

Plant a THINK TANK anywhere
and watch the minds grow!

home-office-school-park-club-churches-laboratory



Unique instructional games designed by university professors to make learning fun through brain-to-brain action. Beginning games can be mastered by young children—final games will challenge intelligent adults. These are the famous GAMES FOR THINKERS from WFF 'N PROOF Publishers.

WFF 'N PROOF (logic)	13.00*
QUERIES 'N THEORIES (logic)	13.00*
EQUATIONS (mathematics)	10.00*
ON-SETS (set theory)	10.00*
PROPAGANDA (social studies)	11.00*
ON-WORDS (word structures)	10.00*
CONFIGURATIONS (geometry)	6.75*
TRI-NIM (problem solving)	5.75*
REAL NUMBERS (arithmetic)	2.25*
WFF (beginner's logic)	2.25*
QWIK-SANE (topology puzzle)	2.25*
TAC-TICKLE (pure strategy)	1.75*
TEACHERS MANUAL	1.25*
THINKERS BOOKENDS	16.00*
Complete 12-Kit THINK TANK & Teachers Manual	
with bookends (save \$10.75)	94.50*
without bookends (save \$4.75)	84.50*

* Includes postage and handling charges

Order from: **WFF 'N PROOF**
1490-DV South Blvd.
Ann Arbor, MI 48104

Fully guaranteed. Dealer inquiries invited.

Gifts that are a COMPLIMENT to receive!

Coming
Soon

the tool for
selecting all your
science books

Science Booklist Supplement 1970-1977



Personnel Placement

POSITIONS WANTED

Animal Science, Environmental Physiology, Ph.D. 1977. Publications in avian pineal physiology, thermoregulation, and endocrinology. Research training in domestic animal bionomics. Experience in radiotelemetry, indirect calorimetry, RIA, experimental surgery, and statistical design and analysis. Seeks research or research/teaching position. Available November 1977. Box 305, SCIENCE. X

Ph.D. Biochemistry, Assistant Director of Research; ambitious, with experience in: allergy, antigens-antibodies, enzymes, lectins, glycoproteins, membranes, solid-phase techniques, radioimmunoassays, project management, budgeting, and personnel. Desires unlimited growth opportunity in industry. Box 298, SCIENCE. X

Biochemist. Ph.D. 1970. Experience in lipid metabolism, nucleotide biosynthesis, enzymology, and lipoprotein metabolism. Publications. Seeks stable position in industry, government, or academia. Box 299, SCIENCE. X

Biochemist/Nutritionist/Physiologist. D.V.M., Ph.D. (1969); strong in analytical biochemistry; college teaching experience in physiology; research interests in endocrine control of metabolic processes (cyclic nucleotides and protein kinases); several publications, scientific reviewer; seeks academic or research position. Box 300, SCIENCE. X

Gross Anatomy/Developmental Biology/Teratology. Biologist, doctorate. Publications. Seeks teaching/research position. Available immediately. Relocation. Box 284, SCIENCE. X

Immunologist. Ph.D. 1974. University of California, Berkeley. Three years of postdoctoral training. Strong research background in cellular and clinical immunology. Publications. Teaching experience in general biology—rated outstanding instructor. Desires research or teaching position. Box 306, SCIENCE. X

Microbiologist-Plasmid Geneticist. Recent Ph.D., top university, seeks research/administrative position with advancement opportunities in industry, government, academia. Research experience includes studies in R factor genetics, cellular repair systems, and environmental mutagenesis. Extensive teaching and supervisory experience. Prefers South/Southwest. Box 307, SCIENCE. X

Professor of Anatomy, Neuroanatomist, and Certified Neurosurgeon, experienced in teaching modern neurosciences, would join busy teaching department. Visiting status eventually accepted. Box 308, SCIENCE. X

Science Writer/Editor. Journalism degree and experience, plus 2 years of graduate work in botany. Special interests: natural history, ecology. Box 309, SCIENCE. X

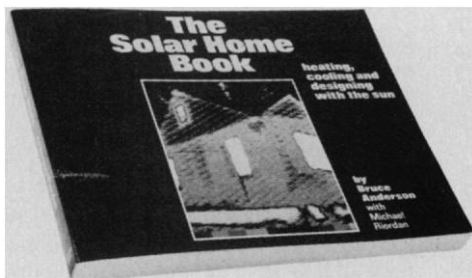
Virologist. Ph.D. 1974. Broad background in veterinary virus research, herpesviruses of mammals, birds, reptiles, and fish. Experience with tissue culture from each of these classes of animals including initiation of cell strains and lines. Publications. Seeks academic/research, industry, or government position. Available September 1977. Box 310, SCIENCE. X

POSITIONS OPEN

ASSISTANT PROFESSOR—PARASITOLOGY. Microbiology Department seeking person with Ph.D., advanced training in parasitology, preferably with D.V.M. and familiar with current diagnostic techniques in animal parasitic problems. Independent research capabilities; teach professional, undergraduate, and graduate programs. Position open until filled. Apply to: **Y. C. Zee, Professor-Chairman, Department of Veterinary Microbiology, University of California, Davis, Calif. 95616.** An Equal Opportunity Employer.

"The best book on solar I've seen to date."

Richard Stepler, **Popular Science**



THE SOLAR HOME BOOK

Bruce Anderson with Michael Riordan
304 pages. \$7.50

**OVER 80,000
COPIES SOLD**

The first book to deal honestly with the drawbacks and blessings of home solar heating and cooling. Simple yet complete, with a wealth of photographs, drawings and diagrams, it's the book for homeowners, tradespeople, designers, apartment dwellers, and all interested in energy options. Allows anyone to build with the sun.

"This is among the best of the new books on solar energy as a viable alternative energy source for homeowners." **Library Journal**

"A much needed contribution to the state of the art of solar heating and cooling a house. It is 'must' reading for anyone who is thinking about building a house—solar or otherwise." **New York Times**

Please send me copy(ies)
of *The Solar Home Book* at
\$7.50 each, plus 75¢ per book
handling charge. Make check
payable to:

Cheshire Books, c/o Science

Name
Address
City
State Zip

Box F, Dorset, VT 05251

POSITIONS OPEN

ANALYTICAL CHEMIST: Principal investigator position, fall 1977, for Ph.D. inorganic/organic chemist with experience in sampling and analyzing air pollutants. Must be interested in working with well-established multidisciplinary research group studying health effects of atmospheric aerosols and gases originating from fossil fuel combustion and photochemistry. Development of analytical methods for quality assurance of exposure concentrations and opportunity for independent research and teaching. Send résumé and letters of recommendation to: **Dr. Jack D. Hackney, Director, Environmental Health Laboratory, Rancho Los Amigos Hospital, University of Southern California, Downey, California 90242.**

ANATOMIST at the level of assistant or associate professor to teach both in an integrated medical histology program and in a course in graduate histology. Independent research and commitment to graduate training are required. Rank and salary level depend on qualifications and experience. Present departmental research interests are in neurobiology, reproduction, and immunobiology. Qualified persons are invited to submit an application, curriculum vitae, publications list, and the names of three persons who, on request, will supply references to: **Dr. W. P. Jollie, Department of Anatomy, Medical College of Virginia, Box 906—MCV Station, Richmond, Va. 23298. The Medical College of Virginia is an Equal Opportunity/Affirmative Action Employer; women and minorities are encouraged to apply.**

ASSISTANT PROFESSOR REPRODUCTIVE PHYSIOLOGIST

Research 80 percent; teaching 20 percent. The individual will be responsible for initiating and executing research projects on some aspects of reproductive physiology in female domestic mammals with emphasis on the biological and/or biochemical explanations of reproductive processes. The projects should expand or complement the current physiology program in cattle and swine and be part of a team effort to solve reproductive problems in the livestock industry.

Qualifications: Ph.D. in reproductive physiology with a strong background in cell biology or protein and steroid biochemistry. A knowledge of practical agriculture is required.

Applications: submit with a curriculum vitae before 31 August 1977 to: **Chairman, Department of Animal and Poultry Science, Ontario Agricultural College, University of Guelph, Guelph, Ontario, Canada N1G 2W1.**

ASSISTANT PROFESSOR: Science education in biology. Full-time, tenure track, \$13,572 to \$16,320. Duties include bioscience methods course, advising students in secondary education, and coordination of laboratories in a large nonmajors course. Ph.D., postdoctoral training, and experience with problems in high school teaching preferred. Send résumé, transcripts, and three letters of reference to: **Dr. J. Neel, Chairman, Search Committee, Biology Department, San Diego State University, San Diego, Calif. 92182.** Closing date for receipt of applications is 1 October 1977. Position to be filled either for January 1978 or August 1978. *An Equal Opportunity/Affirmative Action/Title IX Employer.*

Southern Illinois University at Edwardsville, School of Dental Medicine, invites applications for the position of **ASSISTANT PROFESSOR OF ANATOMY**, available 1 October 1977 in the Department of Biomedical Sciences. Candidates should have a Ph.D. degree in anatomy, experience in professional and graduate teaching in the human health sciences, and a demonstrated research interest.

Applications will be received until 5 September 1977. Send curriculum vitae to: **Dr. Edwin E. Dale, Associate Dean for Administration, Southern Illinois University, School of Dental Medicine, Edwardsville, Illinois 62026.**

Southern Illinois University at Edwardsville is an Equal Opportunity/Affirmative Action Employer and administers its educational and employment programs in conformance with federal and state laws prohibiting discrimination based upon sex, race, age, and other proscribed categories, including Title IX (Higher Education Act). Inquiries regarding Affirmative Action in Employment, Title IX Administration, or other facets of Equal Opportunity should be directed to the Affirmative Action Office, Office of the President.

5 AUGUST 1977

POSITIONS OPEN

The University of California, Berkeley, seeks an **ASSISTANT PROFESSOR OF FOOD SCIENCE** for teaching and research in the Department of Nutritional Sciences and the Agricultural Experiment Station. Applicants should have the Ph.D. degree, or its equivalent, with a strong background in chemistry and nutritional aspects of food processing and preservation. Applications with biography, transcripts, research interests, reprints of publications, and names of references should be sent to: **Professor George Briggs, Chairman, Search Committee, Department of Nutritional Sciences, University of California, Berkeley, Calif. 94720.** Applications should be received before 1 November for this vacancy which we wish to fill by 1 December 1977, or as soon thereafter as possible.

The University of California is an Affirmative Action and Equal Opportunity Employer. Women and minority applicants are encouraged to apply.

University of California, Irvine, Department of Pathology, recruiting for faculty position at **ASSOCIATE PROFESSOR** level. Required: M.D., Ph.D. biochemistry/biophysics, clinical board qualified, service experience in clinical chemistry, demonstrated interest in independent research. Duties: teach medical students and house staff, limited administrative responsibility in area of clinical chemistry. *All qualified candidates welcome: minorities and women encouraged to apply.* Send curriculum vitae and references to: **Edward R. Arquilla, M.D., University of California, Irvine, Calif. 92717, by 15 September 1977.**

THOMAS HUNT MORGAN SCHOOL OF BIOLOGICAL SCIENCES UNIVERSITY OF KENTUCKY

ASSOCIATE PROFESSOR/MICROBIOLOGY. Appointment beginning January 1978. Qualifications: Ph.D. degree, postdoctoral and previous faculty experience. Teaching responsibilities in both pathogenic microbiology and immunology; active research program essential. Send curriculum vitae, a brief description of professional experience, a summary of teaching and research interests, and the names of three references to: **Office of the Director, T. H. Morgan School of Biological Sciences, University of Kentucky, Lexington, Kentucky 40506.** Deadline for applications is 6 weeks after publication of this notice. *The University of Kentucky is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMISTS

This is a unique opportunity to join an expanding department within the Merck Sharp & Dohme Research Laboratories. This group will be concerned with fundamental studies relating to such topics as membrane structure and function, hormone action and control, cell biology, enzymology, comparative biochemistry, drug metabolism, and microbial genetics. At least 2 years of postdoctoral experience and the demonstrated ability to initiate and pursue independent creative research as evidenced by publications is required.

This is an unusual career opportunity which offers a highly stimulating, interdisciplinary work environment. Publication of results is strongly encouraged. Compensation and benefit package is excellent.

Please submit résumé in confidence to: **William T. Jackson, Employment Supervisor,**

Merck & Co., Inc.

P.O. Box 2000

Rahway, N.J. 07065

Equal Opportunity Employer, M/F

CARDIOVASCULAR PHYSIOLOGIST. Level negotiable. Available immediately, starting September 1977. Seeking cardiovascular physiologists with interests in stress physiology and/or environmental physiology. Medical and graduate teaching. Research opportunities. Send curriculum vitae and names of three references to: **Chairman, Department of Physiology, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles, California 90033. An Affirmative Action Employer.**

DEAN GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

A School of The University of Texas Health Science Center at Houston

Candidates are sought for the position of Dean of the Graduate School of Biomedical Sciences (GSBS) established in 1963 in recognition of the unique resources in the Texas Medical Center for research and research training in the biomedical sciences. The faculty of the graduate school is drawn from The University of Texas Medical School, The Dental Branch, School of Public Health, Graduate School, and the University of Texas System Cancer Center M. D. Anderson Hospital and Tumor Institute. Inter-institutional, faculty groups related in educational and research interests have been organized in biochemistry, biomathematics, biophysics and medical physics, cell biology, molecular biology, human genetics, pathology, physiology and reproductive biology, pharmacology, and neurosciences. The diverse faculty with broad multidisciplinary interests creates unusually broad research and educational opportunities. The dean acts as chief administrator of the graduate faculty and has the opportunity to play an important and creative role in the growth and development of the programs within the Health Science Center and the System Cancer Center.

Individuals seeking the position should have an extensive and broad knowledge of the biomedical sciences, their current status, and future prospects. A recognized record of creative and significant research contributions and academic achievement plus demonstrated administrative and leadership abilities are desirable.

Those interested should send a résumé to: **Dr. John A. DeMoss, Chairman, Search Committee, The University of Texas Medical School at Houston, Department of Biochemistry, P.O. Box 20708, Houston, Texas 77025. Equal Opportunity/Affirmative Action Employer.**

DEAN COLLEGE OF ARTS AND SCIENCES

Virginia Polytechnic Institute and State University (VPI & SU) invites applications and/or nominations for the position of Dean of the College of Arts and Sciences. This key executive position carries supervisory responsibility for the conduct of instructional, research, and extension programs in a collegiate unit organized in some 17 departments with approximately 500 faculty and over 5000 undergraduate majors. Graduate programs are conducted at both masters and doctoral levels. State-supported and sponsored research programs are important elements in the comprehensive commitment of the faculty.

Candidates should have extensive experience in a major institutional setting and should have established a significant record of scholarship and teaching in a relevant discipline. While administrative experience appropriate to the position will obviously be weighed, the capacity to articulate the value of the basic disciplines and the purposes of liberal education will be especially sought.

Located in Blacksburg, in the attractive mountain setting of southwest Virginia, VPI & SU is the Commonwealth's land-grant university. Organized in seven degree-granting colleges, the university currently enrolls over 19,000 students with an annual budget in excess of \$100 million.

Applications or nominations may be sent to:

Provost John D. Wilson

201 Burruss Hall

**Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061**

Applications should include a current curriculum vitae and the names of at least three persons to whom the Search Committee can turn at the appropriate time for assessments of the candidate's strengths and experience. Confidentiality requirements of the candidate will be strictly observed. Applications will be received through 30 September 1977.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

DEAN

College of Medicine and Dentistry of New Jersey
Graduate School of Biomedical Sciences

Nominations and applications are invited for the position of Dean. Qualifications include evidence of strong academic administrative ability and academic leadership demonstrated by investigative and professional activities commensurate with senior professorial rank.

Curriculum vitae and nominations should be sent to:



Dr. George Yamane, Chairman
Dean Search Committee

COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY
Graduate School of Biomedical Sciences
100 Bergen Street
Newark, N.J. 07103

An Equal Opportunity/Affirmative Action Employer

ASSISTANT PROFESSOR OF PHARMACOLOGY

The Department of Pharmacology of Northwestern University Medical School in Chicago invites applications from qualified individuals for two positions at the level of assistant professor. Preferred fields of research include molecular pharmacology and toxicology such as receptor characterization, drug metabolism, and mode of action of environmental agents. However, individuals who have demonstrated excellence in research in other areas of pharmacology are also encouraged to apply. The department is rapidly developing with 18 faculty members who have expertise in various fields of pharmacology; the emphasis is on molecular and electrophysiological approaches. Excellent facilities are available in the department including those for NMR, GC-mass spectrometry, EM, and sophisticated electrophysiology such as voltage clamp. Applications should include a curriculum vitae, a list of publications, and names of three references, and should be submitted to: **Dr. Toshio Narahashi, Professor and Chairman, Department of Pharmacology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Illinois 60611.** Northwestern University is an Equal Opportunity/Affirmative Action Employer.

BIOELECTRONICS ENGINEER

Experience with lasers and optical systems, preferably with knowledge of biomedical applications, to work at large medical center. Projects involve design and construction of electronics instrumentation for eyes. Background in electronics and electrical engineering required; knowledge of computer technology helpful. M.S. or Ph.D. preferred. Box 311, SCIENCE.

CYTOGENETICS LABORATORY DIRECTOR Centralized Laboratory for Prenatal Cytogenetic Diagnosis in New York City

This laboratory is part of a system of services to provide prenatal cytogenetic diagnosis to women in New York City. It is sponsored by the New York State and New York City Departments of Health and administered by the Medical and Health Research Association of New York City, Inc. It will eventually have the capacity to process 4,000 amniotic fluid specimens a year for chromosome studies and alpha fetoprotein determination. Specimens will be referred to it by medical centers and other facilities meeting standards for quality of amniocentesis and related services.

The laboratory director will be responsible for the operation of the laboratory, including the supervision of a staff of 25, and for the coordination and quality control of amniocentesis and related services. This person will also have an opportunity to develop a research program relevant to the aims of the project and to hold a medical school appointment in New York City.

Applicants must have an M.D. or a Ph.D., and at least 4 years of experience in cytogenetics, including 2 years of amniotic fluid cell culture, and they should feel comfortable in handling the administration of the referral system.

Those interested should send inquiries and curriculum vitae to: **Coordinator, Centralized Laboratory for Prenatal Cytogenetic Diagnosis, Medical and Health Research Association of New York City, Inc., Room 720, 40 Worth Street, New York, N.Y. 10013.** An Equal Opportunity/Affirmative Action Employer. The deadline for submitting applications is 15 September 1977.

POSITIONS OPEN

DIRECTOR OF BOTANICAL GARDEN, University of Georgia. Will direct development, research, and educational activities at the garden and be responsible for its management. Will prepare budgets for state-support and actively seek outside funds from foundations and individuals. Ph.D. in plant science or related discipline required and must meet qualifications for tenured rank in an appropriate university department. Demonstrated aptitude for administration and possess special technical knowledge of plant science and botanical gardens. Position available 1 July 1978. Applications received through 15 October 1977. Submit applications and nominations to: **S. E. Younts, Old College, University of Georgia, Athens, Ga. 30602.** The University of Georgia is an Equal Opportunity Employer.

UNIVERSITY OF OKLAHOMA College of Medicine

Applications are solicited for faculty positions in the following areas: **DEPARTMENT OF PATHOLOGY.** Assistant professor—requires research and teaching skills in diagnostic electron microscopy, immunopathology and histochemistry (#31); **assistant-associate professor—M.D.** for assistant director of clinical laboratories, University Hospital and Clinics and Veterans Administration Hospital (#32); **assistant professor-professor—M.D.** to serve as coordinator of neuropathology. **RADIOLOGICAL SCIENCES.** Instructor—assistant professor—medical radiation physicist, adept at computer programming, some teaching responsibilities (#23).

Applicants should send curriculum vitae, identifying vacancy number for which they are applying, to: **Dr. Thomas N. Lynn, Dean, College of Medicine, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Oklahoma 73190.** We are an Equal Opportunity Employer.

UNIVERSITY OF PETROLEUM AND MINERALS DHAHRAN, SAUDI ARABIA

The Department of Chemistry, University of Petroleum and Minerals, Dhahran, Saudi Arabia, will have **FACULTY POSITIONS** open for the academic year 1978-79, starting 1 September 1978, to teach in the undergraduate department with a developing graduate program. Applications at all rank levels will be considered. Candidates should have teaching and research interests. English used for instruction.

Minimum regular contract for 2 years, renewable. Excellent salaries and allowances, free air-conditioned housing, free air transportation to and from Dhahran each 2-year tour. Attractive educational assistance grants for school-age dependent children. Local transportation allowance in cash each month. All earned income without Saudi taxes. Ten-month duty each year with 2 months vacation paid and possibility of participation in University's ongoing summer programs with adequate additional compensation.

Apply with complete résumé on academic and professional background, list of references, a complete list of publications with clear indication of those papers published in refereed professional magazines/journals with research details, and with copies of degrees including personal data, such as family status (spouse's name, names of children, age, and sex), home and office addresses, and telephone numbers, to:

University of Petroleum and Minerals
c/o Saudi Arabian Educational Mission
2223 West Loop South, Suite 400
Houston, Texas 77027

POSITIONS OPEN

ASSOCIATE DIRECTOR, data analysis in Human Performance Laboratory and longitudinal research. Ph.D. required; experience in biostatistics or cardiovascular epidemiology. Emphasis in cardiovascular risk factor analysis preferred. Primary responsibility, data analysis for longitudinal research project in aerobics; full-time responsibility depends on interest in other aspects of study and/or teaching assignments in School of Medicine or HPER department. *Equal Opportunity Employer.* If interested in a dynamic Christian atmosphere, send résumé and transcript to: **Dr. David E. Cundiff, Director, Human Performance Laboratory, School of Medicine, Oral Roberts University, Tulsa, Oklahoma 74171.**

CHAIR OR HEAD, Department of Food and Nutrition, College of Home Economics, Iowa State University. Doctorate in food science, nutrition, or related area. Evidence of excellence in teaching and research and of administrative ability required. Nominations due 1 September 1977; applications accepted until 15 September 1977, or until position is filled. Respond to: **Dr. Sam Clark, Department of Child Development, Iowa State University, Ames, Iowa 50011.** *Equal Opportunity/Affirmative Action Employer.*

DIRECTOR

The Marine Biological Laboratory, Woods Hole, Mass., invites applications for the position of **director or director-president**, which will become open on 1 July 1978. Qualified applicants are invited to submit a curriculum vitae, summary of experience, and at least three references to: **Chairman of Search Committee, Marine Biological Laboratory, Woods Hole, Mass. 02543.** *An Equal Opportunity Employer.*

EM LABORATORY TECHNICIAN

Fully trained and experienced in basic techniques of tissue preparation for TEM. Must be proficient in ultrathin sectioning. Salary from \$10,000 to \$12,000 per year, depending on qualifications. Write: **Dr. Greta E. Tyson, Head, Electron Microscope Center, Drawer EM, Mississippi State University, Mississippi State, Miss. 39762.**

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

FACULTY POSITION. Experience in immunology, preferably viral or tumor immunology. Required to assist in teaching medical microbiology and immunology to medical and graduate students and to maintain a vigorous research program. Rank and salary dependent on background, experience, and qualifications. Send curriculum vitae, bibliography, and three recommendations by 31 August 1977 to: **Dr. Fred Rapp, Department of Microbiology, M. S. Hershey Medical Center, The Pennsylvania State University, Hershey, Pennsylvania 17033.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY OF FORESTRY UNIVERSITY OF BRITISH COLUMBIA

TEACHING POSITION QUANTITATIVE REMOTE SENSING

Rank: assistant professor.

Salary: negotiable.

Available: immediately.

Qualifications: Ph.D. with emphasis on interpretation of quantitative remote sensing data. Strong background in mensuration, and land classification with experience in photogrammetry, statistics, computer science, and systems analysis.

General background preferably in forestry or agricultural sciences.

Duties: teaching graduate students and undergraduate students in quantitative interpretation of remote sensing data, student advising and research guidance in an interdisciplinary graduate program in remote sensing.

Closing date for application: 31 October 1977 or until position is filled.

Applications, together with résumé, transcripts, personal statement of interest, and names of three references should be sent by 31 October 1977, to:

Dr. J. A. F. Gardener
Dean
Faculty of Forestry
University of British Columbia
Vancouver, B.C., Canada V6T 1W5

POSITIONS OPEN

BIOCHEMICAL PHARMACOLOGIST/ TOXICOLOGIST—Ph.D.

Requires at least 5 years of research experience beyond the doctorate level, plus the ability to design, supervise and evaluate studies determining the in vivo/in vitro metabolism of drugs, industrial chemicals, pesticides, and chemical carcinogens and relate the biotransformation to the chemical's toxicity. We offer an excellent compensation package. To apply, send your confidential résumé with salary history/requirements to: **Leslie G. Hill,**

Battelle

Columbus Laboratories
505 King Avenue, Columbus, Ohio 43201
Equal Opportunity Employer, M/F

HEALTH SERVICES RESEARCH COORDINATOR University of California—Fresno, Calif.

Research associate position, University of California, San Francisco School of Medicine, Fresno—Central San Joaquin Valley Medical Education Program. The program, based in Fresno, encompasses medical student and house-staff clinical training with emphasis on primary care and rural health service.

Doctorate degree related to health services research, or M.D.—M.P.H. required.

Responsibilities include: health services research with orientation to rural health service problems in central California; design and evaluation of experimental, demonstration models of rural health delivery; evaluation of educational programs; consultation; modest administrative responsibilities; and teaching opportunities.

Apply with curriculum vitae to: **David Werdegarr, M.D., Associate Dean, Fresno University of California Medical Education Program, 2615 East Clinton Avenue, Fresno, California 93703.**

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

POSITIONS OPEN

VISITING ASSISTANT PROFESSOR ZOOLOGY

To teach a two-semester course in human anatomy and physiology primarily to nursing students and a course in environmental physiology for upperclassmen and graduate students. Qualifications: Ph.D. with physiological orientation. One-year appointment starting 1 September 1977. Send résumé with three letters of recommendation to: **Dr. Milton Potash, Department of Zoology, University of Vermont, Burlington, Vermont 05401. An Affirmative Action Employer.**

UNIVERSITY OF CALIFORNIA, BERKELEY Faculty Position in INSECT ECOLOGY—BIOLOGICAL CONTROL Division of Biological Control and Department of Entomological Sciences College of Natural Resources

A position as associate professor of entomology and associate entomologist in the experiment station will be available 1 December 1977. Teaching in **insect ecology** and research in **biological control** on predator-prey (host-parasite) and other ecological relationships of insects and other pests of crops and other resources. Emphasis on both physical and biotic ecology. Qualifications must include Ph.D. degree with specialization in insect ecology and training and experience applicable to biological control, as well as 4 years of experience subsequent to the Ph.D. in these areas, and quantitative insect ecology and population ecology, especially predator-prey or host-parasite relationships. Skills in statistics, mathematical modeling and computer methodology highly desirable. Send full curriculum vitae, official transcripts, copies of all publications or manuscripts, and names of three references by 1 September 1977 to: **Dr. Carl Huffaker, Acting Chairman, Division of Biological Control, College of Natural Resources, University of California, Berkeley, California 94720. The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.**

POSITIONS OPEN

FACULTY POSITION, MEDICAL ONCOLOGY. Appointment at the assistant or associate professor level for qualified internist with subspecialty interest in oncology and substantial training in basic investigation, capable of developing a research program relating to cell surface hormone receptors and their applicability to the diagnosis or treatment of neoplastic disease. Please send curriculum vitae and two recent reprints to: **Robert N. Taub, M.D., Ph.D., Professor and Chairman, Division of Medical Oncology, MCV Station—Box 230, Richmond, Va. 23298.**

UNIVERSITY OF MICHIGAN FACULTY POSITION AVAILABLE

Board-eligible or -certified **urological surgeon** for full-time academic position involving teaching, research, and clinical practice. Level of appointment and salary will be commensurate with applicant's qualifications. Send résumé to: **Box 312, SCIENCE. An Affirmative Action, Nondiscriminatory Employer.**

IMMUNOCHEMIST. Applications are invited for an individual who would engage in research in the Department of Medicine and teach in the Department of Microbiology. Qualifications include a Ph.D. degree or its equivalent with postdoctoral experience and teaching ability in the field of microbiology. Must have a background in immunochemistry and have demonstrated research capability. Contact: **Vincent P. Butler, Jr., M.D., Department of Medicine, Columbia University College of Physicians and Surgeons, 630 West 168th Street, New York, N.Y. 10032. Columbia University is an Equal Opportunity/Affirmative Action Employer.**

MEDICAL GENETICS. Two postdoctoral positions will be available 1 July 1978 for persons with academic and research interests in the clinical and basic aspects of medical genetics. For information and applications write to: **Dr. Charles J. Epstein, Department of Pediatrics, University of California, San Francisco, California 94143. An Affirmative Action/Equal Opportunity Employer.**

THE INTERNATIONAL LABORATORY FOR RESEARCH ON ANIMAL DISEASES

P.O. Box 30709, Nairobi, Kenya
Telephone: 592244/45/46, Telex: 22040

The International Laboratory for Research on Animal Diseases (ILRAD) is a newly established international institute in Nairobi, Kenya, which conducts research on African trypanosomiasis and theileriasis, two vector-borne, hemoparasitic diseases of widespread importance in approximately 50 developing countries. Multidisciplinary research involving immunology, biochemistry, cell culture, pathology, parasitology, ultrastructure, epidemiology, and clinical medicine is being carried out and will be expanded in 1978. The scientific staff is recruited internationally and is composed of core scientists, visiting scientists, and postdoctorals. Core scientists have a long-term association with the institution, while the visiting scientists have appointments for 1 to 2 years and generally are on leave from their home institutions. Postdoctorals are appointed for 2 to 3 years.

ILRAD is recruiting **SCIENTIFIC STAFF** for employment in 1978. Positions will be available in 1978 for **CORE SCIENTISTS, VISITING SCIENTISTS, and POSTDOCTORALS** in immunology, cell culture, pathology, and parasitology. Visiting scientist and postdoctoral posts will be open in biochemistry, epidemiology, and clinical medicine. Core and postdoctoral posts will be available in electron microscopy. The individuals appointed to core and visiting scientist positions must be well-established investigators with excellent training and experience in the relevant discipline and must show evidence of past research productivity. In addition, these individuals must be interested in interacting with other staff in multidisciplinary approaches to relevant questions leading to the control of trypanosomiasis and theileriasis. Postdoctoral candidates must have a strong science background in the relevant discipline and must have shown excellent potential and aptitude for research. Salary is based upon the background, training, and experience of the candidate. In addition to salary, ILRAD pays housing, moving expenses, commutation, insurance, retirement, and other perquisites.

Positions will be available in 1978 for a **STAFF SCIENTIST, VISITING SCIENTIST, and POSTDOCTORAL**. These positions are open to people with research experience and interests in: **basic cell biology**, including cell synchronization and division analysis, mutation screening, and cell cloning; **molecular biology**, including mRNA analysis, cDNA probe analysis, and DNA cloning; and **protein chemistry**, including antigen isolation and purification and peptide analysis. Experience in protozoology would be advantageous. Salary and overseas benefits will be commensurate with age and experience.

ILRAD has a position available immediately for a **SENIOR TECHNICIAN IN DIAGNOSTIC SEROLOGY**. The individual in this position must be well trained, have 6 to 10 years of experience in a diagnostic laboratory, and be familiar with various serologic techniques including fluorescent antibody, haemagglutination, complement fixation, gel diffusion, and others. The person filling this post should be capable of setting up, conducting, and evaluating the results of serologic procedures as well as having sufficient background and training to develop new procedures and improve available ones in cooperation with scientific staff members. In addition, this individual must be able to supervise a small diagnostic laboratory including the activities of other technical staff conducting bacteriological, haematological, and other diagnostic procedures. The salary range is from \$8,000 to \$15,000 per annum and is based upon the training and experience of the candidate. Perquisites include moving, commutation insurance, retirement, and others.

ILRAD has **SENIOR POSITIONS** available in 1977 and 1978 for **TECHNICAL STAFF** for both short-term (1 or 2 years) and longer-term appointments in biochemistry, immunology, cell culture, and parasitology. Individuals filling these positions must be well trained, with 6 to 10 years experience in the discipline, be capable of supervising the functions of a laboratory, including junior grade staff and have the interest and ability to train junior staff. Positions in immunology are for research in both cellular immunology and in immunoglobulins. One post is for a senior technician in serology for diagnostic work. Openings in cell culture are for individuals with training and experience in the initiation and maintenance of mammalian or insect cell cultures and their use in infectious disease research. Positions are available in parasitology for persons experienced in tick and tsetse fly rearing and research techniques as well as in research relating to trypanosomiasis and theileriasis. Individuals with experience in other hemoparasitic diseases will also be considered. Biochemistry openings are available for persons well versed in techniques involving protein, lipid, and enzyme chemistry. The salary range is \$8,000 to \$15,000 and is dependent upon the training and experience of the candidate. Also included are perquisites for transportation, housing, insurance, and other things.

Interested individuals should submit a synopsis of past research activities, curriculum vitae, publications, and the names of three references who could be contacted on behalf of their candidacy to the **Director, ILRAD, P.O. Box 30709, Nairobi, Kenya**. Additional information can be obtained by writing the same address.

POSITIONS OPEN

MARINE ECOLOGIST

Research position available immediately for project leader of an environmental quality study in semi-tropical coral reef environment. Candidate to head small multi-disciplinary research team in ongoing project. Ph.D. and scuba ability essential; post-doctoral experience desirable. Send curriculum vitae plus names of three references to: **The Director, Bermuda Biological Station, St. George's West, 1-15, Bermuda.**

The Department of Biological Sciences invites applications for a tenure-track opening for a **PHYSIOLOGIST** at the assistant or associate professor level beginning September 1977. Applicants should have a Ph.D. in physiology or related field. Teaching duties primarily in undergraduate physiology, anatomy, and general biology. *Affirmative Action/Equal Opportunity Employer.* Interested candidates should send curriculum vitae and list of three references to: **Dr. Herman A. Rierison, Chairman, Department of Biological Sciences, Quinnipiac College, Hamden, Conn. 06518.**

PLASMA MEMBRANE RESEARCH

Postdoctoral research associate to study role of the plasma membrane in control of differentiation and carcinogenesis. Available immediately. Send curriculum vitae and names of three references to:

**Dr. Robert E. Scott
Department of Pathology
Mayo Clinic/Foundation
Rochester, Minn. 55901**

The Mayo Clinic is an Equal Opportunity Employer

INSTITUTE FOR CARDIOVASCULAR STUDIES UNIVERSITY OF HOUSTON HOUSTON, TEXAS

The Institute for Cardiovascular Studies invites applications from recent Ph.D.'s and those with 1 or 2 years postdoctoral training for appointments as **POSTDOCTORAL FELLOWS** and **RESEARCH INVESTIGATORS** in cardiovascular physiology and pharmacology. Successful candidates will be engaged in basic research related to the control of cardiovascular function, etiology of hypertension and antihypertensive drug mechanisms. The starting date for these appointments is 1 September 1977. Salaries would be commensurate with research experience.

Interested persons should send curriculum vitae and three letters of recommendation to: **Dr. B. S. Jandhyala, Department of Pharmacology, University of Houston, 4800 Calhoun Boulevard, Houston, Texas 77004**
Equal Opportunity Employer

TWO POSTDOCTORAL POSITIONS available immediately for 1 or 2 years to study role of mitogen receptors in regulation of cell replication in uninfected and chemical-virus-transformed cultured cells and in perfused hepatectomized and tumor bearing liver. Candidates should have Ph.D. in biochemistry, cell biology, or physiology, and background in endocrinology. Stipend \$10,000 to \$12,000. Send curriculum vitae and three letters of reference to: **Dr. J. F. Perdue, Lady Davis Institute for Medical Research, Jewish General Hospital, Montreal, Quebec, Canada H3T 1E2.**

POSTDOCTORAL POSITIONS. Openings for three postdoctoral fellows: (i) **geneticist** with interest in endocrinology to explore pituitary-gonadal axis in fish; (ii) **pathologist** for studies on the diseases of aquatic animals and their treatments, especially fish; and (iii) **invertebrate zoologist** with knowledge of the nutrition of marine species, for development of methods for rearing aquatic organisms. Send curriculum vitae and names of references to: **Dr. Kenneth Gold, Osborn Laboratories of Marine Sciences, New York Aquarium, Boardwalk and West 8th Street, Brooklyn, N.Y. 11224.**

POSTDOCTORAL POSITIONS open in **VIROLOGY** for Ph.D., M.D., or D.V.M. Experience in immunology, biochemistry, and pathology of virus infections preferred. Ongoing programs on togavirus, enterovirus, rabies, insect virus, and others. United States citizens, residents. Send curriculum vitae and names of references to: **Dr. Francis L. Black, Department of Epidemiology, Yale University, New Haven, Conn. 06510.**

POSITIONS OPEN

POSITION AVAILABLE

The Department of Entomology, Purdue University, is seeking a full-time faculty member at the **assistant professor** level. Requisite to this position is a strong commitment to teaching entomology at both the undergraduate and graduate level. In addition to this primary function, the faculty member will be expected to conduct research and supervise graduate students. This faculty position is for an entomologist having research expertise in and ability to interact in the areas of organismal biology, biosystematics, and/or field ecology presently in the department, and have an appreciation for the potential applications of these areas to entomological problems.

Applicants must have attained a Ph.D. and demonstrate a broad background in the entomological and biological sciences.

Salary is to be commensurate with training and experience. Send detailed résumé including transcripts and three letters of recommendation to:

**Eldon E. Ortman
Department of Entomology
Purdue University
West Lafayette, Indiana 47907**

Applications will be received until 1 August 1977.

An Equal Opportunity Employer: Purdue University is an Equal Access/Equal Opportunity Employer.

POSTDOCTORAL FELLOW or **RESEARCH ASSOCIATE.** Available 1 September 1977. Ph.D. trained in electron microscopy to study biogenesis of membranes and viruses utilizing new techniques. Should possess training in TEM, STEM, electron autoradiography; strong background in biochemistry desirable. Salary negotiable. Apply with curriculum vitae to: **Dr. Herbert A. Blough, Head, Division of Biochemical Virology and Membrane Research, Scheie Eye Institute, University of Pennsylvania, Philadelphia, Pa. 19104.**

POSTDOCTORAL POSITION

Applications are invited from individuals having a biochemical or chemical background desiring training in the following areas: (i) ionophore mediated divalent cation transport, (ii) mitochondrial Ca^{2+} metabolism, and (iii) mitochondrial lipid metabolism. Appointment for 1 year, renewable; stipend of \$12,264 negotiable, depending on experience. Early starting date possible. Send curriculum vitae and three letters of reference to: **Dr. Douglas R. Pfeiffer, The Hormel Institute, University of Minnesota, 801 16th Avenue NE, Austin, Minn. 55912.** *The University of Minnesota is an Equal Opportunity Educator and Employer.*

POSTDOCTORAL POSITION

Position available immediately for cell biologist to participate in project on bone ultrastructure, cell differentiation, hormonal effects, and electron microprobe analysis. Background in electron microscopy and electron microprobe analysis desirable. Available for 2 years at \$10,500 to \$12,000 depending on experience. Send curriculum vitae and references to: **Dr. H. Schraer, Department of Biochemistry and Biophysics, Pennsylvania State University, University Park, Pa. 16802.**

POSTDOCTORAL RESEARCH ASSOCIATE

Opening available immediately in RNA viral oncology program. Experience or interest in virology, molecular biology, immunology, or genetics preferred. Salary is commensurate with experience and starts at \$11,700. Send curriculum vitae and request two referees to send references to: **R. F. Shea, The Jackson Laboratory, Bar Harbor, Maine 04609.** *An Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH POSITION. Current opening for **plant physiologist/biochemist** with training and interest in plant cell and tissue culture, amino acid metabolism, and/or enzymology. Appointment will be made for 1 year; however, a second year would be negotiable. Send curriculum vitae and three letters of reference to:

**J. W. Brown
Personnel Administrator
Comparative Animal Research Laboratory
1299 Bethel Valley Road
Oak Ridge, Tenn. 37830**

The Comparative Animal Research Laboratory is an Equal Opportunity Employer with an Affirmative Action Program.

POSITIONS OPEN

Seeking **RESEARCH ASSOCIATE** interested in basic aspects of cancer chemotherapy. Recent Ph.D. in biochemistry, pharmacology, oncology, or related discipline. Research involves effects of purine and pyrimidine base, nucleoside and nucleotide analogs on enzymes and intact cells. Yearly salary \$11,000 plus fringe benefits. Available autumn 1977. Send résumé and three references to: **Dr. Robert E. Parks, Jr., Division of Biology and Medicine, Brown University, Providence, R.I. 02912.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE—Immediate opening for individual (Ph.D.) with experience in **protein chemistry and amino acid sequence analysis.** Research involves structural analysis of influenza virus proteins. Appointment is for 1 year with probable extension. \$18,000 salary. Send curriculum vitae and names of references to: **Dr. E. D. Kilbourne, Chairman, Department of Microbiology, MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029.** *An Equal Opportunity Employer.*

RESEARCH ASSOCIATE IN MEMBRANE PHYSIOLOGY to study photoelectric effects in pigment-containing lipid bilayers and model systems of visual photoreceptors. Background in physical chemistry and/or electrophysiology desirable. Approximately 1 January 1978. Send résumé, reprints (if any), and three references to:

**Dr. Felix T. Hong
Department of Physiology
Wayne State University School of Medicine
Detroit, Michigan 48201**

An Equal Opportunity/Affirmative Action Employer

RESEARCH BIOCHEMIST—Postdoctoral position to study biochemical mechanisms of taste and olfaction. Unique interdisciplinary research institute. Position available starting fall-winter 1977. Send curriculum vitae to: **Dr. Robert H. Cagan, Monell Chemical Senses Center, University of Pennsylvania, 3500 Market Street, Philadelphia, Pa. 19104.** *An Equal Opportunity Employer.*

CSIRO RESEARCH SCIENTIST DIVISION OF FISHERIES AND OCEANOGRAPHY CRONULLA, N.S.W.

FIELD: fisheries biology.

DUTIES: to participate in the development and execution of a research program on marine fish resources around Australia. Initially, attention will be directed to pelagic species. Field investigations on the division's vessels and on fishing vessels in the open sea will be involved. Temporary posting to other parts of Australia may be required.

QUALIFICATIONS: a Ph.D. degree or equivalent in one of the ecological sciences with training in mathematics and statistics, together with demonstrable research ability, and ability to work at sea.

SALARY: research scientist or senior research scientist: A\$14,012 to A\$20,414 per annum. A higher salary may be offered to an exceptionally experienced applicant.

TENURE: indefinite or 3-year fixed term. Both carry superannuation benefits.

Applications stating full personal and professional details, the names of at least two referees, and quoting reference number 320/577 should reach:

**The Chief
Division of Fisheries and Oceanography
P.O. Box 21
Cronulla, N.S.W. 2230
Australia**

by 29 August 1977.

SENIOR SOLAR ENERGY RESEARCH ENGINEER to conduct and manage applied research in solar energy, energy conservation, energy storage, and related areas at Desert Research Institute, Energy Systems Laboratory, Boulder City, Nevada. Requires M.S., Ph.D., or equivalent degree in mechanical or chemical engineering; substantial experience in solar energy systems highly desirable. Salary: approximately \$18,000. Application deadline: 31 August. Send résumé and three letters of reference to: **J. O. Bradley, Personnel Office, Desert Research Institute, University of Nevada System, P.O. Box 60220, Reno, Nevada 89506.** *Affirmative Action/Equal Opportunity Employer.*

**UNIVERSITY OF PETROLEUM
AND MINERALS
DHAHRAN, SAUDI ARABIA**

The Department of Chemistry, University of Petroleum and Minerals, Dhahran, Saudi Arabia, will require the following for the academic year 1978-79, starting 1 September 1978:

1) ANALYTICAL CHEMIST

A qualified, experienced chemist to work in an analytical laboratory. Work includes analysis and research on organic and inorganic samples. Experience in classical and instrumental methods of analysis essential. Minimum requirements: B.S. degree or equivalent.

2) PETROLEUM PRODUCT CHEMIST

A qualified, experienced chemist to work in an oil-testing center. Work includes analysis and research on products. Experience in classical and instrumental methods of analysis essential. Minimum requirement: B.S. degree or equivalent.

3) PETROLEUM PRODUCTS SPECIALIST

A qualified experienced petroleum products specialist to work in oil-testing center. Work includes research, development, and evaluation of engine laboratory procedures; personnel training; and consultation with petroleum industry representatives. Minimum requirement: B.S. degree or equivalent.

Minimum regular contract for 2 years, renewable. Competitive salaries and allowances, all earned income without Saudi taxes. Free air-conditioned and furnished housing, free air transportation to and from Dhahran each 2-year tour. Attractive educational assistance grants for school-age dependent children. Local transportation allowance in cash each month. Ten and one-half-month duty each year with 45 days vacation paid.

Apply with complete résumé on academic and professional background, list of references, and with copies of degrees/testimonials, including personal data, such as home and office addresses, telephone numbers, and family status (spouse's name, names of children, age, and sex), to:

University of Petroleum and Minerals
c/o Saudi Arabian Educational Mission
2223 West Loop South, Suite 400
Houston, Texas 77027

**CSIRO
RESEARCH SCIENTIST
DIVISION OF ENVIRONMENTAL MECHANICS
CANBERRA, A.C.T.**

CSIRO has a broad charter for research into primary and secondary industry areas. The organization has approximately 7,000 employees, 2,200 of whom are research and professional scientists, located in divisions and sections throughout Australia.

FIELD: soil physics.

GENERAL: research in the division aims primarily at the basic understanding of biological and physical processes of the soil-plant-atmosphere system. Attention is directed particularly to the transport of energy, water, nutrients, and other materials in this system.

DUTIES: the division has contributed substantially to theoretical and experimental investigations of water and solute movement in soils and other porous media. The appointee will conduct research related to the field application of this work.

QUALIFICATIONS: applicants should have a Ph.D. degree or equivalent, supported by evidence of proven ability in research.

SALARY: research scientist or senior research scientist: A\$14,012 to A\$20,414 per annum. A scientist with an outstanding research record may be offered appointment at a higher level.

TENURE: a fixed-term appointment of 3 years is envisaged. In exceptional circumstances an indefinite appointment may be offered. Both carry superannuation benefits.

Applications stating full personal and professional details, the names of at least two professional referees, and quoting reference number 416/31 should reach:

**The Chief
Division of Environmental Mechanics
P.O. Box 821
Canberra City, A.C.T. 2601
Australia**

by 29 August 1977.

**CSIRO
RESEARCH SCIENTIST
DIVISION OF TROPICAL CROPS
AND PASTURES
DARWIN, N.T.**

CSIRO has a broad charter for research into primary and secondary areas. The organization has approximately 7,000 employees, 2,200 of whom are research and professional scientists, located in divisions and sections throughout Australia.

FIELD: experimental ecology.

GENERAL: the division is conducting comprehensive research programs to establish a scientific basis for the improvement of crop and pasture systems in sub-tropical and tropical Australia.

DUTIES: to study the ecology of the major native grassland communities of the Ord, Victoria, and Daly River basins of north-western Australia, including the effects of grazing management. The appointee will collaborate with scientists in CSIRO and other institutions with relevant research interests.

QUALIFICATIONS: a Ph.D. in agricultural science or science with relevant post-graduate experience, preferably in experimental plant ecology or physiological ecology. Demonstrable research ability.

SALARY: the appointment will be made in the research scientist or senior research scientist range: A\$14,012 to A\$20,414 per annum.

TENURE: indefinite term with a 2-year probationary period.

Applications stating full personal and professional details, the names of at least two referees, and quoting reference number 850/502 should reach:

**The Chief
Division of Tropical Crops and Pastures
Mill Road
St. Lucia, Old 4067
Australia**

by 27 August 1977.

**Your Electrochemical R & D Background
Is Needed At The
General Motors Research Laboratories**

Positions on our professional staff provide excellent career opportunities to individuals meeting the following requirements: Ph.D. in Chemical Engineering, Physical Chemistry, Materials Sciences, or a related discipline, and a background in one or more of the following areas:

- **ELECTRIC VEHICLE BATTERY DEVELOPMENT,** Advanced Cell Research, Engineering, and hardware development; and computer-controlled development testing.
- **ELECTRODEPOSITION PROCESSES AND MATERIALS RESEARCH**

Enjoy the campus-like suburban environment of the General Motors Technical Center with outstanding technical and professional support. Very competitive salary and exceptional fringe benefits.

Send Resume To:

**Dr. J. L. Hartman, Head,
Electrochemistry Dept. Research Laboratories**



**GENERAL MOTORS
TECHNICAL CENTER
WARREN, MICHIGAN 48090**

We Are An Equal Opportunity Employer

**HEALTH SCIENTIST
ADMINISTRATOR
(Biological Sciences)**

The Scientific Programs Branch, National Eye Institute, National Institutes of Health, Public Health Service has a Health Scientist Administrator (Biological Sciences) position, salary GS-12 (\$20,442-\$26,571) or GS-13 (\$24,308-\$31,598), involving the development and administration of research grants, training grants, and fellowships in the Retinal and Choroidal Disease Program. Incumbent assists the Branch Chief in formulating and planning extramural research program objectives and policies, counsels potential grantees, recognizes gap areas in current research, maintains liaison with national and international organizations related to vision research and serves as the focal point for program activities in his/her specialty.

Ph.D. or equivalent experience and postdoctoral administrative and research experience in vision research, preferably on retinal and choroidal disorders, and the conduct of clinical trials is preferred. Resourcefulness and the ability to organize diverse research findings are required. Civil Service eligibility is required.

Submit application for Federal employment, SF-171 by August 29, 1977, to Ms. Karen Wright, NEI Personnel Office, Building 31, Room 6A-24, 9000 Rockville Pike, Bethesda, Md. 20014

**NATIONAL INSTITUTES
OF HEALTH**

An Equal Opportunity Employer M/F.

POSITIONS OPEN

RESPIRATORY PHYSIOLOGIST

Applications are invited from candidates with research interest in respiration physiology for an appointment at the rank of assistant professor. Applicants with an M.D. degree are preferred, but suitable candidates with research experience will be considered. Duties include teaching at the undergraduate and postgraduate level and to medical students. Potential for developing and carrying on an independent research programme is also a requirement. Send applications with curriculum vitae and names of three referees to: **J. Milic-Emili, M.D., Professor and Chairman, Department of Physiology, 3655 Drummond Street, Montreal, Quebec, Canada H3G 1Y6.**

Tenure-track, Assistant Professor Effective 1 November 1977

SYSTEMS ECOLOGIST

**Chesapeake Biological Laboratory
University of Maryland**

Ph.D. with training in systems ecology with simulation modeling required. Prime interest must be in estuarine systems with experience in regional studies and energetics desirable.

Submit résumé, three letters of recommendation, and supporting documents by 7 September 1977 to:

**Chairman, Search Committee
Chesapeake Biological Lab
Solomons, Maryland 20688**

*An Equal Opportunity/
Affirmative Action Employer*

TECHNOLOGY AND PUBLIC POLICY

The Department of Engineering and Public Policy of Carnegie Institute of Technology and the School of Urban and Public Affairs, Carnegie-Mellon University, have one or more joint faculty openings: (i) for **applied social scientists** interested in doing collaborative policy research with engineers, or (ii) for **engineers** interested in doing collaborative policy research with social scientists. Problem areas of interest include social impacts of computers and telecommunications, product liability and safety, electric power load management, retrospective technology assessment, and energy and environmental systems. Desirable areas of skill include decision analysis, optimization techniques, organizational analysis, and regulatory process and law. Send résumé with list of publications to: **Barbara Lydon, Assistant Head, Engineering and Public Policy, Carnegie-Mellon University, Pittsburgh, Pennsylvania 15213.**

ANTICIPATED VACANCY

TERRESTRIAL ECOLOGIST. Assistant or associate professor. Both laboratory and field experience desired. Candidates should have major interest in undergraduate teaching and student oriented research. Plant taxonomy, introductory genetics, and ecology courses appropriate to expertise. Send detailed résumé before 15 August to:

**J. M. Aldrich
Dean of Academic Affairs
University of Maine at Machias
Machias, Maine 04654
*An Equal Opportunity Employer***

VETERINARIAN. Assistant professor, laboratory animal medicine. Duties: responsibility as campus veterinarian for animal health programs, supervisor clinical laboratory, teaching at graduate level, and opportunity for individual research. Qualifications: experience in laboratory animal medicine, preference given those having ACLAM certification or Board eligibility. Application deadline: 31 August 1977. Submit curriculum vitae and three references to: **Dr. Robert Allen, Chairman, Department of Laboratory Animal Medicine, Medical University of South Carolina, Charleston, S.C. 29401. An Affirmative Action/Equal Opportunity Employer.**

VIROLOGIST—Ph.D. with 1 or 2 years of post-doctoral experience for research position. Strength in molecular biology and/or biochemistry especially desired. Project involves studies of propagation of human hepatitis viruses in cell culture and characterization of hepatitis viruses and of liver cells in vitro. Salary range \$15,000 to \$16,000. Send curriculum vitae to:

**Dr. H. Fred Clark
Wistar Institute
36th and Spruce Streets
Philadelphia, Pa. 19104**

LETTERS OF INTENT

A plan to study the riverine flux of chemical substances to the oceans (RIVFLO) has been made by an ad hoc Science Advisory Committee in anticipation of seeking support from the Office of the International Decade of Ocean Exploration, National Science Foundation. The committee invites scientists interested in participating in this proposed multi-institutional program to submit **LETTERS OF INTENT**. A copy of the preliminary plan and the membership of the ad hoc Science Advisory Committee are available by writing to the address listed below and prospective participants are encouraged to obtain them prior to writing their letters of intent. The preliminary plan will be modified in response to advice received from various sources including the letters of intent.

The letter of intent should not exceed 5 pages in length and should include a tentative budget but without detailed justifications, and must be received prior to 1 October 1977. Review of the letters of intent will be made by the ad hoc Science Advisory Committee and by external reviewers. Proposals will then be solicited on the basis of the design of the coherent program. Endorsement by the group does not imply funding. All final proposals will be evaluated through the normal procedures of the National Science Foundation.

Requests for copies of the preliminary plan and submission of letters of intent should be made to: **Professor Karl K. Turekian, Department of Geology and Geophysics, Yale University, New Haven, Connecticut 06520.**

ASSISTANTSHIPS

GRADUATE ASSISTANTSHIP IN MATERIALS RECYCLING

The School of Engineering and Applied Science (SEAS) of George Washington University has available one graduate research assistantship in the field of materials recycling, for work leading to a M.S. degree. Applicants must have a bachelor's degree in engineering or physical science, knowledge or interest in recycling technology, and sensitivity toward policy implications of the recycling field. Beginning as soon as 1 September 1977. Stipend: approximately \$7500 for 12 months. Contact: **Professor A. H. Purcell or Professor C. M. Gilmore, SEAS, George Washington University, Washington, D.C. 20052. An Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS

MEMBRANE BIOCHEMISTRY AND STRUCTURE. POSTDOCTORAL FELLOWSHIPS (TWO) AVAILABLE. To do biochemical or ultrastructural studies on plasma membranes on differentiated and undifferentiated and normal and transformed cells. Glycoprotein labeling and isolation, membrane enzymes, effects of various agents including hormones on differentiated and undifferentiated cells; interested in both protein and lipid studies. Structural studies involve TEM, freeze fracture, immunocytochemistry, and SEM; experience in all not required. Experience with isolation and antibody production of contractile proteins beneficial. Salary negotiable. Send curriculum vitae and three letters of recommendation to:

**Dr. Leo T. Furcht
Box 198 Mayo
Department of Laboratory Medicine and Pathology
University of Minnesota Medical School
Minneapolis, Minnesota 55455**

POSTDOCTORAL FELLOWSHIP: an interdisciplinary group of faculty at the University of Pittsburgh is seeking applicants for a postdoctoral program in psychiatric epidemiology to begin in the fall 1977. Program is based in the Department of Psychiatry (Western Psychiatric Institute and Clinic) of the School of Medicine and coordinated with the Department of Epidemiology at the Graduate School of Public Health. Program emphasizes research training with a particular focus on the epidemiology of affective disorders, children's psychiatric disorders, and environmental correlates of mental illness. Postdoctoral fellowships for applicants with masters degrees are also available. Send curriculum vitae and inquiries to: **Dr. Evelyn Bromet, Western Psychiatric Institute and Clinic, 3811 O'Hara Street, Pittsburgh, Pa. 15261. An Equal Employment Education Institution, Title IX/Title VI.**

WORKSHOPS

WORKSHOP ON BIO-SALINE RESEARCH

Indiana University, with the support of the National Science Foundation, will hold an international workshop on Bio-saline Research at Kiawah Island, Charleston, South Carolina, 15 to 18 September 1977, for discussions to develop a comprehensive international program in bio-saline research.

The bio-saline concept includes research, development, demonstration, and utilization of biological sciences and technologies to derive essential resource materials from marine and arid land biomass systems. The broad goal of this concept is to provide options for renewable resources through the appropriate combination and exploitation of micro-organisms, plants, and saline water mediated through solar energy for the development of a non-conventional agriculture, plus new food, energy, and materials industries.

There is no workshop fee. Invitations are extended internationally to science ministries, or agencies, research institutions, individual scientists, or policy officers dealing with technological development planning interested in bio-saline research or in the general area of arid-lands sciences. Participation will be limited to 150 attendees.

Mail your requests for invitations to: **Dr. Alexander Hollaender, Associated Universities, Inc., Suite 603, 1717 Massachusetts Ave., NW, Washington, D.C. 20036.**

MARKET PLACE

Sail a Semester aboard Regina Maris



Ship aboard the square-rigged barquentine r/v Regina Maris for a two-month scientific and educational expedition to study whales and open ocean ecology. This 144' sailing vessel provides a rare opportunity for students (at least 18 years old) interested in marine ecology as well as learning navigation and other nautical skills. Credits are given through the Harvard University Extension program. Expeditions leave in October and December, 1977; and in February, 1978. For details write:

The Ocean Research and Education Society, Inc.
51 Commercial Wharf # 61, Boston, MA 02110
(617) 523-3455

WANTED TO BUY: agriculture specialty company ratiospect.

MODEL R2. Complete and in reasonable or good condition.

**Department of Developmental Biology
Research School of Biological Sciences
P.O. Box 475
Canberra City, A.C.T. 2601
Australia**



118 YEARS SINCE DARWIN'S ORIGINS!

Is teaching evolution *still* an issue?

Ten state legislatures, major school districts, now considering "creationist alternatives" to evolution texts!

176 scientists, others, issue "A STATEMENT AFFIRMING EVOLUTION AS A PRINCIPLE OF SCIENCE" appealing to local school boards.

The statement with signatories plus information on AHA sent free upon request. Write Department S.

**AMERICAN HUMANIST ASSOCIATION
602 3rd Street
San Francisco, Calif. 94107.**

PRODUCT DEVELOPMENT SCIENTIST

Excellent opportunity exists for a PHD Micro-biologist with experience in clinical micro-biology to work on Anaerobic Culture System. The individual will also be responsible for instituting a product development program in the field of clinical micro-biology. An advance knowledge of Biochemistry and Enzymology is required and some techniques relevant to the development of bacteriological growth media is desirable. The position requires an innovative person who has a high degree of technical skills with previous record of patented inventions. Experience in Clinical Anaerobic Bacteriology is a prerequisite.

We are located in a Chicago Suburb and are a rapidly growing division of a nationally known corporation serving the health care industry.

We are an equal opportunity employer and encourage all females and all minorities to apply.

We offer an excellent starting salary with a top benefit package. Please send your resume with salary history in confidence to:

BOX 286, SCIENCE

equal opportunity employer m/f

HEALTH SCIENTIST ADMINISTRATOR

The National Institute on Aging is seeking a Health Scientist Administrator (Biological Sciences) in the Office of Extramural and Collaborative Research, located in Bethesda, Maryland. The position is a career Civil Service appointment at the GS-13 level (starting at \$24,308) and offers opportunity for development and advancement. The position holds responsibility for managing and coordinating research grants, training grants, fellowships and contracts in the areas of metabolism and endocrinology in the process of aging. The applicant must have doctoral level or equivalent training and experience in biochemistry or physiology; and should be knowledgeable of research on mechanisms that may be involved in the aging process.

Send SF-171 or Curriculum Vitae and list of publications by August 29, 1977 to:

Mrs. Jane Carrasco
Personnel Management Specialist
National Institute on Aging, Personnel Office

NATIONAL INSTITUTES OF HEALTH

Public Health Service
9000 Rockville Pike
Bldg. 31, Room 5C19
Bethesda, Md. 20014

An Equal Opportunity Employer M/F.

SUPERVISOR OF TOXICOLOGY INFORMATION DEPARTMENT

The Chemical Hygiene Fellowship of Carnegie-Mellon Institute of Research, a well-established and expanding research facility located 20 miles east of Pittsburgh, PA, concerned with all phases of toxicological testing of chemicals, is developing a toxicology information department. We are seeking a supervisor who will be involved in planning, implementing and administering the future department.

The qualified individual must have an advanced degree in a biological or physical science. In addition, appropriate educational background and two or more years of supervisory experience in information systems involving computer techniques and library administration is required. Some experience in computer programming and knowledge of computer hardware is highly desirable.

Interested individuals should send curriculum vitae to:
Carnegie-Mellon Institute of Research
Box 60, R.D. No. 4
Export, PA 15632
ATTN: Mr. A. R. Ryrholm

A DIVISION OF CARNEGIE-MELLON
UNIVERSITY

AN EQUAL OPPORTUNITY/
AFFIRMATIVE
ACTION EMPLOYER

PRINCIPAL RESEARCH SCIENTIST

The Marschall Division of Miles Laboratories, Inc. is seeking to fill a top level research position in its Protein and Carbohydrate Research Laboratory.

The candidate must have a Ph.D. degree in the area of Chemical or Food Sciences plus 6-10 years of proven performance in the area of food science. This individual is expected to plan, design and carry out research in the area of isolation, properties and applications of protein ingredients for foods.

The Principal Research Scientist must be capable of leading a team of scientists and possess good communication skills.

Located in Elkhart, Indiana, a community of 50,000 population, we offer excellent recreational and educational facilities as well as convenient accessibility to the Chicago area. Excellent starting salary commensurate with experience plus a superior benefits program. Relocation expenses paid by the company. Please send complete resume including salary requirements in confidence to:

Curtis A. Brown, Senior Placement
Representative, Dept. 845



MILES LABORATORIES, INC.

ELKHART, INDIANA 46514

An Equal Opportunity Employer

Other Kodak products

(A few nonphotographic things we make because . . . well, because we know how and there seems to be a need . . .)

KODAK IR Phosphor—A bit of secret technology uncorked a year after the war in 1946. Still arouses flurries of interest among, for example, those who work with infrared-emitting gallium arsenide diodes when they hear there is such a product which we freely offer for sale to anybody who finds out about it. In effect, translates infrared in the 0.7-1.3 μm range into visible light.

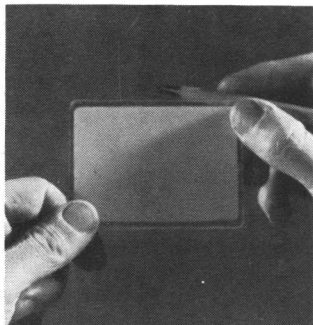
We supply the phosphor coated on plastic-enclosed paper or transparent base. It stores up energy by simply being left around in daylight or under fluorescent room light. The phosphor then releases the energy as an orange glow that shows the infrared beam structure with resolution better than 5 lines/mm. Pattern can be photographed. Under continuous IR impingement and with the maximum energy that the phosphor can store, the glow can last up to 60 seconds. Emission persists for 50-60 nanoseconds after the IR goes off. Just recharge and reuse.

Stocked in 2" x 3", 4" x 5", 8" x 10", 14" x 17", and 20" x 24". Orders and inquiries to Special Products Sales, Kodak Apparatus Division, Rochester, N.Y. 14650 or phone 716-325-2000, ext. 63579.

EASTMAN White Reflectance Coating

Even as all cats are black in the dark, so all whites are gray when there is something whiter to compare them with. Instrumentation for measuring optical reflectance properties simply compares the test surface with something assumed to be a perfect diffusing reflector. Such a standard was traditionally prepared by depositing the white smoke from burning magnesium. The microcrystals of MgO soon develop color centers from ambient UV or particle radiation and lose UV reflectivity. TiO₂, the great white opacifier in the visible, is murky indeed in the UV. That leaves this particular product of ours. It's highly purified BaSO₄ in a binder and solvent for spray application.

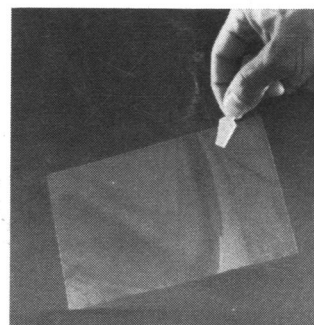
Lab supply houses that sell EASTMAN Organic Chemicals sell it as EASTMAN 6080 and can get you a copy of Kodak Publication No. JJ-32 that gives detailed application directions. The stuff seems to have no luminescence at all.



EASTMAN Q-Switch Acetate Sheet

Cellulose acetate in which we have dissolved our dye Bis(4-dimethylaminodithiobenzil)nickel to produce an optical density of 0.36 ± 0.02 at 1.06 μm , the wavelength of neodymium lasers. This absorbance in the laser cavity permits a buildup of the population inversion of energy states in the Nd³⁺ ions to loose a large pulse when the dye temporarily loses its absorbance. The ability of this dye to do this over and over again without breaking down has been utilized for several years now, but hitherto it has had to be dissolved in a liquid. That is less convenient than having it in a sheet with optical quality of 24 fringes (or fewer) of sodium light per cm² and which can handle a peak power density of 300 megawatts/cm².

\$214.50 for 13 cm x 16.5 cm sheet, subject to change without notice. Orders also accepted for densities other than 0.36. Phone 716-458-4080 and ask for EASTMAN No. 15064.



An Mn-Zn ferrite and the service of installing it in broadcast video magnetic recording equipment for 1,000 hours of high-grade service (instead of the "normal" 350-hour average life)—A ferrite is a coordination compound of one or more metals with iron oxide. Spin Physics, Inc. is a corporate grandchild of ours, a division of Eastman Technology, Inc., which is a subsidiary of Kodak. Spin Physics has spent many millions of dollars in developing this particular ferrite and in learning how to design with it and fabricate it. Building on that base, Spin Physics has then proceeded to manufacture or refurbish a substantial portion of all the recording heads currently being fed telemetered analog data. Now Spin Physics has turned from the temples of high technology to the broadcasting industry as an outlet for its services in upgrading the performance and operating life of nonphotographic picture-recording equipment.

Spin Physics' address is 11633 Sorrento Valley Road, San Diego, Calif. 92121.

