

PRODUCTS and MATERIALS

Oculoplethysmograph

The OPG is a noninvasive detector of carotid occlusive disease, a major cause of stroke. Early detection of a carotid stenosis that could block the carotid artery and prevent sufficient blood from reaching the brain allows preventive treatment. Transparent, contact lens-like cups are applied to temporarily desensitized eyes and sensors are attached to the ear lobes. Electric impulses from these eye and ear sensors are compared to indicate carotid efficiency. The OPG is quicker, safer, and less expensive than the arteriogram as a means of early detection of possible blockage. Narco Scientific Industries. Circle 671.

Peristaltic Pump

A two-channel peristaltic pump features variable speed control. Pumping rates from 50 to 10,000 milliliters per hour are adjustable to within 1 percent of the desired rate. Pump chamber tubing can function through up to 6 months in continuous operation. Scientific Industries. Circle 669.

Voice System for the Vocally Impaired

The Phonic Mirror HandiVoice is a portable, battery-powered electronic voice system. Model HC 120 presents a visual display and is activated by entering three-digit combinations on a calculator-like keyboard. This is for individuals whose cognitive skills exceed their motor skills. Model HC 110 features a 128-station keyboard with four overlays.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card (on pages 1098A and 1186G) and placing it in the mailbox. Postage is free.

—RICHARD G. SOMMER

This is for individuals whose motor skills exceed their cognitive skills. Each model fractures 16 simple phrases, 45 phonemes, 26 letters, and 13 morphemes. The HC 110 has a vocabulary of 373 words and the HC 120 has a vocabulary of 893 words. HC Electronics. Circle 670.

Luminescent Analytical Reagents

Reagents are available for bioluminescent measurement of adenosine triphosphate, and the reduced and oxidized forms of nicotinamide adenine dinucleotide phosphate. LUMIT is a purified luciferin-luciferase in a stabilized form; NRS is a reagent for releasing nucleotides from nonmicrobial cells; NRB releases nucleotides from microbial cells; LUMASE is purified bacterial luciferase in a stabilized form; and FMN is a pure flavine mononucleotide substrate. Pure standards and buffers are supplied separately or in application kits. Cedar Chemicals. Circle 673.

Microcomputer

The System 8813 is a disk-based microcomputer with a desktop-sized central unit that includes 16K bytes of random access memory and from one to three disk drives that accept floppy disks. There is a video monitor, a keyboard, and a software system on a miniature disk. Software is available in assembly language or in fully extended BASIC. The video display provides graphic and alphanumeric representation of data. PolyMorphic Systems. Circle 674.

Literature

pH meters lists the Accumet line of nine meters plus accessories for various uses. Fisher Scientific. Circle 700.

Biochemicals and Instrumentation for

Science includes over 200 compounds. Chemical Data Systems. Circle 701.

Mercury Penetration Porosimeters describes a series of instruments for determination of pore volume and pore size in powdered solid samples. Micromeritics. Circle 702.

Biochemicals is a 202-page reference guide and price list that features over 340 new products. P-L Biochemicals. Circle 704.

Biophot describes a research microscope which features multicoated optics that are free of chromatic aberration. Nikon Instrument Division. Circle 705.

Electrophoresis Systems are the topic of the Versatility brochure. Pharmacia Fine Chemicals. Circle 706.

Direct-Writing Recorders includes the model 2800 eight-channel device. Gould. Circle 707.

Chromatography, Electrophoresis, Immunochemistry, and Membrane Filtration are covered in a 144-page catalog. Bio-Rad Laboratories. Circle 708.

Atomic Absorption Standards is a brochure devoted to aqueous standards for trace metal analysis. Alfa Division, Ventron. Circle 675.

Quantitope is a data sheet that describes a kit for vitamin B₁₂ labeled with cobalt-57. Kallestad Laboratories. Circle 676.

Biochemical Catalog Supplement includes RIA antisera and second antibodies, endoglycosidases, and molecular recombination reagents among 20 new products. Research Products Division, Miles Laboratories. Circle 677.

Antiserum to Human Immunoglobulin G is an alkaline phosphatase conjugated antiserum described in a product profile sheet. Research Products Division, Miles Laboratories. Circle 678.

Instrument Reagent System is devoted to Autopak test delivery system for automated radioimmunoassay. Micromedic Systems. Circle 679.

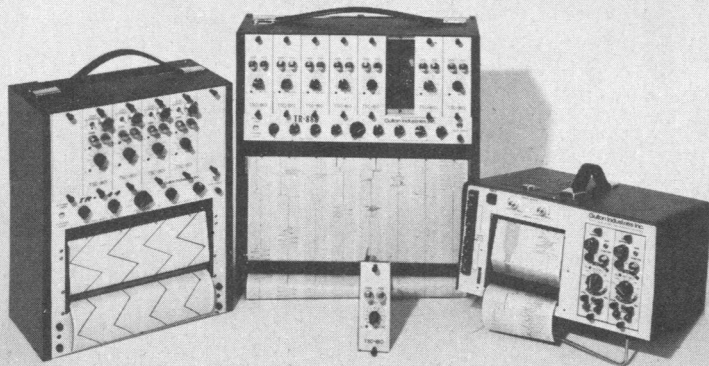
Clinical Chemistry is the topic of a newsletter. A current issue deals with aldosterone and forms of adrenal insufficiency. Diagnostic Products. Circle 680.

Laboratory Procedures features the Unopette system for preparing microsamples for hematologic analysis. B-D Division, Becton, Dickinson. Circle 681.

Systemic Autoimmune Diseases and their diagnosis in the laboratory are treated in a brochure. International Diagnostic Technology. Circle 682.

Organic Chemicals lists more than 1200 substances with their structures, physical constants, and registry numbers and with references to their uses. Parish Chemical. Circle 685.

Two weeks delivery on portable multichannel recorders



On any Gulton 2, 4, 6 or 8 channel portable with standard signal conditioners. Gulton portables are the lightest, smallest and most versatile medium frequency oscillographic recorders available. A wide range of quick-change plug-in signal conditioners permit recording of volts, amps, temperature, EKG, strain, ac to dc, log to dc, etc. Write or call for 12 page portables catalog.

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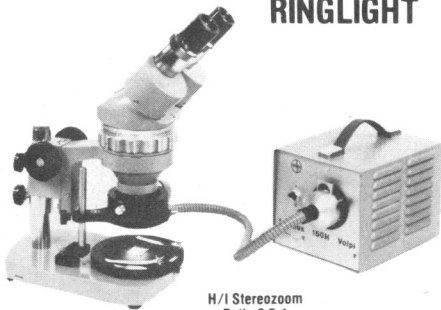
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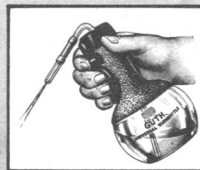
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Your experimental protocol can be impeccable, your LSC counter in A-1 condition: But if your sample is on a membrane filter, silica gel plate, or acrylamide gel slice, the cpm you obtain may be very questionable.

It's a matter of distinguishing between counting efficiency and recovery. Unless that's done properly, your results may vary by a factor of 2 or more.

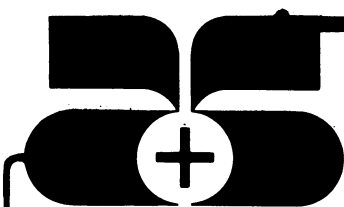
Our LSC Applications Laboratory has developed a reliable method for counting heterogeneous samples. It uses our pre-mixed scintillators, which assure consistently high recovery. Just ask for LSC Applications Note #19: *Notes on Counting Efficiency and Recovery*, by Dr. Yutaka Kobayashi and Dr. Wayne G. Harris.

NEN New England Nuclear
549 Albany Street, Boston, Mass. 02118
Customer Service 617-482-9595

NEN Chemicals GmbH: D-6072 Dreieich, W. Germany,
Daimlerstrasse 23, Postfach 401240,
Telephone: (06103) 85034, Telex: 4-17993 NEN D

NEN Canada Ltd., 2453 46th Avenue, Lachine, Que. H8T 3C9,
Telephone: 514-636-4971, Telex: 05-821808

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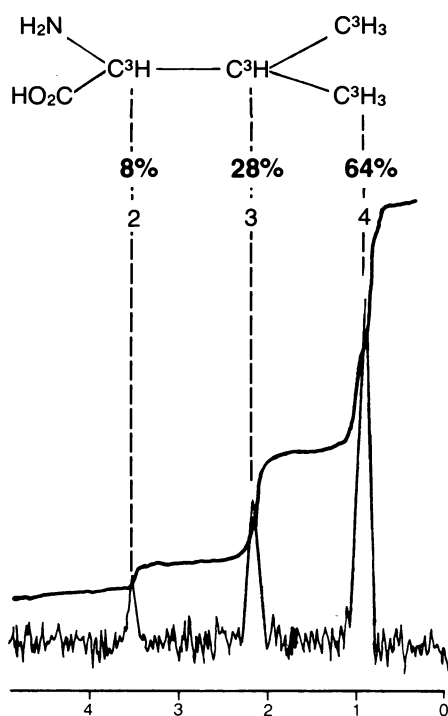


TNMR—now you know where the Tritium is!

For many applications it is important to know the distribution of tritium in a tritiated compound. Now, you can know with confidence where the tritium is located, because Amersham is using Tritium Nuclear Magnetic Resonance Spectroscopy (TNMR) to determine the distribution of tritium. For example:

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Many of the batch analysis sheets that accompany our tritiated compounds include information on the position and configuration of tritium as determined by TNMR, and we are continually analyzing additional products.

When the distribution of tritium is important, ask Amersham!

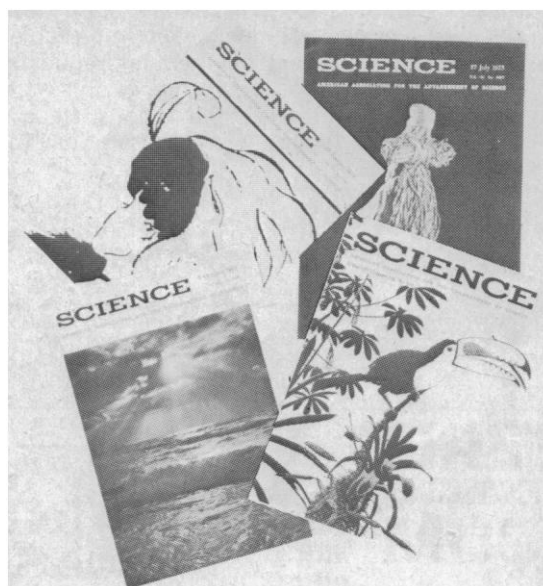
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Spend your next twelve months with **SCIENCE**



The AAAS Calendar, the first in an annual series, is beautifully adorned by spectacular and unusual color and black & white covers from Science. This useful wall calendar is ideal for noting your appointments and remembering important dates in science.

The AAAS Calendar makes the ideal gift!

Order your calendar today while copies are still available.

Price per calendar: \$5.00

Special AAAS Member price: \$4.00

For your copy of the 1978 AAAS Science Cover Calendar, which will be mailed in early December, send your name and address (plus remittance) to

AAAS Calendar
1515 Massachusetts Avenue, N.W.
Washington, D.C. 20005

Personnel Placement

Personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, or national origin.

Positions Wanted: 40¢ per word; \$10 minimum charge, per insertion. \$4 extra for use of box number. Prepayment required. Rate available only to individuals; personnel agencies, companies, colleges, and universities take display rate for all advertising.

Display (Positions Open, Market Place, and so forth): \$145 per 25 millimeters (1 column inch), minimum, per insertion (25 millimeters equals 10 lines of 50 spaces and characters each). Ads over 25 millimeters billed at \$5.80 per millimeter. No charge for use of box number. Rates net. No agency commission for ads under 4 inches. No cash discount. Prepayment required for foreign advertising. Purchase orders and billing information required for all other ads.

Advertising closing is each Wednesday, 3½ weeks before Friday issue date requested. Send copy for all positions wanted ads and display ads under 5 inches to:

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1515 Massachusetts Ave., NW
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Telephone: 202-467-4456

Send copy for display ads, 1/6 page and larger, to:

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11 West 42nd Street
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Blind Ad replies should be addressed as follows:

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Washington, D.C. 20005

POSITIONS WANTED

Biochemist. Ph.D. 1966. Background: biogenic amines/CNS; needs position immediately. Jourdian, 252 Washington Boulevard, Oak Park, Illinois 60302. Home telephone: 312-524-1756. 12/16, 23; 1/6

Biologist. B.A. Chemical mutagenesis/carcinogenesis. Four years of experience: Ames Test, Mohn E. coli, Rabin Test, toxicology. Very knowledgeable in chemical mutagenesis and in other tests. Graduate study in molecular genetics and biochemistry. Seeks rewarding position. Box 443, SCIENCE. X

Geographer. M.A. 1977, trained in survey development, administration, and analysis; seeks position in opinion research with industry, government, or university in Southwest or Mountain region. Published. Veteran. Box 444, SCIENCE. X

Histologist. Ph.D. American citizen working abroad. Dedicated teacher of excellence, mainly histology, some neuroanatomy. Long experience, including 15 years at American medical-dental schools. Organizational ability. Interest: student affairs. Average researcher, histochemistry and ultrastructure. Strong recommendations from U.S. referees. Seeks academic position, preferably with major teaching and administrative responsibilities, in medical, dental, or other schools or in college in the United States or Canada. Available for interview in the United States in February 1978. Write (air mail): 17 Dornoch Street, Dunedin, New Zealand. X

Psychopharmacologist. Ph.D., needs position change. Highly motivated and productive. Main interests include antiparkinsonism drugs, narcotics, psychotropic drugs, neurochemical correlates. Many publications; many exciting ideas. Also enthusiastic about organizing a new CNS research laboratory. Box 445, SCIENCE. 12/16; 1/6, 20; 2/3

Scientific Photographer. Ten years of varied photographic experience at major university. Excellent at designing or improvising equipment and techniques for specific needs. Strong background in biological sciences, especially plant pathology and entomology (includes master of forestry degree). Résumé and portfolio on request. W. Mesner, 689 Coddington Road, Ithaca, New York 14850. X

Seed Pathologist. Ph.D. 1966 (mycology). Seven years of university teaching/research experience (mycology, seed pathology). Seeks teaching, research, or industrial position. Leelavathy, Botany Department, Calicut University 673635, India. X

POSITIONS WANTED

Reproductive/Developmental Biologist. Ph.D. 1974. Three-year postdoctoral with publications. Broad teaching experience. Interests in biochemical embryology, mammalian embryo culture, uterine physiology, teratology. Seeks academic or industrial position. Box 446, SCIENCE. X

POSITIONS OPEN

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

Position available 1 January 1978 for **ASSISTANT OR ASSOCIATE DEAN FOR CURRICULUM**, Medical Administration Department, Medical School. M.D. or Ph.D. degree required. First-hand knowledge of medical education. Administrative experience. Established reputation in medical education community. Responsibilities include the management of undergraduate medical curriculum and staff support for curriculum committees. Administration liaison to other health-related schools on campus. Responsible for special projects as assigned. CODE 800U.A. Please send résumé to **Box 422, SCIENCE**. A *Nondiscriminatory, Affirmative Action Employer*.

Environmentally oriented undergraduate earth science program at the University of Wisconsin-Parkside has an opening at the **ASSISTANT PROFESSOR** level beginning 1 September 1978. Applicants must have the Ph.D. degree, be able to teach introductory courses in earth science, and have demonstrated teaching and applied research interests in one or more of the following areas: hydrogeology, water chemistry, water resource management, and environmental geology. Forward résumés and at least three letters of recommendation by 1 March to: **Professor Eugene I. Smith, University of Wisconsin-Parkside, Kenosha, Wisconsin 53141**. *Parkside is an Equal Opportunity/Affirmative Action Employer*.

ASSISTANT PROFESSOR: BIOCHEMISTRY

The Department of Biochemistry at the University of Minnesota Medical School invites applications for a tenure-track position at the assistant professor level. Preference will be given to individuals who have had 1 or 2 years of postdoctoral experience with a strong background in fundamental biochemical disciplines and who show promise of developing a vigorous research program. Applicants should be qualified to teach biochemistry in graduate and professional school courses. Applications must be received by 31 January 1978. Send curriculum vitae, a coherent and comprehensive plan for future research, and names of three references to: **Search Committee, Department of Biochemistry, Medical School, 435 Delaware Street, SE, 227 Millard Hall, University of Minnesota, Minneapolis, Minnesota 55455**. *An Equal Opportunity Employer*.

TWO ASSISTANT PROFESSORS OF BIOLOGY

The University of San Diego, an independent Catholic university, will have two faculty positions available beginning 1 September 1978:

- 1) a tenure-track position for a molecular biologist, preferably one with a concentration in neurophysiology, and
- 2) a temporary 1-year position for a geneticist-population biologist.

The positions involve teaching undergraduate courses in these areas and help with the introductory biology courses. The university encourages permanent full-time faculty to participate in research.

Applicants should submit their curriculum vitae and at least three letters of reference to: **The Chairman, Department of Biology, University of San Diego, Alcalá Park, San Diego, Calif. 92110**. *The University of San Diego is an Equal Opportunity Employer*.

ASSISTANT OR ASSOCIATE PROFESSOR— CELL BIOLOGY

Applications are invited from individuals who have demonstrated excellence in research and completed postdoctoral experience. Preference will be given to someone doing cell membrane studies, although other areas will be considered. Please send curriculum vitae and at least three references to: **Professor Henry Tedeschi, Chairman of Search Committee, Department of Biological Sciences, State University of New York at Albany, 1400 Washington Avenue, Albany, N.Y. 12222**.

The State University of New York at Albany is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR—BIOCHEMISTRY. Regular tenure-track position in the Department of Chemistry beginning fall 1978. Well-equipped research laboratory available. Research interest in the structure and chemistry of proteins, glycoproteins, or polysaccharides preferred, but other research areas considered. Postdoctoral experience required. Send curriculum vitae and one letter of reference to: **Robley J. Light, Department of Chemistry, Florida State University, Tallahassee, Florida 32306**. *An Equal Opportunity/Affirmative Action Employer*.

BIOCHEMISTRY OR BIOPHYSICS—ASSISTANT PROFESSOR. Tenure-track position with outstanding opportunity for teaching and research. Applications, including curriculum vitae, statement of research plans, and names of four references should be sent to: **Dr. D. L. MacDonald, Department of Biochemistry and Biophysics, Oregon State University, Corvallis, Oregon 97331**. Closing date: 16 January 1978. *Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973*.

University of Massachusetts at Boston ASSISTANT PROFESSOR—BIOLOGY

An assistant professorship is anticipated in biochemistry with special emphasis in microbial physiology. The Department of Biology invites applications from individuals with postdoctoral experience and a desire for excellence in research and teaching. The campus is located on Boston Harbor and has superior laboratory facilities. Assume duties September 1978; salary negotiable.

Submit curriculum vitae, three references, and summary of research interests to: **Dr. Edna Seaman, Recruiting Committee, Biology Department,**

**University of Massachusetts at Boston
Harbor Campus
Boston, Mass. 02125**

An Equal Opportunity Employer

The Section of Comparative Medicine, Yale University School of Medicine, is pleased to offer an **assistant professorship in COMPARATIVE PATHOLOGY**. Applicants must be veterinarians with advanced training in diagnostic and experimental pathology. Preference will be given to candidates who are Board-certified or Board-eligible. The position involves equally substantial commitments to the anatomical pathology service and to independent research. Salary will be commensurate with training and experience. Please send inquiries and résumé to: **Dr. Robert Jacoby, Associate Professor, Section of Comparative Medicine, Yale University School of Medicine, 375 Congress Avenue, New Haven, Connecticut 06510**. *Yale University is an Affirmative Action/Equal Opportunity Employer*.

Position offered as **ASSISTANT RESEARCH PROFESSOR** for experimental work in ophthalmic pathology at the Department of Ophthalmology, Jules Stein Eye Institute, University of California, Los Angeles (UCLA) School of Medicine. Applicant must have completed a fellowship in eye research that has included light and electron microscopy.

Send curriculum vitae and letter describing career goals to **Dr. Alan L. Shabo, Jules Stein Eye Institute, UCLA School of Medicine, Los Angeles, California 90024**. *Candidates are encouraged to apply regardless of sex or ethnic origin. UCLA is an Equal Opportunity/Affirmative Action Employer*.

Ph.D. in **BIOCHEMISTRY** or **PHARMACOLOGY** with expertise in cyclic nucleotides. Department of Medicine, Renal Division, University of Colorado Medical Center.

Applications from women and minority groups are encouraged. Send curriculum vitae of potential candidates to: **Tomas Berl, M.D., Renal Division, Box C 281, University of Colorado Medical Center, 4200 East Ninth Avenue, Denver, Colorado 80262**.

BIOCHEMISTRY POSTDOCTORAL POSITION is available immediately for biophysical studies dealing with either: Fe transport and incorporation into porphyrin; H⁺, O₂, and anion uptake and release by reconstituted and intact erythrocytes; or the interaction of heme with artificial phospholipid bilayers. Experience in rapid reaction techniques, membrane studies, and/or ion transport is highly desirable. Send curriculum vitae and the names of three references by 15 February 1978 to: **Dr. John S. Olson, Department of Biochemistry, Rice University, Houston, Texas 77001**. *An Affirmative Action/Equal Opportunity Employer*

POSITIONS OPEN

The Institute for Pure and Applied Physical Sciences (IPAPS) is looking for an **ASSISTANT RESEARCH PHYSICIST** with a Ph.D. in physics and advanced knowledge of catalysis, magnetism, valence instabilities, and inorganic chemistry. Work will be in the area of experimental catalysis, surface physics, and magnetism. Applicant must have a background in the fields of catalysis, surface physics and magnetism, and experience with cryogenics, ultrahigh vacuum techniques, and magnetic measurements. Specific experience in materials synthesis and analysis including powder metallurgical techniques, arc melting, induction melting, x-ray diffraction and metallographic analysis is required. The salary range is \$17,500 to \$22,900. Send inquiries with résumé to: **Barbara E. Stewart C-013, IPAPS, University of California, San Diego, La Jolla, Calif. 92093.** *The University of California, San Diego is an Equal Opportunity/Affirmative Action Employer.*

ASSOCIATE PROFESSOR OF PHYSIOLOGY

The Department of Physiology of the Louisiana State University Medical Center in New Orleans seeks applications from individuals who are enthusiastic teachers and productive scientists to fill this position. Demonstrated proficiency in research and strong commitment to teaching are essential. Renal, respiratory, or cardiovascular physiologists would be preferred. Please send curriculum vitae to:

John J. Spitzer, M.D., Professor and Head
Department of Physiology
Louisiana State University Medical Center
1542 Tulane Avenue
New Orleans, La. 70112

ASSOCIATE SCIENTIST

Available for Ph.D. in biochemical genetics familiar with techniques of tissue culture, karyological analysis, purification and characterization of enzymes, preparation of cDNA probes and nucleic acid hybridization techniques. Salary: \$12,000. Submit detailed résumé to:

Sandy D'Ambrosio
The Wistar Institute
36th and Spruce Streets
Philadelphia, Pa. 19104

Assumption College, Worcester, Mass., has a new full-time opening in **BIOLOGY** at the **INSTRUCTOR** or **ASSISTANT PROFESSOR** level. The position involves 15 hours (lecture and laboratory) each week. General background in biology with specialization in invertebrate zoology and ecology is required. Complete application (including résumé, three letters of recommendation, and transcripts) must be received by 6 February 1978. Send to: **Paul J. Mahon, Chairman, Division of Natural Sciences, Assumption College, Worcester, Mass. 01609.** *An Equal Opportunity/Affirmative Action Employer.*

BIOLOGY FACULTY APPOINTMENTS

The Department of Biology at the University of Chicago is considering the appointment of faculty with teaching and research competence in any one or combination of the following fields: developmental biology, molecular and cellular biology, eukaryotic genetics, physiology of behavior. We seek persons working with either plant or animal systems or both. Rank of the appointment will depend upon experience and professional attainments. Persons interested in these positions are invited to apply by submitting a curriculum vitae and list of publications to: **Chairman, Department of Biology, University of Chicago, 1103 East 57 Street, Chicago, Illinois 60637.**

BOTANIST

The College of Biological Sciences, The Ohio State University, invites qualified applicants to apply for the following faculty position:

Specialty in either phycology or ecology. Candidates must hold the Ph.D., be interested in teaching at both the undergraduate and graduate level and in developing an aggressive research program. Appointment will be for 9 months, beginning autumn quarter 1978. This position will be filled at the assistant professor level: \$15,120 to \$17,040. Candidates should submit a complete curriculum vitae, including reprints of published papers and at least three letters of recommendation, to: **Dr. Thomas N. Taylor, Chairman, Department of Botany, College of Biological Sciences, The Ohio State University, 1735 Neil Avenue, Columbus, Ohio 43210.** Deadline for receipt of all materials is 15 January 1978.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

FACULTY POSITION: BIOLOGIST/NUTRITIONIST

The Department of Nutrition at Rutgers University invites applications for a tenure-track, 12-month position at the assistant professor level. Candidates must have a Ph.D. and strong training in biology, biochemistry, and nutrition and a desire to establish a vigorous and creative research program in experimental nutrition. The duties of the position include participation, as a member of a team, in teaching introductory biology as well as participation in the other teaching efforts of the nutrition department. Applicants should send curriculum vitae, including bibliography and brief description of research interests and teaching experience, to: **Chairman, Search Committee, Department of Nutrition, Rutgers University, New Brunswick, N.J. 08903.** *An Equal Opportunity/Affirmative Action Employer.*

BOTANIST-MARINE ALGOLOGIST: tenure-track position in active department for September 1978. Experience with Pacific Coast algae preferred. Ph.D. required. Will teach algology and general botany and develop a research program. Send résumés, transcripts, and three letters of recommendation to: **Dr. Frank Alfieri, Department of Biology, California State University, Long Beach, California 90840.** Deadline for application: 15 January 1978. *California State University, Long Beach, is an Equal Opportunity/Title IX/Affirmative Action Employer.*

CARDIOVASCULAR RESEARCH PROGRAM DIRECTOR. Senior cardiovascular research scientist to direct Cardiovascular Research Program of Oklahoma Medical Research Foundation. Established close working relationships with University of Oklahoma Health Sciences Center and other Oklahoma Health Center institutions. Responsibility for evaluation and development of existing and new clinical and laboratory research components, including small group and larger collaborative programs. Salary negotiable with excellent fringe benefits. *Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae and letter of interest to: **Chairman, Cardiovascular Director Search Committee, Oklahoma Medical Research Foundation, 825 Northeast 13 Street, Oklahoma City, Okla. 73104.**

CELL BIOLOGIST or BIOPHYSICIST for staff position in department emphasizing research in membranes or membrane related phenomena. Candidate must be capable of establishing outstanding independent research program. Send curriculum vitae, references, and outline of research interest to: **Martin Morrison, Chairman, Department of Biochemistry, St. Jude Children's Research Hospital, Memphis, Tennessee 38101.**

CHAIRPERSON DEPARTMENT OF GEOSCIENCES

Purdue University is seeking a nationally known scholar as head of the Department of Geosciences. Applicants must have demonstrated scientific excellence in one of the areas of geoscience and have attained an academic or professional level comparable to the rank of senior associate or full professor. Salary is open and competitive.

The Department of Geosciences is a growing department with 22 full-time faculty members participating in undergraduate and graduate degree programs in atmospheric science, geology, geochemistry, geophysics, engineering geology, and coastal dynamics.

Interested applicants should send their résumé and the names and addresses of three references to: **Dr. William L. Wood, Chairperson, Search Committee, Department of Geosciences, Purdue University, West Lafayette, Indiana 47907.** *Purdue University is an Equal Opportunity/Equal Access University.*

DEAN AND VICE PRESIDENT FOR ACADEMIC AFFAIRS THE MEDICAL COLLEGE OF WISCONSIN

The Medical College of Wisconsin, established in 1913 as the Marquette University School of Medicine, seeks the most qualified person for the position of dean and vice president for academic affairs.

The Medical College is an Equal Opportunity/Affirmative Action Employer.

Curriculum vitae and a letter of interest should be sent to: **Dr. Sidney E. Grossberg, Dean Search Committee, Department of Microbiology, The Medical College of Wisconsin, 561 North 15 Street, Milwaukee, Wisconsin 53233.**

POSITIONS OPEN

CARNEGIE-MELLON UNIVERSITY DEPARTMENT OF BIOLOGICAL SCIENCES CHAIRPERSON

Applications are invited for the position of department chairperson. This position involves major responsibilities for the continued growth of departmental research activities, as well as undergraduate and graduate training programs. The department is a newly organized unit of the College of Science (Mellon Institute of Science) and its members are actively engaged in research projects in the areas of biochemistry, biophysics, cell biology, genetics, and molecular biology. Interested candidates should possess a Ph.D. degree and excellent research credentials in related areas. Letters of inquiry and curriculum vitae should be sent to: **Professor Robert D. Goldman, Chairman, Search Committee, Department of Biological Sciences, Mellon Institute of Science, Carnegie-Mellon University, 4400 Fifth Avenue, Pittsburgh, Pa. 15213.**

CHAIRPERSON DEPARTMENT OF BIOCHEMISTRY

The Albany Medical College of Union University seeks a highly qualified individual for the position of chairperson and professor of biochemistry. Ph.D. and/or M.D. required. A commitment to teaching and a record of accomplishment in research essential.

Applicants should send curriculum vitae, bibliography, and names of three references to:

Dr. Lawrence A. Caliguri, Chairman
Biochemistry Search Committee
Albany Medical College of Union University
Albany, New York 12208

An Equal Opportunity/Affirmative Action Employer

CHAIRPERSON DEPARTMENT OF PREVENTIVE MEDICINE COLLEGE OF MEDICINE THE OHIO STATE UNIVERSITY

Applications and nominations are invited for the position of chairperson of the Department of Preventive Medicine. The department has a variety of graduate and professional (medical) programs and has significant research programs. Qualifications:

- earned M.D. or Ph.D.
- proven administrative ability
- teaching and research experience
- commitment to the quality of teaching and research
- capacity for innovations

Deadline for nominations and applications 13 January 1978. Appointment to start 1 July 1978. Send nominations and applications to: **Gregory L. Trzebiatowski, Ph.D., Associate Dean and Chairman, Search Committee, Ohio State University College of Medicine, 254 Medical Administration Center, 370 West Ninth Avenue, Columbus, Ohio 43210.** *An Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON ZOOLOGY DEPARTMENT

Distinguished biological scientist to assume responsibilities as chairperson. Candidate must have extensive research experience, be an accomplished teacher and administrator, and have a broad appreciation of the diverse aspects of the zoological sciences. Responsibilities include administration of 13-faculty department, overseeing departmental teaching responsibilities, program development, and active research. Persons interested should send curriculum vitae and names of three references in letter summarizing qualifications before 1 February 1978 to: **Box 57W, Waterman Building, University of Vermont, Burlington, Vermont 05401.**

An Affirmative Action Employer

ETHOLOGIST

The Institute of Animal Behavior, Rutgers University, has an opening for an **ethologist**. Preference will be given to candidates whose research involves field study of animal behavior (vertebrate and invertebrate), and whose interests include ecological and evolutionary aspects of behavior. The appointment will be jointly in the Institute of Animal Behavior and in either the Department of Psychology or Department of Zoology. For further details write to: **Dr. Jay S. Rosenblatt, Director, Institute of Animal Behavior, Rutgers University, 101 Warren Street, Newark, New Jersey 07102.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

SYDNEY UNIVERSITY—AUSTRALIA Invites applications for a CHAIR OF BIOLOGY (IN THE FIELD OF GENETICS)

This became vacant on the appointment of Professor B. D. H. Latter to the chair of plant breeding in the Faculty of Agriculture. There are three other chairs of biology in the School of Biological Sciences.

Further information available from: **The Registrar, University of Sydney, New South Wales 2006, Australia.**

DEPARTMENTAL CHAIRPERSON

Chairperson, Department of Health Sciences. Sargent College of Allied Health Professions, Boston University, is seeking an individual with a doctorate in a health-related discipline and proven ability for professional and administrative leadership. The department currently consists of 12 full-time faculty and offers baccalaureate programs in applied physiology and cardiopulmonary technology, graduate programs in nutrition, applied anatomy and physiology to about 100 students, and service courses in human anatomy and physiology for about 1000 students in allied health professional programs. The college also has well-established undergraduate and graduate degree programs in occupational therapy, physical therapy, rehabilitation counseling, speech pathology and audiology, and is currently exploring ways to implement an additional emphasis in occupational health. Starting date is 1 August 1978. A letter of interest, curriculum vitae, and three letters of reference should be submitted by 15 January 1978 to: **B. Bullen, Sc.D., Health Sciences Department, Boston University, Sargent College of Allied Health Professions, 36 Cummington Street, Boston, Mass. 02215. Boston University is an Equal Opportunity/Affirmative Action Employer.**

DEAN—SCHOOL OF MEDICINE

The Louisiana State University Medical Center is seeking applicants or nomination of candidates for the position of dean of the School of Medicine in New Orleans. The medical school is part of one of the largest medical complexes in the country and currently enrolls almost 700 students.

Applicants must have an M.D. degree, experience in medical education and clinical medicine, and demonstrated administrative abilities.

Letters of application or nomination should be sent to: **Dr. Joseph J. Biundo, Jr., Chief of Section of Rheumatology and Rehabilitation, Louisiana State University Medical Center, 1542 Tulane Avenue, New Orleans, Louisiana 70112.**

Equal Opportunity/Affirmative Action Employer

PERIGLACIAL LABORATORY DIRECTOR Quaternary Research Center University of Washington

The Quaternary Research Center invites applications for the position of director of its Periglacial Laboratory. The laboratory is designed to carry out studies of frost-action processes in soils and to investigate permafrost problems, including implications for Quaternary paleoclimatology and sedimentology. Applicants should have experience both in field and laboratory investigations and have broad interests in Quaternary studies and polar research. The director will be expected to supervise graduate student research and teach such appropriate courses as may be agreed. Appointment will be at the associate or full professor rank with salary commensurate with experience. Apply to: **Director, Quaternary Research Center, University of Washington, Seattle, Washington 98195.** Closing date for applications is 15 February 1978.

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

INSECT PEST MANAGEMENT CORNELL UNIVERSITY

Applications invited for position which carries responsibility for developing research program related to pests of field crops (60 percent), teaching (senior/graduate courses, 20 percent), and extension (20 percent). Prefer to fill at assistant professor level. Consideration given to associate rank in cases of exceptional qualifications and experience. Send curriculum vitae and names of five references to: **Dr. E. H. Smith, Department of Entomology, Cornell University, Ithaca, N.Y. 14853.** Deadline for applications is 1 March 1978. *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

EDITOR FOR SCIENCE AND MEDICINE HARVARD UNIVERSITY PRESS

You are invited to apply for a most demanding and exhilarating position: continuing the program of specialist and more general volumes (many in the biological sciences) at the high level that has characterized our list.

Titles recently published include: *Sociobiology* by Wilson; *The Horizons of Health* by Wechsler, Gurin, and Cahill; *Behavior of Communicating* by Smith; and *Ontogeny and Phylogeny* by Gould.

This is an opportunity to join a press that will market your books as energetically as the successful applicant will acquire and edit them. Reply, in confidence if you wish, with a letter and résumé to: **Arthur J. Rosenthal, Director, Harvard University Press, 79 Garden Street, Cambridge, Mass. 02138.**

An Equal Opportunity Employer

FACULTY OPENING. The Division of Applied Mechanics, Department of Mechanical Engineering, Stanford University, invites applications for a position at the assistant professor (possibly higher) level. Desired are applicants with a high capability for research and graduate level teaching in the area of general continuum mechanics, including viscoelasticity and plasticity, with both theoretical and computational considerations. Ph.D. is required. Send résumé, transcripts, and names of three referees to: **Professor C. R. Steele, Division of Applied Mechanics, Stanford University, Stanford, Calif. 94305. Stanford University is an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITION is anticipated in the Department of Biology. Candidates with evidence of strong research productivity and teaching experience are invited to apply. Preference will be given but not limited to: hormonal regulation of cells and biochemical adaptations or other aspects of cellular regulation. Send résumé, description of research goals, and names of three or more references to: **Dr. Hiroshi Mizukami, Department of Biology, Wayne State University, Detroit, Michigan 48202.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN DEVELOPMENTAL PLANT ANATOMY

The Department of Botany, University of Minnesota, invites applications for a faculty position for a developmental/experimental plant anatomist. The position will start in September 1978, and is for an assistant professor, although there is a possibility that it might be filled at a higher rank. Applications are invited from persons with research and teaching interests in developmental anatomy of vascular plants. Teaching will include an introductory botany course and an advanced course in developmental plant anatomy, and the guidance of graduate and undergraduate students in the latter. Postdoctoral experience is preferred, and previous teaching experience will be considered. Screening will begin 15 December 1977, although applications will continue to be accepted after that date. Applications should include curriculum vitae, a transcript of undergraduate and graduate courses, résumé of research interests and future plans, statement of teaching experience and interests, reprints of published papers and copies of unpublished manuscripts, and three letters of reference. Respond to: **Chairman, Search Committee, Department of Botany, 220 Biological Sciences Center, 1145 Gortner Avenue, University of Minnesota, St. Paul, Minn. 55108.**

An Equal Opportunity Educator and Employer

FACULTY POSITION

The School of Physics and Astronomy of the University of Minnesota expects to fill one or more positions at the **assistant professor** level. The highest departmental priority at the present time is experimental high energy physics, but consideration will be given to highly qualified physicists in any area. The applicant must demonstrate ability in both teaching and research.

Applications should include a curriculum vitae and three supporting letters of recommendation. These should be sent to: **Professor Walter Weyhmann, Head, School of Physics and Astronomy, 116 Church Street, SE, Minneapolis, Minn. 55455,** by 10 February 1978.

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, or national origin.

Technical

MANAGER HEALTH EFFECTS RESEARCH

Opportunity currently exists at **NORTHROP SERVICES, INC.,** Research Triangle Park, North Carolina facility for an experienced Health Effects Laboratory Manager. Position requires an individual with a PhD in a biological or chemistry discipline and a minimum of 2 years supervisory experience. Areas of research being conducted include asbestos research, inhalation toxicology, tissue culture and cytotoxicity, mutagenesis, pesticide chemistry, and analytical biochemistry. This position is responsible for the direction of approximately 50 researchers and will help coordinate and direct technical, management, and program development and expansion activities.

Candidates are invited to submit resumes with salary history in confidence to: **T.R. Smith**

NORTHROP SERVICES, INC.

P.O. Box 12313

Research Triangle Park, N.C. 27709

An Equal Opportunity Employer M/F

ASSOCIATE SCIENTIST GEOLOGY and GEOPHYSICS

The candidate should have a minimum of 4 years of post-doctoral experience in the fields of sedimentology, acoustics stratigraphy, paleo-oceanography, and dynamic processes within the deep-sea benthic boundary layer. The applicant should have published in these fields and show an interest and expertise in the interpretation of past circulation events from core samples correlated to characteristics of seismic reflection profiles. Extensive experience in organizing and leading oceanographic expeditions including deep-sea drilling operations is required.

Send resume to:
**Personnel Director
PERSONNEL
OFFICE
WOODS HOLE
OCEANO-
GRAPHIC
INSTITUTION
Woods Hole, MA
02543**



An Equal Opportunity Employer M/F

POSITIONS OPEN

FACULTY POSITIONS. The Department of Biology, George Mason University, the State University of Northern Virginia, announces three tenured-track appointments at the assistant professor level for the fall semester of 1978. (i) **ETHOLOGIST** to teach junior-senior level introductory and graduate animal behavior courses, and introductory biology. (ii) **MICROBIOLOGIST-VIROLOGIST** to teach microbiology for nurses and undergraduate virology, and introductory biology. (iii) **DEVELOPMENTAL BIOLOGIST-IMMUNOLOGIST** to teach junior-senior level developmental biology and immunology and introductory biology. The development of other graduate courses is possible in all three positions. The applicant must have the Ph.D. degree by 1 September 1978, a commitment to teaching, and will be expected to establish an active research program. Send curriculum vitae, transcripts, and three letters of reference by 20 January 1978, to: **Search Committee (state position applied for), Biology Department, George Mason University, Fairfax, Virginia 22030.** *George Mason is an Affirmative Action/Equal Opportunity Employer.*

GEOMORPHOLOGIST/ PHYSICAL GEOGRAPHER Department of Geology and Geography University of Massachusetts, Amherst

The Department of Geology and Geography expects to have a vacancy in geomorphology/physical geography beginning 1 September 1978. The successful applicant will fill a central position in the department which includes human and physical geography, and a full spectrum of geological specialties from Pleistocene geology to geophysics. Teaching duties will include an elementary course in physical geography, an advanced undergraduate course in geomorphology, and other undergraduate or graduate courses depending on the interests of the candidate. Research interests may be in any of the following areas: environmental problems (geological or geographical), fluvial processes, remote sensing, Quaternary studies, quantitative methods. Position expected to be filled at assistant professor level. Ph.D. required. Applicants should send a curriculum vitae, a statement of research and teaching interests, and the names of at least three referees to: **George E. McGill, Head, Department of Geology and Geography, University of Massachusetts, Amherst, Mass. 01003.** *The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.*

IMMUNOBIOLOGIST, ASSISTANT PROFESSOR

The Division of Biological Sciences at the University of Georgia is seeking applications from immunobiologists for a position as assistant professor, effective September 1978. The candidate will be expected to develop an active research program, direct graduate student research, and be responsible for an undergraduate and graduate immunobiology course in the Department of Microbiology. Postdoctoral experience is desirable.

Applications should be sent before 15 January 1978, complete with curriculum vitae, reprints, an outline of future research plans, and at least three letters of recommendation to: **Dr. Raymond T. Dammann, Division of Biological Sciences, University of Georgia, Athens, Georgia 30602.** *An Equal Opportunity/Affirmative Action Employer.*

Australia: the University of Adelaide. **LECTURER IN GEOGRAPHY.** Salary: A\$14,632 to A\$14,662(3) to A\$14,661(4) to A\$19,262 with superannuation on FSSU basis. Most of the major fields of human and physical geography are taught in the department and applications from persons specializing in any area of interest will be considered. Potential applicants should first seek particulars from: **The Registrar, North Terrace, Adelaide, South Australia, or The Association of Commonwealth Universities (Appointments), 36 Gordon Square, London WC1H 0PF, England.** Closing date: 13 January 1978.

POSTDOCTORAL POSITION in neural ultra-structure available July 1978 at Department of Neurology, Harvard Medical School, for studies on development of neurons and glia in vitro and in vivo. Experience in electron microscopy essential. Send curriculum vitae and three letters of reference to: **Stephen G. Waxman, M.D., Ph.D., or Marc A. Dichter, M.D., Ph.D., Harvard Neurological Unit, Beth Israel Hospital, Boston, Mass. 02215.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

MAMMALOGIST. Applications are requested for the post of a nontenured curator-professor in mammalogy in the Museum of Comparative Zoology and Department of Biology, Harvard University. The incumbent will be expected to assume responsibility for the maintenance of the extant mammal collections and to teach an introductory course on the biology of mammals. Preferred starting date: 1 July 1978. Applicants are requested to write to: **The Director, Museum of Comparative Zoology, Harvard University, 26 Oxford Street, Cambridge, Mass. 02138.** *An Equal Opportunity/Affirmative Action Employer.*

PETROLOGIST to participate in studies of igneous petrology and surface alteration reactions on planetary objects other than earth and comparison with similar processes on earth. Independent research can be carried out on a wide variety of problems. Requires Ph.D. and strong background in theoretical petrology. Send résumé to: **Professional Staffing, Department 666, Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, Calif. 91103.**

Ph.D. IN PHILOSOPHY required. Some experience plus evidence of scholarly achievement desirable. Must be able to teach courses in the regular philosophy curriculum. Candidate must also have serious background and competence in one or more of the physical or biological sciences. Appointment is primarily for someone to organize, develop, and team-teach courses involving philosophy and the natural sciences. Should have an interest in practical policy issues and implications generated by science and technology. Tenure-track position. Only qualified candidates send curriculum vitae and references by 1 February 1978 to: **Chairman, Department of Philosophy, University of New Hampshire, Durham, New Hampshire 03824.** *The University is an Affirmative Action/Equal Opportunity Employer.*

Applications are invited for a faculty appointment in PHYSICAL OCEANOGRAPHY

which is to be made in the Physics Department as soon as possible. Rank and salary are negotiable and commensurate with the qualifications of the appointee. Minimum of several years of research experience beyond a Ph.D. degree, in any area of physical oceanography, is required.

The position offers a challenging academic career with stimulating research opportunities dealing with cold ocean, particularly the North Atlantic and the Canadian Arctic. The university has already established active research groups in ocean engineering, marine biology, geology, and geophysics with whom the appointee is expected to interact extensively.

Preference will be given to applicants whose primary interests are in experimental or field investigations with strong theoretical background. Proven skill in coordination with initiation of research programs will be an asset. The appointment will include teaching duties at the graduate and undergraduate level. The department offers programmes leading to the M.Sc. and Ph.D. degrees. Applications, including curriculum vitae and the names of three references, should be addressed to:

**Dr. C. W. Cho
Head, Department of Physics
Memorial University of Newfoundland
St. John's, Newfoundland, Canada A1C 5S7
Telephone: 709-753-1200**

PLANT BIOCHEMIST

The Department of Biology at the University of South Carolina has an opening in fall 1978 for an assistant professor with strong commitments to research in the area of plant biochemistry. The appointee should be interested in teaching biochemistry and plant physiology. Send curriculum vitae, reprints, a summary of research plans, and names of three referees to: **Dr. Anthony Huang, Biology Department, University of South Carolina, Columbia, S.C. 29208.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

GENETICIST: Assistant or associate professor of biology, to begin fall 1978. Ph.D. required. Applicants should have a demonstrated ability for teaching introductory biology courses and upper level courses in genetics, molecular biology, and evolutionary biology. Involvement in student research supervision and interdisciplinary courses outside the sciences is expected. Candidates must have a deep interest in teaching and advising undergraduate students in an innovative liberal arts college. Reply to: **Dr. Dan T. Bedsole, Dean of the Faculty, Austin College, Sherman, Texas 75090.** *Equal Opportunity Employer.*

PHYSIOLOGIST: Assistant or associate professor of biology, to begin fall 1978. Ph.D. required. Applicants should have a demonstrated ability for teaching introductory biology courses and upper level courses in systems physiology, comparative physiology, and cell biology. Involvement in student research supervision and interdisciplinary courses outside the sciences is expected. Candidates must have a deep interest in teaching and advising undergraduate students in an innovative liberal arts college. Reply to: **Dr. Dan T. Bedsole, Dean of the Faculty, Austin College, Sherman, Texas 75090.** *Equal Opportunity Employer.*

PLANT PHYSIOLOGIST (assistant or associate professor). The Department of Life Sciences, Indiana State University, anticipates a plant physiology position to begin summer 1978. The successful applicant will be expected to be active in the graduate program (both Ph.D. and master's degrees are offered). Teaching responsibilities will include plant physiology and participation in other botanical offerings by the department. Interested individuals should submit curriculum vitae, including evidence of an active research program, and have three letters of recommendation sent to: **Dr. William J. Brett, Chairperson, Department of Life Sciences, Indiana State University, Terre Haute, Indiana 47809.** *Indiana State University is an Equal Opportunity Employer.*

POSTDOCTORAL APPOINTMENT available for spring 1978. Isolation of DNA from tissue samples and determination of biochemical changes due to carcinogenesis. Background in nucleic acid and analytical biochemistry is important. Send résumé and names of three references to: **Dr. Paul F. Agris, Division of Biological Sciences, Tucker Hall, University of Missouri, Columbia, Missouri 65201.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOW AND RESEARCH ASSOCIATE; ASSISTANT PROFESSOR. An interdisciplinary Liver Research Center has been created at the Albert Einstein College of Medicine. The major objective of this center is linkage of advances in basic biomedical sciences to solution of problems in clinical hepatology. This goal is to be accomplished by creating an environment for fundamental research on liver cell function and pathogenesis of liver disease within a large group of investigators having expertise in medicine, biochemistry, physiology, molecular and cell biology, pharmacology, and ultra-structural pathology. The Liver Research Center is currently evaluating applicants for training at the postdoctoral and research associate (advanced postdoctoral) level, as well as candidates for the position of assistant professor. Qualifications include M.D., Ph.D., or equivalent degrees in biological sciences. Applicants should submit curriculum vitae, bibliography, and names of two references to: **Dr. David A. Shafritz, Liver Research Center, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, N.Y. 10461.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION IN PHYSICAL OCEANOGRAPHY/LIMNOLOGY. The Radiological and Environmental Research Division of Argonne National Laboratory seeks a qualified individual with a Ph.D. or equivalent in physical oceanography/limnology to pursue research in a challenging, interdisciplinary program concerning physical transport processes in the Great Lakes. The applicant should have field experience with standard oceanographic equipment, working knowledge of electronics including instrument design capability and some numerical modeling knowledge. Responsibilities will consist of cooperative field program development and execution, with subsequent data analysis to study pollutant transport processes, including atmospheric input, sediment resuspension, and upwelling effects. If interested, submit résumé to: **Walter D. McFall, Argonne National Laboratory, 9700 South Cass Avenue, Argonne, Ill. 60439.** *An Equal Opportunity Employer, M/F/Handicapped.*

POSITIONS OPEN

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE: Open immediately. Ongoing research includes: chemo-immunotherapy employing chemically modified drugs; modification of cell surface antigens; surface interactions between normal and malignant cells as related to metastatic behavior. Applications should include curriculum vitae, description of past and present research interests, relevant reprints, and names of three references and should be directed to: **Rolf F. Barth, M.D., Department of Pathology and Laboratory Medicine, Mt. Sinai Medical Center/University of Wisconsin, Milwaukee, Wis. 53201.**

POSTDOCTORAL SECTION, biochemistry, available immediately for research in the enzymes of yeast glycolipid biosynthesis. Background in enzyme purification and protein characterization desired. Send curriculum vitae, one letter of reference, and names of two additional references to: **Dr. Robley Light, Department of Chemistry, Florida State University, Tallahassee, Florida 32306.**

An Equal Opportunity/Affirmative Action Employer

TWO POSTDOCTORAL POSITIONS available immediately (\$10,000 to \$12,000) to study (i) electron microscopy of lymphomyeloid tissue, and (ii) cellular immunology and immunogenetics of the chicken. Send curriculum vitae and two letters of reference to: **Dr. Bruce Glick, Poultry Science Department, P.O. Box 5188, Mississippi State, Miss. 39762.**

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PREDOCTORAL POSITIONS available in pharmacology. Research areas include behavioral, cellular, chemical, biochemical, neurophysiological, clinical, and neurochemical subfields of pharmacology and toxicology. Supported by USPHS training grant with stipends of \$3900 per year plus tuition. Apply to: **Director of Graduate Studies, Department of Pharmacology, University of Kansas Medical Center, Kansas City, Kansas 66103.**

POSITIONS OPEN

POSTDOCTORAL POSITION in colour vision research. Applicant should have experience with psychophysical methods and optical apparatus.

Salary: \$11,000 per annum with some possibility of supplementary salary for teaching one course in the Department of Psychology.

Send curriculum vitae and names of three references to:

**Dr. P. K. Kaiser
Department of Psychology
York University
4700 Keele Street
Toronto, Ontario, Canada M3J 1P3**

DEPARTMENT OF PSYCHOLOGY UNIVERSITY OF MASSACHUSETTS

Following openings expected beginning September 1978. **Biopsychology—assistant professor**, 4-year, non tenure slot. Research/teaching, with research experience in neurochemistry with special reference to behavioral correlates. **Clinical—associate professor**. Interests open but applicant should have a strong record of research accomplishments. **Cognitive—assistant professor**. Interests open, ability to conduct programmatic research in the field of cognitive psychology. Salaries are competitive. Send résumés and names of references to: **Norman F. Watt, Chairperson, Department of Psychology, University of Massachusetts, Amherst, Mass. 01003. University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.**

M.D.-Ph.D. RESEARCHER

Wanted by client firm to work with research team in human toxicology: 80 percent research, 20 percent administrative. \$42,000 to \$48,000 salary. Also need **PHARMACEUTICAL CHEMIST**, with tableting experience. \$16,000 to \$22,800 salary.

Telephone Shira Lieberman at 216-464-5450
Management Recruiters
26949 Chagrin Boulevard
Cleveland, Ohio 44122

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Position available January 1978 for someone with a background in cell culture techniques or somatic cell genetics, to join a group doing research on gene regulation and chromosome structure. Project involves cell hybridization and cytogenetic analysis of the regulation of ribosomal RNA synthesis. Send curriculum vitae and names of two references to: **Dr. O. J. Miller, Department of Human Genetics and Development, College of Physicians and Surgeons, Columbia University, 701 West 168 Street, New York, N.Y. 10032. An Equal Opportunity Employer.**

RESEARCH ASSOCIATE. (i) Molecular changes (UV-induced cross-linking and degradation) in collagen and hyaluronic acid. (ii) Interactions between collagen, other glycoproteins and polysaccharides. Experience in glycoprotein and/or polysaccharide structure desirable. Send résumé including references to: **Dr. E. Fujimori, Boston Biomedical Research Institute, 20 Staniford Street, Boston, Mass. 02114. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE. Immediate opening for person with experience in pulmonary biochemistry or immunology. Research involves proteinase; anti-proteinase balance and relationship to human and experimental emphysema. Send applications including curriculum vitae to: **Dr. George Weinbaum, ALBERT EINSTEIN MEDICAL CENTER, York and Tabor Roads, Philadelphia, Pa. 19141. Equal Opportunity Employer.**

RESEARCH ASSOCIATE

Temporary, 18-month, must have M.S. degree or equivalent in marine food technology. Knowledge of Spanish is desirable. Responsible for research program to conduct and coordinate research on the utilization of fish in Central America. Reply by 15 January 1978 to: **Dr. Tung-Ching Lee, College of Resource Development, University of Rhode Island, Kingston, R.I. 02881.**

Affirmative Action/Equal Opportunity Employer, M/F

SCIENTIST PHARMACOLOGY

Ortho's newly restructured and expanding Pharmacology division, currently has an opening for an individual who has the training and/or experience to work at the laboratory level in the area of Pulmonary-immmediate hypersensitivity. This position calls for an PhD with 0-3 years industrial and/or post Doctorate experience in Pulmonary Physiology/Pharmacology.

Ortho is located in central New Jersey and offers a stimulating environment geared to personal and professional growth with opportunities for advancement based on job performance.

Qualified candidates should forward their curriculum vitae in strictest confidence to Ronald H. Darden, Senior Personnel Administrator.



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BIOLOGICAL RESEARCH ASST.

The Upjohn Company's Hypersensitivity Diseases Research Unit currently has an opening for a Biological Research Assistant.

Candidates should have a B.S. or M.S. degree in the biological sciences with a strong background in pharmacology, biochemistry, or physiology. Several years of experience in the field of pulmonary pharmacology and/or asthma research, tissue isolation techniques and small animal procedures highly desirable.

Kalamazoo is a medium-sized southwestern Michigan community with an excellent mix of cultural/recreational options. Submit your resume in confidence to:

Upjohn

Myra W. Johnson
Employment Rep
The Upjohn Company
7000 Portage Road
Kalamazoo, MI. 49001

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UNIVERSITY OF ILLINOIS SCHOOL OF LIFE SCIENCES AT URBANA- CHAMPAIGN

Position Opening

MAMMALIAN SYSTEMS PHYSIOLOGIST: A permanent joint appointment with the School of Basic Medical Sciences and the School of Life Sciences at the Department of Physiology and Biophysics. To share in the delivery of the physiology curriculum to medical students enrolled in the School of Basic Medical Sciences and to participate in teaching and direction of graduate students research in the Department of Physiology and Biophysics within the School of Life Sciences.

RANK AND SALARY: Open. Post doctoral experience, a record of research productivity and a strong interest in quality research and teaching are essential. Candidates specializing in either respiratory or gastrointestinal systems will be considered, with preference given to those applicants with strong background in gastrointestinal physiology.

APPOINTMENT EFFECTIVE: Fall 1978. Applications should be received by February 1, 1978

Address correspondence to Dr. John E. Zehr, Chairman, Mammalian Search Committee, Department of Physiology and Biophysics, 524 Burrill Hall, University of Illinois, Urbana, Illinois, 61801

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Research involves study of endothelial cell (EC) metabolism and tissue culture, transport/metabolism of vasoactive materials by EC, and platelet-EC interaction. Training in cell culture, electron microscopy, pharmacology, membrane transport, cardiovascular, and respiratory physiology is desirable. This position is available immediately. Send curriculum vitae and letters of recommendation to: **Dr. David Shepero, Editorial Office, MICROVASCULAR RESEARCH, 2 Cummington Street, Boston, Mass. 02215.** An Equal Opportunity Employer.

RESEARCH SCIENTIST

Norden Laboratories, animal health subsidiary of Smith Kline Corp. (Philadelphia), has immediate opening for individual with Ph.D. in microbiology. Responsibilities will include varying assignments as part of a project research team investigating bacterial diseases and microbiological genetics. Prefer applicants with Ph.D. in microbiology with specialized experience in pathogenic microbiology and immunology. Virus background and experience in modern techniques relative to microbiological genetics and molecular biology desirable. Qualified applicants should submit résumé and salary requirements to: **D. L. Bornholdt, Assistant Manager-Personnel, 601 West Cornhusker Highway, Lincoln, Nebraska 68501.** Norden Laboratories is an Equal Opportunity/Affirmative Action Employer.

RESEARCH SCIENTISTS

The Highway Safety Research Institute of The University of Michigan seeks research professionals to staff an expanding program of applied policy research focused on the problems of transportation and safety. The research program will involve a series of multidisciplinary projects examining policy formulations, policy implementation, information utilization and future studies.

Candidates are sought from the fields of law, economics, political science, transportation, and related disciplines with a Ph.D. or equivalent terminal degree plus experience in applied research. Appointments will be at a rank and compensation level commensurate with education level and experience.

Send résumé to:



The University of Michigan
Office of Professional and Administrative Staff Services
1200 Literature, Science, and the Arts Building
Ann Arbor, Michigan 48109
A non-discriminatory, Affirmative Action Employer.

HONEYWELL, INC. RESEARCH SCIENTISTS

The Corporate Technology Center of Honeywell, Inc., located in Minneapolis, has several outstanding opportunities for research scientists in our Material Sciences Center. These positions will be involved in research into semiconductor materials and devices in the areas of silicon compound semiconductors, solar cells, and mm wave devices and research into fabrication techniques and properties of materials for infrared optics, electronic micropackaging, and thin film sensor applications.

These positions require a Ph.D. or equivalent in physics, chemistry, electrical engineering, materials science, or a related discipline. We offer excellent income, comprehensive benefits, and a refreshing lifestyle in the heart of one of America's most famous recreational and modern metropolitan areas.

Direct your letter of application with a résumé to:

**Ron Heinz
Honeywell, Inc.
Honeywell Plaza
Minneapolis, Minnesota 55408**

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POSITIONS OPEN

RESEARCH SPECIALIST position available in Department of Biochemistry and Biophysics, University of Pennsylvania. Must be highly skilled in biochemical and biophysical research of hemoproteins. Technical competence in preparative, magnetic resonance, computer, and low-temperature methods and proven ability of data analysis and interpretation are essential. Ph.D. or equivalent research experience and good record of publications are required. Salary \$13,000 to \$15,000. **Juan J. Graña, Administrator, Department of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, Pa. 19104.**

RESEARCH TECHNICIAN: fully trained and experienced in computerized MS. Extensive experience in analytical biochemical methods (radioimmunoassay, chromatography, electrophoresis) as well as in organic synthesis required. Salary from \$10,000 to \$12,000 per year, depending on qualifications. Contact: **Connecticut Labor Department, Employment Security Division, 478 Valley Street, Willimantic, Conn. 06226.**

RESEARCH TECHNICIAN IN ELECTRON MICROSCOPY

Experience in preparation of plant material for TEM; ultramicrotomy, instrument operation, all phases of photography. Salary range: \$11,040 to \$12,000. Starting date: 1 February 1978. Send complete résumé, including three letters of recommendation, to: **Dr. Gary L. Floyd, Botany Department, 1735 Neil Avenue, Ohio State University, Columbus, Ohio 43210.** Deadline for receipt of application materials is 15 January 1978.

An Equal Opportunity/Affirmative Action Employer

TEMPORARY 1-YEAR APPOINTMENT

Washington and Lee University seeks a **TEACHER** for a temporary 1-year appointment in the fields of **physiology and animal behavior.** Opening for the 1978-1979 academic year. Ph.D. required. No applications will be accepted after 1 April 1978. Send curriculum vitae, statement of interests, and three letters of reference to: **Dr. James H. Starling, Department of Biology, Washington and Lee University, Lexington, Virginia 24450.** All qualified applicants are encouraged to apply regardless of race or sex. We are an Equal Opportunity Employer.

Ph.D. Toxicologist

Responsibilities will include reviewing and evaluating existing toxicological data, assisting in ongoing mutagenicity studies, designing and supervising a planned toxicology laboratory.

A Ph.D. in toxicology, pharmacology or related area required. Experience and thorough knowledge of government regulations involving toxic substances preferred.

Competitive benefit package offered.

Send resume and salary requirements to: **Energy Resources Co. Inc.**

**Ms. Kim Gebron, Personnel Department
185 Alewife Brook Parkway
Cambridge, Massachusetts 02138**

ERCO an equal opportunity
employer m/f

VERTEBRATE PHYSIOLOGIST FACULTY POSITION. The Biology Department invites applications for the above position, to begin in September 1978. Applicants with a productive postdoctoral research experience and with teaching experience in vertebrate physiology are encouraged to apply. Rank and salary negotiable. Send curriculum vitae, description of research goals, and names of three or more references to: **Dr. C. J. Swanson, Department of Biology, Wayne State University, Detroit, Michigan 48202.**

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POSITIONS OPEN

NEW ZEALAND FOREST SERVICE SCIENTIST, FOREST PRODUCTS DIVISION, FOREST RESEARCH INSTITUTE, ROTORUA

Applications are invited for the above position. Salary up to NZ\$14,453 per annum, depending on qualifications and experience.

Qualifications desired: preferably Ph.D. or equivalent degree with experience in use and maintenance of both transmission and scanning electron microscopes. Knowledge of Philips EM300 and SEM500 an advantage.

Duties: to initiate and carry out research into wood formation with special reference to the transition from corewood to outerwood in *Pinus radiata*.

Application forms and details of passage assistance may be obtained from: **the New Zealand Embassy, 19 Observatory Circle, NW, Washington, D.C. 20008,** with whom applications close on 16 February 1978. Please quote Vacancy No. 9/78/101.

Further particulars about the position may be obtained from: **the Director, Forest Products Division, Forest Research Institute, Private Bag, Rotorua, New Zealand.**

SOLID STATE PHYSICIST (or electrical engineer with appropriate background) to provide technical leadership in an infrared detector array program. Requires Ph.D. with 2 years or M.S. with 5 years of experience with IR proton detectors and detection systems. Send résumé to: **Professional Staffing, Department 665, Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, Calif. 91103.**

The University of Michigan School of Natural Resources seeks applicants for academic-year, **TEACHING-RESEARCH POSITIONS** at the entry level in the following areas: **ECOLOGY** (two positions) and **RESOURCE POLICY AND MANAGEMENT** (two positions). An earned Ph.D. or equivalent career experience is desired. Apply to: **Dean William J. Johnson, School of Natural Resources, The University of Michigan, 3516 Dana Building, Ann Arbor, Mich. 48109.** A nondiscriminatory, Affirmative Action Employer.

TROPICAL BOTANIST—the Department of Botany of the University of Florida invites applications for a position of **assistant professor** in tropical botany. Applicants should have a Ph.D. and be capable of teaching both introductory biology and botany, and graduate level courses in their chosen field. Experience in tropical botany is required and applicants are expected to develop a strong research program in their specialty. Send three letters of recommendation, curriculum vitae, and a short statement of research and teaching interests to: **James Kimbrough, Chairman, Search Committee, Department of Botany, University of Florida, Gainesville, Fla. 32611.** An Equal Opportunity/Affirmative Action Employer. Deadline for applications is 15 January 1978.

VERTEBRATE MORPHOLOGIST

Assistant professorship at the University of Nevada, Las Vegas, Department of Biological Sciences, effective 1 September 1978. Teaching at the undergraduate level in comparative vertebrate embryology and anatomy and at the graduate level in area of specialty. Development of a research program is expected.

Applications with curriculum vitae, list of publications, names of references, summary of research interests should be sent to:

**Dr. James E. Deacon, Chairman
Department of Biological Sciences
University of Nevada, Las Vegas
Las Vegas, Nevada 89154**

Applications must be postmarked no later than 15 January 1978.

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VACANCIES FOR CHIEF AND ASSOCIATE CHIEF, CONSERVATION DIVISION GS-18, \$47,500 GS-17, \$47,500 GS-16, \$42,423 to \$47,500 U.S. GEOLOGICAL SURVEY Conservation Division Reston, Virginia

Two positions (cite applicable Announcement No. on application):

CHIEF, CONSERVATION DIVISION. GS-17 or -18 (Announcement No. 77-350-A), has responsibility for planning and directing a mineral resource regulatory, evaluation, and conservation program of national scope and significance involving two primary functions: (i) regulation of energy and mineral development activities by lessees on federal and Indian lands and the Outer Continental Shelf to ensure safe and pollution-free operations, and that leased mineral resources are produced efficiently and with a fair return to the Government; and (ii) examination and classification of public lands with respect to mineral and water power resources. These regulatory and evaluation programs directly affect the nation's economy, security, and environment and are of vital interest to federal and state legislative, planning, and management bodies. **Qualifications required:** formal training and broad executive-level program administration experience which has included major responsibility for planning, management, direction, and/or conduct of activities concerned with the exploration, development, production, evaluation, and conservation of energy and mineral resources and with the enforcement of applicable legal and/or regulatory requirements, plus the ability to apply expert management skills in directing a large scientific-engineering organization, and to deal effectively and persuasively with high level officials in both the public and private sectors.

ASSOCIATE CHIEF, CONSERVATION DIVISION. GS-16 (Announcement No. 77-355-A), coordinates and directs the activities of the Assistant Division Chiefs for Operations, Resource Evaluation, and Programs; the division staff; and four regional managers; has principal day-to-day responsibility for operation of internal division activities including the application of policies, procedures, and standards; shares with the division chief responsibility for formulating operating policies, and procedures, for development and implementation of program plans, and for overall division program administration. **Qualifications required:** degree (or equivalent combination of education and experience) in earth sciences or engineering, plus progressively responsible professional and technical experience in the broad spectrum of disciplines including geology, geophysics, mining, and petroleum engineering. Experience must evidence a firm grasp of mineral resource conservation program activities, a high level managerial ability in conducting interdisciplinary programs of broad scope, and ability to direct a multidisciplinary widely dispersed large staff of scientists, engineers, and support personnel.

Selectees for these positions will be subject to conflict of interest regulations relating to holding certain interests in federal lands and in private mineral enterprises, and will not be permitted to perform surveys or examinations for private individuals or corporations. Filing of confidential statement of holdings and employment is required.

Interested candidates should submit Personal Qualifications Statement, SF-171, together with bibliography, to: **Personnel Officer, U.S. Geological Survey—MS 215, 12201 Sunrise Valley Drive, Reston, Virginia 22092.**

Deadline for receipt of applications is 9 January 1978.

The above positions are in Federal Career Service with all Civil Service benefits.

Equal Opportunity Employer

DIRECTOR, DIVISION OF BLOOD DISEASES AND RESOURCES

The National Institutes of Health, Public Health Service, is recruiting for the position of Director, Division of Blood Diseases and Blood Resources, National Heart, Lung, and Blood Institute. This position involves the planning, implementation, and management of research grant and contract programs and training programs in blood diseases and blood resources. It includes basic and applied research on such blood diseases as the hemophilias, sickle cell anemia, and Cooley's anemia. It also includes research on blood and blood products for transfusion and the management of the nation's blood resource. The Division's budget is approximately \$60 million per year and it has a staff of approximately 40 positions.

The Director is required to have had substantial background and experience related to blood diseases and/or blood banking. The position also requires demonstrated managerial experience and an ability to communicate with individuals at all organizational levels and with varying educational experience. An M.D. or Ph.D. (or equivalent experience) is required. This is a career Civil Service position with a salary range of \$42,000 to \$47,500. Selection for and allocation of this position are subject to the approval of the U. S. Civil Service Commission. Appointment may also be made under the United States Public Health Service Commissioned Corps Program which may provide supplemental salary benefits under some circumstances.

For additional information, contact Dr. Robert L. Ringler, Chairman, Search Committee: (301) 496-1078. Applications in the form of a resume and a Personal Qualifications Statement (SF-171) should be sent by January 30, 1978 to Dr. Robert L. Ringler, Deputy Director, National Heart, Lung, and Blood Institute, Building 31, Room 5A49, 9000 Rockville Pike, Bethesda, Maryland 20014. An Equal Opportunity Employer M/F

NATIONAL INSTITUTES OF HEALTH

IMMUNOLOGIST

Searle Laboratories, the pharmaceutical division of G.D. Searle & Co., is seeking an experienced Immunologist to explore and develop new, innovative approaches for the identification of improved therapeutic agents for the treatment of inflammation and allergy.

Preference will be given to individuals with the following qualifications:

- Broad graduate training in Immunology;
- Ph.D in Immunology with 3 to 7 years of research experience beyond the Doctorate. Industrial experience preferred.
- Interest in identifying and developing new, efficacious therapeutic agents for the treatment of inflammation and allergies;
- Demonstrated ability to initiate and conduct an effective and productive research program;
- Ability and desire to collaborate with scientists of various disciplines in this research effort.

We offer to the professional who accepts this challenging opportunity an excellent compensation package plus a full range of company benefits. For confidential consideration, please forward your resume and salary history to:

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POSITIONS OPEN

RESEARCH VETERINARIAN

The Plum Island Animal Disease Center, U.S. Department of Agriculture, is accepting applications for a **research veterinarian**. Applicants must have a D.V.M. and 3 years of advanced research training and experience in veterinary microbiology with emphasis in virology and immunology and preferably specific experience in research on foot-and-mouth disease, rinderpest, and contagious bovine pleuropneumonia and other animal diseases exotic to the United States. Advanced degree(s) with appropriate accomplishments demonstrated by thesis or publications may be substituted for experience. Candidates should have broad knowledge in virology, including immunohistochemical techniques applied to animal tissues and skill in using light, ultraviolet, transmission, and scanning electron microscopes. Duties and responsibilities involve investigating the pathogenesis of foot-and-mouth disease. This is a permanent position subject to U.S. Civil Service requirements and benefits. The salary is allocated at GS-11 (\$18,258 per annum). To be assured of full consideration, applicants should submit current résumé and the names of three references by 1 January 1978, to: **Salvatore Citino, Personnel Officer, SC-1, Plum Island Animal Disease Center, P.O. Box 848, Greenport, New York 11944.** All applicants will receive consideration without regard to race, color, religion, national origin, sex, age, or handicap.

SYSTEMS ECOLOGIST

A position is open for a systems ecologist to study aquatic cycling and/or environmental stress in Southeastern watersheds. Ph.D., publications, and U.S. citizenship required. Experience in mathematical ecology and ability to work as part of an interdisciplinary team is also required. Salary and rank negotiable on a 12-month appointment to commence between June and September 1978. Send curriculum vitae, the names of three references, and other supportive information by 1 March 1978 to:

Michael H. Smith
University of Georgia
Savannah River Ecology Laboratory
Drawer E
Aiken, South Carolina 29801

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VERTEBRATE PHYSIOLOGIST

Opening available at the assistant professor level or possibly above. Effective date: September 1978. Applicants should have a strong commitment to research and undergraduate teaching. The successful applicant will participate in teaching either an introductory course in human biology or general biology as well as an intermediate course in cell physiology and an advanced course in vertebrate physiology. Should have a research specialty in either cardiovascular, respiratory, or renal physiology and a background to teach general zoology as well as cell, vertebrate, and human physiology. Credentials will be reviewed when complete. Interested persons should send their curriculum vitae, graduate, and undergraduate transcripts, brief outline of research plans, and at least one letter of recommendation to: **Dr. Mary D. Coyne, Chairman, Department of Biological Sciences, Wellesley College, Wellesley, Mass. 02181.**

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VISION SCIENTISTS

The Department of Physiological Optics of the School of Optometry is seeking two faculty members with O.D./Ph.D.'s or Ph.D.'s, working in the area of vision science. One position is open for an individual with a background and interest in the area of color vision and psychophysics. The second position is available for a person working in the area of biochemistry/pharmacology. Responsibilities will include: teaching courses within the physiological optics curriculum to both optometry students and graduate students, and conducting research.

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

Rank and salary commensurate with experience. Résumés will be accepted until 15 February 1978. Send curriculum vitae and the names of three professional references to: **Dr. Jerry L. Christensen, Department of Physiological Optics, School of Optometry/The Medical Center, University of Alabama in Birmingham, Birmingham, Alabama 35294.** Equal Opportunity/Affirmative Action Employer.

SYMPOSIUM

INTERNATIONAL SYMPOSIUM ON PROTEINS

The National Science Council of the Republic of China announces an International Symposium on Proteins to be held 6 to 9 March 1978 in Taipei, Taiwan.

The program will be composed of four sessions with invited speakers and will be cochaired by J. Porath, H. Neurath, M. Sela, and C. H. Li. Some voluntary communications will be permitted and will be limited in number. Additional information and registration forms may be obtained from: **Chi-wu Wang, National Science Council, 2 Canton Street, Taipei, Taiwan 107, Republic of China.**

PROGRAMS

PHYSIOLOGY GRADUATE AND POSTDOCTORAL TRAINING. The Department of Physiology, University of Arizona, College of Medicine, invites applications from qualified individuals interested in pursuing the Ph.D. degree in physiology. Applications are now being accepted for August 1978 entrance into the graduate program. In addition, postdoctoral positions are available from time to time. Fellowships and teaching assistantships are available for individuals accepted into the training programs of the department. The department provides facilities for study at both pre- and postdoctoral levels in cardiovascular, neural, renal, muscle, endocrine, and cellular physiology. For further information write: **P. C. Johnson, Head, Department of Physiology, University of Arizona, College of Medicine, Tucson, Arizona 85724.** The University of Arizona is an Equal Opportunity/Affirmative Action Institution.

RESPIRATORY PHYSIOLOGY TRAINING PROGRAM funded by NHLBI. Postdoctoral traineeships available July 1978 for 1 to 3 years. Emphasizes lung metabolism, gas exchange, tissue respiration, respiratory control, cell membranes, and smooth muscle. Write: **Education Officer, Respiratory Physiology Group, Department of Physiology, University of Pennsylvania School of Medicine/G4, Philadelphia, Pa. 19104.** An Equal Opportunity Employer.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS for M.D.'s or Ph.D.'s available in radiation oncology. Established Special Radiation Cancer Center at University Medical Center in Kentucky-Blue Grass Region. Training in radiation oncology and related medical physics or radiobiology with emphasis on cancer treatment and cancer research. Program funded by NCI under NRS training award for postdoctoral training. Training leads to certification by American Board of Radiology. Inquiries to: **Chairman, Department of Radiation Medicine, University of Kentucky Medical Center, Lexington, Kentucky 40506; telephone 606-233-5108.**

FELLOWSHIPS IN MARINE POLICY AND OCEAN MANAGEMENT

Applications are invited for 1-year **postdoctoral fellowships** from scholars and practitioners from relevant fields in the natural sciences, social sciences, and management who are interested in applying their disciplinary training and experience to investigations into questions of marine policy and ocean management in which marine science is an important factor. Recipients of awards are expected to pursue research full-time, basing themselves in Woods Hole.

Applicants must have completed their doctorate degree or possess superior professional qualifications through career experience. Opportunities for investigators on **sabbatical** are also available. Fellowship stipend is \$14,500. Appointees are eligible for group health insurance and a modest research budget. Application deadline is 15 February 1978 for 1978-1979 awards. Awards will be announced in March. Write for application forms to: **Dean of Graduate Studies, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543.**

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FELLOWSHIPS

Drs. E. H. Sonnenblick, J. Scheuer, and 12 colleagues in cardiovascular research have **NIH POSTDOCTORAL (M.D. or Ph.D.) RESEARCH TRAINING POSITIONS** available for 1978. Areas include: biochemistry, electrophysiology, and mechanics of cardiac muscle; coronary circulation and capillary exchange; hemodynamics and cardiovascular regulation. Interviews in New York or at FASEB meetings. Contact: **Dr. J. Scheuer, Division of Cardiology, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, N.Y. 10461.**

The Division of Hematology and the Blood Bank of the Mayo Clinic offer **NIH FELLOWSHIPS** for postdoctoral research training in the areas of hemostasis and blood banking to qualified applicants holding the M.D., Ph.D., or equivalent degrees. Research areas include biochemistry and immunology of the blood coagulation factors, blood group and histocompatibility antigens, and platelet and red blood cell biochemistry. For further information, apply to: **Hemostasis and Blood Bank Research Training Program, Mayo Graduate School of Medicine, Rochester, Minnesota 55901.**

ASSISTANTSHIPS

BIOCHEMICAL VIROLOGY

Two postdoctoral research **assistantships** are available to study biochemical aspects of influenza and parainfluenza virus replication and antigenic variation in influenza viruses. Successful candidates will have strong backgrounds in biochemistry. Send curriculum vitae and a statement of career goals to: **Dr. R. G. Webster and Dr. D. W. Kingsbury, Virology Division, St. Jude Children's Research Hospital, P.O. Box 318, Memphis, Tennessee 38101.** An Equal Opportunity/Affirmative Action Employer.

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IMMUNOLOGIST/ VIROLOGIST

Tenure track position in Department of Biology available September 1978. Background in medical microbiology also desired. Demonstrated teaching and research ability, publications and/or evidence of other scholarly contributions preferred. Doctorate required. Send resume to Dr. Carl E. Warnes, Chairman, Search and Selection Committee, Department of Biology, Ball State University, Muncie, In. 47306. Application deadline February 15, 1978.

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PHYSICAL OCEANOGRAPHER

Dames & Moore, one of the largest consulting engineering partnerships in the world, has an immediate opportunity in its Washington, D. C. office for an individual to fill a career oriented position as a principal physical oceanographer.

Duties include preparation of cruise plans, development of instrument deployment and recovery schemes, and reduction, and interpretation of ocean wave, current and tide data. Applicant should have demonstrated facility in preparing written reports, and may anticipate frequent travel, both domestic and overseas. Advanced degree(s) preferred.

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Materials Scientists

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The Solid State Science Division of Argonne National Laboratory offers the opportunity to explore various aspects of applied superconductivity in programs that provide excellent potential for professional achievement and growth. Openings are for:

Staff Scientist, R&D

Several years of experience beyond PhD or equivalent is necessary. Scientists with electrical, metallurgical or other engineering backgrounds are invited to apply. Some combination of experience in the following areas would be beneficial: materials science; TEM; SEM; X-Ray analysis; electrical power distribution; thin film deposition or high vacuum techniques. Position does not require intimate knowledge of superconductivity — although any work in this area would be helpful.

Initially, you will be responsible for conceiving, designing, setting up and carrying out an experimental program that will involve parts of several ongoing projects. Eventually, you will be expected to initiate and develop projects on your own. Scope will include collaborative efforts with scientists performing similar research and supervision of support staff. A strong interest in conducting independent research is also essential.

Research Scientist — High Temperature Superconductors

Postdoctoral research position will involve the fabrication and study of thin film SQUIDS made with high temperature superconductors. Candidate must have an interest in investigating Josephson effects in various types of weak links as well as in developing and studying the properties of high temperature SQUIDS. Some combination of experience in such areas as sputtering, radiation damage, ion implantation, and materials characterization techniques desired.

Research Scientists — Superconducting Electronic Circuits

Postdoctoral research position will involve the fabrication of superconducting electronic circuitry. Experience in the following areas essential: thin film deposition techniques include sputtering and electron beam evaporation; photolithography; and circuit analysis techniques.

All positions provide commensurate salaries and outstanding benefits. Send resume, including salary history, to: **Walter D. McFall, Argonne National Laboratory, Dept. SSS772, 9700 South Cass Avenue, Argonne, IL 60439.**

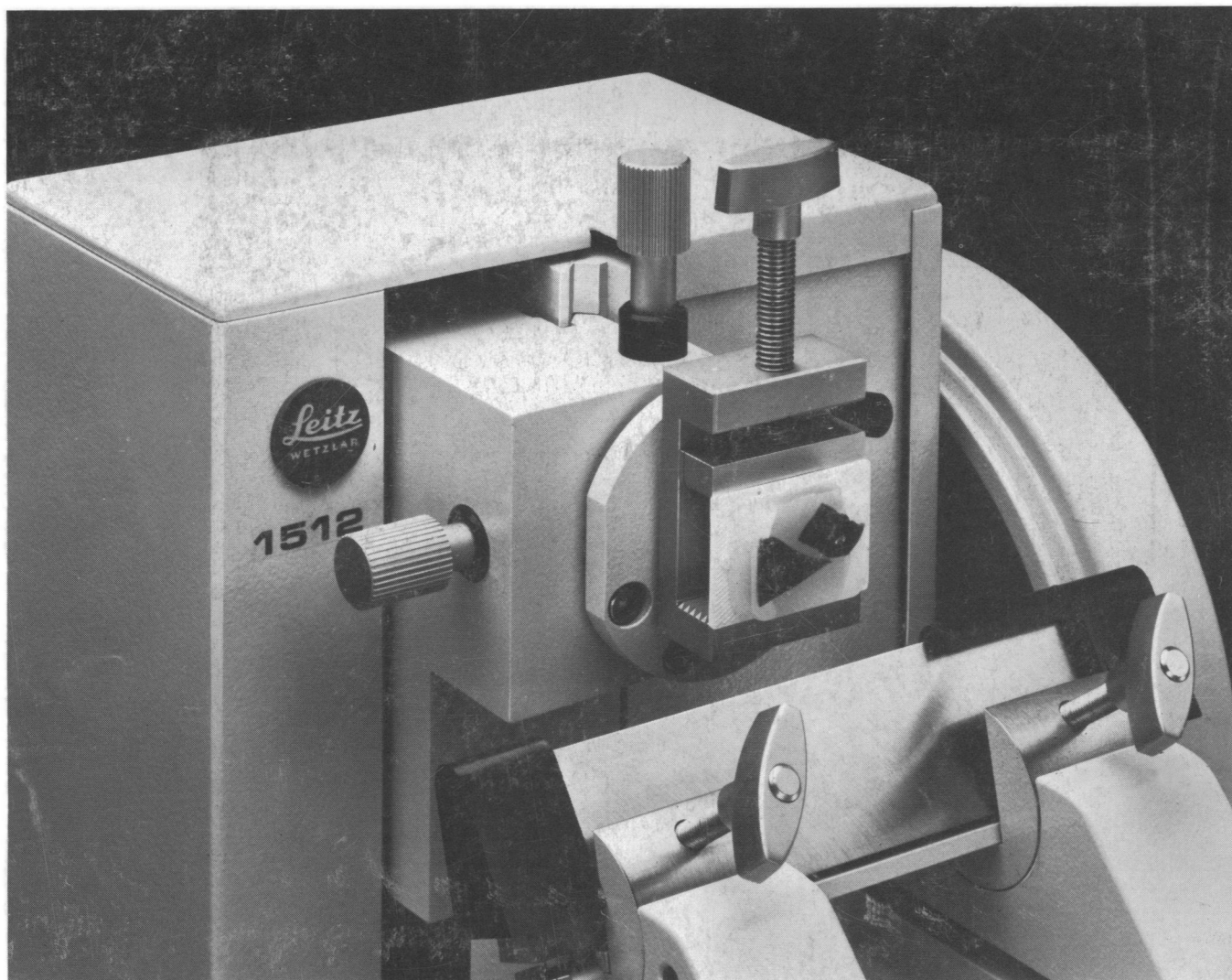


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