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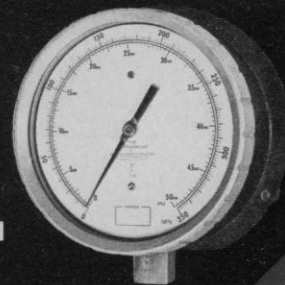
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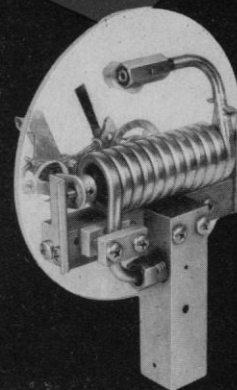
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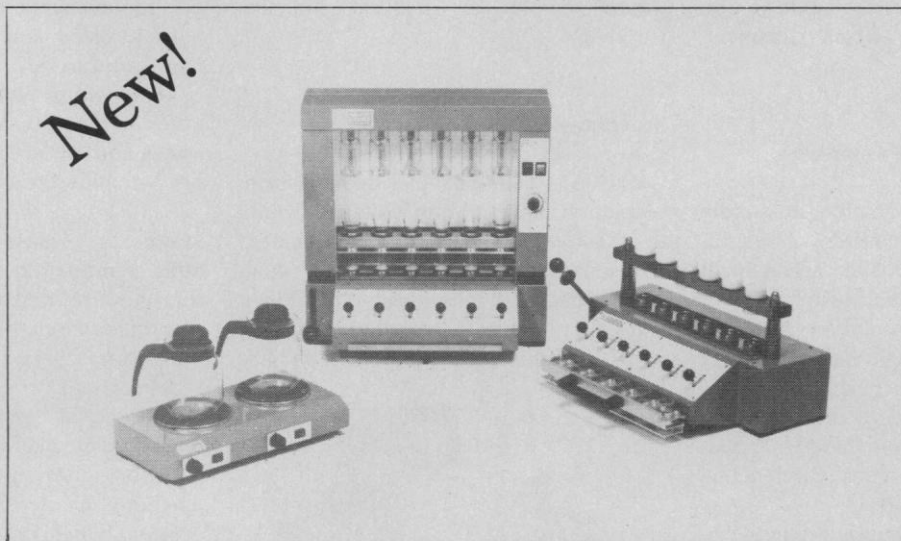


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Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, 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 Reader Service Card (on pages 1250A and 1330F) and placing it in the mailbox. Postage is free.

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Septic Leach Detector

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High-Pressure Liquid Chromatography

The AN-100 system is designed as a teaching unit. An instruction manual includes relevant introductory experiments. The system features a dual-wavelength ultraviolet monitor; a high-pressure, constant-flow pump; a sample injection valve; a reversed-phase column; and a single-channel, 250-millimeter recorder. All that is required for start up is assembly of the components, a high-purity mobile phase, and an appropriate sample for analysis. Anspec. Circle 824.

Scanning Electron Microscope

The JSM-T200 provides 100-angstrom resolution, acceleration voltages from 2 to 25 kilovolts, and it is fully automated. It features a large drawer-type, dual-stage specimen chamber. The lower stage supports up to a 3-kilogram sample or 16 10-millimeter specimen stubs. The



upper eucentric stage will accommodate up to a 3-inch (diameter) wafer. A green display screen offers high contrast and reduces eye fatigue. Options include a sputter-coating accessory and an energy-dispersive x-ray spectrometer. JEOL USA. Circle 825.

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The Eclipse S/140 features a fast, single-board central processing unit whose speed is enhanced by memory prefetch processor (PFP) and standard four-way interleaving on main memory. The single-board CPU frees space in the 16-slot chassis for extra memory and peripheral-controller boards. Program implementation uses a 56-bit microword that permits parallel, overlapped CPU operations. Memory is expandable in 128K-byte and 256K-byte increments up to 1 megabyte. A standard memory allocation and protection unit supports privileged instructions, protects input/output devices, and protects the main memory in multiuser applications. There are two floating-point options. All peripherals are designed for laboratory data processing and scientific calculations. Data General. Circle 828.

Literature

Calibration Proteins for Electrophoresis are described in a booklet. Pharmacia Fine Chemicals. Circle 831.

Activated Resins for Enzyme Assays lists ion-exchange resins with most used particle sizes and cross-linkages. Bio-Rad Laboratories. Circle 832.

Accelerating Rate Calorimeter is devoted to the ARC and its optional accessories and design specifications. Columbia Scientific Industries. Circle 833.

Laboratory Products includes instruments, glassware, plastic-ware, stills, scintillation apparatus, tissue culture labware, and much more. Wheaton Scientific. Circle 834.

Test Chambers describes benchtop devices for strict control of environmental conditions in the experiments of biochemists, medical researchers, physiologists, botanists, and others. Tenney Engineering. Circle 835.

Monoclonal Antibodies lists clone and immunoglobulin content per milliliter for more than two dozen types. Accurate Chemical & Scientific. Circle 836.

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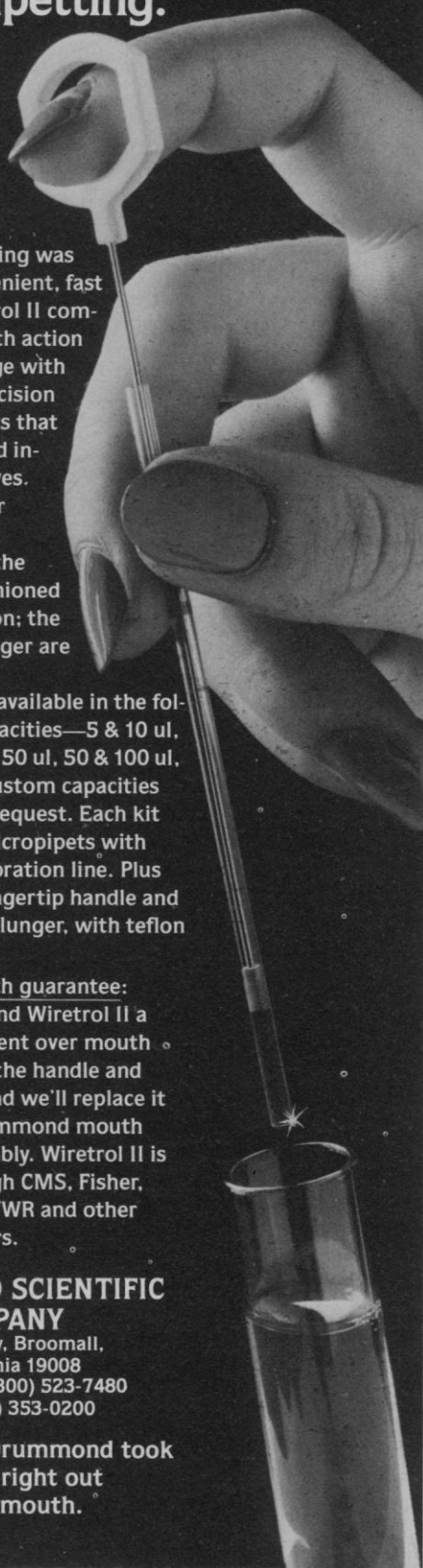
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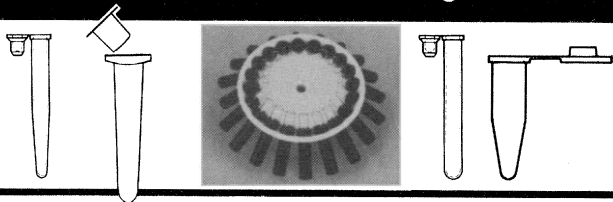
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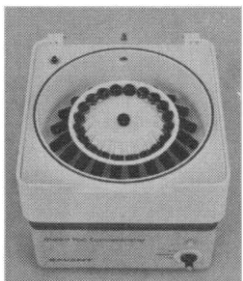
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Immediate position wanted. **Ph.D. Pharmacologist** with experience teaching physiology, chemistry background. Write, giving job description. 5556 North Wayne, Chicago, Illinois 60640. 12/14, 21

Toxicologist; 12 years of experience in designing, monitoring, and evaluating toxicity in drugs, chemicals, and OTC products. Administrative, FDA and EPA regulations, and liaison experience. At present in charge, seeking section head or director's position. Box 340, SCIENCE. X

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ANATOMIST: West Virginia School of Osteopathic Medicine. Effective date: 1 July 1980. Position description: teaching of gross anatomy. Qualifications: Ph.D. with 3 to 6 years of experience teaching in medical or dental school preferred. Pay schedule: rank and salary negotiable. Apply to: **Personnel Office**, West Virginia School of Osteopathic Medicine, 400 North Lee Street, Lewisburg, West Virginia 24901.

ANIMAL PHYSIOLOGY. The position at Hope College which was described in 26 October *Science* is for fall 1980, not fall 1979. Duties include mammalian physiology, a second advanced course, involvement in the introductory course, and an active research program that will involve undergraduates. Refer to ad in 26 October *Science* for more information or write to: **Search Committee, Department of Biology, Hope College, Holland, Michigan 49423.** An Equal Opportunity/Affirmative Action Employer.

ANIMAL/WILDLIFE ECOLOGIST

The Division of Biology has a tenure-earning position available at the assistant professor level effective spring or fall 1980. Applications are invited from candidates who will take advantage of ecological research opportunities on our 3487-hectare Konza Prairie Research Natural Area. Ecological research is broadly defined to include phenomenon related to wildlife problems. Individuals with postdoctoral experience will be given special consideration. The successful applicant is expected to establish a vigorous research program and to participate in graduate and undergraduate teaching in wildlife biology. Candidates should apply by 21 January 1980 and submit curriculum vitae, three letters of reference, and a brief description of future research plans to:

Dr. Terry C. Johnson, Director
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POSITIONS OPEN

ANATOMY POSITIONS

The Medical College of Wisconsin, Department of Anatomy, invites applications for four faculty positions opening for the 1980-1981 academic year, due to increase in class size and subsequent expansion of the faculty. The positions will be at both the senior and junior levels. Individuals should have experience in medical school instruction and have active research programs in the general areas of neuroscience, development/teratology or cell biology. Salaries are competitive commensurate with training and experience; comprehensive benefits. Send curriculum vitae and names and addresses of three references to:

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University of Wisconsin-Madison

The Department of Biochemistry invites applications for the position of **ASSISTANT PROFESSOR**; exceptionally well-qualified applicants would be considered at the level of **ASSOCIATE OR FULL PROFESSOR.** Candidates must have a research interest in the field of enzymology. Responsibilities will include teaching, supervision of graduate students, and development of an independent research program. Salary will be on a 12-month basis; it will be commensurate with the experience of the candidate and compatible with the salary structure of the University of Wisconsin System. *Women and minority candidates are especially encouraged to apply.* Send detailed curriculum vitae and statement of research interests to: **H. F. DeLuca, Department of Biochemistry, University of Wisconsin, Madison, Wis. 53706,** before 15 February 1980. Applicants should have three letters of recommendation submitted to the same address. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF BIOCHEMISTRY— Applicants should have a Ph.D. in biochemistry and appropriate postdoctoral training. Research should be in the area of structural and functional organization of the eukaryotic genome, studies of nonhistone chromosomal proteins, regulation, and so forth. Applicants must be well trained in biochemistry and be able to teach medical and graduate students effectively. Send curriculum vitae, summary of present research/projected research program, and names and addresses of three people who may be contacted for reference to: **Dr. F. P. Inman, P.O. Box 19930A, College of Medicine, East Tennessee State University, Johnson City, Tenn. 37601.** Position open 1 April 1980. *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR, GENETICS. The Department of Biology, The Johns Hopkins University, invites applications for a tenure-track appointment in the general area of molecular genetics. The principal teaching duties involve participation in undergraduate and graduate courses in genetics, advising students, and guiding graduate students to advanced degrees. Applicants must have the Ph.D. and/or M.D. degree and two or more years of postdoctoral training, with a record of productivity in original research. Please send curriculum vitae, reprints, a statement of research plans, and names of three references prior to 31 January 1980 to: **Dr. Philip E. Hartman, Chairman, Genetics Search Committee, Department of Biology, The Johns Hopkins University, Baltimore, Maryland 21218.**

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POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY. Primary teaching duties in invertebrate zoology and general biology. Enthusiasm for undergraduate teaching, a commitment to research, and a Ph.D. are the essential requirements of candidates. Research interests must be compatible with the facilities of a small college. Send curriculum vitae, a statement of teaching and research interests, and the names of three references to: **Kenneth Wittig, Biology Department, Siena College, Loudonville (Albany), New York 12211.**

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

Position available immediately for **ASSOCIATE PROFESSOR.** Duties include teaching, research, and service responsibilities in the Department of Pathology, University of Michigan Medical School. Individual with M.D. degree. Immunologist experienced in basic and applied immunology. Will be involved in research and teaching and required to have research background in both cellular and humoral immunology. Research experience in complement, leukocyte function, and transplantation immunology. Publication record indicative of both productivity as well as independence. Teaching experience at **graduate level** required. Reply to: **Box 341, SCIENCE.** Code 1000D0. A nondiscriminatory, Affirmative Action Employer.

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**Chairperson
Search Committee
Department of Microbiology
University of Georgia
Athens, Georgia 30602**

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UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

Position available immediately for **INSTRUCTOR/ASSISTANT PROFESSOR.** Duties include teaching, research, and service responsibilities in the Department of Pathology, University of Michigan Medical School. A Ph.D. or equivalent degree required. Experience in cell biology. Extensive experience in cell culture work and knowledge of tumor cell biology. Work with group of investigators studying tumor cell and host properties influencing malignancy. Knowledge of immunology and immunopathology important, particularly as relates to isolation, purification, and characterization of serum complement components. Proven record of research accomplishment. Reply to: **Box 342, SCIENCE.** Code 1000H0. A nondiscriminatory, Affirmative Action Employer.

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UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

Position available immediately for **INSTRUCTOR/ASSISTANT PROFESSOR.** Duties include teaching, research, and service responsibilities in the Department of Pathology, University of Michigan Medical School. Individual with M.D.; Board-certified or -eligible in anatomic pathology; must hold current state (U.S.) license and be eligible for state of Michigan licensure. Established record of research training and productivity, documented by scientific publications. Knowledge of immunology and immunopathology necessary. Strong background in biochemistry desirable. Expected to develop independent research program and collaborate with team working in lung immunopathology. Experience in medical school teaching highly desirable. Reply to: **Box 343, SCIENCE.** Code 500H0. A nondiscriminatory, Affirmative Action Employer.

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Position available immediately for **INSTRUCTOR/ASSISTANT PROFESSOR.** Duties include teaching, research, and service responsibilities in the Department of Pathology, University of Michigan Medical School. A Ph.D. or equivalent degree required. Research training and experience, must be documented by publication record. Experience in cellular and tumor immunology, immune regulatory mechanisms, tissue culture and assays of immune function required. Will be expected to partake in ongoing research projects involving the influence of tumor cell and host properties on malignancy. Participate in teaching at **graduate level.** Reply to: **Box 344, SCIENCE.** Code 800H0. A nondiscriminatory, Affirmative Action Employer.

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Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR OF PHYSIOLOGY (NEUROSCIENCE)

The Department of Physiology of the Johns Hopkins University School of Medicine invites applications from neuroscientists for a position as assistant professor, open 1 July 1980. Applicants must have the Ph.D. or the M.D. degree, and a record of productivity in original research. Duties include teaching neuroscience to students of medicine, and the instruction and supervision of graduate students. Please send curriculum vitae, a narrative account of past research accomplishments and present research interests, and two letters of recommendation to: **The Director, Department of Physiology, The Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, Maryland 21205.** The Johns Hopkins University is an Equal Opportunity Employer.

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

ASSISTANT PROFESSOR position is available in the Department of Physiology. Duties include conducting independent research on the relationship between membrane excitation and induction of contractile responses in vascular smooth muscle in the hypertensive state; teaching physiology to medical and other health professional students and to graduate students. Necessary qualifications: Ph.D., 3 years of postdoctoral training, and record of published work dealing with this area of research. Reply to: **Dr. Jack L. Kostyo, Chairman, Department of Physiology, University of Michigan Medical School, Ann Arbor, Michigan 48109.** Code 500N0. A nondiscriminatory, Affirmative Action Employer.

CHEMISTRY. Postdoctoral research associate; commences January 1980; \$12,000. Ph.D. with a strong background in biochemistry to work on the mechanism of protein synthesis. Research experience in enzymology and protein chemistry required. Send curriculum vitae and names of three references by 15 December to: **Dr. N. K. Gupta, Department of Chemistry, The University of Nebraska-Lincoln, Lincoln, Nebraska 68588.** Affirmative Action/Equal Opportunity Employer.

DEAN, COLLEGE OF MEDICINE. The East Tennessee State University (ETSU) College of Medicine is seeking applications and nominations for the position of Dean of the College of Medicine. To qualify for consideration the candidate should possess a doctorate in medicine and/or philosophy in an appropriate science basic to medicine (or its equivalent), and other professional recognition and experience related to medical education. Salary will depend on qualifications and experience and will be competitive with other colleges of medicine in the region and nation. The vacancy should be filled not later than 1 July 1980. Applications should include complete curriculum vitae, three references, and a short essay (no longer than four typed double-spaced pages) on your academic philosophy and the place of a strong college of medicine in the large university community. Review of applications will begin immediately and will continue until the position is filled. The ETSU College of Medicine is a developing community-based, primary care-oriented medical school associated with the Veterans Administration under the Teague-Cranston Health Manpower Act of 1972. A second class of 32 students is currently enrolled, and the school is planned for classes of 72 medical students plus graduate students in sciences basic to medicine. Applications and requests for further information should be directed to:

**Dr. Arthur H. DeRosier, Jr., President
East Tennessee State University
Johnson City, Tenn. 37601**

Applications of women and minority candidates are encouraged. East Tennessee State University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

The **DEPARTMENT OF PSYCHOLOGY** at Yale University expects to make an appointment at the rank of **beginning assistant professor**, starting in fall 1980 and invites applications from individuals whose scholarship and research reflects a biological orientation. The person appointed must be able to contribute effectively to the undergraduate and graduate teaching program of the university, as well as having exhibited clear evidence of excellence in research. The appointment may be in any subspecialty that relates in broadest definition to the biological basis of behavior. Applicants should send, or arrange to have sent, a letter of application, professional résumé, graduate transcript, copies of all publications, and three letters of recommendation to: **Chairman, Biological Search Committee, Department of Psychology, Box 11A Yale Station, New Haven, Connecticut 06520**. Deadline for completed applications: 15 February 1980. *Yale is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT RESEARCH BIOLOGIST I Visibility Laboratory Scripps Institution of Oceanography

Marine ecologist required to participate in project concerned with the remote sensing of meso-scale marine biological phenomena. Position requires a Ph.D., research experience, a sound publication record, and a background in photobiology, computer technology, and underwater optics. Candidate will spend 30 to 50 percent of his/her time at sea. Position available 1 March 1980 and dependent upon continued research funding. Salary at entry level (11-month) appointment of \$1641.67 per month as per established salary schedule of the University of California, San Diego. Please mail résumé and names of three references by 31 December 1979 to:

Dr. R. C. Smith
Visibility Laboratory A-024
Scripps Institution of Oceanography
University of California, San Diego
La Jolla, California 92093

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

The Department of Biological Sciences of the University of Southern California (USC) announces

Reopening of the search for candidates for a tenure-track position available 31 January 1980. Candidates with a major research interest in community ecology should submit up-to-date, complete curriculum vitae and list of three references (do not request letters to be sent at this time) to:

Dr. Jay M. Savage, Director
Evolutionary and Ecological Biology
University of Southern California
Los Angeles, California 90007

USC is an Equal Opportunity/Affirmative Action Employer; women and minority candidates are especially welcome as applicants for this position.

CHAIR OF BIOCHEMISTRY

Rush University, College of Health Sciences, invites applications for the **Chair of Biochemistry**. Applicants should have an established reputation in investigation and teaching and an active ongoing research program. Ph.D. or M.D. is required. Administrative experience is desirable.

The Department of Biochemistry is part of a major academic medical center whose components include the three colleges of Rush University, Presbyterian-St. Luke's Hospital with 873 beds, the Sheridan Road Pavilion with 178 beds, and the Johnston R. Bowman Health Center for the Elderly with 176 beds. Extensive programs in research, education, patient care, and community service utilize the facilities of all Medical Center components.

The Department of Biochemistry is expected to fulfill basic and applied science expectations in the Medical Center. The department is a major site for active research in basic and clinical biochemistry; it supplies basic science instruction to students of all colleges; it is expected to develop a Ph.D. program in biochemistry within the Graduate School; it is responsible for patient care support through its management of the Medical Center's clinical chemistry laboratories.

For further information, please contact: **Dr. Paul E. Carson, Chairperson of the Biochemistry Search Committee, c/o Department of Pharmacology, Rush Presbyterian-St. Luke's Medical Center, 1753 West Congress Parkway, Chicago, Illinois 60612.**

Rush University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

BIOCHEMISTRY ASSISTANT PROFESSOR

A new tenure-track position will be available in September 1980. Preference will be given to a candidate with two or more years of postdoctoral experience, established record of research productivity, funded or pending research grant, and teaching experience. Candidate will conduct research in the area of hormonal control of cellular metabolism and growth and/or hormone-receptor interactions and teach graduate and introductory biochemistry courses. Nine-month salary commensurate with experience. Deadline for submission of curriculum vitae, research synopsis, and names and addresses of three references is 20 January 1980. Send material to: **Dr. Lena B. Brattsten, Department of Biochemistry, University of Tennessee, Knoxville, Tennessee 37916.**

The University of Tennessee, Knoxville, is an Equal Opportunity/Title IX/Section 504 Employer.

NATIONAL SCIENCE FOUNDATION DIVISION OF OCEAN SCIENCES BIOLOGICAL OCEANOGRAPHER

The National Science Foundation, Division of Ocean Sciences, is seeking qualified applicants for a rotating appointment to the position of **Assistant Program Director in the Biological Oceanography Program**. The position is excepted from the competitive civil service, and will have a duration of up to 2 years. The program provides support for scientists primarily from academic institutions to pursue fundamental research in biological oceanography. The selected candidate will assist with program planning, proposal evaluation, administration of research grants, and liaison with other federal agencies. Applicants should have a Ph.D. in biological oceanography, a related biological science, or the equivalent in experience. Salary range is from \$20,611 to \$38,186 per annum, depending on qualifications and experience. Those interested in being considered for the position should send letters of interest and SF-171 or current résumé by 1 March 1980 to: **Division of Personnel and Management, Personnel Management Branch, National Science Foundation, 1800 G Street, NW, Washington, D.C. 20550**. For further information, telephone: **E. Paul Broglio at 202-632-4107**.

An Equal Opportunity Employer

CHEMICAL OCEANOGRAPHER

The Department of Oceanography, University of Hawaii, is now accepting applications for a tenure-track, full-time faculty position for a chemical oceanographer, at the rank of full professor. The position will be split between the Department of Oceanography which is responsible for teaching and the Hawaii Institute of Geophysics, where research is emphasized. The appointee will be expected to explore his/her own field of specialization, to interact extensively with other faculty, and to teach graduate and/or undergraduate oceanography courses. Current areas of specialization within the department include stable isotope geochemistry, paleoenvironmental studies, coral reef ecosystem analyses, marine microbiology, phytoplankton ecology, sediment-seawater trace-element geochemistry, and large-scale ocean circulation dynamics. Send statement of future research plans, curriculum vitae, and three letters of recommendation to: **P. Kroppnick, Department of Oceanography, University of Hawaii, Honolulu, Hawaii 96822**. All materials must be received by 31 January 1980.

DEAN SCHOOL OF LIBERAL STUDIES UNIVERSITY OF WISCONSIN-STOUT MENOMONIE, WISCONSIN

General qualifications: Candidates must have an earned doctorate or terminal degree; a background in liberal arts; successful administrative experience in personnel, budgeting, and curriculum; and successful college teaching experience.

Annual salary range: \$38,000 to \$40,000. Position available 1 July 1980.

Detailed information, further explaining the position and the qualifications, may be obtained from:

Robert Moran, Chairperson
Search and Screen Committee
University of Wisconsin-Stout
Room 307, Administration Building
Menomonie, Wis. 54751

Completed applications must be postmarked by 1 February 1980.

Equal Opportunity/Affirmative Action Employer

ASSOCIATE/PROGRAM DIRECTOR

The **NATIONAL SCIENCE FOUNDATION**, Division of Social and Economic Science, is seeking candidates who are willing to take leave from their university or other research positions for a 1- or 2-year period beginning mid-summer 1980 to serve as:

PROGRAM DIRECTOR, Sociology (EMPB 80-8), \$34,713 to \$50,112 per annum. Responsibilities include evaluation of research proposals in sociology, including research on demography and the nature and behavior of social organizations and institutions. Directs program activities including allocation of resources, establishing overall goals and objectives. Candidates should have at least 6 years of research experience beyond the Ph.D. (or equivalent) and be currently active in the field. Some supervisory or management experience is highly desirable. For further information, telephone: **Catherine Hobek at 202-632-4124**.

ASSOCIATE PROGRAM DIRECTOR, Sociology, \$29,375 to \$45,126 per annum. Assists in carrying out the responsibilities described above. Candidates should have at least 5 years of research experience beyond the Ph.D. (or equivalent) and be currently active in the field. For further information, telephone: **Odessa White at 202-632-4106**.

Salary is negotiable based on qualifications and experience within salary ranges indicated. Positions are excepted from the competitive civil service. Health, life insurance, and leave benefits are available. Send résumé or SF-171 to: **The National Science Foundation, DPM, 1800 G Street, NW, Washington, D.C. 20550** by close of business 1 February 1980. (Program director applicants should show EMPB 80-8.)

An Equal Opportunity Employer

KING FAISAL UNIVERSITY COLLEGE OF MEDICINE DAMMAM, SAUDI ARABIA FACULTY POSITIONS OPEN 1980-1981

The expanding College of Medicine, now in its sixth year, is accepting applications from qualified men and women for the 1980-1981 academic year in:

CHEMISTRY	PATHOLOGY
BIOLOGY	EPIDEMIOLOGY
PHYSICS	MICROBIOLOGY
BIOCHEMISTRY	PARASITOLOGY
ANATOMY	PHARMACOLOGY
PHYSIOLOGY	COMMUNITY MEDICINE

Doctorate or equivalent degree required. Language of instruction is English. Interviews to be held in London, Houston, and Ottawa during February 1980.

Salaries are highly competitive and negotiable; comparable to other Saudi universities.

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

Send curriculum vitae with current telephone number and the names and addresses of three references to:

Dr. Tawfig Tamimi
Dean, College of Medicine
King Faisal University

c/o Saudi Arabian
Educational Mission
2221 West Loop South
Houston, Texas 77027

OR

c/o P.O. Box 2
Sunbury-on-Thames
Middlesex TW16 5JP England

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHYSIOLOGY. The Department of Medical Physiology, College of Medicine, Texas A & M University, invites applications from individuals specializing in any aspect of cardiovascular science. Candidates should have 1 or 2 years of postdoctoral experience and will be expected to show promise of developing a vigorous research program. The appointee will join a physiology faculty deeply involved in cardiovascular research and will participate in its medical and graduate teaching programs. Send references to: **Dr. Elvin E. Smith, Head, Department of Medical Physiology, College of Medicine-1, Texas A & M University, College Station, Texas 77843.** *Texas A & M University is an Equal Opportunity Employer.*

CHILD CLINICAL PSYCHOLOGIST

The Psychology Section in the Psychiatry Department at the University of Michigan expects to make a tenured-level appointment at either the associate or full professor rank. Candidates should have a Ph.D. from an APA-approved clinical program and extensive experience in psychodynamically oriented treatment of children. A demonstrated capacity for vigorous programmatic research is essential. Duties will include supervision of child treatment on inpatient and outpatient services and supervision of psychological testing. There is a broad spectrum of research areas actively represented in the Psychiatry Department with abundant opportunity for collaborative work. The beginning date for this appointment will be 1 July 1980. Submit curriculum vitae and at least three letters of reference to: **Neil Kalter, Ph.D., Children's Psychiatric Hospital, University of Michigan Medical Center, Ann Arbor, Michigan 48109.** Code 600D0. *A nondiscriminatory, Affirmative Action Employer.*

DEAN OF THE COLLEGE OF SCIENCE PORTLAND STATE UNIVERSITY

Portland State University is seeking applications for dean of the College of Science. Candidates must hold an earned doctorate and have an outstanding record in research, teaching, and university administration. The position of dean is a 12-month appointment including 1 month of vacation. The salary is competitive. The dean is charged with the responsibility for all aspects of the academic program within the College of Science and reports directly to the vice president for academic affairs. The College of Science currently includes the Departments of Biology, Chemistry, Earth Sciences, Engineering, Mathematics, Physics, a Center for Public Health Studies, master's degree programs, and a doctoral program in environmental sciences and resources. The doctoral program involves faculty members from biology, chemistry, and physics and is administered by a coordinator who reports to the dean of science. Send applications, including curriculum vitae and three names of references, to: **Dean of Science Search Committee, OGSR, Portland State University, Portland, Oregon 97207,** postmarked by 31 January 1980. *Portland State University is an Equal Opportunity/Affirmative Action Employer.* All interested persons are encouraged to apply.

DIRECTOR OF SUMMER PROGRAMS. Development and administration of summer instruction in natural resources and environmental studies. Duties: curriculum development, management of logistics, publicity, student recruitment, and teaching in areas for which qualified. Requires master's degree in resource or environmental field, demonstrated administrative ability, innovative approaches. Send curriculum vitae, transcripts, and three references to: **Dean Benjamin A. Jayne, School of Forestry and Environmental Studies, Duke University, Durham, N.C. 27706.** *Duke is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS. Resource ecology, systems analysis, policy/economics. Four faculty and four research positions to be filled by 1 September 1980. Applicants sought in one or more of these centers of excellence: ecology; water resources, watershed hydrology, land resource/environmental analysis, applied systems ecology, insect/animal population dynamics; systems analysis; application of quantitative methods (simulation, statistics, operations research) to natural resource/environmental problems; and policy/economics; water, land use, energy systems, taxation, regulation, rural development. Send curriculum vitae, publications, three references, and recent Ph.D.'s submit transcripts, to: **Dean Benjamin A. Jayne, School of Forestry and Environmental Studies, Duke University, Durham, N.C. 27706,** by 1 February 1980. *Duke is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR, PLANT BIOLOGY. Position available September 1980. Recent Ph.D. in population genetics or plant physiology with postdoctoral experience. Teaching responsibilities include introductory biology and upper level plant biology. We are seeking an individual committed to undergraduate teaching including undergraduate research. The appointee will also be expected to establish a modest research program appropriate to a small, liberal arts college. Send résumé, transcripts, and the names of three references to: **Chairman, Biology Department, Mercer University, Macon, Ga. 31207,** by 25 January 1980. *Mercer University is an Affirmative Action/Equal Opportunity Employer.*

DIRECTOR OF ENVIRONMENTAL HEALTH AND SAFETY WAYNE STATE UNIVERSITY

The Director of Environmental Health and Safety is responsible for the implementation and administration of policy relating to biohazards control, recombinant DNA activities, and related in-service training programs related to environmental health and safety. Candidates should possess a doctoral degree, Ph.D. or D.P.H. in public health, epidemiologic sciences, public health microbiology (laboratory practices), occupational and environmental health sciences, or in related areas. Academic appointment in an appropriate academic unit. Salary open. Send curriculum vitae and names of three references to: **Martin Barr, Ph.D., Acting Vice President for Health Affairs, Wayne State University, Detroit, Michigan 48202.** *Wayne State is an Affirmative Action/Equal Opportunity Employer.*

DIRECTOR OF BROOKLYN BOTANIC GARDEN

The Board of Trustees invites applications from candidates having these qualifications: **demonstrated leadership** in imaginative planning, decision-making, and administration of the scientific, educational, and community service functions of a major botanical garden; **professional training** (preferably earned doctorate) in or related to botany or horticulture; **understanding of fiscal management** of nonprofit organizations and ability to effectively represent the institution in seeking private or public support. Send résumé, bibliography, and references to: **Robert A. Lehman, Chairman, Search Committee, Board of Trustees, Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, N.Y. 11225.**

Department of Environmental Engineering Sciences
University of Florida
Gainesville, Florida 32611

ENVIRONMENTAL CHEMIST. Tenure-accruing position available September 1980 at assistant/associate professor level. Doctorate in environmental chemistry or a closely related field with academic background or experience in environmental engineering required. To teach courses in environmental chemistry and water and wastewater analysis. Research interest in water and wastewater treatment processes, trace organic or chemistry of natural waters desirable. Application deadline: 31 January 1980.

SYSTEMS ECOLOGIST. Tenure-accruing position at the assistant/associate professor level. Doctorate required. Emphasis on quantitative approaches to ecological problems. Teaching and research in systems theory, quantitative methods, and ecological engineering. Application deadline: 31 December 1979.

For either position, please send résumé and names of three references to:

**Dr. Thomas L. Crisman
208A Black Hall**

Salaries are competitive and commensurate with qualifications. *The University of Florida is an Affirmative Action/Equal Opportunity Employer.*

FOREST PEST SPECIALIST. Nebraska Forest Service has an immediate opening for an individual with training in forest pathology and entomology. M.S. required; Ph.D. preferred. Coordinate extension and service programs. Opportunity for limited research. Salary competitive. Apply to: **Dr. M. D. Ferrill, Head and State Forester, Department of Forestry, Fisheries and Wildlife, University of Nebraska, Lincoln, Neb. 68583,** by 7 January 1980. *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

DIRECTOR VACANCY OFFICE OF ATMOSPHERIC PROGRAMS

The Office of Research and Development, National Oceanic and Atmospheric Administration (NOAA), has announced the vacancy of **director** for its Office of Atmospheric Programs in Rockville, Maryland. The Office of Research and Development is responsible for administering an integrated program of research, technology, and advanced engineering development and transfer relating to the oceans, the Great Lakes, the U.S. coastal waters, the lower and upper atmosphere, and the solar and terrestrial environment to increase understanding of the environment and human impact thereon, and thus provide the scientific basis for improved services.

This is an exciting and challenging opportunity for an individual with demonstrated knowledge of various scientific disciplines pertinent to NOAA atmospheric research programs. These research fields include the solar-terrestrial environment, the stratosphere, weather, atmospheric remote sensing, weather modification, climate, and technology transfer. In addition, the incumbent must have national reputation in atmospheric sciences or related fields and significant experience in the management of atmospheric science programs. The incumbent will serve as principal staff adviser to the assistant administrator for research and development on all atmospheric R & D activities in NOAA.

Salary: this position will be filled under the new Senior Executive Service (SES). Application: interested persons should send U.S. Standard Form 171, Personal Qualification Statement, to: **Claudia Brooks, Personnel Management Specialist, Office of Personnel, AD-411, NOAA, 6001 Executive Boulevard, Rockville, Maryland 20852,** by 31 December 1979. *The Department of Commerce is an Equal Opportunity Employer.*

ELECTROPHYSIOLOGIST/BIOPHYSICIST research associate to study membrane currents under voltage clamp in dialyzed and intact neurones. Emphasis on mechanisms of chemical modulation of conductances. Applicants should have relevant training plus good physical background, preferably with digital computer experience. Appointment for 2 years or more to begin as soon as possible. Send curriculum vitae and names of three referees to: **Dr. R. Eckert, Department of Biology, University of California, Los Angeles, Calif. 90024.** *Equal Opportunity/Affirmative Action Employer.*

ENVIRONMENTAL CHEMISTRY. Three postdoctoral research associate positions on the environmental chemistry of toxic substances are available starting between June and October 1980. Projects include: (i) polycyclic aromatic compounds in combustion effluents, ambient air, and marine sediments; and (ii) fates of synthetic industrial organic chemicals in rivers. We are seeking people with a background in analytical chemistry, organic geochemistry, environmental chemistry, or even synthetic organic chemistry. Those interested should send their résumés to: **Professor Ronald A. Hites, School of Public and Environmental Affairs, Indiana University, 400 East 7 Street, Bloomington, Ind. 47405,** and should have three letters on their behalf sent to the above address.

An Equal Opportunity/Affirmative Action Employer

FACULTY POSITION—Department of Biological Chemistry, University of California, Davis, School of Medicine. Applications are invited for a faculty position at the rank of assistant or associate professor, to begin spring or summer 1980. Candidate should be active in research and capable of contributing significantly to medical school and graduate teaching in the areas of biochemistry, physiological chemistry, cellular, and molecular biology. Quality and originality of research will receive greater emphasis than field of specialization, although potential to enter into interdisciplinary research within the department, encompassing the areas mentioned above, will be given favorable consideration. Applicants should send curriculum vitae, list of publications, future research plans, and the names of at least three individuals from whom letters of recommendation may be solicited by the Search Committee to: **Dr. Robert R. Traut, Chairperson, Search Committee, Department of Biological Chemistry, School of Medicine, University of California, Davis, Calif. 95616.** Completed applications should be received not later than 5 January 1980. *The University of California is an Affirmative Action/Equal Opportunity Employer. Women and minority candidates are encouraged to apply.*

NATIONAL SCIENCE FOUNDATION

POLICY ANALYST

The National Science Foundation (NSF) is seeking qualified applicants for the position of **policy analyst** with the Technology Assessment and Risk Analysis (TARA) Group of the Division of Policy Research and Analysis, Directorate for Scientific, Technological, and International Affairs. The position is excepted from the competitive civil service and is equivalent to GS-12/13 (salary range: \$24,703 to \$38,186 per annum).

The TARA Group supports studies of the planned and unplanned consequences of technological change. These studies encompass specific technologies as well as methodological improvements. The successful applicant will be expected to concentrate on risk issues. Applicants should have a Ph.D. in the physical or social sciences or engineering, and 5 years of additional policy-related experience. Experience should involve research administration and should include conducting and managing studies; the design of surveys; application of sampling theory; use of methods of statistical inference; game theory; and decision science. The applicant will be expected to participate in the preparation of background papers, reports, analyses, and memoranda which interpret data and/or research findings in terms of implications for public policy, current options, and alternative ways of implementing particular policies. Those interested should send current résumés by 17 January 1980 to: The National Science Foundation, Division of Personnel and Management, Room 212, 1800 G Street, NW, Washington, D.C. 20550, attention: Odessa G. White. NSF is an Equal Opportunity Employer.

NATIONAL SCIENCE FOUNDATION OFFICE OF PROGRAM INTEGRATION PROJECT MANAGER

The National Science Foundation's Office of Program Integration (OPI), Directorate for Science Education, is seeking a qualified person who is interested in a 2-year rotational assignment at the National Science Foundation in the position of **project manager**.

A project manager is responsible for carrying out short- and long-term policy and planning analyses and coordination of OPI activities with other programs in NSF and in other agencies. Responsibilities include the formulation of designs for requisite studies and the execution of the designs and/or selection of external contractors for their execution with subsequent technical monitoring of contractors; preparation of policy statements; analyses of problems and issues in science education; provision of staff support to the assistant director for science education as required; and coordination of activities of directorate advisory committees.

The position is excepted from the competitive civil service. Salary range is from \$24,703 to \$45,126 per annum, depending on qualifications and experience. Health, life insurance, and leave benefits are available.

Qualifications: Applicants should have established credentials in a relevant field of science (including social science) such as is reflected by an earned doctorate, experience, and publication; skill or experience in research, policy analysis, data analysis and statistics, and writing and interpersonal skill. Experience with modern computers is desirable.

Meeting the responsibilities of the Office of Program Integration often requires rapid response and shifts in priorities. Thus, any individual who accepts this position must be willing to deal with a variable workload while maintaining progress on long-term projects.

Those interested in being considered for the position should send a current résumé by 17 January 1980 to: The National Science Foundation, 1800 G Street, NW, Room 212, Washington, D.C. 20550. For further information, telephone: Bessie B. White at 202-632-4106. The National Science Foundation is an Equal Opportunity Employer.

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

The National Research Council will make awards in 1980 for research under the Resident Associateship Program which provides awardees with opportunities to conduct experimental and theoretical research as visiting scientists and engineers in fields of:

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

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

Some programs are open to senior investigators as well as recent doctorates. Further details on research programs can be obtained from: Dr. L. J. Puckett, Ballistic Research Laboratory, Aberdeen Proving Ground, Md. 21005. Telephone: 301-278-2236.

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

Associateship Office (JH 608-H2)
NATIONAL RESEARCH COUNCIL
2101 Constitution Avenue, NW
Washington, D.C. 20418

Postmark deadline for application is 15 January.

EXECUTIVE DIRECTOR LOUISIANA UNIVERSITIES MARINE CONSORTIUM

The newly established Louisiana Universities Marine Consortium (LUMCON) is an organization of thirteen state universities and four higher education boards. The state legislature has provided funds for the Consortium to construct coastal research facilities and vessels and institute a program of marine-related instruction in coastal Louisiana. The principal facility will be the LUMCON Research and Education Center at Cocodrie, a coastal township near Houma, Louisiana. The Executive Director will oversee fiscal operations of the Consortium, hiring and management of support staff, finalization of facilities designs, completion of construction projects, and institution of research and education programs. Qualifications include a Ph.D. degree in an appropriate discipline, demonstrated experience and special skills in administration, acquisition of funding research, and education. Position available on or before August 1, 1980. Applications will be accepted through March 1, 1980. Letter of application, resume and references (or inquiries) should be directed to:

Dr. Darryl L. Felder, Chairman
LUMCON Council
c/o LUMCON Planning Office
P. O. Box 42451
University of Southwestern Louisiana
Lafayette, LA 70504
(318) 264-6753

The Louisiana Universities Marine Consortium is an Equal Opportunity, Affirmative Action Employer.

ENZYME—PROTEIN BIOCHEMIST

(SR. RESEARCH CHEMIST)

The Campbell Institute Research Technology is currently seeking an outstanding candidate with experience in enzymology or protein biochemistry. Successful applicants should possess a PhD with some post doctorate or industrial experience preferred. Activities of this position will include development of an innovative research program in the enzymology and biochemistry of foods. A background in the area of post-harvest physiology or enzyme applications in the food industry is desirable. Our Company offers a competitive salary along with a comprehensive benefits program. Please send resume, salary history and 3 references to:

Dr. Charles Duncan
Vice President Food Science & Technology
CAMPBELL INSTITUTE
RESEARCH & TECHNOLOGY
Campbell Place
Camden, NJ 08101

Campbell Soup Company

Campbell's
Bounty Brand

RECIPE

We Are An Equal Opportunity Employer M/F

POSITIONS OPEN

DIRECTOR, WATER RESOURCES RESEARCH CENTER UNIVERSITY OF MARYLAND COLLEGE PARK

Position requires administration of the Water Resources Research Center (WRRC) and commitment to water-related research and scholarship in a scientific discipline. The director shall be the chief administrative officer of the WRRC and shall be responsible to the provost of the Division of Agricultural and Life Sciences for the quality of research conducted through the center. Candidates must be eligible for appointment at the rank of professor in a department of the College Park campus, should have demonstrated ability to work with people and to conduct and direct water-related research, and should be experienced and successful in obtaining extramural fund support.

Send résumé and names of five references to:

Glenn W. Patterson
Chairman, Department of Botany
University of Maryland
College Park, Md. 20742

by 15 January 1980.

An Equal Opportunity/Affirmative Action Employer

ENVIRONMENTAL BIOLOGISTS

Visiting Professor in Environmental Biology. The Department of Biology of George Mason University, the State University of Northern Virginia, will have a 1-year visiting professor position available in academic year 1980-1981 for a senior-level faculty member with extensive teaching and research experience in environmental biology. In addition to classroom involvement, assistance will be expected in the development of a new environmental biology-public policy graduate curriculum. Professors on sabbatical leaves and especially those familiar with the federal establishment in Washington, D.C., are encouraged to send their curriculum vitae and names of three references by 18 January 1980 to: **Dr. Averett S. Tombes, Chairman, Department of Biology, George Mason University, Fairfax, Virginia 22030.**

Assistant Professor. Applications are also invited for an assistant professor, tenure-track position for the 1980-1981 academic year in freshwater-estuarine ecology, and environmental biology. Teaching duties would involve a graduate freshwater ecology course and some participation in the undergraduate ecology program. The development of an active research program is expected. The terminal degree is a necessity and postdoctoral experience is desirable. Send curriculum vitae and three letters of reference to the above individual by 20 January 1980.

George Mason University is an Affirmative Action/Equal Opportunity Employer and minorities are encouraged to apply.

ENVIRONMENTAL STUDIES POSITION

To teach freshwater ecology and related subjects in environmental studies, beginning fall 1980. Ph.D. required; interdisciplinary interests and postdoctoral experience preferred. One-year appointment, assistant or associate professor, renewable; nontenure track. Send résumé and description of teaching and research interests by 11 January 1980 to: **Search Committee, Huxley College of Environmental Studies, Western Washington University, Bellingham, Wash. 93225.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION DEPARTMENT OF ZOOLOGY UNIVERSITY OF HAWAII AT MANOA

The Department of Zoology, University of Hawaii at Manoa, invites applications for a tenure-track position to teach comparative anatomy and biology of vertebrates. Duties will begin in August 1980. Appointment will be made at the assistant professor level. Candidates must have a Ph.D. degree. Particularly sought are applicants with research interests in some aspect of the biology of marine fishes. Applicants should send a letter expressing philosophy of teaching and detailing the kind of research he/she would pursue at the University of Hawaii, curriculum vitae, copies of recent publications and funded grant proposals, and names of three references to: **Dr. Fred I. Kamemoto, Department of Zoology, 2538 The Mall, University of Hawaii at Manoa, Honolulu, Hawaii 96822.** Applications must be received by 15 January 1980. *The University of Hawaii is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

EXECUTIVE SCIENTIST POSITION The Joint Institute for the Study of the Atmosphere and Ocean University of Washington Seattle, Wash. 98195

EXECUTIVE SCIENTIST—Air Sea Interaction
Two-year appointment as executive scientist for the Storm Transfer Response Experiment with possible extension. Doctoral degree required with experience in air-sea interaction research. Responsible for scientific coordination and organization of data analysis. To begin 1 January 1980 or as soon as possible. Salary: \$18,000 to \$20,000, depending on qualifications, plus university benefits. Apply to: **Dr. Robert G. Fleagle, Department of Atmospheric Sciences, University of Washington, AK-40, Seattle, Wash. 98195.** Closing date: 1 January 1980.

An Equal Opportunity/Affirmative Action Employer

FACULTY OPENING. General science with background in teacher education. Areas of teaching include: science for elementary education majors, methods of teaching science and general science (including geology). Doctorate required. Send résumé to: **Dr. Mike Harrelson, Chairman, Department of Natural Sciences, Gardner-Webb College, Boiling Springs, N.C. 28017.**

An Equal Opportunity Employer

FACULTY POSITION IN BIOLOGY. Mary Baldwin College, a private, liberal arts college for women, has an opening beginning September 1980. Primarily the position entails teaching courses in microbiology, cell biology, developmental biology, and immunology. Primary consideration will be given to applicants who hold the doctorate or who are candidates for the degree. Salary and rank are dependent upon qualifications. Some teaching experience is desirable. Send curriculum vitae, including transcripts of undergraduate and graduate study, and three recommendations, by 1 February to: **Dean Dorothy M. Mulberry, Mary Baldwin College, Staunton, Virginia 24401.** *An Equal Opportunity/Affirmative Action Employer.*

NORTHWESTERN UNIVERSITY GEOLOGICAL SCIENCES

Seizing an opportunity to strengthen the department, the department plans to recruit five faculty over the next 2 years. Two or three of the following positions are to be filled in 1980:

SENIOR PROFESSOR (to become William Deering Professor on retirement of L. L. Sloss in 1981) to provide leadership in broad Crustal Evolution Program; global stratigraphy and sedimentation or some analogous fields.

GEOCHEMIST (probably assistant or associate professor) with strong kinetics-thermodynamics background and interests in chemical and physical interactions among surface waters, sediments, and atmosphere.

Solid earth GEOPHYSICIST (assistant professor): theoretical methodology would be most compatible with general departmental research, but search not limited to theorists.

Send nominations, applications, and inquiries to: **E. H. Timothy Whitten, Chairman, Department of Geological Sciences, Northwestern University, Evanston, Illinois 60201.**

An Equal Opportunity/Affirmative Action Employer

The University of Texas Medical Branch at Galveston, Texas, is seeking a **HEALTH PHYSICIST** to conduct the radiation safety program for a large medical center. The applicant should have a M.S. degree in health physics or a related field and several years of pertinent experience in a medical institution. Teaching experience is highly desirable. Salary is negotiable, depending on qualifications. *We are an Equal Opportunity/Affirmative Action Employer, M/F/H.* Reply to: **Personnel Office, P.O. Box 146, University of Texas Medical Branch, Galveston, Texas 77550, attention: Leo Wade, Jr., Ph.D.**

Medical Geneticist. (M.D.) for state-funded faculty position. Growing department has comprehensive teaching program; clinical activities extend to 31 counties in Alabama and adjoining Florida and Mississippi areas under state and federal sponsorship. Position offered is compatible with various clinical and research interests. Apply to: **W. Wiertelick, M.D., Department of Medical Genetics, University of South Alabama Medical Center, Mobile, Ala. 36617.** Telephone: 205-476-6305. *Equal Opportunity Employer.*

POSITIONS OPEN

GEOLOGY—Assistant professor, tenure-track position starting in September 1980, in a new geology B.S. program at George Mason University, a state university located 10 miles south of the U.S. Geological Survey in Reston and 15 miles west of the Smithsonian Institute in Washington, D.C. Applicants will be considered if they have a Ph.D. by June 1980, and a background sufficient to teach basic undergraduate geology courses plus advanced courses in a specialized field such as soft rock geology, fossil fuels and mineral resources, and/or geomorphology. Research is encouraged and preference will be given to candidates whose research interests complement those of current faculty members. Send résumé, statement of research interests, and names of three references by 15 January 1980 to: **Douglas Mose, Department of Chemistry, George Mason University, Fairfax, Virginia 22030.** Minorities are encouraged to apply. *George Mason University is an Equal Opportunity/Affirmative Action Employer.*

INSECT PHYSIOLOGIST

A tenure-track faculty appointment at the assistant professor level is now anticipated for fall 1980. Applicants must have a Ph.D. and qualifications to carry out independent research in insect physiology. The candidate must be capable of: (i) developing an active research program and guiding graduate research in physiological approaches to growth, development, or behavior, and (ii) teaching appropriate graduate and undergraduate courses.

Applications must include current curriculum vitae and a statement of professional goals. Inclusion of reprints is recommended. The applicant should ask referees to send their letters, prior to the closing date of 1 March 1980, to:

**Dr. William J. Bell, Chairperson
Insect Physiologist Search Committee
Department of Entomology
University of Kansas
Lawrence, Kansas 66045**

The University of Kansas is an Equal Opportunity/Affirmative Action Employer. Applications are encouraged from all qualified candidates regardless of race, color, national origin, or sex.

MAMMALIAN PHYSIOLOGISTS AND BIOPHYSICISTS. Positions open for the 1980-1981 academic year in the areas of cardiovascular physiology, renal physiology, gastrointestinal physiology, endocrinology, reproductive physiology, and respiratory physiology at King Faisal University College of Medicine in Dammam, Saudi Arabia. Ph.D. and/or M.D. and at least 2 years of teaching experience. Salaries are highly competitive and benefits are excellent. Language of instruction is English. Send complete curriculum vitae with telephone numbers and three references to: **Dr. Tawfig Tamimi, Dean, College of Medicine, King Faisal University, c/o Saudi Arabian Educational Mission, 2221 West Loop South, Houston, Texas 77027.**

METABOLISM/BIOCHEMISTRY. The University of California, San Francisco, is seeking qualified candidates with Ph.D. degree in chemistry or biochemistry for appointment as adjunct associate professor of medicine. Successful candidate will be experienced in studies of metabolism and analysis, including radioimmunoassay, of vitamin D and its metabolites; will supervise vitamin D laboratory at the San Francisco Veterans Administration Medical Center. Responsibilities will include instruction to house staff and postdoctoral fellows in laboratory aspects of vitamin D and related research. Please send inquiries and curriculum vitae to: **David Zakim, M.D., 151-K, VA Medical Center, 4150 Clement Street, San Francisco, Calif. 94121.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

PHYSICAL OCEANOGRAPHER

Faculty teaching and research position, Institute of Marine Science, University of Alaska, Fairbanks. Research interests should include estuarine, coastal, or open ocean investigations in subpolar or polar oceanography. Participation in interdisciplinary studies is encouraged. Ph.D. degree in physical oceanography is preferred (or its equivalent in training or experience). Rank and salary will be determined by experience. Candidates should send résumés and names of three references to: **Dr. Vera Alexander, Acting Director, Institute of Marine Science, University of Alaska, Fairbanks, Alaska 99701.** *The University of Alaska is an Affirmative Action/Equal Opportunity Employer.* Closing date: 6 January 1980.

CHAIRMAN MEDICAL MICROBIOLOGY DEPT.

University of Wisconsin-Madison School of Medicine seeks candidates for the Chair of the Medical Microbiology Dept. This position has senior administrative responsibility for the Department including post doctoral and undergraduate education. The position will be available on or following 1 July 1980. Applications are invited at this time and until 1 February, 1980. Qualified candidates must have demonstrated high academic competence in education and research.

Applications may be initiated by sending a letter and the candidate's curriculum vitae to:

Frank C. Larson
Depts. of Pathology and Medicine
UNIVERSITY OF
WISCONSIN—MADISON
SCHOOL OF MEDICINE
600 Highland Avenue
Madison, WI 53792

The University of Wisconsin is an equal opportunity affirmative action employer.

The Australian National University invites applications for appointment as **RESEARCH FELLOW** in the **JOHN CURTIN SCHOOL OF MEDICAL RESEARCH** to commence early 1980 in the following departments:

1) BIOCHEMIST

The successful applicant will hold a Ph.D. or have equivalent experience, and will be required to undertake research on the mechanism of enzyme reaction within a group headed by Dr. J. F. Morrison. Current projects are concerned with the chemical mechanism of the reaction catalyzed by chorismate mutase-prephenate dehydrogenase, the slow-tight-binding inhibition of dihydrofolate reductase by folate analogs and the inhibition of phosphotransferases by lanthanide-nucleotide complexes. Applicants should have had postdoctoral experience in enzymology and possess expertise in kinetic and other procedures for studying enzymatic catalysis.

2) PHYSICAL BIOCHEMISTRY

Applicants should hold a Ph.D. or have equivalent experience and be interested in joining a group engaged in one of the following fields of research: the physical and chemical characterization of biological macromolecules, interacting protein systems including studies on subunit assembly, self-associations and acceptor-ligand binding (Professor L. W. Nichol and Dr. P. J. Jeffrey); studies of protein hydration and denaturation primarily involving calorimetric and spectroscopic methods (Dr. H. A. McKenzie); comparative studies of sequences and properties of transferrins, lactoferrins, α -lactalbumins, and lysozymes (Dr. H. A. McKenzie and Dr. D. C. Shaw). Further information may be obtained from Professor L. W. Nichol (head of department).

Salary on appointment will be in accordance with qualifications and experience within the range: A\$16,291 to A\$21,265 per annum. Present exchange rate: A\$1 : U.K. 0.52 : U.S. \$1.10. Appointment for 2 years or in exceptional circumstances 3 years, with possible extension to 5 years. Reasonable appointment expenses. Superannuation benefits. Assistance with finding accommodation. Prospective applicants should write to: **The Registrar, P.O. Box 4, Canberra, ACT 2601, Australia** for further particulars before submitting applications, which close on 31 January 1980.

Senior Environmental Toxicologist

**Location Duxbury,
Massachusetts**

Battelle, one of the world's leaders in contract R&D, is seeking an individual with a Ph.D. in Aquatic Life Sciences and extensive experiences in research relating to the fates and effects of toxic substances on aquatic organisms, with some emphasis on marine and estuarine systems.

Your responsibilities will include: leadership of an aquatic toxicology group; development of new research programs; and collaborative efforts in environmental field research, impact assessment, histology and analytical chemistry. Demonstrated expertise for quality research, ability to develop sponsored research, and ability to interact in a project team mode are all requirements for consideration.

We offer an excellent opportunity for career development, competitive salary and generous fringe benefits. Send your resume in complete confidence to: **Director**

William F. Clapp Laboratories
P.O. Drawer AH
Duxbury, Massachusetts 02332



Equal Opportunity Employer M/F

U.S. ENVIRONMENTAL PROTECTION AGENCY CORVALLIS ENVIRONMENTAL RESEARCH LABORATORY

The Corvallis Environmental Research Laboratory is currently recruiting for three positions: **Research Chemist**, **Photobiologist**, and **Oceanographer/Marine Biologist**, GS 12/14 (current salary range: \$24,703 to \$34,713 per annum) in Corvallis and Newport, Oregon.

RESEARCH CHEMIST: The position involves the determination of the chemical and biological fate and transport of organic and organometallic toxic substances in the environment. Biochemistry, metabolism, fate of metabolites in biological systems, and chemical structure/activity relationships will be studied as these relate to the biological food-chain processes under investigation.

PHOTOBIOLOGIST: The position of photobiologist involves program development, management, and coordination of inter- and intra-agency research on impacts and consequences of stratospheric pollution on terrestrial biota. The incumbent will perform in-house and extramural research on the effects of ultraviolet radiation on photosynthesis and other biological processes.

OCEANOGRAPHER: This position is the senior research position concerned with passage of pollutants through, and accumulation within, marine food chains. Laboratory and field investigations will be conducted to assess human exposure and risk and to provide data for use in regulatory programs. Emphasis is on municipal and industrial sources of pollutants in estuarine and near-shore coastal environments, focusing on organic pollutants attached to suspended particulates or incorporated in sediments. The position is located at Oregon State University's Marine Science Center, Newport, Oregon. Standard Form 171, Personal Qualifications Statement, should be completed and submitted to: **Las Vegas Personnel Office, P.O. Box 18417, Las Vegas, Nevada 89114**, no later than 15 January 1980 (telephone: 702-736-2969). The application form is available from any federal agency or the Office of Personnel Management.

BACTERIAL PHYSIOLOGIST/ BIOCHEMIST

We are seeking a senior PhD level person as principle investigator in the development of reagents used in the rapid detection and diagnosis of bacterial infection and related illness.

Strong background in the physiology and biochemistry of bacterial cell wall syntheses is essential. In addition, the successful candidate will be experienced in the purification of bacterial cell wall antigens and in fluorescent labeling procedures. The ideal candidate will be comfortable with advanced instrumentation and will have experience at the project leader level.

We offer a creative work environment, excellent salary and the opportunity to be a significant contributor in the dynamic health care field. Please send your resume and salary history to: F.R. Wilson,

BECTON DICKINSON
Research Center
P.O. Box 12016
Research Triangle Park, N.C. 27709
An Equal Opportunity Employer M/F

**BECTON
DICKINSON**

Government of Papua New Guinea Department of Minerals and Energy SENIOR GOVERNMENT VOLCANOLOGIST

A vacancy exists for a **GEOLOGIST** to plan and direct the operations of the Volcanological Section of the Department of Minerals and Energy involving the provision of volcanic prediction and reporting services and associated research.

Applicants should possess an appropriate university degree with studies in appropriate subjects and preferably have considerable experience and competence in volcanology.

Remuneration: K15,630 per annum plus K3,751 per annum gratuity. (Approximately U.S.\$26,939 gross per annum.)

Conditions of service:

- Three-year contract,
- Fares paid to and from Papua New Guinea for employee and family,
- Gratuity is payable in lump sum or installments and taxed at a flat rate of 2 percent,
- Rent-free accommodation provided,
- Leave fares to home country once during 3-year contract, and
- Generous educational subsidies for dependent children.

Applications, including full details of qualifications and experience, should be forwarded to:

The Recruitment Representative
Government of Papua New Guinea
G.P.O. Box 4201
Sydney, Australia 2001

Further details will be provided upon receipt of applications or on request.

In reply, please quote advertisement number 128/43.

POSITIONS OPEN

MICROBIAL ECOLOGIST

The Institute of Marine Science at the University of Alaska will fill at the rank of assistant professor a tenure-track position in one of the several areas related to marine microbial processes. The successful applicant will provide evidence of a strong background in fundamentals and of experience related to natural processes. Participation in interdisciplinary studies is encouraged. A letter of application, curriculum vitae, and the names of three references should be sent to: **Dr. Vera Alexander, Acting Director, Institute of Marine Science, University of Alaska, Fairbanks, Alaska 99701.** The University of Alaska is an Affirmative Action/Equal Opportunity Employer. Closing date: 6 January 1980.

NEUROSCIENTIST—ASSISTANT PROFESSOR

The Department of Anatomy at the University of Minnesota Medical School is seeking applicants for a faculty position at the assistant professor rank. Qualifications for the position include pre- and/or postdoctoral training in experimental studies of the nervous system especially pertaining to pain, neurotransmitter histochemistry, receptor localization, development, remodeling, aging, or membrane-specific proteins. Applicants should have a strong interest in teaching neuroanatomy to medical and dental students, in participating in teaching a graduate-level neuroscience course, and the potential to develop an independent research program. Letters of application, curriculum vitae, a proposed research program, and three letters of reference must be received by 15 January 1980. Send to: **Dr. David W. Hamilton, Professor and Head, Department of Anatomy, 4-135 Jach, 321 Church Street, SE, University of Minnesota, Minneapolis, Minn. 55455.** An Equal Opportunity Educator and Employer

OCEANOGRAPHY

Opening in undergraduate program, **Sea Semester**, for Ph.D. to teach introduction to marine science. Each semester entails 6 weeks of intensive classroom instruction followed by 6 weeks of research and teaching at sea on board R/V *Westward*. Initial 1-year contract. Nine months of duty includes two of the above cycles and administration/research ashore. Total sea time: 15 weeks per year in waters Caribbean to Newfoundland. Position to be filled by late spring/early summer 1980. Salary appropriate to qualifications and experience. Résumé and three references by 15 January 1980 to: **Dean of Sea Semester, Sea Education Association, Box 6, Woods Hole, Mass. 02543.**

An Equal Opportunity Employer

PHARMACOLOGIST(S). The Department of Physiology and Biophysics at Colorado State University (CSU) has two regular faculty position openings for pharmacologists. Applicants should have D.V.M., M.D., or Ph.D. degrees. The positions will involve teaching in the professional veterinary curriculum as well as participation in the department's graduate program. An interest in interaction with clinicians in the teaching hospital is encouraged. Successful applicants will be expected to maintain an active research program and be willing to collaborate with other researchers in the department. Rank is open, but we wish to fill at least one of the positions at the entry level. Applications will be accepted until the positions are filled. Letter of application and curriculum vitae should be addressed to: **R. W. Phillips, D.V.M., Ph.D., Chairman, Search Committee, Department of Physiology and Biophysics, Colorado State University, Fort Collins, Colo. 80523.** CSU is an Equal Opportunity/Title IX Employer. Equal Opportunity Office: 314 Student Services Building.

PHYSIOLOGICAL ECOLOGIST/ INVERTEBRATE ZOOLOGIST

The University of Pittsburgh at Johnstown (UPJ), an undergraduate college of the University of Pittsburgh system, invites applications for a tenure-stream position in the Division of Natural Sciences starting September 1980. Applicants will be expected to teach animal physiology, participate in the general biology program, and contribute to biological offerings in general ecology and invertebrate zoology. Applicants should have a Ph.D. and teaching experience. In addition, applicants must demonstrate a continued commitment to professional development. Send letter of application, curriculum vitae, and three letters of reference before 15 February 1980 to: **Dr. Neil D. Woffinden, Division of Natural Sciences, University of Pittsburgh at Johnstown, Johnstown, Pa. 15904.** UPJ is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

PHYSIOLOGIST—Background in classical or traditional cardiovascular physiology, preferably with a Ph.D. in physiology, although candidates not holding a Ph.D. but with extensive background or candidates with either an M.D. or D.V.M. would also be considered. The work is in grant-supported research on animals with total artificial hearts or circulatory-assist devices in a well-established, well-equipped laboratory. Would strongly consider applicant bringing some funded research in own area. Salary negotiable.

Letters of application, including résumés, should be sent to: **Willem J. Kolff, M.D., Ph.D., Director of Institute for Biomedical Engineering, University of Utah, Building 518, Salt Lake City, Utah 84112.**

The Institute for Biomedical Engineering and Division of Artificial Organs of the University of Utah are Equal Opportunity Employers, M/F.

PLANT ECOLOGIST

The Botany Department, Clemson University, has an opening for a plant ecologist (Ph.D.). Position is tenure track at the rank of assistant professor. Begins 15 August 1980. Successful applicant will be competent to teach plant ecology at the senior/graduate level, physiological plant ecology, and graduate-level special topics courses in field of interest. Applicant should be strong in statistical analysis as well as physiologically oriented. Deadline: 10 March 1980.

Forward final transcripts, résumé, and three letters of reference to:

**C. R. Dillon, Head
Botany Department
Clemson University
Clemson, South Carolina 29631**

Clemson University is an Equal Opportunity/Affirmative Action Employer.

PLANT PHYSIOLOGIST. Assistant professor or higher. The Department of Biology of The Pennsylvania State University announces a full-time, tenure-track position for a qualified plant physiologist starting no later than 1 September 1980. The candidate chosen will be expected to develop a strong research program, to train graduate students, and to participate in graduate and undergraduate teaching. Research interest preferred, but not limited to, photosynthesis, nitrogen fixation, phytohormones, and phytochemistry. Ph.D. required and postdoctoral experience desirable. Send curriculum vitae and three letters of reference by 1 February 1980 to: **Robert H. Hamilton, Chairman, Plant Physiology Search Committee, 202 Buckhout Laboratory, Box A, The Pennsylvania State University, University Park, Pa. 16802.**

An Equal Opportunity/Affirmative Action Employer

PLANT TAXONOMIST. Full-time research position available immediately for Ph.D. with broad interests in Mexican floristics and taxonomy of a large family (*Compositae*, *Rubiaceae*, and so forth). Salary ranges from \$14,400 to \$17,600 per annum, according to experience and qualifications. Send curriculum vitae and two letters of reference to: **Dr. J. Sarukhán, Director, Instituto de Biología UNAM, Apdo. Postal 70-233 México 20, D.F.**

POSTDOCTORAL ASSOCIATE. Position available 1 September 1980 for research in quantitative genetics and evolution of mammalian thermoregulation, renewable for 2 years. Prefer applicants with training in statistics, quantitative genetics, or evolutionary and population biology. Minimum salary: \$12,000. Send curriculum vitae and three letters of reference to: **Dr. Carol B. Lynch, Department of Biology, Wesleyan University, Middletown, Conn. 06457.** An Equal Opportunity/Affirmative Action Employer.

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

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study membrane transport and metabolism in maturing reticulocytes and erythrocytes. Starting salary negotiable. Send curriculum vitae and names of three references to: **Dr. H. D. Kim, Department of Pharmacology, The Medical Center, University of Alabama in Birmingham, Birmingham, Ala. 35294.** An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.

POSTDOCTORAL POSITION in photochemistry and photobiology available for studies of direct and photosensitized ultraviolet light damage to cell membranes and DNA. Ph.D. in organic chemistry and/or biochemistry required. Send curriculum vitae and letters of reference to: **Dr. L. C. Harber, Department of Dermatology, College of Physicians and Surgeons, Columbia University, 630 West 168 Street, New York, New York 10032.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS available immediately. Interdisciplinary teams concentrating in one of three areas may be able to accept a fellow. The areas are: (i) cerebral hemispheric asymmetry in human and animals with neurochemical, pharmacological, and electrophysiological methods; (ii) the role of peptides in the regulation of behavior using voltage-clamp studies of the actions of peptide neurotransmitters on molluscan neurons; and (iii) neurophysiological and neuroanatomical studies with animal and human psychophysics and biomedical engineering directed towards understanding coding and feature extractions in the auditory nervous system. Send current curriculum vitae, three letters of reference, and summary of special interests to: **Harman V. S. Peeke, Ph.D., Director, Interdisciplinary Training Program, Department of Psychiatry, University of California, San Francisco, San Francisco, Calif. 94143.** The University of California is an Equal Opportunity Employer. Minorities and women are urged to apply.

POSTDOCTORAL POSITIONS are available in the Department of Biochemistry in the following areas: (i) structure-function relationships in plasma membrane proteins; (ii) mitochondrial respiratory components; (iii) platelet aggregation; (iv) hormone-stimulated pancreatic secretion; (v) role of Ca^{2+} and calmodulin; (vi) hormone receptors in experimental mammary cancer; (vii) hemoprotein chemistry; and (viii) peroxidase antimicrobial activity. Stipend: \$13,000 and above, depending on experience. Please send curriculum vitae, a statement of research interests, and the names of three references to: **Department of Biochemistry, St. Jude Children's Research Hospital, P.O. Box 318, Memphis, Tennessee 38101.**

POSTDOCTORAL POSITION: Cell Biology. Available 1 April 1980 for study of regulation of DNA replication and functions of tumor antigens in mammalian cells. Background in cell culture required. Training in molecular biology of nucleic acids, animal virology, or somatic cell genetics helpful. Recent Ph.D. preferred. Group includes other postdoctoral fellows and graduate students. Opportunity available for interaction with other groups interested in nucleic acids research. Send curriculum vitae and references to: **Dr. Roger Hand, McGill Cancer Centre, 3655 Drummond, Montreal, Quebec, Canada H3G 1Y6.**

POSTDOCTORAL RESEARCH ASSOCIATE

To complete and extend a numerical simulation of plasma sheaths associated with spacecraft charging phenomena at geosynchronous altitudes. Required: a strong background in scientific computing and applied mathematics, together with expertise in collisionless plasma theory and/or magnetospheric physics. Salary and benefits appropriate to qualifications and experience. Send résumé, publications list, and names of three referees to: **Dr. J. G. Laframboise, Physics Department, York University, Toronto, Canada M3J 1P3.**

VIROLOGIST, Ph.D.—The Diabetes Research Laboratory, Division of Arteriosclerosis and Metabolism, Department of Medicine, The Mount Sinai School of Medicine, is seeking a Ph.D. virologist with at least 3 years of postdoctoral experience. Faculty position will be at the instructor or assistant professor level, depending on qualifications. Salary will be commensurate with experience. Research is in viral etiology of diabetes mellitus in animal models and man. Please send curriculum vitae and three letters of recommendation to: **Dr. E. J. Rayfield, Department of Medicine, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029.** An Equal Opportunity Employer.

**UNIVERSITY OF
WAIKATO**
Hamilton, New Zealand
LECTURER IN
EARTH SCIENCES

The University of Waikato invites applications for the position of Lecturer in Earth Sciences. The appointment may be made for a limited term. The appointee should be able to undertake and supervise research in either engineering hydrology or in the physics and hydraulics of water and sediment motion in fluvial, estuarine, or coastal environments. Some general teaching in hydrology at undergraduate level will also be required.

The salary will be in the range for Lecturers: NZ\$13,722-\$16,861 per annum.

Further information on the method of application and general conditions of appointment is available from the Registrar, University of Waikato, Private Bag, Hamilton, New Zealand or from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF. Enquiries of an academic nature may be made to Professor J.D. McCraw, Head of Earth Sciences, in the University.

Applications close on 12 January 1980.

COAL CHEMIST

If you are a creative, resourceful chemist, (Ph.D.), with some knowledge of the coal industry, this innovative Fortune 100 chemical company has an opening that will challenge your initiative and professional expertise.

You will lead a group conducting basic studies of coal chemistry and coal processing, in an interdisciplinary catalysis department performing organometallics research. You'll work in a stimulating atmosphere, where both exploratory and fundamental approaches are stressed. We are results-oriented and encourage publication of findings.

The successful candidate will have a record of academic or industrial accomplishment and approximately 8-10 years experience, including some supervisory background.

Our company offers the salary to match your talents and experience, and the finest benefits available. Please send your resume and salary history in strictest confidence to:

Box 347, SCIENCE

An Equal Opportunity Employer

RESEARCH ASSOCIATE

SYNTEX, a leading multinational Pharmaceutical/Life Sciences firm on the SAN FRANCISCO PENINSULA, offers a challenging opportunity to be involved in the development of methods for the determination of extremely low concentrations of steroidal hormones in various biological media. You will collaborate with other SYNTEX R&D groups involved in RIA and GC/MS.

Position requires considerable experience with HPLC and GLC combined with strong background in physical chemistry & mathematics. You must be conversant with separation techniques & instrumentation. PhD in Chemistry/Biochemistry.

SYNTEX offers a stimulating environment and most attractive salaries & benefits. Please send resume, including salary history, to R. E. Torrence (Refer to Job #8658), SYNTEX, 3401 Hillview Ave., Palo Alto, CA 94304. We are an equal opportunity employer.

SYNTEX

Berlex Laboratories is a recently incorporated subsidiary of Schering AG (West Germany) created by the acquisition of the Internal Medicine Division of Cooper Laboratories, Inc. Located in the scenic Morris County Community of Cedar Knolls, New Jersey, Berlex Laboratories offers desirable suburban living and recreational opportunities within easy commuting distance of the Metropolitan New York Area. Schering AG, Berlin, West Germany, is not connected with Schering-Plough Corporation of Kenilworth, New Jersey.

ASSISTANT DIRECTOR, DRUG REGULATORY AFFAIRS

Responsibilities will include supervision of the preparation of IND's and NDA's; review and approval of preclinical and clinical study protocols and reports including toxicity, ADME, safety, efficacy and bioavailability; GLP and GCP auditing, and FDA Liaison. PhD in toxicology, pharmacology or related discipline, and knowledge of the regulatory process are required. Starting salary commensurate with experience.

Resume should include salary history or requirements and professional references. Send to:

Mr. J. MacLachlan

BERLEX
Laboratories Inc.

110 E. Hanover Avenue, Cedar Knolls, N.J. 07927
An Equal Opportunity Employer M/F

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Stream ecology in tallgrass prairie ecosystems with emphasis on organic matter budgets to compare tallgrass prairie and gallery forest channels on the Konza Prairie Research Natural Area. Send résumé and three letters of reference by 31 December 1979 to: **G. R. Marzolf, Division of Biology, Kansas State University, Manhattan, Kans. 66506.** *Kansas State University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Position available January 1980, for study of the interaction of active oxygen species (superoxide radicals, hydroxyl radical, and singlet molecular oxygen) with metal-cations, metal-complexes, and compounds of biological interest. Applicants should send résumés to: **Dr. B. Bielski, Chemistry Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973.** *An Equal Opportunity Employer, M/F.*

PRODUCT DEVELOPMENT—ELECTROPHORESIS SYSTEM

Isolab is an established leader in the field of gel electrophoresis. We are seeking an experienced individual to develop new electrophoresis products, techniques, and applications. Responsibilities will include all areas of new product development: testing and evaluation, applications research, manufacturing processes, supporting technical literature and service.

Send résumé with salary requirements in full confidence to: **Personnel Manager, Isolab, Inc., P.O. Box 4350, Akron, Ohio 44321.**

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

An Equal Opportunity/Affirmative Action Employer

VISITING PROFESSOR OF BIOLOGY

The University of Miami invites applications and nominations for the position of **DISTINGUISHED VISITING PROFESSOR OF BIOLOGY** for the 1980-1981 academic year. We seek a person at the rank of associate or full professor with a distinguished record of research in any of several biological disciplines. The successful applicant will be expected to offer a short lecture series in his/her areas of expertise, to utilize departmental resources for their continuing research, and to complement and augment a faculty whose collective interests include botany, cellular and molecular biology, developmental biology, physiology, population and community ecology, genetics, and evolutionary biology. Salary will be commensurate with experience and qualifications; appointments will be made for up to 1 year's duration.

Submit curriculum vitae, names of four references, and representative reprints to:

**Chairperson, Visiting Professor Search Committee
Department of Biology
University of Miami
P.O. Box 249118
Coral Gables, Florida 33124**

Deadline for receipt of applications is 15 February 1980.

RESEARCH ASSOCIATE

Research associate in vector biology to work in developing program on bluetongue. Must have a strong background in entomology; field experience with *Culicoides* desirable. Salary: \$13,000 to \$15,000 per year. Open immediately. Send résumé and three letters of reference to:

**Dr. E. C. Greiner
Department of Preventive Medicine
College of Veterinary Medicine
Box J 136
University of Florida
Gainesville, Florida 32610**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE IN BIOMEDICAL SCIENCES.

Position available in research program investigating the pathophysiology of exocrine secretion in cystic fibrosis. Experience in electrolyte transport physiology, molecular biology, or pharmacology helpful. Backgrounds in engineering, physics, or chemistry also considered. Annual salary: \$13,500 to \$17,000, depending on experience. Send curriculum vitae to: **Dr. Paul Quinton, Biomedical Sciences, University of California, Riverside, Calif. 92521.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

QUANTITATIVE POPULATION BIOLOGY. Applications invited for tenure-track position with primary teaching responsibility in undergraduate-level courses in general biology and to develop advanced-level courses in biostatistics and quantitative population biology. Excellence in teaching essential. Individual must also pursue a productive research program and direct graduate students. Preference to those interested in field studies and with a zoological background. Appointment level expected as assistant professor. Send curriculum vitae, three letters of recommendation, reprints and description of research program, and a summary of teaching capabilities to: **John C. Downey, Ph.D., Head, Department of Biology, University of Northern Iowa, Cedar Falls, Iowa 50613.** Closing date: 15 January 1980. *The University of Northern Iowa is an Equal Opportunity/Affirmative Action Employer and welcomes nominations and applications of women and minority group members.*

RESEARCH ASSISTANT PROFESSOR OR RESEARCH ASSOCIATE

Biochemist/Immunologist/Cell Biologist to compare cell surface antigens of immunogenic, nontumorigenic mouse melanoma cells with tumorigenic line. Postdoctoral experience required. Salary negotiable. Send curriculum vitae, publications, and three names of referees. **POSTDOCTORAL RESEARCH POSITION** also open for recent Ph.D. in above areas or melanogenesis and differentiation. **Dr. S. Silagi, Cornell University Medical College, 515 East 71 Street, New York, N.Y. 10021.** *Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE. Two postdoctoral positions in endocrinology are available immediately for the study of the mechanism of glucocorticoid hormone action in rat liver. Starting salary range: \$10,000 to \$12,000. Send curriculum vitae and two letters of recommendation to: **Dr. M. Kalimi, Department of Physiology, Medical College of Virginia, Richmond, Virginia 23298.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE in chemical-physical studies of adenylate kinases. Requirements are Ph.D. or equivalent with strong interest in and at least 1 year of experience in the purification of phosphotransferyl and other enzymes and familiarity with such techniques as affinity chromatography, equilibrium dialysis studies, chemical modification, electrophoresis, fluorescence spectroscopy, use of radioisotopes, and amino acid sequencing. Salary: \$12,000 to \$14,000. Send résumé with three references to: **Dr. L. Noda, Department of Biochemistry, Dartmouth Medical School, Hanover, N.H. 03755.** *An Affirmative Action/Equal Opportunity Institution.*

The Australian National University invites applications for appointment as **RESEARCH FELLOW** in the **ULTRAVIOLET PHYSICS UNIT** of the Research School of Physical Sciences. The unit investigates laboratory problems of astrophysical and atmospheric significance and collaborates with members of the Mount Stromlo and Siding Spring Observatories and the Plasma Research Laboratory of the Research School of Physical Sciences. Applicants should have research experience in one or more of the following fields: photoionization and photoabsorption in atmospheric gases, VUV spectroscopy, plasma spectroscopy, laboratory astrophysics, evolution of the atmosphere, space astronomy, computer control of atomic and molecular physics experiments. Salary on appointment will be in accordance with qualifications and experience within the range: A\$16,291 to A\$21,265 per annum. Present exchange rate: A\$1 : U.K. 0.52 : U.S.\$1.10. Appointment for 3 years with possible extension to 5 years. Reasonable appointment expenses. Superannuation benefits. Assistance with finding accommodation. Prospective applicants should write to: **The Registrar, P.O. Box 4, Canberra, ACT 2601, Australia,** for further particulars before submitting applications, which close on 31 January 1980.

POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR OF UROLOGY

The Department of Urology at the University of Pennsylvania is seeking pharmacologist (Ph.D.) with at least 6 years of experience in biochemical and molecular pharmacology for a nontenured faculty position. Applicant must have a proven ability to organize and conduct a basic research program and have extensive experience in applying basic research techniques to clinical urological problems.

Applicants should submit curriculum vitae, bibliography, a two-page outline of proposed research objectives, and three letters of recommendation to: **Alan J. Wein, M.D., Urology, 5-Silverstein, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, Pa. 19104.**

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RESEARCH ASSOCIATE. Nontenure-track position for two or more years to study the neural basis of limb position sense. Ph.D. or equivalent training in neurophysiology required. Experience in recording from muscle afferents preferred. Starting salary: \$14,000. Send curriculum vitae, a list of publications and reference names and addresses to: **Dr. P. R. Burgess, Department of Physiology, University of Utah College of Medicine, Research Park, Salt Lake City, Utah 84108.** *The University of Utah is an Affirmative Action/Equal Opportunity Employer.*

SPONSORS SOUGHT

SPONSORS NEEDED for the American Medical Research Expedition to Everest in 1981. This will be the first medical scientific expedition to the world's highest mountain. We need \$300,000 (tax deductible). Information: **John B. West, M.D., Ph.D., Department of Medicine M-023, University of California, San Diego, La Jolla, Calif. 92093.**

COURSE

EMBO Advanced Laboratory Course on Molecular Biology of Membranes
Cosponsored by FEBS and SKMB
14 to 27 September 1980
Biocenter, Basel, Switzerland

The course will include review lectures, specialized lectures, and laboratory experiments. Main topics to be covered will include the physical chemistry of membranes, membrane reconstitution, and analysis of membranes by biochemical, genetic, and immunological methods.

Laboratory space will be available for 24 students. The course fee will include Swiss francs 100 for registration and approximately Swiss francs 500 for accommodation and food. Fellowships will be available. Applicants will be selected on a worldwide basis. Application forms may be obtained from the organizers. Deadline for application is 1 April 1980.

Organizers:

**G. Schatz and J. Seelig
Biocenter
University of Basel
Klingelbergstrasse 70
CH-4056 Basel, Switzerland
Telephone: 061/25 38 80**

SYMPOSIUM

FIFTH BIENNIAL INTERNATIONAL SYMPOSIUM ON ALCOHOLISM
9 to 13 June 1980; Cardiff, Wales

Keynote presentation by internationally known researchers and poster presentations will address the following featured topics: peripheral pathology and markers for alcoholism; ethanol's effects on endocrine function and hormonal effects; ethanol's effects on membrane and neuronal function; electrophysiology of alcoholism, and reinforcement, preference, and peptides as determinants of alcohol intake.

For further information and abstract forms, contact: **Professor Boris Tabakoff, Department of Physiology and Biophysics, University of Illinois Medical Center, P.O. Box 6998H, Chicago, Illinois 60680.**

Organized by the International Group for Biomedical Research on Alcoholism, this symposium will be held in parallel with the 26th International Institute on the Prevention and Treatment of Alcoholism (Cardiff, Wales; 9 to 14 June 1980).

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Vice President Food Science and Technology
**CAMPBELL INSTITUTE
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Campbell Place
Camden, NJ 08101

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GENENTECH, INC. is continuing to expand its research program and is inviting applications for several positions in recombinant DNA research. Positions are available for highly qualified individuals in the areas of molecular genetics, molecular and general virology, immunology, and Bacillus and yeast molecular biology at the following levels:

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RESEARCH ASSOCIATES & TECHNICIANS: Candidates for these positions should have a B.S. or M.S. degree, significant laboratory experience and the ability to carry out a successful research program with minimal supervision.

Genentech is situated on the San Francisco peninsula and provides a stimulating working environment with competitive salaries and extensive fringe benefits. Please send a resume and list of three references to the attention of Mrs. Chris McKinley at:

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460 Pt. San Bruno Blvd.
So. San Francisco, CA 94080

Congressional Science and Engineering Fellowships

Applications Invited

The Congressional Science and Engineering Fellow Program provides an opportunity for accomplished and socially aware postdoctoral to mid-career scientists and engineers to participate in and contribute to the public policy-making processes within the Congress for approximately 1 year. Fellows work as special legislative assistants within the congressional staff system.

As the coordinator for the program, which includes 20 sponsoring scientific and engineering societies, AAAS arranges a carefully structured orientation program, guides the placement process, and arranges seminars throughout the year. In addition, AAAS sponsors one Fellow of its own (persons in all fields of science and engineering are eligible) and cosponsors at least one additional Fellow. Minority and handicapped candidates are especially encouraged to apply.

Cooperating sponsoring societies now are accepting applications for the 1980-81 Fellowships. Stipends, application procedures, and deadline dates vary by society. All Fellowships begin 1 September 1980. Applicants should contact the sponsors listed below directly at the earliest possible date.

American Association for the Advancement of Science

Director, Congressional Science and Engineering Fellow Program,
1776 Massachusetts Avenue, NW, Washington, D.C. 20036

American Chemical Society

Dr. Annette Rosenblum, 1155 16th Street, NW,
Washington, D.C. 20036

American Geophysical Union

Dr. Fred Spilhaus, 1909 K Street, NW, Washington, D.C. 20006

American Institute of Aeronautics and Astronautics

Mr. Johan Benson, Suite 606, 1625 Eye Street, NW,
Washington, D.C. 20006

American Physical Society

Dr. Mary Shoaf, 335 East 45 Street, New York, N.Y. 10017

American Psychological Association

Dr. Joann Horai, 1200 17th Street, NW, Washington, D.C. 20036

American Society for Microbiology

Dr. Robert F. Acker, 1913 Eye Street, NW, Washington, D.C. 20006

American Society of Mechanical Engineers

Mr. Mitchell Bradley, Jr., Washington Representative,
Suite 603, 2029 K Street, NW, Washington, D.C. 20006

Acoustical Society of America

Ms. Betty Goodfriend, 335 East 45 Street, New York, N.Y. 10017

Biophysical Society (in cooperation with the American Society for Photobiology)

Dr. E. L. Hess, 8706 Yarmouth Court, Potomac, Md. 20854

Conference Board of the Mathematical Sciences

(coordinator for Fellowship sponsored jointly by the American Mathematical Society, Mathematical Association of America, and Society for Industrial and Applied Mathematics) Dr. Truman Botts, Suite 457-8,
1500 Massachusetts Avenue, NW, Washington, D.C. 20005

Duke University Round Table on Science and Public Affairs

Dr. William Bevan, Duke University, Durham, N.C. 27706

Federation of American Societies for Experimental Biology

Mr. Walter Ellis, 9650 Rockville Pike, Bethesda, Md. 20014

Institute of Electrical and Electronics Engineers

Mr. Thomas Suttle, IEEE Washington Office, 2029 K Street, NW,
Washington, D.C. 20006

Society for Research in Child Development

Dr. Eileen Blumenthal, 815 15th Street NW, Washington, D.C. 20005

For additional information, write: **Dr. William G. Wells, Jr., Science Policy Programs Manager, AAAS, 1776 Massachusetts Ave., NW, Washington, D.C. 20036.**

SYMPOSIA

The Sixth Food and Drug Administration (FDA) Science Symposium on Aquaculture—Public Health, Regulatory, and Management Aspects will be held 12 to 14 February 1980, at the Science Lecture Hall, Southern University, 6400 Press Drive, New Orleans, Louisiana 70126. The symposium will examine the dangers inherent in such systems, national and international regulatory laws, and the management policies and difficulties in model and large-scale systems. For further information, contact: Dr. Charles E. Kimble, (HFY-31), FDA, 5600 Fishers Lane, Rockville, Maryland 20857.

STREAM ECOLOGY SYMPOSIUM 19 to 22 October 1980—Augusta, Georgia

The Savannah River Ecology Laboratory, in cooperation with the University of Georgia's Institute of Ecology, the U.S. Department of Energy, and the National Environmental Research Park program, will host a symposium on the ecology of lotic ecosystems. Symposium format will include presentations by invited speakers, panel discussions, and contributed papers. Abstracts due 1 June; manuscripts due 1 August 1980. For registration and additional information, contact: Thomas D. Fontaine, III, Ph.D., or Steven M. Bartell, Ph.D., Cochairpersons, Savannah River Ecology Laboratory, P.O. Drawer E, Aiken, South Carolina 29801. Telephone: 803-725-2472.

Fifth Annual Clinical Pharmacy Symposium "The Clinical Application of Cancer Agents" 8 and 9 February 1980

The Florida Agricultural and Mechanical University
School of Pharmacy
Tallahassee, Florida 32307

Speakers include: Joseph Byron, Ph.D., William Dana, Pharm.D., William Evans, Pharm.D., Anthony M. Guarino, Ph.D., Franklin Hamilton, Ph.D., Jay Herson, Ph.D., Thomas L. Lincoln, M.D., Mortimer Mendelsohn, M.D., Francisco Tejada, M.D., Lambros Tterlikkis, Ph.D., Paul V. Woole, M.D., and Gordon C. Zubrod, M.D.

For further information contact:

Leonard L. Inge, R.Ph., M.Ed.
Director of Continuing Education
Coordinator

Telephone: 904-599-3343
Lambros Tterlikkis, Ph.D.
Program Director
Telephone: 904-599-3301

Florida Agricultural and Mechanical University is approved by the American Council on Pharmaceutical Education as a provider of continuing education. This program is approved for fifteen (15) continuing education credits by the Florida Board of Pharmacy.

GRADUATE STUDY

NEUROSCIENCES AT BAYLOR COLLEGE OF MEDICINE

An interdepartmental **Neuroscience Program** is offered at Baylor College of Medicine for students interested in advanced study leading to the Ph.D. in neuroscience. The faculty of the program share common interests in neurobiology and strive to promote collaborative research intended to maximize the interdisciplinary nature of the student's education. Applications must be completed by 1 February. Applicants are notified regarding admission and financial support by 15 April. Information regarding the program curriculum, research opportunities, and application procedures may be obtained from:

Scott F. Basinger, Ph.D.
Predoctoral Director
Program in Neuroscience
Baylor College of Medicine
Texas Medical Center
Houston, Texas 77030

GRADUATE STUDIES IN ATMOSPHERIC CHEMISTRY. The Department of Chemistry, State University of New York at Albany (SUNY), invites applications for research fellowships of \$5000 plus tuition waiver for the academic year. Additional summer support of up to \$1500 is possible. The fellowships are supported by the SUNY Atmospheric Sciences Research Center, and the research pursued must be broadly relevant to the chemistry of the atmosphere. Beginning date can be spring, summer, or fall 1980. Write to: Professor Andrew J. Yench, Chairman, Graduate Admissions Committee, Department of Chemistry, State University of New York at Albany, Albany, N.Y. 12222. An Affirmative Action/Equal Opportunity Employer.

FELLOWSHIPS

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

POSTDOCTORAL RESEARCH FELLOWSHIPS Simpson Memorial Research Institute University of Michigan Medical School

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

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

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GRADUATE FELLOWSHIPS IN PHARMACOLOGY (\$5040 per year) available to all qualified predoctoral students admitted to the Ph.D. Program in Pharmacology at the University of Alabama in Birmingham beginning September 1980. Research opportunities include autonomic, biochemical, endocrine and cardiovascular pharmacology, carcinogenesis, and environmental toxicology. Apply by 1 March 1980 to: Graduate Committee, Department of Pharmacology, University of Alabama in Birmingham, Birmingham, Alabama 35294. Women and minorities are encouraged to apply.

DOCTOR OF ARTS IN BIOLOGY: FELLOWSHIPS are available for qualified persons interested in the D.A. degree in biology. The program stresses preparation for undergraduate teaching at colleges and universities. Applicants should hold a master's degree in some area of biology. Deadline for receipt of application is 1 March 1980. For more information contact: Dr. Donald P. Streubel, Chairman, D.A. Committee, Department of Biology, Idaho State University, Pocatello, Idaho 83209. An Equal Opportunity Employer.

BUSCH POSTDOCTORAL FELLOWSHIPS BUREAU OF BIOLOGICAL RESEARCH RUTGERS UNIVERSITY

Available July 1980 for studies in membrane and organelle function, immunobiology, parasitology, genetics, and reproductive biology. For further information, contact:

Dr. John W. C. Bird, Director
Bureau of Biological Research
P.O. Box 1059
Rutgers University
Piscataway, N.J. 08854

POSTDOCTORAL POSITION

Available for research on preimplantation mammalian embryos. Studies are on micromanipulation of the embryo as well as on biochemistry of development. Apply with curriculum vitae to: R. L. Brinster, Laboratory of Reproductive Physiology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pennsylvania 19104.

POSTDOCTORAL FELLOWSHIP—Applications are invited for a National Research Science Award training program in research in red blood cell diseases. Holders of M.D. degrees with 3 years of appropriate clinical training or Ph.D. degrees in a basic science with less than 3 years of postdoctoral experience who are U.S. citizens or permanent residents and who evidence a commitment to an academic health science-related career are eligible. Stipends will be in accord with NRSA and college policies. Additional information and directions for making applications may be obtained from: Ernst R. Jaffe, M.D., Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, N.Y. 10461. An Equal Opportunity Employer.

FELLOWSHIPS

POSTDOCTORAL TRAINING FELLOWSHIPS in medical genetics, available to individuals with advanced degrees altering career objectives towards medical genetics. Stipend: \$10,000 to \$13,000 per year. Opportunity for active clinical service. Applicants must be U.S. citizens/permanent residents. Write: Dr. James V. Neel, Department of Human Genetics, University of Michigan Medical School, Ann Arbor, Michigan 48109. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIPS

Three postdoctoral fellowships are available beginning 1 January 1980, at the Osborn Laboratories of Marine Sciences for studies in the following disciplines: fish pathology, fish genetics, and protozoology. Send résumés and the names of three references to:

Dr. Kenneth Gold
Assistant Director
Osborn Laboratories of Marine Sciences
New York Aquarium
Brooklyn, New York 11224

Two American Chemical Society **CONGRESSIONAL FELLOWSHIPS** begin fall 1980. Fill a staff position on Capitol Hill. For further information, write to:

Dr. Annette T. Rosenblum
American Chemical Society
1155 16th Street, NW
Washington, D.C. 20036
Telephone: 202-872-4383

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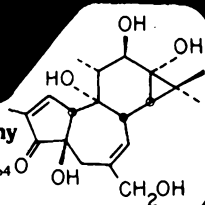
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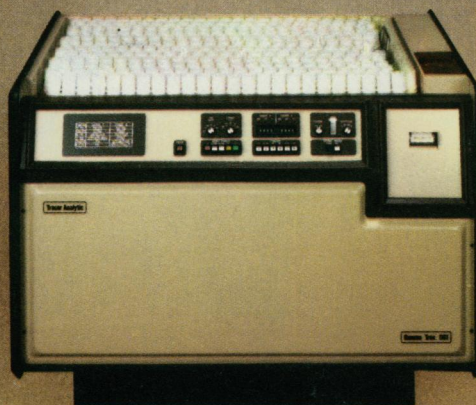
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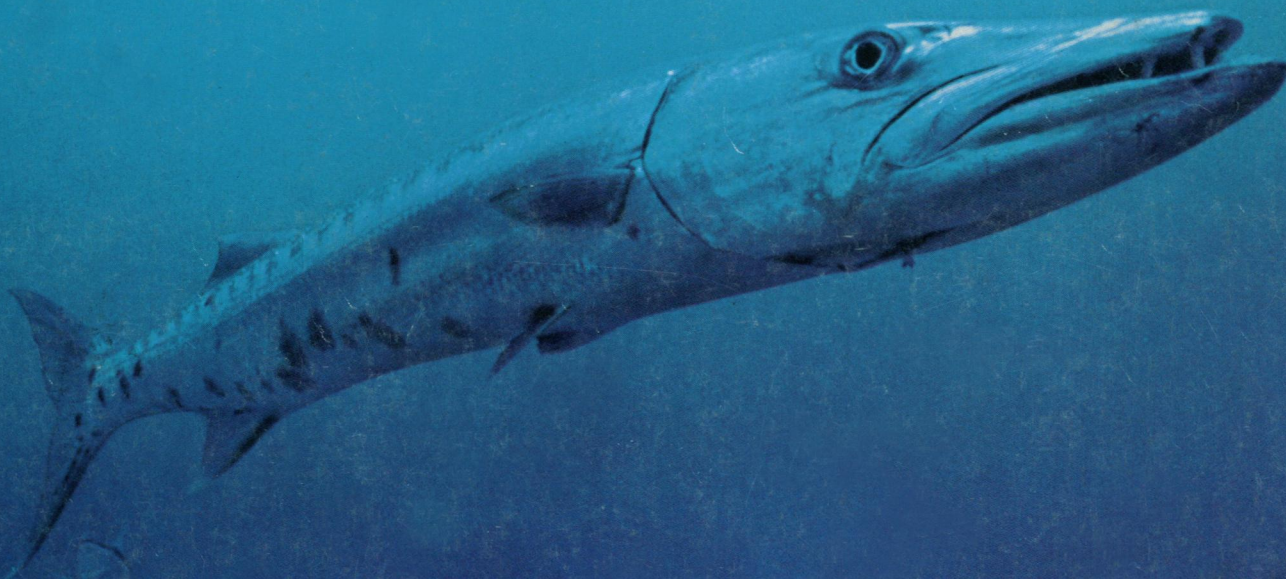
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