological problems, and will work with the director of the Institute, Dr. F. Eugene Yates, in developing the Institute program. The Institute has ten senior scientists, ten graduate students, and three postdoctoral fellows, and a current operating budget of approximately \$1 million per year. Among research areas of interest are the design of novel controlled drug delivery systems and the design of improved electro-surgical apparatus.

Applicants should write to: **Professor S. K. Friedlander, Chairman, Faculty Search Committee, Department of Chemical Engineering, 5531 Boelter Hall, UCLA, Los Angeles, Calif. 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

CARDIOVASCULAR RESEARCH

Faculty research appointment jointly sponsored by Dalton Research Center and Department of Physiology. Appointee will be expected to establish an independent research laboratory located at the Dalton Research Center. While a specific area of specialization is not sought, the successful candidate is likely to have an interest in some aspect of cardiovascular structure, function, or control whether at the molecular, cellular, or organ level. The successful candidate should demonstrate independent research capability as evidenced by publications in peer-reviewed journals and successful competition for funding of research. The initial appointment is nontenured and renewable, but an eventual tenure-track position is possible. This is an excellent opportunity for a research oriented individual to establish a program of investigation within a stimulating environment of multidisciplinary cardiovascular research and to participate in medical physiology teaching. Send curriculum vitae to: **Dean Franklin, Director, Dalton Research Center, University of Missouri, Columbia, Mo. 65211.**

The University of Missouri is an Equal Opportunity Employer.

CELLULAR/MOLECULAR BIOCHEMIST. Opportunity to establish research laboratory in Section of Urology with emphasis on oncogenesis utilizing tissue culture and animal models. Ph.D. with postdoctoral experience who has demonstrated outstanding potential for independent research. Compensation commensurate with experience. Possible tenure-track appointment. Please submit curriculum vitae and brief résumé of past and proposed research directions to: **Roger Hanos, Personnel Manager, UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY—Rutgers Medical School, P.O. Box 101, Piscataway, New Jersey 08854.** *An Equal Opportunity/Affirmative Action Employer, M/F.*

POSITIONS OPEN

BIOLOGY FACULTY, MILLERSVILLE UNIVERSITY—One tenure-track and two temporary 1-year positions are available in the Biology Department, Millersville University, beginning August 1984. The permanent position involves teaching genetics, molecular biology, and introductory biology in a 16-member Department. Ability to teach microbiology and immunology desired. Ph.D. required. Applicant should provide evidence of scholarly activity and teaching effectiveness. Appointment at the instructor or assistant professor level, commensurate with experience. The two temporary positions are for an ecologist to teach general biology (majors and non-majors) and possibly biometry; and for a plant physiologist/botanist who can teach plant physiology, general biology (majors and nonmajors), and possibly biometry. Applicants for these positions should provide evidence of scholarly activity (publication and/or Ph.D.) and teaching effectiveness. Appointment at the instructor or assistant professor level commensurate with experience. Applicants for both the permanent and temporary positions should send three letters of recommendation, current curriculum vitae, and official transcripts of graduate and undergraduate courses to: **David S. Ostrovsky, Ph.D., Chairperson, Department of Biology, MILLERSVILLE UNIVERSITY, Millersville, Pa. 17551.** Closing date for all applications is 1 February 1984. *Millersville University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

BIOLOGY FACULTY

Applications are invited from exceptional candidates whose research interests lie in the molecular and cell biology of eukaryotic systems, including plant molecular biology, cellular immunology, and developmental biology. Interested persons should send curriculum vitae, statement of research interests, and the names and addresses of three referees to:

Chairman, MCD Biology Search Committee
Division of Biology, 156-29
California Institute of Technology
Pasadena, Calif. 91125

Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

BIOCHEMISTRY—Assistant/associate professor. Applications are invited for a 1-year sabbatical leave replacement in biochemistry and organic chemistry at Kutztown University of Pennsylvania to commence fall 1984. The successful applicant will have a Ph.D. in biochemistry or organic chemistry. A strong interest in undergraduate teaching is essential. Duties include teaching biochemistry, organic chemistry, and advanced organic chemistry, in addition to staff responsibilities. The appointment will be for 9 months, salary will be commensurate with experience. Please submit a letter of application, complete résumé, and the names of three references by 15 February 1984 to: **Dr. Bruce F. Rowell, Chairperson, Physical Science Department, Kutztown University of Pennsylvania, Kutztown, Pa. 19530.** *Kutztown University is an Affirmative Action/Equal Opportunity Employer.*

BIOLOGY: Assistant professor with specialty in plant science, beginning August 1984. Tenure-track position. Ph.D. required. Responsibilities include teaching plant science, nonmajors introductory biology, and electives in specialty area. Individuals with a field orientation preferred. Send letter of application, résumé, transcripts, and three letters of reference to: **Dr. R. B. Angstadt, Chairman, Department of Biology, Lycoming College, Williamsport, Pa. 17701.** Applications invited through 15 February 1984 or until a successful candidate is identified. *Lycoming College is an Equal Opportunity Employer.*

BIOPSYCHOLOGY/NEUROENDOCRINOLOGY. Postdoctoral position to study neural, endocrine, and seasonal/environmental influences on obesity in rodents. Background in physiological psychology, neuroendocrinology, nutrition, or related field preferred. Salary and benefits competitive. Send curriculum vitae and three letters of reference to: **Dr. George N. Wade, Division of Neuroscience and Behavior, Department of Psychology, University of Massachusetts, Amherst, Mass. 01003; telephone: 413-545-0772.** Deadline for submission of application: 1 February 1984. *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

UNIVERSITY OF MAINE AT ORONO, CHEMISTRY DEPARTMENT, CHAIRPERSON. The Department of Chemistry, University of Maine, seeks a chairperson who will be a creative leader in helping a capable, enthusiastic faculty to further develop a research-based graduate program while maintaining high quality undergraduate teaching. The candidate must have demonstrated ability in research and teaching and show promise of developing administrative skills. Starting date: 1 July 1984. Closing date: 31 January 1984, or until suitable candidate is found. Send curriculum vitae, including three letters of reference, to: **Search Committee, College of Engineering and Science, 101 Barrows Hall, University of Maine at Orono, Orono, Maine 04469.** *The University of Maine is an Equal Opportunity/Affirmative Action Employer.*

CHAIRMAN

DEPARTMENT OF PHARMACOLOGY

Applications are sought for the position of chairman of pharmacology. Applicants must have Ph.D. and/or M.D. degree, a commitment to excellence in teaching, established leadership ability, demonstrated capabilities in research, and administrative experience. The department has excellent research facilities. Teaching responsibilities include medical and graduate students. Collaborative research efforts are encouraged. Send curriculum vitae and names of three references to: **Richard A. Gilmore, Ph.D., Associate Dean for Biomedical Sciences, School of Medicine, Oral Roberts University, 7777 South Lewis, Tulsa, Oklahoma 74171.**

Oral Roberts University is a Christian ministry that employs without regard to race, color, sex, age, handicap, national origin, or status as a veteran.

CYCLOTRON OPERATOR. Staff position available for a person with a Ph.D. in organic chemistry and previous experience in the routine operation and maintenance of a biomedical cyclotron. Previous experience in microscale synthesis and the synthesis of F-18 and C-11 labeled compounds. Send curriculum vitae and three letters of recommendation to: **Dr. H. Donald Burns, Johns Hopkins University, 615 North Wolfe Street, Baltimore, Md. 21205.**

DEAN COLLEGE OF NATURAL SCIENCES THE UNIVERSITY OF NORTHERN IOWA CEDAR FALLS, IOWA

Applications and nominations are invited for the position of Dean of the College of Natural Sciences, University of Northern Iowa. The University, one of three state universities in Iowa, enrolls approximately 11,000 students, of whom over 1700 are majors in the College of Natural Sciences. The dean of the College of Natural Sciences, together with the graduate dean, the deans of three other undergraduate colleges, and the dean of the School of Business, is responsible to the vice president and provost of the University. He or she is expected to provide administrative leadership and support for undergraduate and graduate programs in the departments of biology, chemistry, earth science, industrial technology, mathematics and computer science, and physics. In addition, he or she administers and provides leadership for interdisciplinary programs in science and science education. B.A. and M.A. degrees are offered in all six academic departments of the College of Natural Sciences. In addition, programs leading to the bachelor of technology degree and the doctoral of industrial technology degree are available in the Department of Industrial Technology.

ANTICIPATED STARTING DATE: July 1984.

QUALIFICATIONS: Earned doctorate in a discipline related to the College of Natural Sciences and an extensive record of teaching, research, and publication, and public professional service. Applicants must have previous administrative experience in higher education and qualifications sufficient for a tenured appointment in one of the departments of the College of Natural Sciences.

SALARY: Open.

APPLICATION DEADLINE: 15 February 1984.

Applicants are requested to provide the Committee with a letter of application and current curriculum vitae. Candidates should arrange to have four letters of recommendation sent to the Committee. Send applications and nominations to:

Professor Wayne I. Anderson, Chair
Search Committee for Dean, College of Natural Sciences
Department of Earth Science
University of Northern Iowa
Cedar Falls, Iowa 50614
Telephone: 319-273-2759

The University of Northern Iowa is an Equal Opportunity/Affirmative Action Employer. Members of protected classes are encouraged to apply.

THE AUSTRALIAN NATIONAL UNIVERSITY LECTURESHIPS IN THE FACULTIES

It is estimated that by the 1990's only about one-quarter of the tenured staff of The Faculties will be under 45 years of age. As a step towards remedying this age imbalance The Faculties propose to fill four tenurable lectureships in 1984 in disciplines in which there have been no tenurable appointments or very few such appointments in recent years. The Faculties intend to appoint to these posts younger academics although no precise age limit is specified.

In filling posts in four out of the six areas advertised, the emphasis will be on the selection of applicants of the highest quality. Applicants should have a higher degree, preferably a Ph.D. degree or its equivalent. In selection, length of teaching experience will not be a prime consideration but at least a year of experience will be expected.

Applications are invited from men and women in the following areas:

Lectureship in Forestry

Applicants should be qualified in soil science, fire science, or wood science.

Lectureship in Theoretical Physics

Applicants should be qualified in physics with emphasis on theoretical physics.

CONDITIONS OF APPOINTMENT:

Salary will be in accordance with qualifications and experience within the range: lecturer \$23,394 to \$30,734 per annum. Australian currency. Current exchange rate: A\$1 = U.S.\$0.91. Appointment will be for 4 years in the first instance with the possibility of reappointment, after review, to retiring age.

Grants are provided towards travel and removal. Assistance towards housing is given to an appointee from outside Canberra. Eligible appointees will be required to join the Superannuation Scheme for Australian Universities. The University reserves the right not to make an appointment or to make an appointment by invitation at any time. Prospective applicants should write to the undersigned for further particulars, stating the post in which interested, before submitting applications which close on 31 January 1984.

G. E. Dicker
Registrar
G.P.O. Box 4
Canberra, A.C.T. 2601
Australia

POSITIONS OPEN

DEAN ONTARIO VETERINARY COLLEGE UNIVERSITY OF GUELPH

Applications and nominations are invited for the position of Dean of the Ontario Veterinary College, which will become vacant on 31 December 1984. The Ontario Veterinary College has a faculty complement of 110 and comprises four academic departments and a teaching hospital. Currently, there are approximately 480 students enrolled in the D.V.M. program and 115 students enrolled in advanced degree programs.

It is expected that candidates will hold the D.V.M. or equivalent qualifications, preferably with further advanced training. Considerable experience in teaching, research, and administration in an academic environment will also be expected.

The successful applicant will also hold an academic appointment in the appropriate department of the Ontario Veterinary College.

Applications, which will be treated in confidence, will be accepted until 1 April 1984 and should be submitted to: **Dr. H. C. Clark, Vice President Academic, University of Guelph, Guelph, Ontario, Canada N1G 2W1.**

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

DIRECTOR, CLINICAL PHARMACOLOGY PROGRAM

Director, Clinical Pharmacology Program, in Comprehensive Cancer Center and Department of Pharmacology at the University of Alabama in Birmingham. The program will initially include a chair in clinical pharmacology and two additional faculty positions. Candidate must have an M.D. degree, several years of pharmacology research experience (laboratory or clinical), and a research effort in oncology. Send curriculum vitae to: **Albert F. LoBuglio, M.D., Director, Comprehensive Cancer Center, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294.** *An Equal Opportunity/Affirmative Action Employer.*

IOWA—FACULTY POSITIONS. The University of Iowa, Department of Internal Medicine, is seeking faculty for positions in all subspecialties in internal medicine. Qualifications include M.D. degree; Board-eligibility in internal medicine and its subspecialties preferred. Applicant should have demonstrated abilities and skills in research, teaching, and clinical medicine. Research activities will be commensurate with the interest and the demonstrated ability of the applicant. The applicant will be expected to participate in teaching and clinical activities of the Department of Medicine. Salary is based on the academic level of entry and on the applicant's qualifications and responsibilities. Candidates should submit curriculum vitae to: **Randall Jordison, Administrator, Department of Medicine, SE311 GH, The University of Iowa, Iowa City, Iowa 52242.** *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION: A tenure-track position at the assistant or associate professor rank will be open in the Department of Mechanical Engineering, Aeronautical Engineering and Mechanics at **RENSSELAER POLYTECHNIC INSTITUTE (RPI).** Applicants should have strong background in experimental mechanics with specific research interest in **BIO-MECHANICS.** Duties include undergraduate and graduate teaching, research in collaboration with the existing biomechanics program, development of external funding for research projects, supervision of graduate students, and other normal faculty responsibilities. Ph.D. is required; salary is highly competitive and commensurate with qualifications and experience. Address all inquiries to: **Dr. Van C. Mow, Jonsson Engineering Center, Rensselaer Polytechnic Institute, Troy, N.Y. 12181.** *RPI is an Affirmative Action/Equal Opportunity Employer.*

UNIVERSITY OF WASHINGTON/GEOPHYSICS: Applications invited for a tenure-track faculty position in geophysics. Individual is to teach courses at the senior and graduate student level and to establish innovative, forward-looking research programs. Scientists with prime interest in global seismology or in the physical properties of the earth's mantle and core preferred. Send curriculum vitae and four letters of reference prior to 31 January 1984 to: **Professor Ronald T. Merrill, Geophysics Program AK-50, University of Washington, Seattle, Wash. 98195.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ECOLOGIST

The Department of Biological Sciences, Dartmouth College, invites applications for a tenure-track position at the assistant professor level to begin fall 1984. We seek a field ecologist who employs experimental and theoretical approaches in the study of populations and/or communities, either in **freshwater systems** or with **terrestrial plants.** The successful applicant will be expected to participate in departmental teaching at the undergraduate and graduate levels and to develop an active independent research program. Teaching or research experience at the postdoctoral level is required. Applicants should submit curriculum vitae, statements of research and teaching interests, and at least three letters of recommendation by 15 February 1984 to: **Ecology Search Committee, Department of Biological Sciences, Dartmouth College, Hanover, N.H. 03755.** *Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION IN MOLECULAR IMMUNOLOGY

The Department of Biology and the Rosenstiel Center of Brandeis University invite applications for a tenure-track position at the assistant or associate professor level for an immunologist, preferably with a strong background in molecular genetics. The level of the appointment will depend on the background and experience of the candidate and excellence of research, both accomplished and planned. Excellence in teaching is also expected. Send curriculum vitae and a short description of accomplished and planned research and names of three references to: **Dr. Alfred Nisonoff, Rosenstiel Center, Brandeis University, Waltham, Mass. 02254.** Deadline for application is 15 February 1984. *We are an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION DIVISION OF OCCUPATIONAL MEDICINE

University of Washington
Department of Environmental Health

Assistant or associate professor position for physician/investigator in occupational medicine, with established research skills and ability to gain competitive grant support. Board-certification in occupational medicine and a primary care specialty desirable. Opportunity for joint appointment in clinical department.

Send curriculum vitae and names of three references by 22 January 1984 to:

**John T. Wilson, Jr., M.D., Chair
Occupational Medicine Search Committee
Department of Environmental Health
University of Washington, SC-34
Seattle, Washington 98195**

The University of Washington is an Affirmative Action Employer.

GENETICIST. The Department of Biology of the University of North Carolina (UNC) at Greensboro has available a tenure-track position for a geneticist at the assistant professor level. Candidates should have research interests in the areas of cellular and/or molecular biology; ability to teach immunology is desirable. The successful applicant will be expected to develop an independent research program and to teach courses within these areas. Initial applications should include: curriculum vitae, three letters of reference, and a statement of research and teaching interests. Applications should be sent to: **Dr. William K. Bates, Head, Department of Biology, UNC-Greensboro, Greensboro, N.C. 27412.** Application deadline: 29 February 1984. *An Equal Opportunity Employer.*

MOLECULAR BIOLOGY

The Department of Biological Sciences at Dartmouth College seeks candidates for a senior faculty position in the area of molecular biology. The person selected will be expected to pursue an active research program, participate in departmental courses in his or her area of biological interest, and on behalf of the department take the lead in developing an interdepartmental, institution-wide program in molecular genetics. A tenure appointment will be made at the level of professor to begin 1 July 1984. We urge all who wish to be considered for the position to submit a current résumé, copies of their most important publications, and names of four references. The search committee will begin reviewing the applicant pool on 15 February 1984. **Secretary, Search Committee, Department of Biological Sciences, Dartmouth College, Hanover, N.H. 03755.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

FRESHWATER ECOLOGIST

Freshwater ecologist with a broad background in limnology. Ph.D. required. Tenure-track, assistant professor level, to begin August 1984. Successful candidate will be expected to maintain an active research program and to teach in both undergraduate and graduate programs in zoology. *Women and minority candidates are especially encouraged to apply.* Application deadline: 1 February 1984.

Send résumé, reprints, three letters of recommendation, and a detailed statement of professional interests to:

**S. G. Fisher
Department of Zoology
Arizona State University
Tempe, Ariz. 85287**

Equal Opportunity/Affirmative Action Employer

UNIVERSITY OF SOUTH CAROLINA/ GEOLOGY

The Department of Geology invites applications for two anticipated tenure-track positions in two of the following areas: (i) geophysics, (ii) igneous petrology/structure, (iii) coastal processes, or (iv) organic sediments. It is anticipated that the applicants will be at the assistant professor level, but applications from more senior persons will also be given strong consideration. A Ph.D. degree is required. Starting date will be August 1984, with an application deadline of 1 March 1984. Applicants should send curriculum vitae, statement of research interests, pertinent reprints, and the name of three references to: **Dr. Bjorn Kjerfve, Department of Geology, University of South Carolina, Columbia, S.C. 29208 (telephone: 803-777-4529).** *The University of South Carolina is an Equal Opportunity Employer which encourages applications from qualified minority groups and women.*

IMMUNOLOGISTS

Newly developed research center is seeking senior and junior scientists for **cancer immunology, particularly hybridoma, immunochemistry, tumor imaging, and tumor therapy research.** Candidates with experience and funding in these or related disciplines are encouraged to apply before 15 February 1984. Salary commensurate with experience and credentials. Eligibility for adjunct faculty appointment. Send résumé and names of references to:

**Personnel Director
CENTER FOR MOLECULAR
MEDICINE AND IMMUNOLOGY
University of Medicine and Dentistry of New Jersey
100 Bergen Street, Building 16, Room 1602
Newark, N.J. 07103**

Equal Opportunity Employer

JUNIOR FACULTY APPOINTMENT. Faculty position with joint appointment as research associate of the Howard Hughes Medical Institute available to pursue ongoing studies of coordinate expression of nonglobin genes selectively expressed in erythrocytes. Applicants must possess an M.D. or Ph.D. degree and have had postdoctoral experience in either recombinant DNA methodology or techniques of trace protein isolation and characterization. Candidates should send a letter of application, curriculum vitae, and names of three persons from whom letters of recommendation may be sought to:

**Dr. Samuel H. Boyer
Department of Medicine, Division of Medical Genetics
The Johns Hopkins University School of Medicine
and Howard Hughes Medical Institute
Laboratory for Human Biochemical Genetics
Traylor Postdoctoral Research Building
720 Rutland Avenue
Baltimore, Maryland 21205**

RESEARCH ASSOCIATE. Two- to three-year appointments available for persons with M.D. or Ph.D. degree to pursue ongoing studies in F cell biology; organization, function, and evolution of sex chromosome DNA; or coordinate expression of non-globin genes in erythrocytes. Candidates should send a letter of application, curriculum vitae, and names of three persons from whom letters of recommendation may be sought to:

**Dr. Samuel H. Boyer
Department of Medicine, Division of Medical Genetics
The Johns Hopkins University School of Medicine
and Howard Hughes Medical Institute
Laboratory for Human Biochemical Genetics
Traylor Postdoctoral Research Building
720 Rutland Avenue
Baltimore, Maryland 21205**

POSITIONS OPEN

DEPARTMENT HEAD, ANIMAL DAIRY AND VETERINARY SCIENCES UTAH STATE UNIVERSITY

Will administer and coordinate departmental programs in teaching, research, and extension. Applicants should have a doctorate or equivalent in animal science, dairy science, poultry science, or veterinary medicine. Five years of experience as a college or university faculty member desirable. Address inquiries or send résumé and three references by 1 February 1984 to: **Dr. R. A. Smart, Search Committee Chairman, UMC 56, Utah State University, Logan, Utah 84322. An Affirmative Action/Equal Opportunity Employer.**

HISTORICAL/URBAN GEOGRAPHER. The Illinois State Museum is seeking a historically trained geographer with knowledge of 19th- and 20th-century industrialization and manufacturing processes to conduct historical research into disposal activities at 100-year-old industrialized site in the American midwest. This 1-year project is to develop the methodology and a historic profile of manufacturing, waste generation, and disposal practices for the subject area. The successful candidate is expected to have advanced graduate training with a Ph.D. preferred. Interested applicants should send a current résumé and the names of three people familiar with their qualifications by 15 January 1984 to: **Dr. R. Bruce McMillan, Museum Director, Illinois State Museum, Springfield, Ill. 62706. Equal Opportunity/Affirmative Action Employer.**

IMMUNOLOGY—TENURE-TRACK FACULTY POSITION opening in Department of Microbiology, University of Texas Medical Branch. Postdoctoral experience and evidence of research excellence are required. Preference for molecular genetic approaches to antibody production, expression/recognition of cell-surface determinants, or immunoregulatory molecules. We offer starter support, good facilities, competitive salary, and strong immunology research environment. Submit curriculum vitae, research interests, and references to: **Dr. Klimpel, Chairperson, Search Committee, Department of Microbiology, University of Texas Medical Branch, Galveston, Texas 77550. An Equal Opportunity/Affirmative Action Employer, M/F/H.**

St. Jude Children's Research Hospital is seeking **INVESTIGATORS** doing innovative research in the areas of contemporary cell or molecular biology to join the faculty in the Divisions of Human Tumor Cell Biology (two positions) and the Division of Pathology (one position). Appointments will be at the assistant or associate member level, depending on qualifications and experience, and are intended for individuals interested in investigator-initiated, full-time research. Applicants should have the minimum of 2 years of postdoctoral experience and potential or demonstrated ability to conduct an independent program. Send curriculum vitae and names of three references to:

Charles J. Sherr, M.D., Ph.D.
Chairman, Search Committee
St. Jude Children's Research Hospital
Division of Human Tumor Cell Biology
332 North Lauderdale
Memphis, Tennessee 38101

St. Jude Children's Research Hospital is an Affirmative Action Employer.

MOLECULAR IMMUNOLOGIST

The University of California at San Francisco (UCSF) seeks a molecular immunologist preferably to be hired at the rank of assistant professor. Applicant preferably should have an appropriate record of creativity and accomplishment in research and show exceptional promise for development of an independent research program in an area of molecular immunology, and be willing to participate in graduate teaching. This appointment in the **Laboratory of Radiobiology and Environmental Health** will include laboratory space, facilities, and research support. There will be an opportunity for a formal appointment in a basic science department. This appointment can begin in spring 1984. Applicants should send curriculum vitae and names and addresses of three to five references to: **Dr. Zena Werb, Search Committee, Laboratory of Radiobiology, LR 102, University of California, San Francisco, Calif. 94143, by 1 February 1984.**

UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

Career Opportunities for Technical Specialists and Geotechnical Scientists

The U.S. NUCLEAR REGULATORY COMMISSION, Division of Waste Management, Silver Spring, MD, invites applications for staff positions in Geology, Geophysics, Geochemistry, Hydrology, Seismology, Rock Mechanics and Materials Engineering/Science. Successful applicants will serve as technical specialists in the assessment of safety and environmental aspects of site characterization and design of underground geologic repositories for high-level waste, low-level waste facilities, and uranium recovery operations. Applicants must have knowledge of the principles, theories, and practices in one of the above fields, and good writing and speaking skills. Prefer, as a minimum, education and/or experience equivalent to a Master's degree in engineering or geoscience. Salary is commensurate with qualifications. Mail government application, SF-171 -- available at most Federal agencies to:



U.S. Nuclear Regulatory Commission

Division of Organization and
Personnel, SPE Branch; WM,
Washington, D.C. 20555,
(301) 492-4244
Attn: Martie Lopez-Nagle
U. S. Citizenship Required
An Equal Opportunity Employer, M/F/Hdcp.

ASSOCIATE DIRECTORS (FOUR)

NATURAL RESOURCES RESEARCH INSTITUTE UNIVERSITY OF MINNESOTA, DULUTH

The Institute: Newly established; primary mission of technical research relating to commercial development of Minnesota's natural resources. Emphasis on minerals, biomass, involving development of peat and forest products, energy and water resource utilization. When fully developed, the Institute is expected to employ over 200 professional researchers and support personnel. Base budget \$2.5 million plus by 1984-1985.

The Position: An associate director for each of four fields: **Minerals, Water, Biomass, and Energy.** Primary responsibilities: generation of external grants and contracts, provide leadership in initiation and operation of research in each designated field. Involvement in staff selection and development of laboratory facilities. Available 1 May 1984. Salary open.

Qualifications: Desired: earned doctorate related to field, record of research accomplishments, 5 to 10 years of executive management, administrative experience in technical research facility, demonstrated experience in external grant/contract generation. Record of research accomplishment essential. Minimum: graduate degree related to field, 3 to 5 years of experience in research administration.

Applications: Application letter, current résumé, names of at least three references. Applicants may apply for one or more associate directorships by submitting separate application materials for each. Postmark by 15 January 1984. Send to:

Dr. David G. Darby
NRRI, 421A DAdB
University of Minnesota, Duluth
Duluth, Minn. 55812

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

Neurobiologists

The Worcester Foundation for Experimental Biology has several faculty level openings for Neurobiologists with a commitment to cellular approaches to an understanding of the functions and organization of the nervous system. We seek individuals who study functional units in vertebrate or invertebrate nervous systems with precise tools (e.g., cloned genes, monoclonal antibodies, individual ion channels). Excellent opportunities exist for collaboration with scientists working on cell-cell interactions, gene expression, chemoreception, cytoskeleton and motility, membrane organization, developmental biology, biorhythms and neuroendocrinology. Candidates must be able to develop a strong, independent research program. Excellent facilities, a minimum of non-scientific obligations and strong administrative commitment to productive research all contribute to a supportive environment highly conducive to scientific interactions. The Foundation is situated on a wooded 100 acre campus only a few minutes from the University of Massachusetts Medical Center and in close proximity to all major Boston, Hartford and Providence area academic and research institutions. Applicants should send their curriculum vitae and description of research interests to:

**Chairman, Neurobiology Search Committee,
C/O PERSONNEL OFFICE
Worcester Foundation for Experimental Biology
222 Maple Avenue
Shrewsbury, MA 01545**

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



**WORCESTER FOUNDATION
FOR EXPERIMENTAL BIOLOGY**

POSITIONS OPEN

MEDICAL DIRECTOR, LABORATORY OF CYTOGENETICS. This is a tenure-accruing position at a rank and salary commensurate with experience, in the Department of Pathology, College of Medicine, University of Florida, to begin 1 April 1984. The candidate must hold an M.D. degree and be licensed or be eligible to apply for a license in the state of Florida. The candidate will be responsible for the medical direction of the Laboratory of Cytogenetics in the Department of Pathology. This will involve hospital service activities as well as development of independent research and teaching programs. Preference will be given to a candidate with interest in molecular genetics or related areas. Interested candidates should forward applications by deadline of 1 March 1984 to: **Raul C. Braylan, M.D., Professor, Department of Pathology, Box J-275, College of Medicine, University of Florida, Gainesville, Florida 32610.** An Equal Opportunity/Affirmative Action Employer.

MEDICAL NMR SPECTROSCOPIST

The Department of Radiology of the Hospital of the University of Pennsylvania is seeking a person to conduct a research program in NMR spectroscopy in conjunction with the NMR imaging group. There are opportunities for both laboratory animal and clinical research.

The candidate must have a Ph.D. degree and prior research experience in NMR spectroscopy.

Submit curriculum vitae to:

Stanley Baum, M.D.
Department of Radiology
Hospital of the University of Pennsylvania
3400 Spruce Street
Philadelphia, Pa. 19104

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

MOLECULAR BIOLOGIST. NPI, a plant research and product company established in 1973 and based in Salt Lake City, Utah, invites applications for a Ph.D.-level position in our molecular biology group. Background in the application of recombinant DNA technology to the characterization of gene structure and regulation is desired. Research will focus on the protoxin gene of *Bacillus thuringiensis*. Opportunities exist for interactions with our research groups in plant tissue culture, microbiology, and phytochemistry. Applicants should send curriculum vitae, names of three references, and a statement of interests to: **Dr. Tom Ulrich, NPI, 417 Wakara Way, Salt Lake City, Utah 84108.**

Position description: NEUROSCIENCES.

Assistant, associate, or full professor of physiology in residence.

The Department of Physiology invites applicants to fill two positions in neurosciences, affiliated with the Howard Hughes Institute, effective 1 September 1984.

The candidate's research interests should be in the broad areas of molecular and cellular neurobiology. Specific topics could include membrane channels, receptors, inter- and intra-cellular messengers, developmental neurobiology, and molecular genetics.

The appointees will be members of the Howard Hughes Institute and will have academic appointments of appropriate rank in the Department of Physiology. They will be expected to conduct an active research program and participate in the teaching program of the department.

Submit résumé and letters of recommendation to: **Dr. Louis F. Reichardt, Department of Physiology, University of California, San Francisco, San Francisco, Calif. 94143.**

An Equal Opportunity/Affirmative Action Employer

PLANT ECOLOGIST—HORTICULTURIST. Tenure-track position, assistant professor level, effective September 1984, for a botanist with special interests in plant ecology, horticulture, and related botanical subjects. Be qualified to instruct in general biology, general botany, and plant physiology; possess a Ph.D.; have a commitment to quality teaching and research; and be able to provide leadership in the development of an arboretum-botanical garden complex. By 31 January 1984, send: (i) a letter of application, including a brief personal teaching philosophy, (ii) official transcripts, and (iii) a complete résumé (references may later be requested) to: **Dr. Donald J. Drapalik, Faculty Search Committee, Department of Biology, Georgia Southern College, Statesboro, Ga. 30460-8042.** Georgia Southern College is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ORGANIC/POLYMER/POLYSACCHARIDE CHEMIST (Ph.D.)

Wanted for research and development of drugs and devices. The candidate should be capable of initiating and leading a research program and interfacing this with biological and clinical testing projects. Boston location. Please submit résumé, salary history, and references to: **Box 345, SCIENCE.**

PHYSIOLOGISTS—The Department of Biology at **WEST CHESTER UNIVERSITY** invites applications for two full-time, tenure-track, teaching/research positions. We are seeking two physiologists whose teaching responsibilities in the areas of general physiology, human physiology, microbial physiology, human anatomy, parasitology, and pathophysiology will be filled in the terms of the best complementary fit. Requirements include a Ph.D. and college teaching experience. Postdoctoral experience is desirable. Expected availability: September 1984. Submit curriculum vitae, a complete set of undergraduate and graduate transcripts, and three letters of recommendation postmarked by 15 February 1984. Apply to: **Dr. Ronald F. Romig, Department of Biology, WEST CHESTER UNIVERSITY, West Chester, Pa. 19383.** An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

PLANT ECOLOGIST

The Department of Botany, University of Wisconsin-Milwaukee, anticipates a tenure-track position at the **ASSISTANT PROFESSOR** level, beginning 27 August 1984. Applicants must have a Ph.D., broad training in plant ecology, a willingness to interact with other disciplines, and a commitment to excellence in teaching. Preference will be given individuals with strong field orientation, research interests in wetlands, population, community or physiological ecology, and ability to develop a vigorous research program with extramural funding. The appointee will teach introductory and advanced courses in plant ecology, contribute to other botany and biology courses, and direct students in M.S. and Ph.D. programs.

Submit curriculum vitae, with reprints and statement of research interests, and have three letters of recommendation sent to: **Professor Forest Stearns, Department of Botany, University of Wisconsin-Milwaukee, P.O. Box 413, Milwaukee, Wisconsin 53201.** Closing date is 15 February 1984.

An Equal Opportunity/Affirmative Action Employer

PLANT ECOLOGIST—CORNELL

A 2-year position (with the possibility of extension) will be available for an assistant professor beginning 1 September 1984. Preference will be given to individuals in physiological plant ecology, but others are encouraged to apply. Teaching responsibilities include an undergraduate course in general ecology and participation in a graduate-level course in physiological and population ecology. Participation in research will be encouraged (laboratory and other facilities provided). Applicants must supply curriculum vitae and the names, addresses, and telephone numbers of three references. Send applications by 1 March 1984 to: **P. L. Marks, Ecology and Systematics, Corson Hall, Cornell University, Ithaca, New York 14853-0239.** Cornell University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately for studies directed towards improving the efficiency of nitrogen fixing microorganisms by genetic manipulation. Applicants should have a strong background in molecular biology, preferably with experience in gene isolation and characterization. Salary: \$19,000 per year. Send curriculum vitae and names of three references to: **Dr. B. R. Glick or Dr. J. Pasternak, Department of Biology, University of Waterloo, Waterloo, Ontario, Canada, N2L 3G1.**

POSTDOCTORAL POSITION. Immediate opening for studies with new regional cerebral blood flow radiopharmaceutical. Candidates should have a strong background in neurobiology or neurophysiology and be experienced in handling radiotracers. Some experience with computers is desirable. Ph.D. required. Salary: \$21,000 per year. Applicants should supply curriculum vitae and have three letters of reference sent to: **Dr. W. A. Volkert, Department of Radiology, 410 Lewis Hall, University of Missouri-Columbia, Columbia, Missouri 65211; telephone: 314-882-2557.** The University of Missouri is an Equal Educational and Employment Opportunity Institution.

POSITIONS OPEN

PLANT MOLECULAR BIOLOGIST

The Department of Biology of University of California, Los Angeles (UCLA) will make a tenure-track appointment in the area of plant molecular biology on or after 1 July 1984. We seek an outstanding scientist who will develop a vigorous research program on some aspect of higher plant gene structure and function. Although all researchers with such interests are encouraged to apply, preference will be given to those with experience in introducing foreign genes into plant cells and applying this methodology to investigate fundamental problems of plant molecular biology. The appointment will preferably be at the assistant professor level; however, more senior investigators with demonstrated productivity in research will also be considered. The successful candidate will contribute to departmental undergraduate and graduate teaching programs. Applicants should send curriculum vitae, names of three referees, and statements of current and future research plans by 15 February 1984 to: **Dr. Robert B. Goldberg, Search Committee on Plant Molecular Biology, Department of Biology, University of California, Los Angeles, Calif. 90024.**

UCLA is an Equal Opportunity/Affirmative Action Employer.

PLANT TAXONOMY. Tenure-track, assistant professor position starting August 1984. Ph.D. required. Applicants should have a strong commitment to excellence in teaching and research. Teaching responsibilities will be in the areas of vascular plant taxonomy/systematics and introductory botany and biology. The successful candidate will be expected to actively publish in the field of angiosperm taxonomy/systematics and to direct graduate student training in that field at the master's degree level. Send curriculum vitae, publications, undergraduate and graduate transcripts, and at least three letters of recommendation to: **Dr. Edward Schneider, Chairman, Search and Screen Committee, Department of Biology, Southwest Texas State University, San Marcos, Texas 78666.** Deadline for receipt of applications will be 15 February 1984. Southwest Texas State University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOW. The Ecosystems Center of the Marine Biological Laboratory (MBL) announces the availability of a 1-year postdoctoral appointment for work in terrestrial or aquatic ecology. Applicants should have completed the requirements for the Ph.D. prior to the start of the appointment and should expect to join in some aspect of the Center's continuing research. Major programs at present are on the biogeochemical cycling of nutrient elements including carbon, nitrogen, and sulfur. The position is available starting 1 July 1984 and is renewable for a second year. Curriculum vitae, statement of objectives, and names of three references should be sent by 1 March to: **Dr. G. M. Woodwell, Director, Ecosystems Center, MBL, Woods Hole, Mass. 02543.**

The MBL is an Affirmative Action/Equal Opportunity Institution.

POSTDOCTORAL POSITION IN PHYTOCHEMISTRY OF PLANT-INSECT INTERACTIONS. Ph.D. in natural products chemistry and some training in ecology required. The successful applicant will be based in Boston where chemical aspects of the work will be performed. Summer field work will be done in Minnesota in collaboration with Dr. P. Morrow, Department of Ecology and Behavioral Biology, University of Minnesota, Minneapolis, Minn. 55455. The position is available in May 1984, for 2½ years in the first instance. Beginning salary: \$17,000. Applicants should submit curriculum vitae and statement of research interests, and arrange to have three letters of recommendation sent to: **Dr. P. W. Le Quesne, Department of Chemistry, Northeastern University, 360 Huntington Avenue, Boston, Mass. 02115.** An Equal Opportunity/Affirmative Action/Title IX University.

POSTDOCTORAL POSITIONS—PLANT TISSUE AND PROTOPLAST CULTURE. Positions available early 1984 for the study of various aspects of plant tissue and protoplast culture with emphasis on flow sorting as a method for intraspecific gene transfer. Candidates must have a good background in plant cell or molecular biology. Experience in somatic embryogenesis or organogenesis desirable. Salary: \$16,500. Apply by letter with curriculum vitae and names and addresses of three references to: **Dr. David W. Galbraith, School of Biological Sciences, University of Nebraska-Lincoln, 348 Manter Hall, Lincoln, Neb. 68588-0118.** Affirmative Action/Equal Opportunity Employer.

The American Mathematical Society announces

**The Fifty-seventh Annual
Josiah Willard Gibbs
Lecture**

Herbert A. Simon

**Computer Programs
That Model the Process of
Scientific & Mathematical
Discovery**

Commonwealth Convention Center, Exh. Space B
Louisville, Kentucky

Wednesday, January 25, 1984, 8:00 p.m.

No admission charge. The public is invited.

The Gibbs Lectures enable the public and academic community to become aware of the contribution that mathematics is making to today's Society.

Herbert A. Simon, Nobel Laureate and Professor of Computer Science and Psychology at Carnegie-Mellon University, is a member of the National Academy of Sciences and has received awards for distinguished research from the American Psychological Association, the Association for Computing Machinery, and The American Economic Association. In 1978 he received the Alfred Nobel Memorial Prize in Economic Sciences.

SEARCH EXTENDED

**CHAIRPERSON, DEPARTMENT
OF PHYSICAL THERAPY/
EXERCISE SCIENCE**

The School of Health Related Professions, State University of New York at Buffalo, is inviting applications/nominations for chairperson of a new department which combines the well-established Departments of Physical Education and Physical Therapy. Located in a major university health sciences center, this department's undergraduate and graduate programs are supported by 17 academic faculty and a large clinical faculty. Position offers unique opportunity to define philosophy and policies, plan facilities and organizational structure for the department; responsibility for overall administration of department; quality of academic, research programs; faculty recruitment and development.

Twelve-month, tenure track position. Applicants/nominees must have earned doctorate and be eligible for tenure and graduate faculty status. Academic, professional, and administrative experience required. Candidates must demonstrate research productivity, national visibility, grantsmanship, and ability to communicate with diverse groups within and outside the university. Academic rank and salary commensurate with qualifications. Individuals from disciplines other than physical education and physical therapy will also be considered.

Applications/nominations, to include curriculum vitae, should be sent before February 1, 1984, to: **Phillip D. Shannon, OTR, Chair, Search Committee, 515 Kimball Tower, SUNY at Buffalo, NY 14214.** The State University of New York at Buffalo is an affirmative action/equal opportunity employer.

NATURAL RESOURCES

**PROFESSOR/DIRECTOR/
ASSOCIATE DEAN**

**The Ohio State University
Columbus, Ohio**

The Ohio State University seeks nominations and applications for Director, Professor, School of Natural Resources and Associate Dean, College of Agriculture. Candidates must have earned doctorate and professional expertise in one or more of the natural resource management disciplines and qualifications and ability to provide leadership to the School in research, teaching and public service.

Inquiries and nominations will be received until January 1, 1984 or until suitable candidates have been identified, by **Dr. Mary Lynne Bowman-Cowen, Chair, Search Committee, 379-C Kottmann Hall, 2021 Coffey Road, Columbus, Ohio 43210.**

The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

EYE RESEARCH INSTITUTE

The Eye Research Institute of Retina Foundation seeks a strong leader with a good administrative background to serve as President. The Institute invites applications from candidates including, but not limited to, individuals with an M.D., preferably specialized in Ophthalmology, and/or a Ph.D., preferably with a strong background in vision related research. Candidates should have proven records of leadership and administrative ability.

The Eye Research Institute of Retina Foundation is an independent organization that devotes all of its energies to research in vision and diseases of the eye. The Institute is uniquely situated in a stimulating academic and clinical community which offers many possibilities for the further development of active collaboration. Over the past 33 years, the Eye Research Institute has had a strong record of research funding from government and private sources. The staff includes 50 independent investigators carrying on laboratory and clinical research in the areas of retina, vitreous, lens, cornea, glaucoma, pharmacology, neuroscience, optics and cell biology.

Please send applications accompanied by a curriculum vitae, or nominations to:

**Mr. Richard Harte, Jr.
Chairperson, Search Committee
Eye Research Institute
20 Staniford Street
Boston, MA 02114**

An affirmative action and equal opportunity employer.

**SPECIAL EXPERT
NATIONAL INSTITUTES
OF HEALTH
PUBLIC HEALTH
SERVICE**

The National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) invites applications for the position of Special Expert in its Office of Planning and Analysis. This is a non-tenured position, lasting two (2) years, and is located in Bethesda, Maryland. The incumbent will assume a major role in the review, update and generation of research goals for the neurological and communicative sciences.

Applicants must possess an extensive background of professional training and successful research activity in neurological and/or communicative sciences; must show extensive ability to compile, write and edit scientific reports; and must possess the interpersonal skills necessary to plan, organize and conduct scientific meetings. An individual must have the same level of qualifications as required for the GS-13 grade level in the Federal government. Salary will be commensurate with the appointee's qualifications and expertise, but may not exceed Level V of the Executive Schedule (\$63,800/per annum).

Please submit a Standard Form 171 (Personal Qualifications Statement), curriculum vitae, and bibliography to: Mr. Clifford Schein, NINCDS Personnel Office, Building 31, Room 8A-23, 9000 Rockville Pike, Bethesda, Maryland 20205 (Telephone (301) 496-6334). All applications must be post marked no later than January 30, 1984.

The National Institute of Neurological and Communicative Disorders and Stroke is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIPS FOR RESEARCH IN NEUROPLASTICITY AND REGENERATION

Positions are available for interdisciplinary studies in neuroplasticity and regeneration with a group of investigators in the Department of Neurosurgery, Neurology, and Otolaryngology in the Clinical Neuroscience Research Center of the University of Virginia. Current research interests of the participating faculty focus on the neural mechanisms involved in CNS injury and neurological and neuromuscular disorders. Participating faculty include J. E. Greenlee, L. Heimer, J. A. Jane, Y. I. Kim, J. J. Lenn, W. B. Levy, E. W. Rubel, and O. Steward. Applicants should hold either the Ph.D. or the M.D. degree, and should be committed to a career involving research. We are particularly interested in clinically trained individuals with a commitment to basic research. Inquiries should be directed to:

Oswald Steward, Ph.D., or
John A. Jane, M.D., Ph.D.
Neuroplasticity and Regenerating Training Program
Department of Neurosurgery
University of Virginia School of Medicine
Charlottesville, Va. 22908

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

POSTDOCTORAL POSITION available immediately (3 years' duration). Should have expertise in one or more of following areas: ovarian mitochondria, phospholipids, protein phosphorylation, and/or protein kinases. Contact: M. J. Dimino, Ph.D., Department of Biochemistry, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, Va. 23501. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS

Research associate positions immediately available in ongoing projects to study:

- 1) **BIOLOGY OF ADRENAL CELLS** in relation to steroid synthesis. This project offers experience in-depth in BIOCHEMISTRY and CELL BIOLOGY. Emphasis can go in either direction. Studies include CYTOSKELETON, MEMBRANE EVENTS, INTRACELLULAR TRANSPORT, MITOCHONDRIAL FUNCTION, and CYCLIC AMP.
- 2) **CELL BIOLOGY and ENDOCRINOLOGY** of the SERTOLI CELL. This project offers research opportunities in CYTOSKELETON, CELL-CELL INTERACTION, EXTRACELLULAR MATRIX, CELL DIVISION, and HORMONE ACTION using BIOCHEMISTRY, MORPHOLOGY (light and electron), and CELL BIOLOGY. Background in OOGENESIS and GRANULOSA CELLS would also be appropriate.

Submit curriculum vitae and names of three references to: Dr. Peter Hall, c/o PERSONNEL OFFICE, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.

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

POSTDOCTORAL POSITION available immediately for Ph.D. biochemist or molecular pharmacologist to study aspects of drug transport in isolated brain capillary endothelial cells. Salary: \$14,000 to \$15,000 per year. Send curriculum vitae and names of three references to: Dr. Ronald T. Borchardt, Department of Pharmaceutical Chemistry, 3006 Mallott Hall, The University of Kansas, Lawrence, Kans. 66045. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately for Ph.D. biochemist or molecular pharmacologist to study aspects of epinephrine metabolism in the CNS with emphasis on the biosynthetic pathway. Salary: \$14,000 to \$15,000 per year. Send curriculum vitae and names of three references to: Dr. Ronald T. Borchardt, Center for Biomedical Research, 2099 Constant Avenue, The University of Kansas, Lawrence, Kans. 66044. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH POSITION to isolate and characterize newly described antitumor agents from bacteria. Background in biochemistry and/or immunology preferred. Opportunity for collaborative interactions with members of the Oncology Research Center. Send curriculum vitae and names of three references to: I. van de Rijn, Ph.D., Bowman Gray School of Medicine, 300 South Hawthorne Road, Winston-Salem, N.C. 27103. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION. Molecular geneticist with experience in recombinant DNA technology. Skill at lambda cloning is essential. Work to involve wheat and related species. Two-year position; salary range: \$20,280 to \$21,228; available 15 February 1984 at the earliest. Submit résumé, transcripts, publication list, and names and addresses of three references to: Dr. Jan Dvorak, Department of Agronomy, University of California, Davis, Calif. 95616. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION in viral immunology available. Project area concerns the early events in infection of human cells by herpesviruses (receptor binding, endocytosis, deenvelopment) and the mechanisms involved in induction of T and B cell immune responses. Financial support through NIH training grant and other sources. Background in virology, immunology and/or cell biology preferred. Interested individuals please send curriculum vitae and references to: Neil R. Cooper, M.D., Department of Immunology, Scripps Clinic and Research Foundation, La Jolla, Calif. 92037.

POSTDOCTORAL POSITION in BIOMECHANICS available commencing 1 July 1984 to perform flow measurements of concentrated biomacromolecular solutions, creep and stress-relaxation tests on normal and pathological soft connective tissues, and mathematical modeling of such phenomena. Stipend is from NIH and NSF grants and is highly competitive. Position is for 2 years, renewable at the end of the first year. Send curriculum vitae and three letters of reference to: Dr. Van C. Mow, Department of Mechanical Engineering, Rensselaer Polytechnic Institute, Troy, N.Y. 12181.

POSTDOCTORAL POSITION available immediately for a recent Ph.D. in biochemistry to study non-enzymatic glycosylation of protein and its role in diabetes. Salary: \$20,000. Send résumé and three letters of recommendation to: Dr. H. Franklin Bunn, Brigham and Women's Hospital, 75 Francis Street, Harvard Medical School, Boston, Mass. 02115. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION in diabetes research program presently available with group investigating pancreatic islet cell biochemistry, physiology, and morphology. Involves extensive use of tissue culture techniques. Applicants must possess M.D. or Ph.D. degree with background in biochemistry, physiology, or cell biology. Stipend is competitive. Send curriculum vitae, description of current research interests and objectives, and three letters of reference to: Postdoctoral Search Committee, Department of Biochemistry, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, Mass. 01605.

The University of Massachusetts Medical School is an Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL POSITION available immediately for the biochemical characterization of human tumor antigens as recognized by human monoclonal antibodies. The candidate should have protein chemistry experience. Send curriculum vitae, three letters of references, and a one-page summary of research interests to: Dr. M. C. Glassy, University of California, San Diego, Cancer Center, T-011, San Diego, Calif. 92103.

POSTDOCTORAL RESEARCH

Postdoctoral positions in neuroendocrinology available to study: (i) aging, pineal, and opioid peptides on reproduction, and (ii) hormone release from cultured hypothalamic and pituitary cells. If qualified and interested, please submit résumé to: Employment Coordinator, St. Joseph's Hospital and Medical Center, P.O. Box 2071, Phoenix, Ariz. 85001. *Equal Opportunity Employer.*

POSTDOCTORAL-RESEARCH ASSOCIATE position available immediately to study immune mechanisms of pulmonary fibrosis. Applicants should have a background in collagen biochemistry and experience in protein purification. Experience with HPLC would be desirable. Send curriculum vitae to: Dr. Ronald P. Daniele, Director of the Interstitial Lung Disease Program, University of Pennsylvania School of Medicine, 807 East Gates Building, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, Pa. 19104.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study the neuroanatomy of peptidergic visceral afferent and medullary pathways involved in the central regulation of autonomic functions. Ph.D. applicants with research interests in neuropharmacology and neuroanatomy and experience with immunocytochemistry and retrograde tracer techniques are preferred. Position is university-supported, pays \$17,000, and is for 2 years. Send curriculum vitae, summary of research interests, and names of three references to: Dr. C. J. Helke, c/o Personnel Manpower Division, Department of Pharmacology, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20814. *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN PHYSICAL OCEANOGRAPHY

Available for research on the ocean-related aspects of climate in collaboration with CIMAS Fellows and using the facilities of RSMAS and NOAA's Atlantic Oceanographic and Meteorological Laboratory. Applicants should submit a résumé, a statement of research interest, and the names of three references to:

Dr. William W. Fox, Jr., Director
Cooperative Institute for Marine
and Atmospheric Studies
RSMAS/University of Miami
4600 Rickenbacker Causeway
Miami, Fla. 33149

An Equal Opportunity/Affirmative Action Employer

PRE- AND POSTDOCTORAL POSITIONS IN MOLECULAR BIOLOGY. Available from 1 April 1984. Successful candidates will join a research program to study the regulation of gene expression during differentiation of skeletal and cardiac muscle cells. Excellent laboratory facilities for work using recombinant DNA techniques, DNA sequencing, and cell free protein synthesizing systems. Send curriculum vitae and three letters of reference to:

Dr. J. Bag
Assistant Professor of Molecular Biology
Faculty of Medicine
Memorial University of Newfoundland
St. John's, Newfoundland, Canada A1B 3V6

FULL PROFESSOR, COMMITTEE ON BIOPSYCHOLOGY, UNIVERSITY OF CHICAGO. Distinguished biopsychological researchers, who are currently at the rank of full professor or equivalent at top research institutions, are invited to apply for a position at the full professor level. Please send curriculum vitae and three to five recent reprints to: Dr. Howard Moltz, Committee on Biopsychology, 5848 South University Avenue, University of Chicago, Chicago, Ill. 60637, no later than 1 February 1984.

UNIVERSITY OF ILLINOIS AT CHICAGO PROGRAM COORDINATOR

OFFICE OF SPONSORED RESEARCH Natural Sciences, Mathematics, and Engineering

Applications are invited for the position of program coordinator in the Office of Sponsored Research. The objective of this position is development of external funding for research and educational activities in the natural sciences, mathematics, and engineering. The coordinator will provide support services to assist faculty in obtaining grants from agencies of federal and state government, professional and industrial associations, and foundations. Tasks include identifying grant opportunities, assisting in the development and submission of proposals, and maintaining relations with agencies.

Qualifications: preferably a doctorate in an area of the natural sciences, mathematics, or engineering; experience with sponsored research at the departmental, college, or university level or in a comparable technical setting at an institute or agency; excellent communication skills and an ability to relate well with faculty and administrators; and strong initiative and interest in work which emphasizes service to others.

Starting date: as soon as possible. Salary will be competitive and commensurate with experience. The deadline for applications is 31 January 1984. Send letter of application, curriculum vitae, and a list of at least three references to:

Richard Buchanan
Associate Director, Sponsored Research
1527 University Hall
University of Illinois at Chicago
P.O. Box 4348
Chicago, Illinois 60680

The University of Illinois at Chicago is an Equal Opportunity/Affirmative Action 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 April, July and November of 1984 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. Most programs require U.S. citizenship.

Further details on research programs can be obtained from Dr. L. J. Puckett, (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-E-15)
NATIONAL RESEARCH COUNCIL
2101 Constitution Avenue, NW
Washington, DC 20418

Postmark deadlines for application are January 15, April 15 and August 15, 1984, respectively.

STAFF SCIENTIST/ GROUP LEADER

A life sciences company in the Washington, D.C. area is seeking a Group Leader for restriction enzyme development. The successful candidate will be required to cover the microbiological and biochemical aspects of new enzyme development with emphasis on commercial resale yields and consistent product quality. This person will also act as a resource to other molecular biologists with the company.

This position requires a Ph.D. with a minimum of one year industrial experience and a broad background in both protein chemistry and enzymology. Skills should include enzyme immobilization, enzyme purification, development of enzyme assays, chemical modification and molecular biology techniques including rapid DNA sequencing. A minimum of 3-6 months supervisory experience is required.

Salary: \$27,864-\$31,579 based on 40 hour week.

Submit resume to: Job Order 0451631

Maryland Employment Security
Administration
1100 N. Eutaw Street
Baltimore, Md. 21201

An equal opportunity employer, M/F/H

ANALYTICAL OR PHYSICAL CHEMIST

The Navy's largest research, development, test and evaluation activity, located at the foot of the Sierra Nevada has an immediate vacancy for a Senior Chemist to conduct research in

INSTRUMENTAL CHEMICAL ANALYSIS

This position offers the opportunity to work in a challenging research environment combined with community living in a small town environment.

Salary to \$45,000.

Applicants with a PhD and a strong background in analytical procedures and instrumentation are encouraged to apply. The ability to plan, direct and execute major technical programs is essential. This position is for the Head of the Instrumental Chemical Analysis Branch; experience or interest in technical management is desirable. Applications accepted until 15 Feb. Please submit resumes to:



NAVAL WEAPONS CENTER
Code O92-38-2
China Lake, CA 93555
An Equal Opportunity Employer

SPECTROSCOPIST

The Navy's largest research, development, test and evaluation activity, located at the foot of the Sierra Nevada has an immediate vacancy for a Senior Chemist to conduct research in

NMR SPECTROSCOPY

This position offers the opportunity to work in a challenging research environment combined with community living in a small town environment.

Salary to \$45,000.

Applicants with a PhD and strong background in theoretical and experimental aspects of NMR Spectroscopy are encouraged to apply. Position is for a Research Chemist to conduct NMR investigations of

- **Molecular Structure**
- **Stereochemistry**
- **Molecular Dynamics**

in areas related to polymeric and energetic materials and organometallic compounds.

Applications accepted until 15 Feb.



Please submit resumes to:
NAVAL WEAPONS CENTER
Code O92-38-1
China Lake, CA 93555
An Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL POSITIONS—A limited number are open for training in cell biology, biochemistry, genetics, and virology as related to cancer. These are open to U.S. citizens or holders of permanent U.S. visas. Research conducted at the Dana-Farber Cancer Institute under the guidance of faculty members with appointments at Harvard Medical School. For further information, send a brief résumé and two letters of recommendation to: **Dr. Arthur B. Pardee, DANA-FARBER CANCER INSTITUTE, 44 Binney Street, Boston, Mass. 02115. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available 1 April 1984 for 1 or 2 years in membrane transport physiology. The project will involve studies of single ion channels by patch clamp techniques in isolated renal tubule preparations. Candidate should have a strong background in electrophysiological techniques. Applicants should send curriculum vitae along with two references to: **Dr. Gerhard Giebisch, Department of Physiology, Yale University School of Medicine, 333 Cedar Street, P.O. Box 3333, New Haven, Conn. 06510.**

Yale University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

Research associate (postdoctoral) with background in physical oceanography and atmospheric sciences and interests in dynamical aspects of climate variability. Term of appointment: one year, renewable for a second year subject to the approval of the Council. Closing date: 1 February 1984. Send curriculum vitae and a list of four references to: **Director, JISAO, c/o Department of Atmospheric Sciences, AK-40, University of Washington, Seattle, Wash. 98195. An Equal Opportunity/Affirmative Action Employer**

PROFESSIONAL RESEARCH ASSOCIATE Plant Tissue Culture

A position is now open for a Ph.D. in biology, botany, genetics, or biochemistry to work on one of several ongoing projects to develop "improved" crop strains using plant tissue culture and biotechnological methods. Salary will conform to NSERC guidelines. Send complete curriculum vitae and three letters of reference to:

**Dr. Alan McHughen
Crop Development Centre
University of Saskatchewan
Saskatoon, Saskatchewan, Canada S7N 0W0**

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

PROGRAMME LEADER—SOIL PHYSICS. Applications sought from scientists with established records of personal research achievement in experimental and theoretical research in the area of porous medium physics to lead the Division's research programme. Salary to A\$42,210 per annum. Contact: **Dr. J. R. Philip, Chief, CSIRO, Division of Environmental Mechanics, G.P.O. Box 812, Canberra, A.C.T. 2601, Australia, or refer to Nature or EOS for full details.**

PSYCHOLOGIST, EXPERIMENTAL. Tenure-track position, beginning fall 1984, in strong, research-oriented undergraduate department. Must hold a Ph.D. with a specialty in any of the following areas: ecological psychology, human factors, philosophical foundations of psychology, psychophysiology, or statistics and research methods. Applicant must also have demonstrated strengths in at least two additional areas of traditional academic psychology. Skill in computer applications in research desirable. Contact: **Richard S. Lehman, Chairman, Department of Psychology, Franklin and Marshall College, P.O. Box 3003, Lancaster, Pa. 17604. An Equal Opportunity Employer.**

RESEARCH ASSOCIATE/POSTDOCTORAL POSITIONS to study intracellular and secretion of calcium-regulating hormones. Candidates should have experience in one of the following areas: recombinant DNA, molecular biology, peptide isolation, biochemical analysis, or cellular biology. New research group, University of Louisville Dental/Medical Schools. Send curriculum vitae, statement of research interests, and the names of two references to: **Dr. David V. Cohn, 1238 Wyncrest Court, Arden Hills, Minn. 55122.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

RESEARCH ASSOCIATES: Two positions available immediately. Research involves the study of novel human glycosyltransferases. Background in glycoproteins, glycolipids, and enzymology is desired. Experience in structural study of glycoconjugates, HPLC, and tissue culture helpful. Send curriculum vitae and two letters of reference to: **Dr. Khushi L. Matta, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263.**

RESEARCH ASSOCIATE sought with 2 to 3 years of experience in purification of membrane proteins. Send résumé to: **Dr. Giuseppe Inesi, Department of Biological Chemistry, University of Maryland School of Medicine, 660 West Redwood Street, Baltimore, Maryland 21201. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH TECHNICIAN—MOLECULAR BIOLOGY. A position is available immediately for individual with hands-on experience in recombinant DNA technology. Procedural capabilities required include purification of nucleic acids, cloning, and colony screening. DNA sequencing experience desirable but not essential. Individual will work with a team pursuing exciting problems in molecular neurobiology. A competitive salary commensurate with experience is offered. **Telephone: 303-394-5604** for details. Send résumé, published work, and references in confidence to: **William E. Hahn, Professor, University of Colorado, School of Medicine, B-111, Denver, Colo. 80262. The University of Colorado Health Sciences Center is an Equal Opportunity/Affirmative Action Employer.**

SUPERVISOR ELECTRON MICROSCOPY LABORATORY ATLANTA, GEORGIA

EMORY UNIVERSITY, Yerkes Primate Center, has a position available to establish and supervise laboratory for scanning electron microscopy and x-ray microanalysis. Requirements: master's degree in a related field or related bachelor's degree and 2 years of related experience. Degree requirements may be waived for commensurate experience. Send résumé to: **Employment Center, Emory University, Personnel Department, Atlanta, Ga. 30322. An Equal Opportunity/Affirmative Action Employer.**

VENTURE CAPITAL PROFESSIONAL HEALTH CARE AND BIOTECHNOLOGY

Western Pennsylvania-based firm seeks an individual who will analyze business plans, make investment recommendations, and perform an active role in start-up development of new companies.

Qualified individuals will meet the following requirements:

- Three years of business experience in health care related industry,
- Demonstrated analytical and conceptual skills, effective communication skills (both oral and written), and good interpersonal skills, and
- Undergraduate or higher degree in health care related science; M.B.A. preferred.

We offer a competitive compensation program and full company benefits. We encourage qualified professionals to submit their résumé and salary history in confidence to:

**Box 346, SCIENCE
An Equal Opportunity Employer, M/F**

VERTEBRATE BIOLOGIST OREGON STATE UNIVERSITY

The Department of Zoology invites applications for a tenure-track assistant professorship in vertebrate biology starting 16 September 1984. Preference will be given to individuals with postdoctoral experience, expertise in ecology and/or evolutionary biology, and whose primary research is conducted in the field. Teaching responsibilities will include undergraduate courses in introductory biology and vertebrate biology, a graduate course in the candidate's area of expertise, and graduate seminars. A Ph.D. is required. Applications consisting of curriculum vitae, including a statement of professional goals, representative reprints, and the names and addresses of at least three individuals who can provide letters of reference should be directed to: **Dr. Peter S. Dawson, Vertebrate Biology Search Committee, Department of Zoology, Oregon State University, Corvallis, Oregon 97331, by 1 February 1984. Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.**

POSITIONS OPEN

RESEARCH ASSOCIATE position available for research in chemical carcinogenesis. Research areas include metabolism of nitrogen-heterocyclic polynuclear aromatic hydrocarbons, their interaction with DNA, and microsomal enzyme induction. Ph.D. in biochemical pharmacology, toxicology, or biochemistry required; experience in metabolite isolation by HPLC preferable. Position provides opportunity for developing programs of candidates' interest. Submit résumé and names of three references to: **Dr. Harish C. Sikka, Director, Great Lakes Research Laboratory, State University of New York College at Buffalo, 1300 Elmwood Avenue, Buffalo, N.Y. 14222.**

SCIENTIFIC DIRECTOR AND

**CHIEF EXECUTIVE OFFICER
The John P. Roberts Research Institute
London—Canada**

This new, major medical research institute, due to open in 3 years, is seeking a scientific director immediately. Jointly sponsored by The University of Western Ontario and University Hospital, London, the Institute's research will be centered in the fields of neurobiology, circulation, immunology, clinical trials, and advanced diagnosis including NMR. The director, an outstanding clinical or basic scientist with demonstrated administrative ability, will be responsible for the scientific development, organization, and management of the Institute. The scientific director will hold appropriate appointments in the University and University Hospital.

Applications, including curriculum vitae and names of three references, should be submitted to:

**Dr. M. J. Hollenberg
Chairman, Search Committee
The John P. Roberts Research Institute
P.O. Box 5015
London, Ontario, Canada N6A 5K8
Telephone enquiries: 519-679-3861**

The deadline for applications is 15 March 1984.

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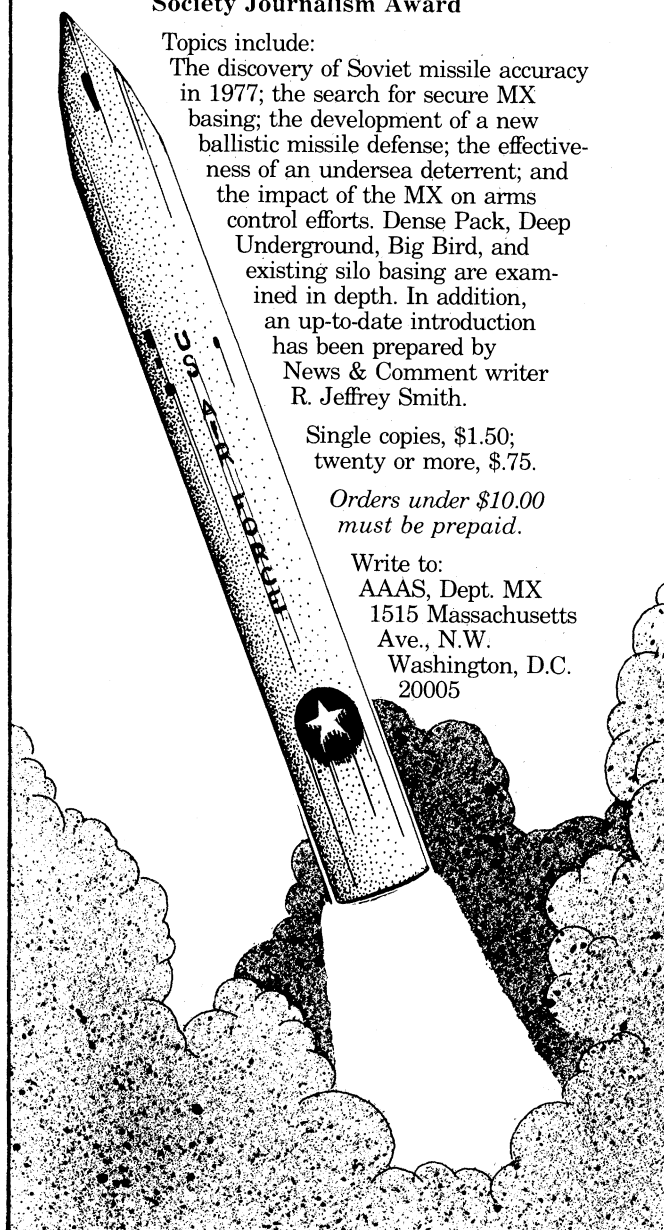
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**National Academy of Sciences
Section on U.S.S.R. and Eastern Europe
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Washington, D.C. 20418
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The Department of Anatomy and Cellular Biology, Tufts 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 1984.

For application materials, write:

**Dr. 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**

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Three postdoctoral positions will be available, commencing 1 July 1984, at Michigan State University (MSU) in an NIH-supported training program in the combined fields of pathology and environmental toxicology. Applicants should have a D.V.M., M.D., or D.O. degree and be willing to undertake training leading to a dual Ph.D. in pathology/environmental toxicology. Deadline for applications is 1 March 1984. Stipends will be based on NIH postdoctoral levels. More complete description of the program is available upon inquiry. Please address letters of application with three letters of reference to:

**Dr. R. W. Leader, Associate Dean
Program Director
College of Veterinary Medicine
A-136 East Fee Hall
Michigan State University
East Lansing, Michigan 48824**

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FELLOWSHIP IN ALCOHOL-DRUG DEPENDENCE, 1 year, G-4 or G-5 level, University of Minnesota. Contact: **Dr. Joseph Westermeyer, Box 393 Mayo Building, University of Minnesota Hospitals, Minneapolis, Minn. 55455**, for further information. Telephone: 612-373-7952.

POSTDOCTORAL FELLOWSHIP to study the organization and expression of nuclear DNA [Cell 28:99-106; Nuc. Acids Res. 11:5113-5130], available spring 1984. Applicants must have received Ph.D. degree in molecular biology or biochemistry in 1983 or 1984. Send curriculum vitae and names and telephone numbers of two or three referees to: **Bert Vogelstein, Johns Hopkins University School of Medicine, 600 North Wolfe Street, Oncology 1-127, Baltimore, Md. 21205. Equal Opportunity Employer.**

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The Woods Hole Oceanographic Institution offers fellowships to individuals in social sciences, law, or natural sciences to apply their training to problems that involve the use of the oceans. Present themes in the program include marine policy problems and opportunities in developing countries, policy and management issues concerning fisheries, marine minerals, and coastal zone use, implications of the Law of the Sea Treaty for ocean activities, Arctic and Antarctic resource issues, and use of scientific information in decision-making and policy-planning. Other research topics may also be appropriate. Previous policy fellows have been trained in fields such as law, economics, anthropology, political science, international relations, engineering, marine science, and geography. Recipients of awards are selected on a competitive basis with primary emphasis placed on research promise.

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Dean of Graduate Studies, P.O. Box MP, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543.

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PREDOCTORAL FELLOWSHIPS. The Graduate Program in Molecular Cell Biology invites applications from highly qualified students interested in an interdisciplinary Ph.D. program. Major areas of emphasis include molecular genetics, nucleic acid biochemistry, connective tissue and protein biochemistry, membrane biochemistry, microbial pathogenesis, immunology, and molecular virology. Students receive stipends of \$7500 plus tuition and fees. Contact: **Dr. Brian Johnson, Department of Microbiology, University of Alabama in Birmingham, Birmingham, Alabama 35294. Equal Opportunity/Affirmative Action Employer.**

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**E. Mihich, M.D., Chairman
Graduate Pharmacology Program
Roswell Park Memorial Institute
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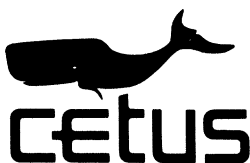
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