

ics, which will be quite useful for workers in the field. Finally, the book is strongly recommended to the rapidly growing number of astrophysicists studying magnetically active stars. They will find it an easily accessible review of the ideas and tools that have proven their value in solar physics.

H. C. SPRUIT

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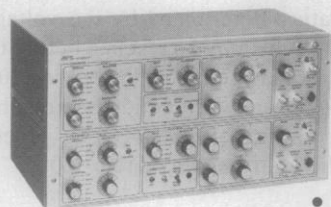
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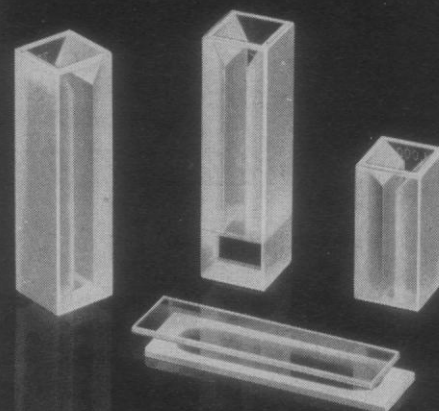


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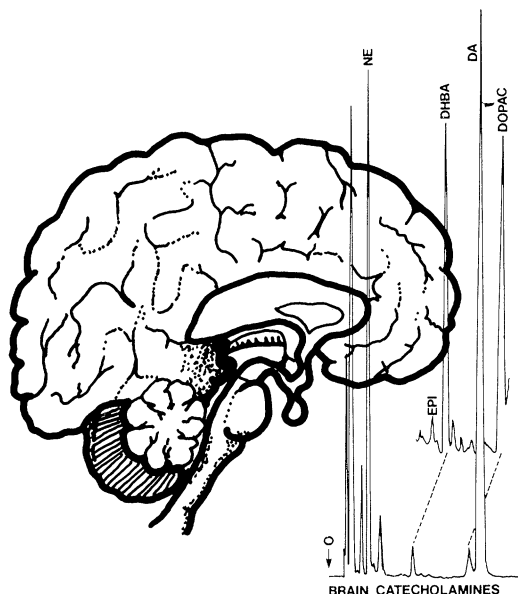
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Spectrofluorometer

System 3 incorporates digital displays, a high energy light source, a universal sample chamber, double monochromators, and data reduction capability. Minute sample concentrations are detectable with high sensitivity and high selectivity. Bandwidth is selectable and all modes of fluorescence analysis are supported. Farrand Optical. Circle 556.

Minicomputer

The MC-500 is a 32-bit, 16-megabyte, virtual memory, real-time UNIX-based minicomputer for scientific and engineering applications. It acquires, analyzes, presents, and manipulates data from laboratory apparatus. Multiple processors and multiple bus structures allow

the MC-500 to process data while further data is being acquired and while previously processed material is being displayed and manipulated. The system features twin 10-megahertz Motorola 68000's and a third 68000 in the graphics processor. There is also an 8-MIPS bipolar bit-slice processor for data acquisition and control. MASSCOMP. Circle 557.

Electrochemical Detector

Model 5100A Coulochem is specifically designed to detect biological and pharmaceutical compounds in high-pressure liquid chromatography. It may be operated in the conventional single electrode mode, a screening operation for specific compounds in the chromatographic eluent, reduction-oxidation for increased selectivity, and a scanning mode for determination of optimum operation. Model 5100A Coulochem features an external guard cell to oxidize or reduce the mobile phase before analysis. This minimizes background noise caused by electroactive components. Environmental Sciences Associates. Circle 558.

Nucleic Acid Chromatography System

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Gel Sequencer

Model SE 1500 maintains an even temperature over the gel surface to prevent the "smile" effect. The upper buffer chamber forms a vertical pod against which the gel sandwich is sealed. The temperature of the gel rapidly equilibrates with that of the buffer. Both gel and buffer are heated by Joule heat to a temperature determined by the voltage. A steady state may be reached before the sample is analyzed. A gel receiving 2000 volts under standard conditions reaches a temperature of about 60°C. Hoefer Scientific Instruments. Circle 560.

Separation Material for HPLC

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Literature

Gas Chromatography instruments and peripherals are featured in a series of brochures and applications sheets. Erba Instruments. Circle 562.

Gas Chromatography lists specifications of a line of thermal conductivity instruments. Gow-Mac Instruments. Circle 563.

Gas Chromatographs offers details of the Sigma 2000 and 2100 instruments. A section is devoted to the quick-change injector concept, sampling valves, and headspace sampling. Perkin-Elmer. Circle 564.

Ultraviolet Equipment has lamps, viewing cabinets, transilluminators, and radiometers for industrial, research, and medical laboratories. Spectronics. Circle 565.

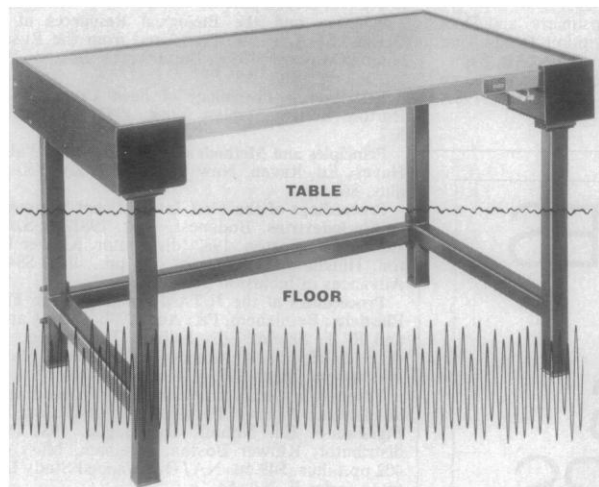
High Pressure Liquid Chromatography Systems includes a modular line of isocratic and gradient devices and introduces the Data Master option for integrating peaks and performing statistical analysis. Gilson Medical Electronics. Circle 566.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card (on pages 222A and 134A) and placing it in a mailbox. Postage is free.

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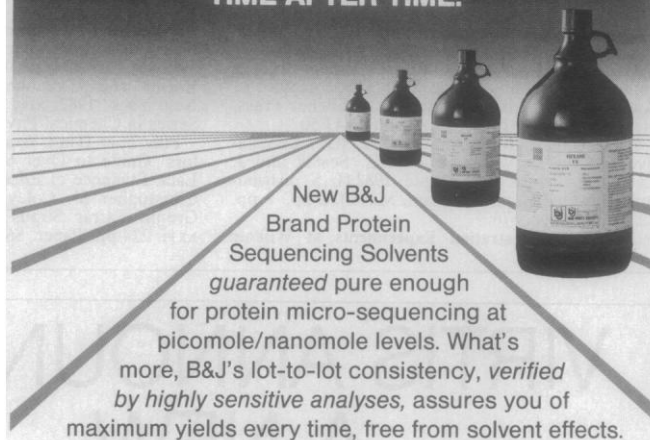
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(Continued from page 192)

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(Continued from page 187)

sociation, introduced the Congress' theme, "Man and Ocean—Resources and Development." He described the Indian tradition of looking to the land although the nation is surrounded on three sides by oceans and he called attention to the benefits for India and the world through effective use of the ocean's resources.

Many presentations focused on the assessment of ocean resources. G. S. Siddhu, director general of the Council of Scientific and Industrial Research, spoke about the need for education of first-rate Indian oceanographers and for oceanographic vessels to provide students and scientists access to the seas. The Department of Oceans has had only one oceanographic ship but is now obtaining a modern research vessel from West Germany and expects to add two additional vessels in the next several years. M. Dayal, secretary to the Commission on Alternative Sources of Energy, told the Congress of government-industry joint plans for an ocean thermal energy conversion plant to produce between 1.0 and 1.6 million watts of electricity by exploiting the difference in temperature between surface and deep waters. Professor D. K. Das Gupta described studies conducted in Calcutta University where striking results have been achieved in raising sugar beets on coastal saline tracts.

Among many presentations of scientific interest, two attracted particular attention. Professor M. G. K. Menon of the Planning Commission reviewed the proton-decay experiments at the Kolar gold mines and described the new, bigger detector that is being installed. He reported three confirmed and three non-confirmed events that have encouraged the scientists and suggests that the proton does decay. S. Sriramachari, additional director general, Indian Council of Medical Research, discussed fluorosis, which is a serious problem in some areas of India. A new method for removing fluoride ions from water offers the hope of preventing fluorosis in many villages.

During the Congress the Indian National Science Academy made awards to 16 young scientists for exceptional work in basic and applied research.

William D. Sawyer, dean, School of Medicine, Wright State University, represented the AAAS at the 70th Indian Science Congress. Some 4000 Indian scientists and 40 visiting scientists from 15 countries attended the Congress, held 8–18 January in Tirupati.

Personnel Placement

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

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Biological Oceanographer. M.S. Five years of environmental consulting experience with a specialization in fisheries investigations. Extensive field and supervisory experience in large, multidisciplinary programs. Skilled editor/writer. Seeks position in industry, government, consulting, or academia. Box 86, SCIENCE. 4/8, 15

Biomathematician. Ph.D. in biochemistry, 1981. Extensive experiences with mathematical modeling, computer simulation, optimization, biochemical system analysis. Currently employed as postdoctoral fellow in the University of Michigan Medical School. Dynamics of enzymatic feedback system, of biosynthetic networks, and of cyclic enzyme system. Seeks position in the university, research institute. Box 87, SCIENCE. 4/8, 15

Clinical Chemist. Ph.D. seeks position as laboratory director in hospital or private laboratory in Southeast. Box 76, SCIENCE. X

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Linguist with artificial intelligence mind-model (now available to anyone upon request) seeks position in robotics. Arthur Theodore Murray, 11033 Greenwood Avenue North, Seattle, Washington 98133. X

Neurochemist/Biochemical Pharmacologist. Ph.D. Experienced, many publications. Psychotropics/CNS drugs, psychiatric diseases, neurochemical techniques, and analytical methods. Seeks position in industry or academia for research or laboratory responsibility. Box 89, SCIENCE. X

POSITIONS OPEN

The Department of Pathology of the University of Illinois has an immediate opening for an **ACADEMIC RESEARCHER** in the area of **EXPERIMENTAL PATHOLOGY**. The appointee is expected to direct a research laboratory to study the role of circulating leukocytes in vascular disease, develop cell markers, and investigate biochemical mechanisms in tissue cytotoxicity. Two or more years of postdoctoral training with research experience in cell biology-pathology for three or more years is required. Salary and rank dependent on experience and credentials. M.D. or M.D., Ph.D. required. For fullest consideration, applications should be received by 1 May 1983. *An Equal Opportunity/Affirmative Action Employer.* Direct inquiries and submit curriculum vitae to: **Abel L. Robertson, Jr., M.D., Ph.D., Head, Department of Pathology, University of Illinois College of Medicine, 808 South Wood Street, Chicago, Illinois 60612.**

The Department of Pathology of the University of Illinois has an immediate opening for an **ACADEMIC RESEARCHER** at the level of a **RESEARCH ASSISTANT PROFESSOR**. Salary dependent on experience and credentials. The applicant must be qualified to do independent research in atherosclerosis and neoplasia under the general supervision of a senior staff member. The appointee is expected to share in teaching and service duties while continuing research activities. This is an excellent opportunity within the nation's largest medical school system. For fullest consideration, applications should be received by 1 May 1983. *An Equal Opportunity/Affirmative Action Employer.* Direct inquiries and submit curriculum vitae to: **Egil Fosslie, M.D., Department of Pathology, University of Illinois Medical Center, 840 South Wood Street, Chicago, Illinois 60612.**

VISITING ASSISTANT PROFESSOR OR INSTRUCTOR—One-year position. Two terms of human anatomy/physiology for nursing students, zoology majors; one term of introductory zoology for nonmajors. Ph.D. preferred; candidates with M.S. considered. Submit letter of application, résumé, undergraduate and graduate transcripts, and three reference letters to: **Chairperson, Zoology Department, Ohio Wesleyan University, Delaware, Ohio 43015**, by 22 April 1983. *An Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE PROFESSOR OF TOXICOLOGY AND PHARMACOLOGY: Applications are invited for a tenured position at the rank of associate professor. Applicants possessing an M.D. or a Ph.D. or preferably an M.D./Ph.D. degree, and having a strong commitment to basic research, are sought. Some clinical or clinic-related experience is desirable. Applicants having an interest in disease-related or organ-specific toxins, or in xenobiotics having cellular or genetic actions or in xenobiotic distribution and metabolism, would be preferred but applications from specialists in other related areas will be considered. Responsibilities will include participation in the departmental teaching of medical and graduate students, major involvement in the toxicology tracks of the department, and minor administrative duties. Inquiries, which should include curriculum vitae, synopsis of current research interests, list of publications, reprints of selected publications, and the names of eight references, should be sent by 30 April 1983 to: **Dr. Francis Johnson, Chairman, Faculty Search Committee, Department of Pharmacological Sciences, School of Medicine, Health Sciences Center, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794.** *SUNY, Stony Brook is an Equal Opportunity/Affirmative Action Employer.* AK Number 558A.

The Department of Pathology of the University of Illinois has an immediate opening for an academically oriented **HEAD OF THE CLINICAL MICROBIOLOGY LABORATORY** in the hospital laboratories. Salary and rank dependent on experience and credentials. Applicants must be Board-certified or Board-eligible in clinical pathology. The appointee is expected to share in teaching and service duties while continuing research activities. This person will directly supervise the bacteriology, virology, parasitology, and mycology sections of the Hospital Laboratories and be responsible to the director of Hospital Laboratories. For fullest consideration, applications should be received by 1 May 1983. *An Equal Opportunity/Affirmative Action Employer.* Direct inquiries and submit curriculum vitae to: **Egil Fosslie, M.D., Department of Pathology, University of Illinois Medical Center, 840 South Wood Street, Chicago, Illinois 60612.**

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY, tenure-track position available August 1983. Ph.D. in biology with background in genetics and human anatomy and physiology. Teaching excellence and a commitment to liberal arts essential. Primary responsibilities include a senior-level genetics course, anatomy/physiology, and an introductory human biology class for nonmajors. A knowledge of computer applications in biology also desirable. Faculty committee participation and student advisement expected. Salary competitive. Quincy College is a 4-year, private, Franciscan, liberal arts college. Send letter of application, transcripts, and curriculum vitae with references by 25 April 1983 to: **Dr. Kenneth Conroy, Academic Dean, Quincy College, Quincy, Illinois 62301. An Equal Opportunity Employer.**

ASSISTANT PROFESSOR OF BIOLOGY. Broadly trained, outstanding teacher wanted. One-year contract for teaching two courses per quarter from the following: anatomy and physiology, developmental biology, cell biology, human biology, comparative animal physiology, introductory ecology, and senior seminar. Reply: **Dr. William Harvey, Earlham College, Richmond, Indiana 47374**. Send curriculum vitae, teaching interests, and three references. Deadline: 27 April. *Affirmative Action/Equal Opportunity Employer.*

DEPARTMENT OF CHEMICAL ENGINEERING AND MATERIALS SCIENCE, UNIVERSITY OF MINNESOTA, seeks Ph.D.'s with strong backgrounds in biotechnology/biochemical engineering for tenure-track position as **assistant professor**. Candidates should have a distinguished academic record, outstanding potential for creative research in biotechnology/biochemical engineering, and a commitment to both undergraduate and graduate instruction in chemical engineering. Nominations or applications with résumé and a list of three references should be submitted by 30 April 1983 to: **Professor A. G. Fredrickson, Department of Chemical Engineering and Materials Science, University of Minnesota, 151 Amundson Hall, 421 Washington Avenue, SE, Minneapolis, Minn. 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**

UNIVERSITY OF CALIFORNIA BERKELEY

THE UNIVERSITY OF CALIFORNIA AT BERKELEY invites applications for a tenure-track faculty position in **COMPUTER SCIENCE**. Applications for the **ASSISTANT PROFESSOR** level will be given highest preference.

Applicants should have a doctoral degree and demonstrated research accomplishments in the field of computer science. Highest preference will be given to candidates who can form a bridge between computer theory and some more applied area. Some teaching experience would also be desirable. Send résumé and names of three references by 6 May 1983 to:

Professor Carlo H. Sequin
Associate Chairman
Computer Science Division
Electrical Engineering and Computer Sciences
University of California
Berkeley, California 94720

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ASSISTANT PROFESSOR OF NEUROLOGY: Adult neurologist, Board-certified or -eligible, to participate in clinical and teaching programs at University Hospital and in PETT research programs at Brookhaven National Laboratory. Submit curriculum vitae of pertinent experience to: **Chairman, Department of Neurology, Health Sciences Center, T12-020, State University of New York (SUNY), Stony Brook, Stony Brook, N.Y. 11794. SUNY, Stony Brook is an Equal Opportunity/Affirmative Action Employer. AK Number 565C.**

BOTANIST—ECOLOGIST

Earlham College is offering a teaching internship at the assistant professor level during the fall quarter 1983. Applicants should be Ph.D. candidates or recent Ph.D.'s interested in working in an institution concerned with teaching excellence. The position includes team teaching introductory ecological biology and a plant kingdom course. Submit résumé, transcripts, and three letters of recommendation by 27 April to: **Dr. William Harvey, Earlham College, Richmond, Indiana 47374. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

ASSISTANT, ASSOCIATE, OR FULL PROFESSOR—RECOMBINANT DNA STUDIES ON MOLECULAR MECHANISMS OF MICROBIAL PATHOGENESIS

A position at the assistant professor, associate professor, or professor level with teaching and research responsibilities is available in the Department of Bacteriology. Teaching would involve the responsibility for a graduate lecture-laboratory course in recombinant DNA methodology applied to prokaryotic systems, plus other teaching in bacteriology, including the development of an upper division course in the mechanisms of microbial pathogenesis. Candidates who are committed to developing or have already developed a research program involving the application of recombinant DNA technology to the molecular mechanisms of microbial pathogenesis are urged to apply. Research should involve the study of problems in the area of molecular mechanisms of viral or prokaryotic pathogenesis. Excellent molecular biological and biochemical facilities are available; however, animal facilities are quite limited. Send curriculum vitae, including a brief description of research experience, samples of refereed publications, a brief statement of proposed research, and names of three references, by 27 May 1983 to: **Chairman, Search Committee, Department of Bacteriology, University of California, Davis, California 95616. University of California is an Affirmative Action/Equal Opportunity Employer.**

ASSISTANT RESEARCH BIOCHEMIST position in a large, active laboratory, available 1 July 1983. Successful candidate must have Ph.D. or equivalent with experience in recombinant DNA and protein purification techniques, and sufficient experience to conduct studies investigating the mechanism of action of thyroid hormones. Position involves purification and characterization of the nuclear thyroid hormone receptor, investigation of the binding of the receptor to cloned thyroid hormone responsive genes, development of a thyroid hormone regulated cell-free transcription system, and supervision of a graduate student and postdoctoral fellow working on the project. Base salary: \$23,800. Submit curriculum vitae, a list of at least three persons willing to write letters of reference, and any other relevant material by 1 May to: **Dr. John Baxter, Chairman, Search Committee, Metabolic Unit, 1143-HSW, University of California, San Francisco, California 94143. The University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

ASSISTANT RESEARCH SCIENTIST

Organize and manage a research group of four to five, including graduate students. Work involves the manipulation of eukaryotic genes, including isolation, DNA sequencing, and gene expression of human leukocyte antigen genes.

Ph.D. with at least 2 years of postdoctoral experience in the field of molecular biology with an emphasis in bacterial genetics and cell biology in eukaryotes.

Job site: Duarte, California; \$22,000 per year. Send résumé to: **Job Number 6106, P.O. Box 865, Sacramento, Calif. 95804, no later than 27 April.**

ASSISTANT PROFESSOR: MOLECULAR BIOLOGY/GENETICS OF IMMUNE SYSTEMS

Tenure-track position open in Department of Microbiology for molecular/developmental biologist (2 to 5 years of postdoctoral experience) to do research and teaching in genetics and/or regulation of immune responses. Available are a large well-equipped laboratory, supporting cloning and computerized sequencing facilities, and well-funded graduate and postdoctoral training programs. Send résumé to: **Dr. David C. Benjamin, Chairman, Search Committee, Department of Microbiology, University of Virginia School of Medicine, Charlottesville, Va. 22908.**

An Equal Opportunity/Affirmative Action Employer

BIOLOGY DEPARTMENT seeks assistant, associate, or full professor to teach undergraduate and graduate courses and conduct research. We are particularly interested in candidates who can teach medical microbiology or teach electron microscopy and direct EM laboratory. Other fields considered; minority applicants encouraged. Postdoctoral experience desirable. Send curriculum vitae, description of research, and three letters of reference by 1 May 1983 to: **Chair, Search Committee, Biology, University of Massachusetts/Boston, Boston, Mass. 02125.** Position subject to availability of funds. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

BIOLOGY—Two tenure-track positions available fall 1983; Ph.D. required; salary and rank commensurate with experience. Candidates must be able to offer competent instruction in one or more of the following areas: human anatomy and physiology, biochemistry and nutrition, pharmacology, epidemiology. Send résumé and three letters of reference to: **Dr. Gertrude Torres, Dean of Academic Affairs, D'Youville College, 320 Porter Avenue, Buffalo, N.Y. 14201. Equal Opportunity Employer. Deadline: 30 April 1983.**

CARDIOLOGY FACULTY MEMBER with a strong interest in basic research is being recruited at the instructor level by the Cardiology Division of State University of New York (SUNY), Stony Brook. Candidates should possess both M.D. and Ph.D. (chemical physics) degrees, and have demonstrated significant research capability in the field of skeletal and cardiac muscle kinetics. Interested parties should contact: **Dr. Peter F. Cohn, Chief of Cardiology, Health Sciences Center, T-17, Room 020, SUNY, Stony Brook, Stony Brook, N.Y. 11794. SUNY, Stony Brook is an Equal Opportunity/Affirmative Action Employer. AK Number 564B.**

CELL BIOLOGY AND GROSS ANATOMY. Applications invited for associate professor/cell biology and assistant professor/gross anatomy, available 1 July 1983. Applicants must have a Ph.D. and be productive in research and teaching. Submit curriculum vitae and the names of three references to: **Dr. Marilyn L. Zimny, Head, Department of Anatomy, Louisiana State University Medical Center/New Orleans, 1901 Perdido Street, New Orleans, La. 70112. An Equal Opportunity Employer.**

CELLULAR AND SYSTEMS PHYSIOLOGIST—ASSISTANT PROFESSOR, 9-month academic year appointment, tenure-track; summer employment available when justified by enrollment; salary commensurate with training and experience. The Physiology Section of the Zoology-Entomology Department at Auburn University is seeking an energetic person with a completed Ph.D. in physiological science to engage in teaching and research. The successful candidate will share the teaching of courses in cellular and systems physiology, teach a graduate course in area of specialty, and be expected to develop a vigorous research program, including graduate students. Send a current résumé, copies of all transcripts, available reprints and/or manuscripts, and the names of three to five persons from whom letters of recommendation can be obtained to: **Dr. John F. Pritchett, Head, Department of Zoology-Entomology, Auburn University, Auburn, Alabama 36849. Telephone: 205-826-5929. Closing date: 15 May 1983 or when acceptable candidate applies. Starting date: 16 September 1983. Auburn University is an Equal Opportunity Employer.**

CHAIRMAN—Department of Biology and Biotechnology. Worcester Polytechnic Institute (WPI) seeks a chairman for the department with experience in teaching and research. The chairman is expected to teach and carry on a vigorous research program consistent with the interests of the department. The research interests of the five current faculty include developmental biology, cellular energetics, fermentation biology, microbial genetics, plant cell and tissue culture, aquatic ecology, and biochemistry. To encourage the growth of the recently initiated biotechnology program, it is expected that the chairman will develop contacts with local industry. The department has master's programs in biology and biotechnology, and a Ph.D. program in biomedical sciences in a consortium with the Worcester Foundation for Experimental Biology, University of Massachusetts Medical School, and Clark University. Interested applicants should submit curriculum vitae and cover letter to: **R. E. Bolz, Dean of Faculty, Worcester Polytechnic Institute, Worcester, Mass. 01609. WPI is an Equal Opportunity Employer.**

CHEMISTRY: Department Chair. Tenure-track position available summer or fall 1983. Teaching experience required; administrative experience desirable. Preferred teaching fields are instrumental analysis or physical chemistry. Experience in electronics and computer interfacing of instruments is desired. Responsibilities include undergraduate teaching as well as coordination of six-person undergraduate, ACS-accredited Chemistry Department. Submit nominations or applications with curriculum vitae by 1 May 1983 to: **P. Douglas Kindschi, Dean of Science and Mathematics, Grand Valley State College, Allendale, Michigan 49401. Grand Valley is an Equal Opportunity Institution.**

POSITIONS OPEN

CHAIRMAN AND PROFESSOR OF PATHOLOGY LOYOLA UNIVERSITY STRITCH SCHOOL OF MEDICINE

Applications and nominations are invited for Chairman of Pathology in this suburban Chicago medical center and hospital. The Medical School is closely affiliated with the neighboring Hines Veteran's Administration Hospital. The candidate must be Board-certified in pathology and have administrative, teaching, and research experience. Applicants should send curriculum vitae and names of at least three references to: **Rolf M. Gunnar, M.D., Chairman, Search Committee for Chairman of Pathology, Loyola University Stritch School of Medicine, Room 7604, 2160 South First Avenue, Maywood, Illinois 60153.** *An Equal Opportunity/Affirmative Action Employer.*

The INSTITUTE for ENZYME RESEARCH at the UNIVERSITY OF WISCONSIN-MADISON has an opening for a **CHAIRPERSON** of one of its five sections. The position is at the associate professor or professor level and requires the appointee to have a joint (one-half time) appointment with the Department of Biochemistry. (The present section chairmen are members of the Departments of Biochemistry and Genetics.) The duties involve basic research and training of postdoctoral associates at the Institute and participation in the activities of the Biochemistry Department. The latter will include teaching, predoctoral research training, and committee service commensurate with the share of the appointment in that department. Candidates are expected to have demonstrable records of accomplishment in independent, original research, to have shown ability in leading and supervising research groups, and to have established reputations in their fields of research. Because of the present balance of research interests and activities on the campus, preference will be given to candidates experienced and active in analyzing protein structure and function by the application of physical techniques, especially magnetic resonance spectroscopy and other spectroscopic techniques or x-ray crystallography.

Applications will be accepted until 1 July 1983 and should be submitted to: **Professor Perry A. Frey, Institute for Enzyme Research, University of Wisconsin-Madison, 1710 University Avenue, Madison, Wis. 53706.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

DEAN SCIENCES AND HEALTH PROFESSIONS

Nominations and applications are invited for the position of **Dean** of the School of Sciences and Health Professions. This school includes the Departments of Biological Sciences, Chemical Sciences, Community Health Professions, Computer Science, Dental Hygiene and Dental Assisting, Geophysical Sciences, Mathematical Sciences, Nursing, Oceanography, Physics and Psychology. The School offers 7 doctoral, 13 M.S., and 20 B.S. degree programs. It also operates the Center for Marine Studies, the Applied Marine Research Laboratory, the Center for Applied Psychological Studies, the Barrier Islands Field Station, and the Great Dismal Swamp Field Station. The school has a faculty of more than 200 and an annual budget of \$7 million with an additional \$2 million in external funding.

Candidates should have an earned doctorate in one of the disciplines of the school, experience at the department chairman or equivalent level, and a strong record of teaching and research. Position requires creative ability to provide leadership for developing programs in an emerging university.

Position available 1 September 1983 or as soon thereafter as possible. For full consideration, applicants should submit résumés and names of at least three references by 1 May 1983 to: **Dr. Harold G. Marshall, Dean's Search Committee, Office of the Vice President for Academic Affairs, Old Dominion University, Norfolk, Va. 23508.**

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FACULTY POSITIONS

Applications are invited for anticipated tenure-track positions. We are seeking individuals who will establish vigorous, independent research programs in microbiology or cell biology, complementing existing programs in membrane biology and molecular genetics. Rank and salary are negotiable. Send curriculum vitae, a summary of research plans, and names of three references to: **Dr. H. Mizukami, Department of Biological Sciences, Wayne State University, Detroit, Mich. 48202.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

DIRECTOR, CONSERVATION ANALYTICAL LABORATORY, to provide overall planning, direction, management of laboratory's activities/operations which include conservation treatment, analysis, research into deterioration, archaeometrical studies, and future support of a training program. Requires Ph.D./equivalent education/experience in chemistry, physics, or materials science; or at least 3 years of specialized professional experience in conservation/restoration of museum objects, and a background in related physical sciences. At least 1 year of experience equivalent to the GS-14 level in the federal service. Starting salary: \$48,553 per annum. For further information, contact: **Chandra Heilman, telephone: 202-357-1372.** Send SF-171 (Federal Personal Qualifications Statement) to: **Attention 1481 CPH, Office of Personnel Administration, Smithsonian Institution, Washington, D.C. 20560.** Closing date: 30 April 1983. *An Equal Opportunity Employer.*

Simon Fraser University Burnaby, British Columbia, Canada DEPARTMENT OF BIOLOGICAL SCIENCES ENVIRONMENTAL TOXICOLOGY

Applications are invited for a tenure-track position at the level of assistant professor. The successful applicant will participate in a programme in environmental toxicology at the undergraduate and graduate level. Candidates must have a Ph.D. degree with experience in toxicology and a strong record in research. The successful applicant will be expected to develop and maintain an active research programme in an area of toxicology appropriate to a life sciences department. *Preference will be given to candidates eligible for employment in Canada at the time of application.*

The position is available immediately. Salary commensurate with experience. The current salary base for the assistant professor rank is \$25,807.

Applications should include curriculum vitae, a brief statement of research interests and objectives, and selected reprints of published research. Applicants should request confidential assessments of their research and teaching ability from at least three referees to be forwarded directly to:

**Dr. K. K. Nair, Chairman
Department of Biological Sciences
Simon Fraser University
Burnaby, British Columbia, Canada V5A 1S6**

Deadline for receipt of applications is 30 June 1983, or until the position is filled.

FACULTY POSITION IN PLANT AND SOIL BIOLOGY UNIVERSITY OF CALIFORNIA, BERKELEY

The Department of Plant and Soil Biology is recruiting a tenure-track assistant professor of pedology. Applicants should have a Ph.D. with a strong background in soil development, morphology, and mineralogy, and also should have field experience. The appointee, who will have an 11-month appointment, will be expected to develop a research program in pedology with an orientation to plant-soil studies. Undergraduate and graduate teaching responsibilities will include an introductory course in development and morphology of soils and participation in a summer field course. Submit curriculum vitae, bibliography, and a two-page outline of teaching interests and research objectives by 1 June 1983 to: **Eldor A. Paul, Chair, Department of Plant and Soil Biology, 108 Hilgard Hall, University of California, Berkeley, Calif. 94720.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

The Department of Aeronautics and Astronautics, Stanford University, seeks an outstanding person for appointment to a **SENIOR FACULTY POSITION** in the field of **computational fluid dynamics**. Candidates must be widely recognized to have proved their excellence in research on numerical analysis of fluid dynamic phenomena of aeronautical interest, such as transonic flow with shock waves, viscous effects, turbulence, and the efficiency and stability of methods of computation. Candidates must have demonstrated competence in research supervision and in teaching. Industrial experience is desirable. *Stanford is an Affirmative Action Employer and welcomes applications from women and minority candidates.* Inquiries should be made to:

**Professor Arthur E. Bryson, Jr.
Department of Aeronautics and Astronautics
Durand Building, Room 279
Stanford University
Stanford, Calif. 94305
Telephone: 415-497-4755**

POSITIONS OPEN

FACULTY POSITION IN IMMUNOLOGY

Experienced immunologist with documented ability to establish a research program in molecular or cellular immunology and who likes to teach is sought. Potential for generating research support and for collaborative interactions with other faculty and trainees will be major considerations. Please include curriculum vitae, bibliography, names of references, and outline of research interest to: **Dr. D. Bernard Amos, Chief, Division of Immunology, Duke University Medical Center, P.O. Box 3010, Durham, North Carolina 27710.**

An Equal Opportunity/Affirmative Action Employer

FACULTY POSITION—VETERINARY VIROLOGY

Applications are invited from individuals interested in a full-time, tenure-track assistant professor position in veterinary virology. Applicants must have a Ph.D. while a D.V.M. degree is highly desirable. Preference will be given to persons with proven research experience using immunological, genetic, or molecular approaches to investigations of viral diseases of animals. Applicants will have the challenge of teaching virology to professional and graduate students, to develop an independent research program, and to participate in the limited service responsibilities of the department.

Submit current curriculum vitae and the names of three references to: **Dr. Ian Tizard, Professor and Head, Department of Veterinary Microbiology and Parasitology, College of Veterinary Medicine, Texas A & M University, College Station, Texas 77843.**

FACULTY POSITION/PHYSICAL OCEANOGRAPHY UNIVERSITY OF MARYLAND CENTER FOR ENVIRONMENTAL AND ESTUARINE STUDIES (UMCEES)

The Horn Point Environmental Laboratories of UMCEES invites applications for a tenure-track (rank open) position for a physical oceanographer. The physical oceanographic program is young and developing, so that candidates with a wide range of research interests will be considered. Opportunities exist for oceanographers with experimental, theoretical, or numerical modeling skills. In addition, the strong chemical and biological programs provide opportunities for interdisciplinary research. Although some preference will be given to applicants with interests in continental shelf and estuarine circulation processes, the primary criterion for selection of the successful candidate is the ability to develop a strong research program. The closing date for applications is 16 May 1983. Applications and a list of references should be sent to:

**Dr. William C. Boicourt
Chairman, Search Committee
University of Maryland
Center for Environmental and Estuarine Studies
Horn Point Environmental Laboratories
P.O. Box 775
Cambridge, Maryland 21613**

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

FELLOW of the INSTITUTE OF BIOLOGICAL CHEMISTRY

A scientist with a distinguished record of research accomplishments or with exceptional potential in an area of biochemistry relevant to agriculture is being sought to fill a permanent faculty position in the Institute of Biological Chemistry at Washington State University, Pullman, Washington. This faculty member will be expected to lead a vigorous and innovative research program and will have opportunities to participate in graduate education. The Institute provides an excellent environment and support for research. Salary and rank are open to negotiation.

Send nominations or applications, including curriculum vitae, a short description of research accomplishments and goals, and a list of three or more references, to: **Dr. P. E. Kolattukudy, Director, Institute of Biological Chemistry, Washington State University, Pullman, Washington 99164,** before 1 May 1983.

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

POSITIONS OPEN

FACULTY POSITION IN PHYSIOLOGY

Dr. William M. Scholl College of Podiatric Medicine, 1001 North Dearborn Street, Chicago, Illinois 60610. Applications are invited for a faculty position in the Department of Physiological Sciences. Requirements include a Ph.D. and a firm commitment to teaching. We offer faculty rank and salary commensurate with professional achievements. Position available 1 July 1983. Duties include the design and teaching of a comprehensive course in medical physiology, including laboratory, to first-year medical students. Limited funding is available to assist in personal research interests. Please submit letter of application, curriculum vitae, and supporting material, including the names of three references to: **Walter Rudek, Ph.D., Associate Dean. Equal Opportunity Employer.**

GENETICISTS. Faculty positions at associate professor or professor level are available for those trained in the field of molecular genetics, biochemical genetics, immunogenetics, population genetics, or somatic cell genetics. Preference will be given to individuals who have direct experience with recombinant DNA technology. Individuals selected will be expected to establish an active research program and teach both graduate and undergraduate courses. Please send curriculum vitae, proposed research program, and two letters of recommendation to: **Dr. Kuang-dong Wu, National Yang Ming Medical College, Shih-Pai, Taipei, Taiwan, Republic of China.**

HEAD OF THE APPALACHIAN ENVIRONMENTAL LABORATORY

The University of Maryland's Center for Environmental and Estuarine Studies (CEES) is seeking a head for its Appalachian Environmental Laboratory (AEL). Senior scientists in wildlife or fisheries are encouraged to apply. Demonstrated leadership in research and administration. Salary will be competitive. Applications received before 1 July 1983 will be considered, with the appointment effective 1 January 1984. Please forward your résumé and other appropriate materials to: **Appalachian Environmental Laboratory, University of Maryland, Frostburg, Maryland 21532; telephone: 301-689-3115.**

Affirmative Action/Equal Opportunity Employer

IMMUNOLOGISTS

ACS Pharmaceuticals invites applications from outstanding candidates for positions of research scientists. Applicants who wish to participate in our rapidly expanding programs in immunology should have a Ph.D. degree and postdoctoral experience in molecular immunochemistry. Experience in protein or peptide chemistry would be an advantage.

ACS Pharmaceuticals offers a competitive salary, comprehensive benefit package, and relocation assistance. Please send your résumé and salary history in confidence to:

ACS PHARMACEUTICALS, INC.
5245 Edina Industrial Boulevard
Edina, Minnesota 55435

THE CHINESE UNIVERSITY OF HONG KONG, FACULTY OF MEDICINE, invites applications for **LECTURESHIP IN BIOCHEMISTRY.** Applicants should have a Ph.D. in biochemistry or a medical qualification. Experience in nucleic acid, genetic engineering, or immunology will be a definite asset. **Date of assumption of duty:** August 1983 or as soon as possible thereafter. **Annual salary:** HK\$129,840 to \$147,360 by two increments BAR HK\$156,120 to \$217,380 by seven increments (exchange rate approximately, U.S.\$1 = HK\$6.6, £1 = HK\$10). Starting salary to be offered will depend on qualifications and experience. **Benefits** include vacation leave, sick leave, long leave with full pay, superannuation (university 15 percent, appointee 3 percent), medical benefits, education allowance for children and housing allowance (for those whose annual salary is HK\$138,600 or above), and for appointees on overseas terms, passage benefits for themselves and their dependents as well. **Application procedure:** Applications should be made out in duplicate, giving full particulars, experience, and the names and addresses of three persons to whom references may be made, and sent together with copies of certificates/diplomas/testimonials and recent publications (quoting reference 6/509/2/83), to: **The Personnel Section, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong, not later than 30 April 1983.** Please mark "Recruitment" on cover.

KING ABDULAZIZ UNIVERSITY JEDDAH, SAUDI ARABIA FACULTY OF SCIENCE

Applications for academic positions are now being accepted for the academic year 1983/84. If you are interested send the following requirements:

1. Complete resume.
2. Copies of degrees and letter of experience.
3. List of research and publications.

All the listed requirements should be sent to:

King Abdulaziz University
Recruitment Office
c/o Saudi Arabian Educational
Mission
2425 West Loop South, Suite 654
Houston, Texas 77027
Telephone: (713) 629-5170

Deadline for all applications will be
April 24, 1983.

IMMEDIATE OPENING for UNIVERSITY FACULTY MEMBER—ASSOCIATE PROFESSOR OF PETROLEUM ENGINEERING. Minimal requirements are B.S., M.S., and Ph.D. in petroleum engineering.

Salary offer of \$34,000 per academic year to qualified applicant; 40 hours per week.

Duties include conducting university courses for undergraduate and graduate students in petroleum engineering curriculum (that is, enhanced oil recovery by steam and chemical processes). Courses taught include petro-physics and formation evaluation to undergraduates and advanced petro-physics and numerical applications to petroleum engineering problems to graduate students, phase behavior to undergraduate students, and undergraduate research. Candidate must be able to carry out contractual work with industry in steam-chemical processes of enhanced oil recovery and drilling fluid properties optimization in flow loops.

Applicant should have course work in the following areas: secondary recovery, thermal processes, numerical simulation of reservoir, numerical applications to reservoir and engineering problems, flow-through porous medium, advanced reservoir engineering, well test analysis, gas technology and advanced technology, and operation research.

Job requires preparation and delivery of lectures to students, assignment of outside reading, administration and grading of examinations, and conducting of research, publishing of findings in the area of enhanced oil recovery by steam and chemical processes.

Employer is an Equal Opportunity Employer and in compliance with Title IX of the Civil Rights Act and Section 504 of the Rehabilitation Act of 1973.

Persons interested, contact: **Louisiana Department of Labor, Office of Employment Security, 706 East Vermilion Street, Lafayette, Louisiana, 70501, JOB ORDER NUMBER 468786.**



PRESIDENT

NORTHWESTERN COLLEGE OF CHIROPRACTIC Saint Paul, Minnesota

The Board of Trustees and the Presidential Search Committee of the Northwestern College of Chiropractic are currently accepting applications for the position of **PRESIDENT** of the college.

The Northwestern College of Chiropractic, one of nine chiropractic colleges in the country, is fully accredited by the Council on Chiropractic Education, an accrediting agency recognized by the U.S. Department of Education. The college is a private nonprofit educational institution offering a rigorous basic science and chiropractic science curriculum leading to the doctor of chiropractic degree.

The college was founded in 1941 and current enrollment is between 450 and 500. The average age of the chiropractic student is 25. The present academic program consists of ten trimesters.

The faculty numbers approximately 60, of which 30 have full-time appointments. Almost the entire faculty holds a terminal degree or is actively pursuing it. The college, in addition to emphasizing a strong academic program, is committed to scientific research.

The college since its founding has been located in the Twin Cities of Minneapolis-Saint Paul. Control of the college is vested in a Board of Trustees. The president is responsible to the Board of Trustees.

Candidates for president should possess those qualities of professional or academic excellence necessary to promote the college's goals of quality chiropractic education and research. The successful candidate's credentials should include, preferably, an earned doctorate, a distinguished professional or academic record, and qualities of academic excellence. This candidate should also have demonstrated successful administrative, professional leadership, fund-raising, communication, and public relations skills, preferably in a professional or college setting. The successful candidate should demonstrate a willingness to maintain the college's tradition of excellence and leadership in chiropractic education. Finally, the candidate should possess a commitment to develop future goals which are compatible with the college's present educational program and policies.

The salary is negotiable with numerous fringe benefits.

Screening of applications will begin 15 July 1983. The successful applicant should be available by June 1984. All nominations and applications should be addressed to:

Presidential Search Committee
V. Duane Henre, Chairman
1834 South Mississippi River Boulevard
St. Paul, Minn. 55116

The Northwestern College of Chiropractic is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

HORTICULTURAL SEED BIOLOGIST/TECHNOLOGIST

A position is available at a large vegetable and flower seed company. The qualifications for the position are Ph.D. or M.S. in related areas with a strong background in seed biology, physiology, or technology in vegetable and flower seeds.

Box 82, SCIENCE

IMMUNOHEMATOLOGIST/BLOOD BANK. The Dartmouth-Hitchcock Medical Center is seeking to fill a position at the assistant professor level in clinical pathology. M.D. applicants should be Board-eligible or -certified and should have an active interest in teaching and research. Individuals with expertise in immunohematology, immunology, coagulation, and/or molecular biology are encouraged to apply. Please send curriculum vitae, names of three references, and salary requirements by 15 May 1983 to: Daniel S. Longnecker, M.D., Department of Pathology, Dartmouth-Hitchcock Medical Center, Hanover, N.H. 03756.

Equal Opportunity/Affirmative Action Employer

INVERTEBRATE PALEONTOLOGIST. Applications are invited for anticipated tenure-track position at assistant professor level beginning August 1983. Principal teaching responsibilities involve several large introductory geology courses and courses in paleontology. Research area open, but preference given to coral specialist with strong background in numerical taxonomy and other statistical methods. Applicants should have Ph.D. Send résumé, statement of research interests, and names of three references: Search Committee, Department of Geology, The University of Iowa, Iowa City, Iowa 52242. Screening date for applications is 30 May 1983. The University is an Affirmative Action/Equal Opportunity Employer.

MANAGING EDITOR for *Technology Review*, the Massachusetts Institute of Technology (MIT) magazine of science, engineering, and policy for semi-technical and professional audiences.

Candidates should have strong background in science and/or technology, plus 3 to 5 years of journalistic writing and editing experience. Magazine background preferred.

Please submit two copies of résumé along with writing samples, referencing Job Number A263, to: MIT Personnel Office, E19-239, 77 Massachusetts Avenue, Cambridge, Mass. 02139. MIT is an Equal Opportunity/Affirmative Action Employer.

MEDICAL ENTOMOLOGIST/PARASITOLOGIST. Full-time, 11-month tenure-track appointment at assistant professor level beginning 1 September 1983. Research to emphasize ecology, feeding behavior, and vector relationships of ticks, mites, and related ectoparasites associated with zoonotic pathogens. Teaching involves shared responsibility for undergraduate and graduate courses in medical/veterinary entomology and parasitology. Qualifications include a Ph.D. degree and evidence of outstanding potential for teaching and research. Application should include: (i) curriculum vitae, academic transcripts, and evidence of teaching skills and experience, (ii) bibliography and reprints of significant publications or manuscripts, (iii) a statement outlining research areas and approaches used, and (iv) names and addresses of at least three people who can provide recommendations. All materials should be submitted by 1 July 1983 to: E. S. Sylvester, Chair, Department of Entomological Sciences, 201 Wellman Hall, University of California, Berkeley, Calif. 94720. The University of California is an Equal Opportunity/Affirmative Action Employer.

INSTITUT NATIONAL DE LA RECHERCHE SCIENTIFIQUE (INRS) UNIVERSITÉ DU QUÉBEC PHYCOLOGIST/PHYSIOLOGIST Applications are invited for a post of RESEARCH ASSOCIATE

To work in a multidisciplinary group studying phytoplankton/trace metal interactions. The successful candidate will be expected also to teach at the graduate level in water sciences. Applicants should have a Ph.D. in biological sciences with research experience in the physiology/biochemistry of phytoplankton. Salary is from \$29,000. Applications with curriculum vitae and two letters of reference should be sent to: Dr. A. Tessier, INRS-Eau, Université du Québec, Complexe scientifique, C.P. 7500, Ste-Foy, Québec, Canada G1V 4C7.

POSITIONS OPEN

MOLECULAR MICROBIOLOGY. Tenure-track position as assistant or associate professor of microbiology. Applicants must have Ph.D., M.D., or equivalent degree, at least 1 year of postdoctoral research experience, experience in recombinant DNA technology, and strong background in microbiology. Successful applicant will be expected to develop independent research program, supervise graduate student research, and teach at graduate and undergraduate levels. Salary negotiable. Send curriculum vitae and names of four references to: Sandra J. Ewald, Chairperson—Search Committee, Department of Microbiology, Montana State University, Bozeman, Montana 59717. Deadline for applications is 1 July 1983. An Equal Opportunity/Affirmative Action Employer.

MUSEUM DIRECTOR

Bishop Museum of Honolulu, Hawaii, is seeking candidates for the position of **DIRECTOR**. The Museum is a private nonprofit corporation and has major collections and research programs in anthropology, entomology, zoology, botany, and history and extensive educational and public service programs, including its planetarium and press. The Museum is governed by a 25-member Board of Trustees who employ the director. The Museum has a total staff, full- and part-time, of 220, including 23 persons with doctoral degrees. Its total annual operating budget is about \$4.5 million. Candidates should have a doctoral degree and a record of significant postdoctoral achievement, preferably with experience in the Pacific. Proven administrative ability is essential, as well as the capacity to provide leadership for the varied concerns of a leading museum, including its public service programs and local community interaction. Salary and other benefits will be commensurate with the responsibilities of the position and will be further negotiated on the basis of experience. Candidates should be available for employment on or before 1 July 1984. Interested and qualified applicants should send curriculum vitae, bibliography, names of at least three references, and any supplemental information by 1 July 1983 to: Peter E. Russell, President, Bishop Museum Board of Trustees, P.O. Box 3170, Honolulu, Hawaii 96802.

An Equal Opportunity/Affirmative Action Employer

OVERSEAS OPPORTUNITY IN SAUDI ARABIA

Position open for a 1- to 2-year assignment at King Faisal University, Dammam, Saudi Arabia.

High-level technical advisor to assist in planning and implementation of comprehensive Clinical Engineering Program for the medical school and the teaching hospital as well as to provide long-range planning for academic programs in biomedical engineering. B.A. in electrical engineering. Master's in business administration desirable. Experience in operation of Clinical Engineering Program.

Good salary plus allowances, fringe benefits, travel, overseas tax advantage, and dependent education allowances.

For complete job descriptions, write or call: Robert E. Johnson, Education Development Center, 55 Chapel Street, Newton, Mass. 02160; telephone: 617-969-7100, extension 291.

Résumé deadline is Friday, 22 April 1983.

An Equal Opportunity Employer

PEDIATRICIANS

Newly formed academic Department of Pediatrics seeks faculty with emphasis on neonatology, hematology-oncology, gastroenterology, nephrology, and infectious diseases. Responsibilities will include development of teaching, research, and patient care programs appropriate to a major university. Positions are available at various levels. Individuals will be selected on the basis of their research training and potential and their commitment for teaching. Respond to: John C. Partin, M.D., Chairman, Department of Pediatrics, School of Medicine, State University of New York (SUNY), Stony Brook, Stony Brook, N.Y. 11794. SUNY, Stony Brook, is an Equal Opportunity/Affirmative Action Employer. AK Number 561B.

PHYSIOLOGIST. Interest in study of distribution in tissues of: PO_2 , pH, diverse metabolites, blood flow, especially in tumor tissue. Junior faculty position. Equal Opportunity Employer. Massachusetts General Hospital, Harvard Medical School. Write to:

Herman D. Suit
Massachusetts General Hospital
Boston, Mass. 02114

POSITIONS OPEN

MARINE BIOLOGIST

Postdoctoral research associate and lecturer position available immediately. Applicants should have a Ph.D. in Biology, Zoology or Botany with research interests in organismal biology. Research should require marine laboratory. Successful applicant would work at Northeastern University's Marine Laboratory at Nahant. Salary negotiable. Send curriculum vitae and brief description of research and teaching interests. Applicant should ask three individuals to send letters of recommendation directly to: Paul Rudy, Acting Director, Marine Science & Maritime Studies Center, East Point, Nahant, MA 01908. Northeastern University is an Equal Opportunity/Affirmative Action, Title IX University.

PLANT MOLECULAR BIOLOGIST. An anticipated tenure-track position in plant physiology/biochemistry and tissue culture for 1 September 1983. Duties include the teaching of undergraduate and graduate courses in plant physiology and molecular genetics. In addition, the applicant will be expected to contribute to the In Vitro Cell Biology and Biochemistry/Biophysics programs. Ph.D. with established, productive research program in plant molecular biology and demonstrated teaching ability. Level of appointment and salary negotiable. Submit curriculum vitae, reprints, a statement of professional and research goals, and written recommendations from three references by 1 June 1983 to: Dr. R. M. Clark, Department of Biological Sciences, Box 1000, State University of New York, Plattsburgh, N.Y. 12901. An Equal Opportunity/Affirmative Action Employer.

Position available: **POSTDOCTORAL ASSOCIATE** to work on protein, biochemistry, and sodium, potassium-ATPase research. Recent graduate with appropriate qualifications. Telephone: Khalil Ahmed, Ph.D. (University of Minnesota, Department of Laboratory Medicine and Pathology) at: 612-725-6767, extension 6046. The University of Minnesota is an Equal Opportunity Educator and Employer.

POSTDOCTORAL CELL BIOLOGIST. Position available immediately for a project on tissue specificity of sister chromatid exchange. Experience in eukaryotic DNA replication and/or nuclear structure and technical expertise in DNA autoradiography, isolation, and characterization of nuclear substructures and/or cytogenetics. Starting salary: \$16,000. Send résumé, statement of research interests, and references as soon as possible to:

Dr. John Hozier, Director
Medical Genetics Laboratory
Florida Institute of Technology
Melbourne, Fla. 32901

An Equal Opportunity Employer

POSTDOCTORAL FELLOWS

The Center for the Study of Drug Development is a nonlaboratory research unit within the Department of Pharmacology of the University of Rochester School of Medicine. Applications are invited for postdoctoral fellows interested in training and participating in interdisciplinary studies of drug development and regulation. Preference will be given to candidates who hold the M.D. degree or a Ph.D. degree in pharmacology or a related biomedical science. Primary responsibilities include (i) independent work on study design, data collection, and analyses of research projects and (ii) writing reports of results, proposals, and so forth. Initial appointment, at a flexible starting date, is for 1 year, renewable with opportunity for extension or conversion to a research associate position. Minimum salary for the first year is competitive, with consideration made for prior relevant postdoctoral experience. Letter of application, including a brief statement of objectives, curriculum vitae, and names and addresses of three references, should be sent to: Kristine Niven, Administrator, Center for the Study of Drug Development, University of Rochester Medical Center, Rochester, New York 14642.

POSTDOCTORAL POSITION available 1 September 1983 for comparative studies of directional mechanisms of movement detection in peripheral visual cells, using intracellular recording and staining. Prior electrophysiological experience highly desirable. Send curriculum vitae and three letters of reference to: Dr. Robert DeVoe, Department of Visual Sciences, School of Optometry, Indiana University, Bloomington, Ind. 47405. Indiana University is an Equal Opportunity/Affirmative Action Employer.

**KING FAISAL UNIVERSITY
COLLEGE OF MEDICINE
DAMMAM, SAUDI ARABIA
1983-1984 Academic Year**



King Faisal University, College of Medicine, invites applications from qualified men and women for the 1983-1984 academic year in the following disciplines:

CHEMISTRY	ANATOMY	MICROBIOLOGY
BIOLOGY	BIOCHEMISTRY	PHYSIOLOGY
PHYSICS	EPIDEMIOLOGY	IMMUNOLOGY
	PATHOLOGY	

Doctorate and minimum of 2 years teaching experience (medical school) required. Language of instruction is English. Interviews will be held in London and Houston.

Salaries are highly competitive and negotiable. Benefits include free furnished housing, educational allowances, air tickets to and from Saudi Arabia once each year for family of four, 60-day paid vacation, and liberal overweight baggage allowance. No Saudi income tax.

Send curriculum vitae with day and evening telephone numbers and the names and addresses of three references to:

Dr. Tawfik Tamimi
Dean, College of Medicine
c/o U.S. Recruiting Office
2425 West Loop South, Suite 540
Houston, Texas 77027

or

c/o U.K. Recruiting Office
29 Belgrave Square
London, S.W.1X, 8QB, England

Senior Scientist

ALZA Corporation is the world leader in the development of therapeutic systems: pharmaceutical products based on rate-controlled, continuous, programmed administration of pharmacologically active agents. We are presently seeking a senior scientist who holds a Ph.D. in physical, organic or pharmaceutical chemistry with emphasis on molecular structure and characteristics of drug molecules related to their transport across biological membranes. This position reports to the Director, Biomedical Sciences and will provide scientific support and administrative supervision to other personnel in this area. Position requires a thorough understanding of biological transport processes, as they relate to drug absorption and deposition, and an ability to undertake and interpret pharmacokinetic analysis of drug study design and evaluation. Expertise or experience in studying drug permeation across skin desirable. Industrial experience desirable, but not essential. Salary is commensurate with experience. Send resume to Darlene Markovich, ALZA Corporation, 950 Page Mill Road, Palo Alto, CA 94304. We are an equal opportunity employer, m/f/h.

alza

Assistant/ Associate Director Cellular Immunology

SmithKline Beckman, a leader in pharmaceutical research and technology, is seeking an outstanding senior scientist with an excellent national and international scientific reputation to participate in a challenging immunoregulation research program.

The successful candidate will lead a research group responsible for studies of the molecular and cellular interactions in immunoregulation and suppressor cell modulation in autoimmunity.

Candidates are required to have:

- A doctorate degree with 8 or more years of post doctoral research experience.
- A strong background in cellular immunology, immunoregulation and immunobiology of disease.
- Knowledge and experience in immunobiological systems and models of autoimmunity.
- General knowledge in molecular immunology.
- Excellent communication skills and leadership capabilities.
- An excellent publication record.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and names of 3 references to: Mr. Walter B. Flagg, Smith Kline & French Laboratories, a division of SMITHKLINE BECKMAN CORPORATION, 1576 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

KING ABDULAZIZ UNIVERSITY JEDDAH, SAUDI ARABIA FACULTY OF MARINE SCIENCES

Applications for academic positions are now being accepted for the academic year 1983/84. If you are interested send the following requirements:

1. Complete resume.
2. Copies of degrees and letter of experience.
3. List of research and publications.

All the listed requirements should be sent to:

King Abdulaziz University Recruitment Office
c/o Saudi Arabian Educational Mission
2425 West Loop South, Suite 654
Houston, Texas 77027
Telephone: (713) 629-5170

Deadline for all applications will be April 24, 1983.

POSITIONS OPEN

We wish to appoint **FOUR POSTDOCTORAL FELLOWS** for research on aging under dietary restriction in germfree rats. Earned doctorate degree required for studies on:

- **Molecular Nutrition** involving functional parameters, for example, thyroid function, mixed function oxidases, and so forth (B. S. Wostmann).
- **Animal Pathology** with interest in histochemistry, histopathology, and experimental procedures with animals (M. Pollard).
- **Immunology** with interest and experience in cell culture, cellular immunology and/or immunocytochemistry (S. I. Schlager).
- **Enzymology** with experience in structure determination of glycoconjugates (S. Basu).

Send curriculum vitae and three references to:

Dr. Morris Pollard
Lobund Laboratory
University of Notre Dame
Notre Dame, Indiana 46556

POSTDOCTORAL POSITIONS (TWO) available after June 1983 for **biochemist or pharmacologist**. (i) To study the role of metal in the regulation and mechanism of gene expression in both prokaryotic and eukaryotic cells. (ii) To study the mechanism of action of a new antitumor drug. Experience in metalloproteins or antitumor drugs is helpful. Send curriculum vitae and three letters of recommendation to: **Professor Felicia Wu, Department of Pharmacological Sciences, Health Sciences Center, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794. SUNY, Stony Brook is an Equal Opportunity/Affirmative Action Employer. AK Number 568.**

POSTDOCTORAL POSITION—BIOCHEMISTRY OR BIOPHYSICS. We study lipid-protein interactions and membrane properties related to fusion. Our laboratory utilizes many biochemical techniques, organic synthesis of lipids, and physical methods including NMR, ESR, fluorescence, electron microscopy, and synchrotron x-ray diffraction. Salary at NIH postdoctoral fellowship level. Available spring 1983. Send statement of research interest, curriculum vitae, and names and telephone numbers of three references to: **Dr. Gerald W. Feigenson, Section of Biochemistry, Molecular and Cell Biology, Clark Hall, Cornell University, Ithaca, N.Y. 14853. Cornell University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available to develop techniques for cloning and characterizing mammalian genes which encode plasma membrane receptors. Special emphasis is placed on membrane receptors for virus attachment and penetration. Experience with recombinant DNA techniques desirable. Send résumé and names of three references to: **Dr. David Kabat, Department of Biochemistry, Oregon Health Sciences University, Portland, Ore. 97201. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION. Research in the molecular mechanisms of methane formation and transmembrane ion gradient-driven ATP synthesis by the methanogenic bacteria, using modern biochemical and biophysical techniques. Spectacular Rocky Mountain environment. Send résumé and names of two references to: **Dr. Jack R. Lancaster, Jr., Department of Chemistry and Biochemistry, Utah State University, Logan, Utah 84322. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available for work on the mass spectrometric determination of kinetic isotope effects in enzymatic reactions. Appointment for 1 year, with an additional year possible. A variety of projects are available ranging from enzyme purification to instrument development and computer programming. Send résumé to: **Michael H. Klapper, Department of Chemistry, The Ohio State University, Columbus, Ohio 43210. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available now (1 July latest) for on-going studies of extracellular matrix (ECM) metabolism in skeletal muscle. Collagen, glycoproteins, and proteoglycan synthesis/degradation during development (innervation), denervation and in human muscular dystrophies. Experience in tissue culture, ECM biochemistry/immunocytochemistry, and separation techniques (that is, HPLC) desirable. Send curriculum vitae and three letters of reference to: **Dr. Barry W. Festoff, Neurobiology Research Laboratory (127), University of Kansas/KCVA Medical Center, 4801 Linwood Boulevard, Kansas City, Mo. 64128. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION—The Dana-Farber Cancer Institute is seeking to fill one research position at the postdoctoral level to study gene regulation and mechanisms of coordinate gene control in differentiating 3T3-adipocytes. Experience with recombinant DNA technology helpful. Joint appointment will be held in an appropriate department of Harvard Medical School. Send curriculum vitae and names of three references to: **Dr. Bruce Spiegelman, DANA-FARBER CANCER INSTITUTE, 44 Binney Street, Boston, Mass. 02115. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION—MOLECULAR PARASITOLOGY, beginning July 1983. To study the control of gene expression and molecular evolution of trypanosomes. Background in recombinant DNA and protein purification would be desirable. Send curriculum vitae to: **Harvey Rubin, M.D., Ph.D., Infectious Diseases Section, 536 Johnson Pavilion/G2, University of Pennsylvania School of Medicine, Philadelphia, Pa. 19104.**

POSTDOCTORAL POSITION available 1 July 1983 in laboratory studying the physico-chemical and immunological events attending the interactions between lipoproteins and cells. Techniques used include tissue culture, monoclonal antibodies, and recombinant DNA approaches. Versatile program. Please send statement of research interest, curriculum vitae, and names and addresses of two references to: **Dr. Angelo M. Scannu, Director, Lipoprotein Study Group, University of Chicago, 950 East 59 Street, Box 231, Chicago, Ill. 60637. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available for studies of organelle biogenesis in *Euglena*. Studies involve determining the intracellular localization of light-induced, ethanol-induced, and light-induced ethanol-repressed polypeptides as well as whether induction is controlled at the transcriptional level. Familiarity with or desire to learn techniques for organelle isolation, two-dimensional gel electrophoresis, monoclonal antibody production, and mRNA purification essential. Forward curriculum vitae and three recommendation letters by 1 May to: **Dr. Stephen Schwartzbach, Search Committee Chairperson, 303 Lyman Hall, University of Nebraska-Lincoln, Lincoln, Nebraska 68588-0118. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available immediately for a person with a Ph.D. in immunology. This is a research position in a group concerned with immunological mechanisms in renal disease and immunopathology. Strong background in cellular immunology preferred. Send résumé with names of referees to: **Alfred F. Michael, Professor, Pediatrics, Box 491, University of Minnesota, 515 Delaware Street, SE, Minneapolis, Minn. 55455. The University of Minnesota is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION—Axonal transport and biochemistry of nerve regeneration. A 1-year position, available immediately; salary of \$15,000. Prefer individual with experience in neurobiology or biochemistry. Send curriculum vitae, bibliography, and two to four letters of reference to: **Dr. David Wilson, Department of Physiology and Biophysics, University of Miami School of Medicine, P.O. Box 016430, Miami, Florida 33101. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN MOLECULAR/DEVELOPMENTAL BIOLOGY. A position is available for either a beginning or advanced postdoctoral fellow to work on the structure and regulation of muscle-specific genes using recombinant DNA and gene transfer. Experience in either molecular biology or developmental biology or both is desirable. Salary commensurate with experience. Interested persons should submit a letter indicating their interests and include curriculum vitae and names of three references to: **Dr. Charles Ordahl, S-1334, University of California, San Francisco, San Francisco, Calif. 94143.**

POSTDOCTORAL/RESEARCH ASSOCIATE position to study phenylketonuria (PKU) by analysis of the phenylalanine hydroxylase gene. The study involves the use of a cloned cDNA probe to isolate mutant genes from deficient individuals, DNA sequence analysis, and gene transfer into cells and embryos. Background or experience in molecular biology/biochemistry preferred. Send curriculum vitae and three letters to: **Dr. Savio L. C. Woo, Department of Cell Biology, Baylor College of Medicine, Houston, Texas 77030. Baylor is an Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to develop and test a membrane ultrafiltration process to allow continuous recycling of bacterial fermentation broth. Chemical engineering background with some experience in membrane processes is desirable. Some theoretical work will also be involved. Applicant should forward curriculum vitae and three letters of recommendation as soon as possible to:

Professor Georges Belfort
Department of Chemical Engineering
and Environmental Engineering
Rensselaer Polytechnic Institute (RPI)
Troy, New York 12181

RPI is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION IN ELECTRON MICROSCOPY

Position available early fall 1983 to study the structure of ion channel containing membranes from *Paramecium* and *Drosophila*. Experience in all aspects of electron microscopy is advantageous but demonstrated experience in freeze-fracture technology is required. Send curriculum vitae and names of three references to: **Michael Forte, Department of Biology, Case Western Reserve University, Cleveland, Ohio 44106. An Equal Opportunity Employer.**

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION IN MOLECULAR NEUROBIOLOGY

Position available late summer/early fall 1983 for up to 3 years to join in a genetic and biochemical study of ion channels *Paramecium* and *Drosophila*. Demonstrated experience in either (i) recombinant DNA technology (mRNA isolation, cDNA preparation, screening genome libraries) or (ii) membrane protein isolation and characterization are advantageous but not required. Send curriculum vitae and names of three references to: **Michael Forte, Department of Biology, Case Western Reserve University, Cleveland, Ohio 44106. An Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE position available for participation in studies of absorption of ligand bound metals using cultured tissues and intact animals. Applicants with experience in protein purification, tissue culture, and handling of experimental animals will be preferred. Send curriculum vitae and three letters of recommendation to: **Dr. Wai-Yee Chan, Department of Pediatrics, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Oklahoma 73190.**

POSTGRADUATE RESEARCH BIOLOGIST OR ASSISTANT RESEARCH BIOLOGIST—NEUROCHEMIST: Applications are invited for a position immediately in the Biology Department at the University of California, San Diego, within a multidisciplinary Cellular Neurobiology Laboratory headed by Silvio Varon. The period of this position will be for 2 to 3 years and will involve the purification and characterization of molecules that influence the survival and axonal regeneration of peripheral and central neurons using tissue culture microassays to monitor factor biological activity. Applicants must have Ph.D. degree. Strong experience required with the latest technologies in protein or peptide fractionation. Position will be commensurate with experience at levels of either postgraduate research biologist (\$15,936 to \$19,848) or assistant research biologist (\$22,900). Send curriculum vitae, reprints, and three letters of recommendation by 30 April to: **Marilee Bateman, Biology Department M001, University of California, San Diego, La Jolla, Calif. 92093. The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.**

DISTINGUISHED PROFESSORSHIP in new CENTER FOR MOLECULAR GENETICS AND BIOTECHNOLOGY at RUTGERS UNIVERSITY

Applications are invited. Send résumé to:

Dr. Sewell P. Champe
Chairman, Search Committee
Waksman Institute of Microbiology
Rutgers, The State University
of New Jersey
P.O. Box 759
Piscataway, N.J. 08854

**Division of Cancer Treatment
National Cancer Institute
National Institutes of Health
Public Health Service
Department of Health and
Human Services**

**ASSOCIATE
DIRECTOR, DEVELOPMENTAL
THERAPEUTICS PROGRAM**

The National Cancer Institute (NCI) develops the overall national strategy against cancer, coordinates federal government and non-federal government cancer programs, and supports international programs of cancer research.

The Division of Cancer Treatment directs the NCI's major research effort related to the treatment of cancer. The Developmental Therapeutics Program plans, directs, and conducts a basic and applied research program in the preclinical development of chemotherapeutic agents. This Program is comprised of in-house laboratories as well as several branches which administer a 75 million dollar a year grant and contract program through a staff of 275.

This is a Civil Service position in the Senior Executive Service (SES) with a salary range from \$56,945 to \$63,800 per annum. Candidates may be eligible for Physicians' Comparability Allowance up to \$10,000 per year. (Alternately, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) The individual selected, if not presently in SES, must serve a one year probationary period.

Candidates must meet established mandatory professional/technical and managerial/executive requirements. Candidates will be further evaluated on the extent they exceed the minimum requirements and on additional factors including scientific reputation/peer recognition, training and education and honors and awards. A copy of the requirements may be obtained by contacting Mrs. Sara Benesch, Personnel Management Branch, NCI (301) 496-6862.

Applications (Personal Qualifications Statement SF-171) are to be sent to the above individual at: The National Cancer Institute, Building 31, Room 3A34, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications from women and/or minority group members are especially solicited.

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Applications must be postmarked no later than April 30, 1983.

ANNOUNCING

DISTINGUISHED FELLOWSHIPS IN SCIENCE ICSU-UNESCO

The International Council of Scientific Unions (ICSU) and the United Nations Educational, Scientific and Cultural Organization announce the ICSU/Unesco Distinguished Fellowship Programme in Science for 1984. A limited number of fellowships will be granted (2) in the natural sciences, including their application to development, in order to strengthen the scientific capacity of developing nations. The Fellowships will be awarded to individuals who have demonstrated exceptional scientific ability at the level of Ph.D., or its equivalent, and who desire to advance their scientific knowledge in order to conduct basic research relevant to national needs.

Candidates will come from developing countries and will, ordinarily, have had one year of post-doctoral experience; special consideration will be given to candidates who have done research in their native region. Fellowships will be awarded for one year, with extension for a second year in exceptional circumstances, and will be tenable in any centre of scientific excellence in the world. A letter will be required to show the candidate will be accepted in the host department or laboratory where he proposes to study. In order to make sure a position will be available when the Fellow returns to his native region, institutional commitment of a post will be required with the application as well as governmental approval of the application for Fellowship.

Stipend will depend upon the cost of living in the country in which the Fellowship will be tenable. If the Fellowship were to be held in the United States, for example, the stipend would be \$20,000 per year in addition to \$1,000 for each dependent (to a maximum of three). Tourist-class travel will also be provided to the Fellow and his dependents (to three). There will also be an institutional allowance of \$2,000 to the host department for the purpose of covering expenses incidental to the Fellow's training and research.

An important feature of the award is the follow-up programme which includes a grant of up to \$5,000 (supplied by Unesco) to the Fellow for research materials and services to support a research project to be carried out in the Fellow's region of origin. Another feature is the award of two travel grants in the two to three-year period after completion of the Fellowship. These travel funds will allow one visit by the Fellow to his foreign, host institution as well as one lecture-ship for his foreign mentor, tenable in the country or region in which the former Fellow's research project is being conducted.

Application forms for the ICSU-Unesco Distinguished Fellowships in Science will be available from the National Commissions for Unesco or from the Division of Scientific Research and Higher Education at Unesco, 7 Place de Fontenoy, 75700 Paris, France. The forms will also be obtainable from the Unesco Regional Offices (Unesco Regional Office for Science and Technology for Africa, P.O. Box 3059, Nairobi, Kenya; Unesco Regional Office for Science and Technology for South and Central Asia, Unesco House, Jor Bagh, Lodi Road, New Delhi 110003, India; Unesco Regional Office for Science and Technology in Southeast Asia, United Nations Building, 2nd floor, Jalam Thamrin 14, 273/JKT Tromolpos, Jakarta, Indonesia; Unesco Regional Office for Science and Technology for Latin America and the Caribbean, 1320 Blv. Artigas, Casa Postal 859, Montevideo, Uruguay; Unesco Regional Office for Science and Technology in the Arab States, 7 Place de Fontenoy, 75700 Paris, France).

Completed application forms in triplicate should be sent to the Division of Scientific Research and Higher Education, Unesco, 7 Place de Fontenoy, 75700 Paris, France. They should be received at Unesco not later than 1st July 1983.

Awards will be announced about 1 November 1983 and the first fellowships will begin between 1 January and 30 June 1984.

POSITIONS OPEN

POSTGRADUATE RESEARCH BIOLOGIST OR ASSISTANT RESEARCH BIOLOGIST—NEUROANATOMIST: Applications are invited for a position immediately in the Biology Department at the University of California, San Diego, within a multidisciplinary Cellular Neurobiology Laboratory headed by Silvio Varon. The position is available for 2 to 3 years and will involve the investigation of in vivo models for CNS and PNS regeneration and potential influences on them by trophic and neurite-promoting agents. Applicants must have an M.D. or Ph.D. degree with strong background/experience in two or more of the following: histology, microsurgery, tracing techniques, and morphometry. Title and salary will be commensurate with experience: postgraduate research biologist (\$15,936 to \$19,848), assistant research biologist (\$22,900). Send curriculum vitae, reprints, and three letters of recommendation by 30 April to: **Marilee Bateman, Biology Department M001, University of California, San Diego, La Jolla, Calif. 92093.** *The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.*

PRIMATE GENETICIST UNIVERSITY OF WISCONSIN-MADISON PRIMATE RESEARCH CENTER AND LABORATORY OF GENETICS

We seek an innovative researcher in basic or applied genetics to develop a research program utilizing nonhuman primates. The individual would also be expected to teach at least one advanced course in genetics. This is a tenure-track appointment. Application should include curriculum vitae, bibliography, reprints or preprints of two significant publications, and three letters of recommendation and should be sent to:

Search Committee
The University of Wisconsin
Primate Research Center
University of Wisconsin-Madison
Madison, Wisconsin 53706

The University of Wisconsin-Madison is an Affirmative Action/Equal Opportunity Employer.

KING SAUD UNIVERSITY COLLEGE OF MEDICINE RIYADH, SAUDI ARABIA PROFESSOR OF PHYSIOLOGY

PROFESSOR OF PHYSIOLOGY, King Saud University College of Medicine, Riyadh, Saudi Arabia, with a concurrent appointment in the Department of Physiology, University of Colorado School of Medicine. Successful candidates will be expected to teach undergraduate medical students and assist in development of research programs in physiology at King Saud University. Two positions are available with renewable annual contracts. Substantial remuneration and benefits.

Please send application with updated curriculum vitae and passport-sized photograph to: **Dr. A. Robert Martin, Professor and Chairman, Department of Physiology, University of Colorado School of Medicine, 4200 East Ninth Avenue, Box C-240, Denver, Colorado 80262.** *Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSISTANT PROFESSOR: 3-year minimum; salary competitive. Anatomy and physiology of primate extrageniculate visual and visuomotor paths. Postdoctoral experience is required. Send curriculum vitae and three letters of recommendation to: **L. A. Benevento, University of Illinois, College of Medicine, P.O. Box 6998, Chicago, Ill. 60680.** *The University of Illinois is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

RESEARCH SCIENTIST I

Position is associated with a multi-institutional project studying global biogeochemical cycles, with particular emphasis upon the role of terrestrial biota. Qualifications include bachelor's degree in biology, chemistry, or ecology, and at least 1 year of experience in computer programming (FORTRAN) and familiarity with data analysis techniques. Expertise in modeling biological and/or chemical systems and knowledge of nutrient cycling essential. Additional experience in advanced programming preferred. Salary range: \$15,890 to \$24,690. Forward résumé by 29 April 1983 to: **Dr. Berrien Moore, Director, Complex Systems Research Center, O'Kane House, University of New Hampshire, Durham, N.H. 03824.** *The University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

THE UNIVERSITY OF WESTERN AUSTRALIA Perth VISITING PROFESSOR IN MARINE SCIENCE WITHIN THE DEPARTMENT OF ZOOLOGY

The University of Western Australia is seeking a senior **marine scientist** to conduct research at Shark Bay, Western Australia, for a period of 1 year, June 1983 to June 1984.

Shark Bay is a large, shallow, hypersaline embayment (reverse estuary), which has extensive seagrass meadows and shallow carbonate banks.

An ongoing multidisciplinary research programme is being carried out by the University of Western Australia. The candidate will be a member of the Zoology Department but will be expected to participate with the research staff from other departments (Botany, Organic Chemistry, Civil Engineering, and Geology) during his/her tenure with the programme. Candidates should send a letter of interest and curriculum vitae to: **Professor S. D. Bradshaw, Department of Zoology, The University of Western Australia, Nedlands, Western Australia 6009, Australia.**

RESEARCH ASSISTANT PROFESSOR—(Nontenure-track) position available in the Thrombosis Research Center of Temple University School of Medicine for Ph.D. in biology or biochemistry with at least 5 years of postdoctoral experience in platelet research. The applicant must have demonstrated ability in the purification of lysosomal enzymes, preparation of thrombin-degranulated platelets, stractant-gradient centrifugations, and assay of platelet secreted protein. Send curriculum vitae and three references to: **Robert W. Coleman, M.D., Director, Thrombosis Research Center, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE

A postdoctoral position available immediately to study cytochromes P-450 from steroidogenic organs. Studies will include isolation, characterization of physical and chemical properties, determination of amino acid sequence, and genetic cloning. Send 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.**

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SCIENTIFIC ASSISTANT

Maintain reference collection of recent mollusks, including accessioning, cataloguing, identifying, and incorporating specimen into the collection. Also assists curators, answers general inquiries, and attends to loan requests.

QUALIFICATIONS: B.A./B.S. in biology with a concentration or specialization in invertebrate zoology, and knowledge of systematics and taxonomy of recent mollusks. Light typing required. Reading knowledge of French, German, or Russian and skills in preparation techniques for hard and soft tissue are desirable.

Starting salary: \$13,878 per annum. Benefits include major medical/dental coverage, 4 weeks of vacation, and tuition reimbursement. Send résumé to:

Personnel Department
**American Museum of
Natural History**

79th Street at Central Park West
New York, New York 10024

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

VERTEBRATE ZOOLOGY CURATOR: A curatorial/research position at Bishop Museum is anticipated 1 July 1983. Requirements: Ph.D.; research achievement, preferably in systematic mammalogy and/or ornithology; responsibility for important avian, mammalian, and herpetological collections. Salary based on qualifications and experience. Forward résumé and copies of three publications, and ask three references to write directly to: **Search Committee, c/o Dr. D. M. Devaney, An Equal Opportunity Employer, Box 84, SCIENCE.**

POSITIONS OPEN

PLANT MOLECULAR BIOLOGIST

Postdoctoral fellow to participate in studies on the influence of ethylene on gene expression in higher plant tissues. Should be conversant with general techniques of molecular biology, including recombinant DNA and cloning technology. Requisite plant biology can be acquired. Position open September 1983. Send curriculum vitae and names of three references to: **Dr. George G. Laties, Department of Biology and Molecular Biology Institute, University of California, Los Angeles, Los Angeles, Calif. 90024.**

RESEARCH STAFF OPENING. Animal experimental psychologist with training and/or interest in developmental psychobiology. Ph.D. required. Salary and rank open, depending on experience. Send curriculum vitae with letters of recommendation to: **Byron A. Campbell, Department of Psychology, Princeton University, Princeton, N.J. 08544.**

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

SENIOR SOFTWARE ENGINEER—The professional we seek will design and develop computer programs and modify, install, test, and maintain operating systems software. The successful applicant will possess a B.S. in electronics or computer science and 3 years of experience in the field of microcomputers and minicomputers, including experience with PDP-11/34 computers and RT-11 or RSX-11M and its assembly and FORTRAN language, ASSEMBLER language programming on microprocessors, development of real-time systems software on minicomputer and microprocessor systems, and developing interactive review and control software. The position offers a competitive salary of \$27,375 per year, outstanding benefits, and a sophisticated environment that permits freedom of technological expression and personal achievement. For immediate consideration, please send your résumé in confidence to: **Ohio Bureau of Employment Services, 3135 Euclid Avenue, Cleveland, Ohio 44115, attention: Mildred M. McGill. Order Number 0227765.**

TRANSLATORS (Russian to English). Publisher of major Soviet scientific and technical research journals in English translation requires qualified translators in the following areas: electrical engineering, energy technology, aeronautics, machine sciences, superhard materials, friction and wear. Applicants must have a technical background in the field of translation. Ongoing assignments available. Application with curriculum vitae to: **Box 85, SCIENCE.**

VIROLOGIST AND IMMUNOLOGIST

ADVANCED GENETICS RESEARCH INSTITUTE (AGRI), a young, growing San Francisco Bay area company doing research and development in animal health products, has immediate openings for skilled hands-on scientists for our veterinary viral vaccine development program. Virologist position requires broad expertise in virus growth, assay, and titer methods. Immunologist needs strong background in immunochemistry and serology including antibody/antigen purification and assay. Experience with veterinary virus and vaccine development a distinct advantage. Exciting opportunity for hardworking, highly motivated individuals. Please send résumé, including salary history and objectives, to: **Burt Dorman, AGRI, 2220 Livingston Street, Oakland, Calif. 94606.**

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DOCTORAL PROGRAM

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Department of Anatomy
Wayne State University
School of Medicine
540 East Canfield Avenue
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A collection of recent articles from **SCIENCE** on contemporary strategic ideology is now available for use by professionals, teachers, and researchers interested in the nuclear arms race.

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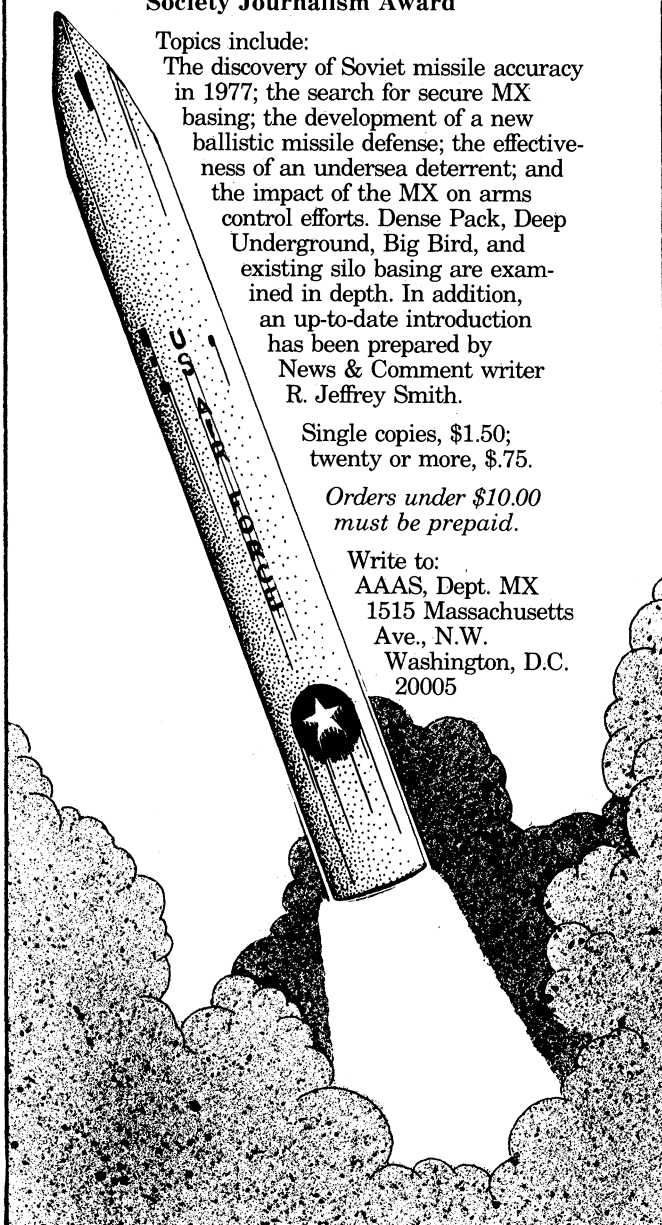
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REQUEST FOR PROPOSALS

PROPOSAL SOLICITATION

The EPA/NCSSU Acid Precipitation Program, a cooperative program (Number CR-806912) between the U.S. Environmental Protection Agency (EPA) and North Carolina State University (NCSSU), is seeking proposals for development of an integrated assessment plan related to the causes and effects of acidic deposition. The procedures and analytical methodologies developed to complete the integrated assessment will be utilized in the evaluation of public policy options. A total of \$200,000 is available for this activity and a minimum of two organizations, institutions, or individuals will be selected. To receive submission details, send a self-addressed envelope to: EPA/NCSSU Acid Precipitation Program, Department of Botany, North Carolina State University, 1509 Varsity Drive, Raleigh, N.C. 27606, attention: Dr. Rick A. Linthurst. Requests for details must be postmarked by 29 April 1983.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP. Position open to work in electrophysiology of epithelial tissues and its correlation with molecular membrane phenomena such as receptor function and physicochemistry. Good background in microelectrode recording, ion sensitive electrodes, and physicochemistry preferred. Chemistry background welcomed. Write to (include curriculum vitae): Dr. J. A. Zadunaisky, New York University Medical Center, 550 First Avenue, New York, N.Y. 10016.

BIOCHEMISTRY FELLOWSHIP

Postdoctoral fellowship opportunity in biochemical aspects of muscle disease available 1 July 1983. Research involves investigating, development, and clinical application of novel analytical techniques which can be utilized for diagnosis of muscle diseases. Applicant should have a good working knowledge of HPLC and GLC. GC/MS experience desirable. Positions open to U.S. citizens and permanent residents who have Ph.D., M.D., or equivalent degrees in a basic biomedical discipline. Applicants should send curriculum vitae and three references to:

Director of Education
The Cleveland Clinic Educational Foundation
9500 Euclid Avenue
Cleveland, Ohio 44106

or telephone, toll free:

1-800-362-1001 (Ohio)
1-800-321-7000

POSTDOCTORAL RESEARCH FELLOWSHIP. Positions available for 3 years for persons interested in cyclic nucleotide research. Current research areas include cyclic GMP synthesis, metabolism and function including enzyme purification, protein chemistry, development of monoclonal antibodies, immunohistochemistry, molecular biology, cell cultures, protein phosphorylation, and smooth muscle regulation. Send curriculum vitae and three letters of recommendation to: Dr. Ferid Murad, Departments of Medicine and Pharmacology, Stanford University, VAMC (111), Palo Alto, Calif. 94304. An Equal Opportunity Employer.

NIH INSTITUTIONAL POSTDOCTORAL FELLOWSHIP IN COMMUNICATION BIOPHYSICS OR NEUROBIOLOGY

A position is available immediately for someone to work in the fields of psychoacoustics, audiology, communication engineering, neurochemistry, or neurophysiology. This position must be filled by 30 June 1983. Contact: Dr. Walt Jesteadt, Boys Town National Institute for Communication Disorders in Children, 555 North 30 Street, Omaha, Nebraska 68131.

POSTDOCTORAL FELLOWSHIP IN COMPARATIVE ENDOCRINOLOGY

Starting in September 1983 for a period of 1 or 2 years. Research on comparative endocrinology of the vertebrate adrenal and hormonal control of renal function in fishes and birds. Remuneration subject to guidelines of the Natural Sciences and Engineering Research Council of Canada. Foreign applicants must satisfy Canadian immigration authorities and be able to obtain a work permit. Please send curriculum vitae and three letters of reference to: Dr. D. G. Butler, Department of Zoology, University of Toronto, Toronto, Ontario, Canada M5S 1A1.

COURSES

FREEZE-FRACTURE TRAINING COURSE, 18 to 22 July 1983. Instructors: John E. Rash, Russell L. Steere, Timothy J. A. Johnson, and Evan Sohn (Balzers). Denton and Balzers freeze-etch equipment; propane jet and "Slammer" freezing devices; Philips 400T. Limited to 12 students. Tuition (\$785) includes five nights lodging (single occupancy), textbook, and supplies. Registration closes 1 June 1983. For details, contact: Phyllis Hayworth, Department of Anatomy, Colorado State University, Fort Collins, Colorado 80523. Telephone: 303-491-5847.

WORKSHOP

WORKSHOP ON FUNDAMENTAL APPROACHES TO EXTRAPOLATION MODELING OF INHALED TOXICANTS: OZONE AND NITROGEN DIOXIDE

A workshop will be held 27 to 29 June 1983, at the Twin Bridges Marriott Hotel in Washington, D.C., sponsored by the Toxicology Branch of the Health Effects Research Laboratory, U.S. EPA, RTP, NC.

Topics will include pulmonary dosimetry models, and extrapolations between animals and man relating structural and functional changes, metabolic responses to oxidant exposure, and host defense responses against infection.

Poster abstracts related to the above areas are being solicited for consideration from all interested individuals. Abstracts (less than one double-spaced page) must be submitted by 1 May 1983.

For further information and registration forms, contact: Dan Tisch, Workshop Coordinator, Northrop Services, Inc., P.O. Box 12313, Research Triangle Park, N.C. 27709. Telephone: 919-549-0411.

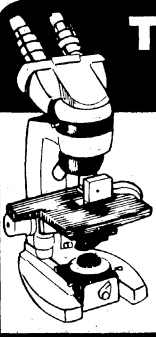
CONFERENCE

CONFERENCE ON NUTRITIONAL INTERVENTION IN THE AGING PROCESS, 12 and 13 September 1983, Marriott Pavilion Hotel, St. Louis, Missouri. Purposes: (i) present recent advances in basic research concerning nutrition and aging (proteins, minerals, vitamins, dietary restriction, antioxidants) and (ii) apply this knowledge to diseases of the elderly (diabetes, osteoporosis, dementia, cardiovascular disease). Program will include invited speakers, contributed posters, and panel discussions. Contact: Conference Secretary, Geriatric Center (111G-JB), VA Medical Center, St. Louis, Mo. 63125; telephone: 314-894-4659.

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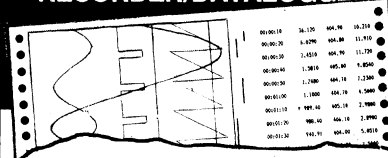
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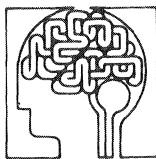
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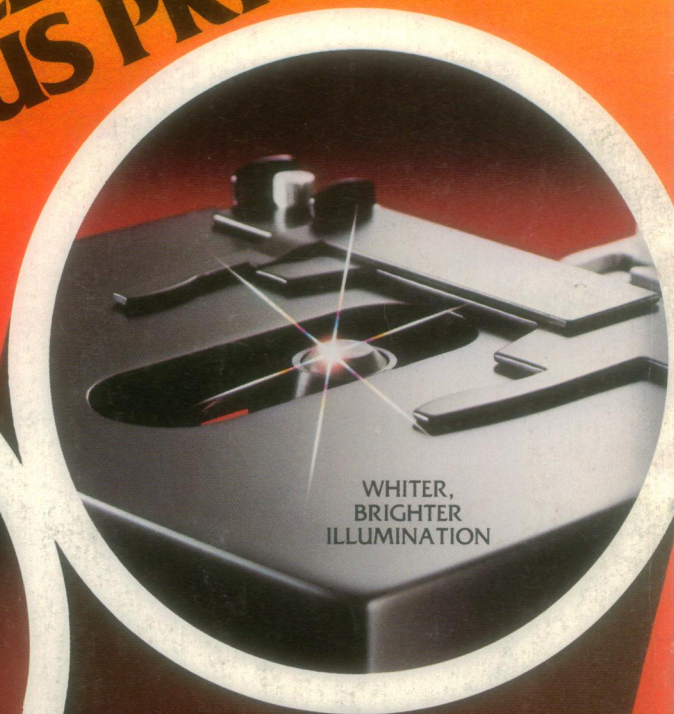


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