

apparent whether the "our" to whom Hunt refers is only women or all humans who labor in potentially hazardous environments. This thematic ambivalence limits the contribution of this otherwise impressive work.

Hunt has compiled a wealth of information on the known and suspected environmental antecedents of a wide array of symptoms and disease entities, much of it previously available only from remote sources: 100-year-old European conference proceedings, 50-year-old U.S. government and foundation reports, and equally obscure contemporary documents, from federal regulatory guidelines to foreign-language scientific journals. The subject matter ranges from turn-of-the-century data on the physically hazardous consequences of working with lead, benzene, and ionizing radiation to the legal treatment in the 1970's of "pregnant women and nonpregnant persons," in Supreme Court Justice Rehnquist's categorization of the work force (*General Electric v. Gilbert*, 429 U.S. 125, 135, citing *J. Stewart in Geduldig v. Aiello*, 417 U.S. 484, 496-97, n. 20).

Some of the substantive analyses are particularly noteworthy. Presaging the recently published longitudinal data from the Framingham Heart Study (S. G. Haynes and M. Feinleib, *Am. J. Public Health* 70, 133-139 [1980]), Hunt describes the complex relationships among gender, employment status, occupational level, hypertension, and coronary heart disease, particularly for older workers, and most particularly for older women workers. In another chapter, "Ergonomics," again presaging more recent analysis (in a federal appeals court decision on the layoff of pregnant flight attendants: *Harriss v. Pan American World Airways, Inc.*, 24 EPD ¶13,425), Hunt reports on the few studies of the capabilities of various categories of working and nonworking women on a number of manual handling tasks. But to date studies of the physical capabilities of American women are limited because of women's systematic absence from some "physical" occupations, because of the lack of research even where women have done specific manual tasks for decades (routine lifting of human loads in nursing and child care work), or because of the lack of emphasis until recently on physical conditioning of females, either as an end in itself or to enhance occupational qualifications.

The issue of women's physical conditioning, or lack thereof, in the contemporary United States is the take-off point for Hunt's excellent analysis of the known relationships between childbearing

and menstruation and physical performance. Often the data are taken from studies of European women, especially women athletes, so their importance in the United States is in elucidating women's physiological potentials. But there are now significant practical impediments to research on at least one major facet of the subject, the physical capacity of pregnant women. Hunt notes that "restrictions on the use of human subjects have become more rigorous and a double standard is applied to research on pregnant women for a variety of rational and irrational reasons" (p. 56).

Equally significant research needs and problems are raised as Hunt describes the literature on a number of other environmental hazards to which women workers, among others, are exposed: ionizing and nonionizing radiation, noise and vibration, fluctuations in time and temperature, and a wide array of toxic chemicals. Hunt provides minute, tortuously detailed, but often limited findings on each topic. For example, in summarizing a report measuring the chemicals used in a single five-day period in a relatively well-ventilated pesticide analytical laboratory in 1968, she tells us that "the threshold limit values . . . ranged from 10 ppm for *N,N*-dimethylformamide to 500 ppm for hexane, [and] the atmospheric hydrocarbon concentrations rose markedly by noon . . . to reach 1200 to 1500 ppm by 3 p.m. each day" (p. 132).

In discussing each potential environmental hazard, Hunt apparently attempts to emphasize one or both aspects of the book's title theme—workplace hazards and women's hazards. Here is where the same kind of confusion that has characterized the Supreme Court's attempts to dichotomize the world into "pregnant women and non-pregnant persons" confounds the presentation. In some instances, the coincidence of pregnancy or possible pregnancy, conventional gender-based divisions of the labor force, and related environmental hazards readily fits the subject matter to the title theme—as in the case of the impact of crossing time zones on the menstrual experience of airline flight attendants (p. 90). But in other instances the issues, understandably, begin to transcend the categories that initially brought them within Hunt's purview. There are several reasons for this. First, at the same time women are becoming factory workers and anesthesiologists, men are becoming flight attendants, nurses, and househusbands—crossing time zones and lifting human and nonhuman weights—with problematic effects on

their mental and physical health. Second, the work hazard often is not attributable solely to the home or to the workplace—for example, exactly when does the interaction between inhaled smoke and asbestos from work clothing, for either sex, occur? And, finally, issues of the potential impact of all aspects of the environment on individuals of both sexes cannot be easily and logically avoided. This is why Hunt's book should and does include contributed chapters on legal considerations bearing on the health and employment of women workers and the influence of environmental agents on male reproductive failure.

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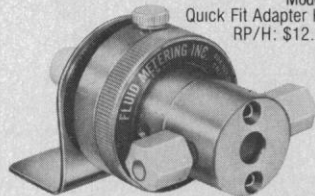
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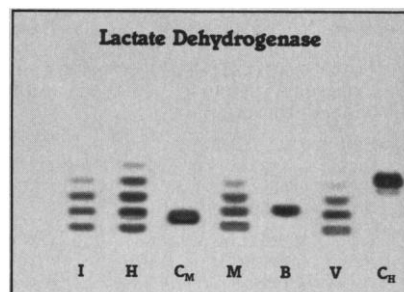
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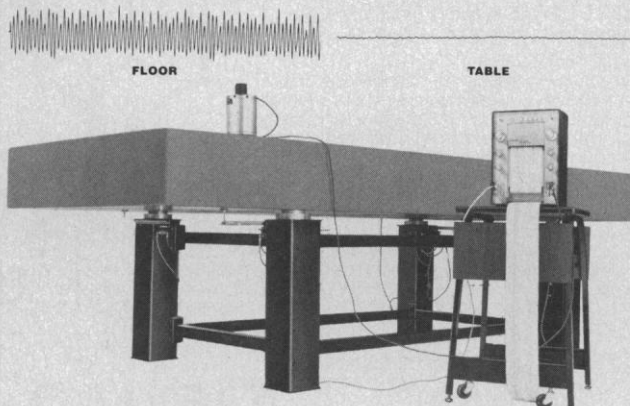
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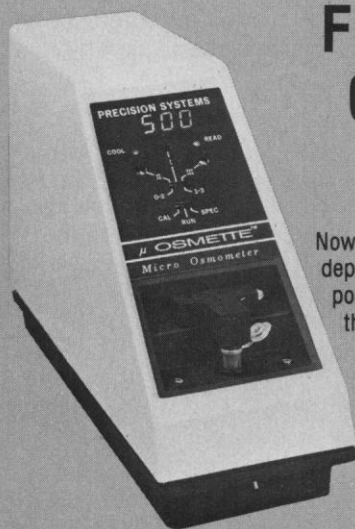
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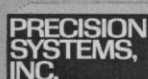


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Ecologist. Ph.D. Seeking employment in the field of environmental impact research. Industrial or consulting firm. Broad training in zoology, botany, and chemistry with analytical experience. Box 182, SCIENCE. X

Ecologist/Administrator. Ph.D. in terrestrial ecology; ten plus years of experience in environmental research and administration. Main areas of interest: ecology, toxicology, and ornithology; 50 plus publications on international level. Seeks challenging research/research administration position in academia or research institution. Box 187, SCIENCE. X

Immunologist. M.S. 1977. Seeks stimulating position with active researcher in recombinant DNA or immune regulation in industry or academia. Four years of laboratory experience. Opportunity to pursue Ph.D. also desired. Box 172, SCIENCE. X

Inorganic Trace Analysis, chemist, Ph.D.; 8 years of heavy experience (biological environmental); seeks a position. Box 188, SCIENCE. X

Microbiologist. Ph.D. Experienced in management of microbiological/tissue culture laboratories. Background includes microbial isolation and screening for antimicrobial and anticancer drugs, development and use of in vitro and in vivo assays for novel anticancer and antiviral drugs and fermentation development. Box 185, SCIENCE. X

Neuroanatomist. Ph.D. 1980. Teaching, publications. Previous experience in cardiology, immunology, and analgesia research. Seeking nonacademic research position. Box 173, SCIENCE. X

Pathologist. AP-CP certified, with several years of experience in pathology and in research (mainly biochemistry). Interested in research exploring general pathology. Will teach, write, practice too. Southwest, but can relocate. Box 175, SCIENCE. X

Toxicologist. Ph.D. Postdoctorate. Industrial experience: aquatic/environmental, mammalian, and regulatory. Designing programs, evaluating data, general corporate consultant. Seeks industrial position. Box 189, SCIENCE. X

POSITIONS OPEN

ASSISTANT PROFESSOR

Applicants are invited for a tenure-track position at the rank of assistant professor. Candidates possessing an M.D. or Ph.D., several years of postdoctoral experience, and a strong commitment to developing an independent research program are sought. Applicants with research interests in neuropharmacology, toxicology, or molecular biology are preferred, but applications from outstanding candidates in any area of pharmacology are welcomed. Responsibilities include participation in departmental teaching responsibilities for medical and graduate student training. Inquiries, which should include curriculum vitae, synopsis of current research interests, list of publications, reprints of selected publications, and the names of three references should be addressed to: **Professor Cheng-Wen Wu, Chairman, Faculty Search Committee, Department of Pharmacological Sciences, School of Medicine, Health Sciences Center, State University of New York at Stony Brook, Stony Brook, N.Y. 11794. An Equal Opportunity/Affirmative Action Employer. AK number 92B.**

POSITIONS OPEN IN THE DIVISION OF PHYSIOLOGY, CELLULAR AND MOLECULAR BIOLOGY

National Science Foundation (NSF), Division of Physiology, Cellular and Molecular Biology, is seeking qualified applicants for two positions: **Assistant/Associate Program Director and Program Director** in the Developmental Biology Program. The appointments will be rotational for 1 or 2 years with the possibility of extension to 3 years. The positions are open immediately. Applicants should have a Ph.D. and approximately 6 years of postdoctoral experience. Three years of general and 3 years of research in areas related to developmental biology. The positions are excepted from the competitive civil service; the assistant/associate program director will be at the EC-12/14 (equivalent to GS-12/13) level, \$26,951 to \$49,229 per annum, and the program director will be at the EC-14/15 (equivalent to GS-14/15), \$37,871 to \$57,912 (limited by statute to \$50,112.50). Send résumés to: NSF, **Personnel Administration Branch, EX 81-34, Room 212, 1800 G Street, NW, Washington, D.C. 20550, attention: E. Paul Broglie.** For details concerning the positions, contact: **Dr. James W. Campbell, Division Director, Physiology, Cellular and Molecular Biology. Telephone: 202-357-9400. NSF is an Equal Opportunity Employer.**

BIOCHEMIST/IMMUNOLOGIST required for assistant research biochemist position, researching the interaction of antibody-coated liposomes with cells. The successful applicant will also collaborate with clinical staff of the Cancer Research Institute (CRI) to establish clinical research program on therapeutic and diagnostic applications of liposomes. Requirements: Ph.D. biochemistry (or related area); 4 to 5 years of postdoctoral experience in liposomes preparation, protein conjugation in aqueous media, membrane proteins reconstitution, cell culture, experimental animal models, immunology of adjuvants, antibody response measurement, immunoglobulin purification, monoclonal antibody production. Salary: \$21,600 to \$28,400. Send curriculum vitae and reprints to: **Dr. D. Papahadjopoulos, CRI, M-1282, University of California, San Francisco, Calif. 94143. Equal Opportunity/Affirmative Action Employer.**

BIOCHEMISTRY RESEARCHER: \$36,000 per year; full-time, 40 hours per week. Ph.D. biochemistry/genetics required, 3 years of experience, recombinant DNA and biochemistry engineering "cloning" for rapid sequences from minilysates. Contact: **Saph Menon, Job Service Wisconsin, 206 North Broom Street, P.O. Box 7943, Madison, Wis. 53707.** This ad is not paid for by Job Service funds.

DIRECTOR OF CELL PHYSIOLOGY

Applications are invited for director of cell physiology unit of interdisciplinary laboratory in New York City. Experience with cell organ culture of avian and mammalian connective tissue necessary. Basic biochemical knowledge desirable. Faculty appointment and salary commensurate with ability and experience. Submit qualifications and recommendations to: **Orthopaedic Research Laboratories, College of Physicians and Surgeons, Columbia University, 630 West 168 Street, New York, N.Y. 10032. We take Affirmative Action toward Equal Opportunity.**

POSITIONS OPEN

THE UNIVERSITY OF CHICAGO BIOLOGIST

Applications are solicited for a position in the Anatomy Department, which is now completing a shift in research emphasis and role within the university community. Current interests focus on adaptation at the tissue and whole organism level, in both vertebrates and invertebrates, and include study of morphology from developmental, functional, and evolutionary perspectives. We are seeking an additional colleague whose research interests lie in such areas as the **MECHANICAL PROPERTIES OF BIOLOGICAL MATERIALS, MORPHOMETRICS, THE FUNCTIONAL MORPHOLOGY OF ANIMAL ADAPTATIONS, OR RELATED AREAS.** Applicants should have demonstrated skill with experimental approaches; research organisms may be invertebrates or vertebrates. The successful candidate will be expected to take significant responsibility in a course in human morphology. Academic rank is open. Applications, including curriculum vitae, statement of research interest, and three letters of recommendation, should be sent to: **R. Eric Lombard, Anatomy Department, The University of Chicago, 1025 East 57 Street, Chicago, Illinois 60637, by 15 September 1981.**

The University of Chicago is an Equal Opportunity Employer; women and members of minority groups are specifically encouraged to apply.

Texas A & M University, a land-grant and sea-grant institution, invites letters of application and nomination for the position of **DEAN OF THE COLLEGE OF SCIENCE.** The position will become open on 1 September 1981. Texas A & M is a state-supported university with a full-time enrollment of 33,500 students. The College of Science currently has 230 faculty, 1783 undergraduate, and 467 graduate students in the Departments of Biology, Chemistry, Mathematics, Physics, and the Institute of Statistics. The College also has a Cyclotron Institute. Funded research within the College is about \$11 million for the current year.

Qualifications for the position include demonstrated academic and research leadership and administrative ability. Nominations, applications, and support materials will be accepted until 1 October 1981 and should be sent to:

Dr. Clinton A. Phillips
Dean of Faculties
Texas A & M University
College Station, Texas 77843

Texas A & M University is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR OF SELF-PACED LEARNING LABORATORY. Position available 1 October 1981. Oversees operation and development of the laboratory, supervising one full-time staff and student aides. Emphasis is on mathematics and natural science. Qualifications: administrative experience and background in self-paced learning. Experience with computer based education desirable; also experience working with diverse cultural backgrounds. Master's required; Ph.D. preferred.

Evergreen is a public, liberal arts college emphasizing interdisciplinary studies. No departments; no faculty ranks. Salary based on years of experience. This 12-month administrative appointment carries faculty status.

Application deadline: 1 September 1981. Send: (i) résumé; (ii) essay of educational philosophy; (iii) two letters of recommendation each from colleagues and students; and (iv) letter detailing administrative and self-paced learning experience to: **Dean Barbara Smith, The Evergreen State College, Olympia, Wash. 98505. Evergreen is an Equal Opportunity Employer committed to Affirmative Action.**

FACULTY FOR INSTITUTE OF BIOLOGICAL CHEMISTRY

An outstanding scientist is being sought to fill a permanent faculty position in the Institute. This person will be expected to conduct a vigorous research program in biological chemistry relevant to agriculture and participate in graduate training. Salary and rank are open to negotiation. Review begins 1 September 1981.

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

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

POSITIONS OPEN

CYTOGENETICIST

The Boston University School of Medicine, Center for Human Genetics, is seeking a director for the Cytogenetics Laboratory as of 1 October 1981. Applicants should hold a Ph.D. in cytogenetics and should have not less than 2 years of postdoctoral experience.

Responsibilities will include direction of a cytogenetic laboratory with a special interest in prenatal diagnosis as well as research participation in somatic cell genetics including hybridoma work. Please send résumé and three references to:

Dr. Joel Alpert
Chairman, Department of Pediatrics
Boston City Hospital
Children's Building
818 Harrison Avenue
Boston, Mass. 02115

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LABORATORY TECHNICIAN. Position available November 1981 for a person skilled in nutrient chemistry/mass spectrometry in limnology/oceanography. M.S. preferred. Responsibilities include 2 months of fieldwork each year in Brazil in cooperative international project with "INPA" on nutrient cycling Amazon floodplain lakes. Knowledge of Portuguese desirable. Salary: \$14,000 to \$16,000 per year for 3-year period. Send résumé to: **T. R. Fisher, University of Maryland, Horn Point Laboratories, Cambridge, Md. 21613.**

POSTDOCTORAL POSITION available for a person with training in biochemistry, cell biology, or molecular biology. Position is for the study of the role of mammary epithelial cellular endomembranes in the synthesis, postsynthetic modification, and secretion of the constituents of milk. Applicants with experience in *in vitro* translation are particularly welcomed. Please submit curriculum vitae and three letters of recommendation to: **Dr. T. W. Kennan, Department of Animal Sciences, Purdue University, West Lafayette, Ind. 47907. Purdue University is an Equal Opportunity/Affirmative Action Employer.**

NATIONAL SCIENCE FOUNDATION

HEAD MATERIALS RESEARCH LABORATORY SECTION

The Division of Materials Research is seeking qualified candidates for the position of head of the Materials Research Laboratory Section, which also includes responsibility for the National Magnet Laboratory and major synchrotron radiation and neutron scattering user facilities. This Senior Executive Service position, with a current salary of \$50,112, may be filled on a permanent or 1- or 2-year rotational basis.

A Ph.D. or equivalent experience in one of the materials-related science or engineering disciplines is required. Substantial research administration involving multidisciplinary programs and recognized professional standing in the materials research community are essential, while experience with interdisciplinary research projects is desirable.

Applicants should contact: **Margaret Cademartori, telephone: 202-357-7857** to request announcement EPB 81-10 for a career appointment or EPB 81-20 for a rotational appointment. Announcements contain additional qualification requirements as well as instructions concerning preparation of supplemental narrative required with SF-171 as application. Send SF-171 and narrative to: **National Science Foundation, Executive Personnel Branch, Room 212, 1800 G Street, NW, Washington, D.C. 20550, EPB 81-10 or EPB 81-20.** Applications must be received by 1 September 1981.

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POSITIONS OPEN

GENETIC RESOURCES CONSERVATION. A vacancy exists at the International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria, for a scientist to coordinate the activities of the Institute's Genetic Resources Unit. The successful applicant must have a doctorate in the field of crop science, botany, or genetics and previous experience in crop breeding and/or genetic resources conservation. As well as the collection, maintenance, evaluation, documentation, and preservation of large amounts of food legume and rice germplasm, the Unit coordinator and his/her staff work closely with the Institute's and other crop improvement programs to promote the use of germplasm. The Unit runs an annual training course for African technicians in many aspects of crop genetic resources conservation. Send letter with curriculum vitae to: **Michael A. Akintomide, Director for Administration, IITA, PMB 5320, Ibadan, Nigeria.**

UNIVERSITY OF PENNSYLVANIA DEPARTMENT OF HUMAN GENETICS

Three tenure-track positions to begin at the assistant professor level are available in the Department of Human Genetics. Candidates (M.D. or Ph.D.) trained in modern molecular genetic techniques and with a record of research in genetics are urged to apply.

One position is to be filled by an M.D. researcher who would be qualified to hold a joint clinical appointment. Areas of interest in molecular approaches include: evolution, development, gene regulation, molecular cytogenetics, polymorphism, and molecular mechanism of disease. Send résumé to: **Dr. R. Schmickel, Department of Human Genetics, Room 195 Medical Laboratories Building/G3, University of Pennsylvania, Philadelphia, Pa. 19104. An Equal Opportunity/Affirmative Action Employer.**

MICROBIOLOGIST/BIOCHEMIST. Federal term (2-year) appointment. Opportunity for a qualified research professional to apply microbiological/enzymatic technology to increasing the efficiency of lignocellulosics conversion to alternative chemicals/fuels. Candidate to conduct research targeted at enzymatic processes to generate fermentable sugars (glucose/xylose) from pretreated cellulosic/hemicellulosic feedstocks. Candidate to evaluate mixed microbial processes for direct bioconversion of agri-residues to fermentation chemicals. Salary based on qualifications and experience. GS-11 position. Position located at the NRRC, Peoria, Illinois. Send curriculum vitae and references to: **Dr. R. W. De-troy, FL, NRRC (s), U.S. Department of Agriculture, 1815 North University, Peoria, Ill. 61604. Telephone: 309-685-4011. An Equal Opportunity Employer.**

POLAR OCEANOGRAPHER/ SEA ICE DYNAMICIST

A position is available under the Intergovernmental Personnel Act of 1970 for persons now employed in state/local government or in colleges and universities. This position is located within the Oceanic Processes Branch of the Environmental Observation Division of the Office of Space and Terrestrial Applications, NASA Headquarters. The position is for 1 year, with the possibility for renewal for an additional year. Pay will be at a level commensurate with experience, and will be established after a review of qualifications.

Candidates must have been employed by the university in a permanent position for at least 90 days or be a career employee of a state or local government. Candidates must also meet the federal qualification standards for the position. These are as follows: a degree in an appropriate field of science, plus 3 years of progressively responsible experience in duties related to the position.

This individual will be responsible for planning, developing, and implementing a scientific research program in satellite remote sensing of oceanic processes in polar regions. A background in polar oceanography, sea ice dynamics, or a closely related field is required; experience in remote sensing, although desirable, is not essential. A Ph.D. or equivalent training and experience is mandatory.

Interested parties should send a current résumé to: **NASA Headquarters, attention: Catherine Zegowitz, Code EPM-3, Washington, D.C. 20546.**

Selection for this position will be made from otherwise eligible candidates without discrimination for any nonmerit reason such as race, color, religion, sex, national origin, politics, marital status, physical handicap, age, membership or nonmembership in an employee organization, or personal favoritism.

POSITIONS OPEN

DEAN OF THE COLLEGE OF PHARMACY AND ALLIED HEALTH PROFESSIONS WAYNE STATE UNIVERSITY

Nominations and applications are invited for the position of dean of the College of Pharmacy and Allied Health Professions, beginning fall 1981. Wayne State University is a comprehensive university with 33,000 students and ten schools and colleges. The University's mission is to emphasize teaching, research, and public service activities responsive to the needs of a major metropolitan area and consistent with the tradition of a university of substance.

The College consists of two major units: Pharmacy and Allied Health Professions. Allied Health Professions consist of seven departments: Anesthesia (Nurse), Medical Technology, Occupational and Environmental Health, Occupational Therapy, Ophthalmic Technology, Physical Therapy, and Radiation Technology. Pharmacy is not departmentalized. Allied Health Professions offer B.S. and M.S. degrees while Pharmacy offers B.S., M.S., Ph.D., as well as the doctor of pharmacy degree. Both units have approximately 600 undergraduate majors and 175 graduate majors.

Qualifications: an earned doctorate, full-time faculty experience, and demonstrated excellence in teaching, scholarly research, and academic administration.

Nominations, inquiries, and applications should be addressed to: **Dr. John D. Taylor, Chairman, Department of Biological Sciences, Wayne State University, Detroit, Michigan 48202.**

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FACULTY POSITION BIOLOGICAL OCEANOGRAPHY UNIVERSITY OF HAWAII MANOA

The Department of Oceanography and the Hawaii Institute of Marine Biology are seeking applicants for a joint appointment in the field of biological oceanography. This state-funded position is potentially tenurable and will become available in fall semester 1981. The successful applicant should have the communication skills of an excellent teacher, the intellect and creativity for high quality individual research, and a demonstrated ability or potential to obtain federal funds. Our graduate oceanography program has need for qualified scientists with training and demonstrated research capability in fisheries biology or marine planktonic and benthic ecology; however, top priority will be based on individual qualifications rather than on specific disciplines. Therefore, we urge all qualified candidates to apply.

Applicants must hold a Ph.D. in biological oceanography, marine biology, or a related field, but there is no restriction on the experience level. Salary and rank will depend on qualifications of the individual selected. Applications should include curriculum vitae and names of three scientists whom we can contact for reference.

Send application to:

**Dr. Jed Hirota, Chairman
Search Committee
Department of Oceanography
University of Hawaii at Manoa
Honolulu, Hawaii 96822**

Application deadline is 1 September 1981.

An Equal Opportunity/Affirmative Action Employer

A **POSTDOCTORAL POSITION** will be available 1 September 1981 for persons with a Ph.D. in biochemistry to work in the isolation, localization, and characterization of mammalian sperm membrane proteins. A knowledge of current 2-D PAGE and immunoelectrophoretic techniques is desirable. Send curriculum vitae to: **Dr. R. N. Peterson, School of Medicine, Southern Illinois University at Carbondale, Carbondale, Illinois 62901.**

POSTDOCTORAL POSITION—Biochemist to study the interaction of membrane-active chemicals with biological membranes and membrane proteins. Research background in membrane or protein biochemistry highly preferred, as is experience with biochemical and biophysical characterization of cytochromes P-450. Salary range: \$13,000 to \$15,000. Send curriculum vitae and three letters of recommendation before 14 August 1981 to: **Dr. Terry L. Miller, Department of Agricultural Chemistry and Environmental Health Sciences Center, Oregon State University, Corvallis, Oregon 97331. An Equal Opportunity/Affirmative Action Employer, in compliance with Section 504 of the Rehabilitation Act of 1973.**

POSITIONS OPEN

IGNEOUS/METAMORPHIC PETROLOGIST

Faculty position, 12-month, tenure track. Candidate expected to develop strong research program emphasizing the application of latest theoretical, experimental, and geochemical methods to petrological problems, particularly those related to the formation of oceanic crust, islands, and/or volcanic arcs. Rank is assistant/associate professor. Salary: \$23,000 to \$38,000, commensurate with experience. Send résumé and names of three references by 1 September 1981 to:

**G. Ross Heath, Dean
School of Oceanography
Oregon State University
Corvallis, Oregon 97331**

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

The Department of Radiation Oncology requests applications for the full-time position of **INSTRUCTOR** (nontenured) within the Division of Radiation Biology. Applicants must have a Ph.D. and postdoctoral training in radiation biology or related field. Candidates must be capable of independent research in the areas of hyperthermia, radiation modifiers, or microvascular pathology. The successful applicant will be expected to share the division's teaching responsibilities. Interested applicants should direct curriculum vitae, brief description of research experience, and future research plans to: **Dr. A. J. Lawson, Division of Radiation Biology, University of Alabama in Birmingham, P.O. Box 441, Birmingham, Ala. 35294.**

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INSTRUMENT ENGINEER—Duties include design and construction of prototype instruments to be used in support of basic meteorological research aimed at the problems of the dispersion and removal of air pollutants in the atmosphere, forest canopy radiation distribution and signatures, and forest energy balances; troubleshooting and repair of existing and/or commercially constructed equipment related to the above studies. Requirements: B.S. with emphasis on instrument engineering and 3 to 5 years of recent experience in design, construction, and troubleshooting complex analog and digital circuitry, including microprocessor applications. Send résumé, with salary history, and names and addresses of references to: **Employment Office OAK RIDGE ASSOCIATED UNIVERSITIES, P.O. Box 117, Oak Ridge, Tenn. 37830.** *An Equal Opportunity Employer.*

PLANT BIOCHEMIST

The Department of Agricultural Biochemistry of the University of Nebraska-Lincoln invites applications and nominations for a tenure-track assistant or associate professor in plant biochemistry with research interests involving plant membranes. Postdoctoral experience is desirable. Although this 12-month position will primarily entail basic research within the Experiment Station, the appointee will also participate in the teaching program. Résumé and names of three references should be sent by 30 October 1981 to: **Dr. R. V. Klucas, Department of Agricultural Biochemistry, The University of Nebraska, Lincoln, Nebraska 68583.** Telephone: 402-472-2932. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately for candidates having Ph.D. or M.D. degrees to participate in the ongoing research program on hormonal regulation of eukaryotic gene expression. Preference will be given to candidates with experience in biochemical and recombinant DNA technology. Send résumé, brief summary of research experience, and three references to: **Secretary, Laboratory of Pharmacology, Harvard School of Dental Medicine, 188 Longwood Avenue, Boston, Mass. 02115.**

POSTDOCTORAL POSITION available immediately for research on preimplantation mouse embryos. Studies are on micromanipulation and the biochemistry of development. Apply with curriculum vitae to: **R. L. Brinster, Laboratory of Reproductive Physiology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pennsylvania 19104.**

POSTDOCTORAL POSITION in biochemical pharmacology of anticancer pyrimidine and purine antimetabolites (NIH grant). Send résumé and names and addresses of three references to: **Dr. W. Sadée, Department of Pharmacology and Pharmaceutical Chemistry, University of California at San Francisco, San Francisco, California 94143.**

MICROBIAL GENETICIST

A challenging career opportunity exists at Pfizer Central Research for a microbial geneticist. The successful candidate will have a unique opportunity to join a large, experienced, multidisciplinary team based Fermentation and Recovery R&D department and to apply skills to the continuing development of Pfizer's commitment to fermentation microbiology and the broader areas of biotechnology. Major activities encompass both new product discovery/development and process improvement.

Applicants must hold a Ph.D. in Genetics/Microbiology or a related discipline, and postdoctoral experience is highly desirable. Evidence of creative, independent research contributions in the study of microbial genetics, genetic regulatory mechanisms, and microbial physiology is required. Candidates having expertise with a variety of microbial systems are highly desirable.

In addition to the challenge of working in this exciting field, Pfizer Central Research offers opportunities to participate in a large, multi-disciplinary organization. You will also enjoy an excellent salary/benefits package and our attractive Connecticut shore location.

For prompt consideration, send your resume, a summary of your research, experience and a list of publications to: **Mr. F. G. Ziegler, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.**



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Mobil

EXPERIENCED TOXICOLOGISTS

Mobil's expanding Toxicology Division has opportunities available at its Environmental and Health Science Laboratory near Princeton, N.J.

TOXICOLOGIST (1)

B.S., M.S. or PhD with a minimum of 3 years hands-on experience in conducting IN VIVO toxicological studies. In addition to successful completion of a course of studies in the biological/biochemical sciences, knowledge of organic chemistry is necessary and training in physical chemistry is desirable.

SENIOR TOXICOLOGISTS (2)

Well-experienced, doctoral-level scientists with previous supervisory responsibility and broad background in general toxicology, preferably with specialization in reproductive physiology/teratology, inhalation toxicology/pneumoconiosis, or dermal toxicology/contract sensitization. Some industrial experience preferable; knowledge of organic chemistry essential; background training in physical chemistry desirable.

For confidential consideration, submit resume and salary requirements to: **R.H. Daniels, Employee Relations, Mobil Research and Development Corporation, P.O. Box 1025, Princeton, New Jersey 08540.**

MOBIL OIL CORPORATION

AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN

MOLECULAR BIOLOGIST/MICROBIOLOGIST. Career federal service. Opportunity for a qualified research professional to apply molecular genetics recombinant DNA technology to economically important prokaryotic eukaryotic fermentation microorganisms. Candidate to conduct research on development of recombinant microorganisms capable of more efficient conversion of plant polysaccharide to chemical fuel/feedstocks. Salary based on qualifications and experience. GS-11/12 level position. Position located at the Northern Regional Research Center, Peoria, Illinois. Send curriculum vitae and references to: **Dr. R. W. Detroy, Fermentation Laboratory, Northern Regional Research Center(s), U.S. Department of Agriculture, 1815 North University, Peoria, Ill. 61604. Telephone: 309-685-4011. Equal Opportunity Employer.**

PLANT GENETICIST/ BREEDER

Ph.D. or person with equivalent experience required to conduct a program of cultivar development in collaboration with geneticists, physiologists, pathologists, and molecular biologists.

Applicants should have record of achievement in breeding and cytogenetics, supervision of a crossing program, and computer-assisted statistical analysis. Prefer individuals with experience in cultivar development, recurrent selection, and conventional or molecular cytogenetics.

Send résumé, publications, and references to:

Personnel Department
IPRI
853 Industrial Road
San Carlos, California 94070

POSTDOCTORAL—NEUROPHARMACOLOGY
Position available immediately for Ph.D. or M.D. to study biochemical and pharmacological approaches to drug development for neurological disease. Experience with ligand binding, cyclic AMP, protein phosphorylation, and ion transport desirable. Send curriculum vitae to:
James A. Nathanson, M.D., Ph.D., Neurology Department, Harvard Medical School, Massachusetts General Hospital, Boston, Mass. 02114. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS—BIOPHYSICS
Techniques of research include laser light scattering and fluorescence photobleaching recovery with applications in the fields of cell motility, the electrical charge properties of biological membranes, and the dynamic/electrokinetic properties of nucleic acids. Candidates with backgrounds in either physical or biological sciences are welcome to apply. Applications should be addressed to: **Professor B. R. Ware, Department of Chemistry, Syracuse University, Syracuse, N.Y. 13210.**

Scripps Institution of Oceanography invites applications for **THREE TO FIVE POSTDOCTORAL POSITIONS** distributed among the following fields:

- 1) Inshore processes/coastal engineering,
- 2) Marine pollution and the assimilative capacity of the ocean for social wastes utilizing resonance ionization spectroscopic analytical methods, and
- 3) Climate research, including long-range weather forecasting and impacts of increased atmospheric carbon dioxide.

Private foundation funding limits awards to U.S. citizens. Appointments are for 1 or 2 years. Applicant should have a background in appropriate physical sciences for work in one of these fields at the Ph.D. level or equivalent. Appointments in the University of California system will be at the level of postgraduate research or assistant research. Salary from \$17,112 to \$28,400, commensurate with qualifications. Submit résumé (specify position/field), including names of references, before 18 September 1981 to: **J. D. Frautschy, Deputy Director, A-010, Scripps Institution of Oceanography, University of California at San Diego, La Jolla, Calif. 92093.** Request position profiles at the same address. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately in an active, stimulating, and well-equipped laboratory in New York City for a Ph.D. in biochemistry or microbiology. Research area includes studies on plasmid DNA replication and cloning of chromosomal toxin genes. Techniques include DNA sequencing and recombinant DNA technology. Salary: \$16,000. Send curriculum vitae and names of two references to:

Dr. Saleem Khan
Department of Plasmid Biology
Public Health Research Institute
of the City of New York
455 First Avenue
New York, N.Y. 10016
An Equal Opportunity Employer

POSTDOCTORAL POSITION available. Opportunity to participate in studies defining the role of specific apolipoproteins in the regulation of lipoprotein metabolism in patients and in cell culture systems. Techniques for studying human fibroblasts and smooth muscle cells, and also mouse macrophages and mouse hybridomas, are ongoing in the laboratory. Also techniques for the characterization and the radioimmunoassay of apolipoproteins are operational. The position is supported by an NIH training grant, supplemented to institutional levels. U.S. citizenship or immigrant visa required. Write to: **B. A. Kotke, M.D., Atherosclerosis Research Laboratory, Mayo Clinic, Rochester, Minn. 55901, or telephone: 507-285-5902.**

An Equal Opportunity/Affirmative Action Institution

POSTDOCTORAL POSITION available for studies concerning biochemical and physiological mechanisms underlying exocytosis from nerves and cells. Research includes investigations concerning the role of specific proteins phosphorylation and the role of chemiosmotic mechanisms in secretion. A biochemical background is desired. The position is NIH funded. Please send curriculum vitae, bibliography, and the names of three references to: **Dr. Ronald W. Holz, Department of Pharmacology, M6322 Medical Science Building Number 1, The University of Michigan, Ann Arbor, Michigan 48109. The University of Michigan is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION to study **REGULATORY MECHANISMS OF MEMBRANE PHOSPHOLIPID METABOLISM.** Experience in related areas (lipid biochemistry, cell culture, lipoproteins, lipid-protein interactions) is desirable. Annual stipend: approximately \$16,000. Send curriculum vitae, three references, summary of previous research, and a statement of research interests to: **Dr. W. J. Baumann, The Hormel Institute, University of Minnesota, Austin, Minn. 55912. University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages women and minority applications.**

POSTDOCTORAL POSITION

The Research Laboratory in the Department of Neurosurgery is seeking a postdoctoral fellow interested in research in cerebellar physiology. A doctorate degree (Ph.D. or M.D.) or equivalent is required, and experience in single unit recording and quantitative data processing techniques is strongly desired. Send curriculum vitae and references by 1 September to: **James R. Bloedel, Department of Neurosurgery, University of Minnesota Medical School, B590 Mayo, Minneapolis, Minnesota 55455. The University of Minnesota specifically invites and encourages applications from women and minorities.**

POSTDOCTORAL POSITION available immediately. Electrophysiological studies on opiate receptors and/or studies on skeletal muscle physiology and pharmacology. Salary: C\$17,000 to start. Send curriculum vitae and the names of three references to, or for further information, write to: **Dr. George B. Frank, Department of Pharmacology, The University of Alberta, Edmonton, Alberta, Canada T6G 2H7.**

RESEARCH PHYSIOLOGIST—A position is available immediately for a Ph.D. with 1 to 4 years of postdoctoral experience in an area relevant to cerebrovascular disease. The person selected will hold a joint academic appointment in the Departments of Physiology and Clinical Neurological Sciences and is expected to obtain independent research funding. Submit curriculum vitae and names of three referees to: **Dr. F. R. Calaresu, Department of Physiology, University of Western Ontario, London, Ontario, Canada N6A 5C2.**

POSITIONS OPEN

POSTDOCTORAL POSITION—DEPARTMENT OF GENETICS, STANFORD SCHOOL OF MEDICINE—Available immediately for research in the genetics of the human mitochondrion. Research projects employ somatic cell genetic, molecular genetic, and biochemical approaches to investigate the organization, inheritance, and evolution of human mitochondrial genes. Excellent research facilities are available within the laboratory and additional supporting facilities are available throughout the department, Medical School, and University. Extensive seminar and workshop programs foster communication and interaction between department personnel and research groups throughout the University. Forward résumé and a list of three references to: **Dr. Douglas C. Wallace, Department of Genetics (S337), Stanford School of Medicine, Stanford, Calif. 94305.**

POSTDOCTORAL POSITION available. Research on hepatic microsomal electron transport and fatty acid elongation and desaturation. Contact:

Dr. Dominick L. Cinti
Department of Pharmacology
University of Connecticut Health Center
Farmington, Conn. 06032

An Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL RESEARCH ASSOCIATE position available in Molecular Genetics Section studying replication and segregation of P1, a unit-copy plasmid prophage. Applicants should have a recent Ph.D., familiarity with contemporary bacterial and phage genetics, and preferably a strong background in the biochemistry of DNA replication, recombination, or bacterial membrane-DNA interactions. Salary and position will be commensurate with qualifications and experience. Send curriculum vitae and three letters of recommendation to: **Dr. Michael Yarmolinsky, Cancer Biology Program, Frederick Cancer Research Center, P.O. Box B, Frederick, Md. 21701.**

POSTDOCTORAL RESEARCH ASSOCIATE POSITION for biochemist-cell biologist available 1 September for 2 to 3 years, to identify, isolate, and characterize insulin-like growth factor and α -thrombin receptors [*J. Biol. Chem.* 256, 2767 (1981)] from cultured cells and tissues.

Experience in membrane protein chemistry, monoclonal antibody production, and/or ligand receptor characterization is desirable but not essential; \$15,000 to \$20,000, yearly depending on qualifications.

Send curriculum vitae and names of three references to: **Dr. James F. Perdue, Lady Davis Institute for Medical Research—Sir Mortimer B. Davis-Jewish General Hospital, 3755 Cote St. Catherine Road, Montreal, Quebec, Canada H3T 1E2.**

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available immediately for candidate with a demonstrated interest and technological expertise in developmental and molecular biology. Experience in hematopoietic stem cell growth in vitro desirable. Excellent research opportunity in the area of the regulation of hemoglobin synthesis in man and baboon model systems. Salary negotiable and competitive. Candidate would be employee of the University of Illinois. Career possibilities. Send curriculum vitae and names of three references to: **Dr. Joseph DeSimone, Hematology Research Laboratory, Veterans Administration West Side Medical Center, 820 South Damen Avenue, Chicago, Illinois 60612. An Affirmative Action/Equal Opportunity Employer.**

A 2-year **RESEARCH ASSOCIATE** position to study the intermediary metabolism of mammalian embryos and spermatozoa is available immediately. Applicants should send curriculum vitae and names of two referees to:

Dr. Nina Hillman
Temple University
Biology Department
Philadelphia, Pennsylvania 19122

RESEARCH PHYSICIST

The Department of Physics of the University of California, Irvine, offers a position for a theoretical research physicist with a Ph.D. degree and at least 3 years of experience in plasma physics to work on new accelerator concepts. One-year appointment can be extended if funds are available. Send résumé, bibliography, and names of three professional references to: **Professor Norman Rostoker, Department of Physics, University of California, Irvine, Irvine, California 92717. University of California is an Affirmative Action/Equal Opportunity Employer.**

Postdoctoral Research Associates BROOKHAVEN NATIONAL LABORATORY

Two Postdoctoral Research Associate positions will be available in October, 1981, in the Biology Department at Brookhaven National Laboratory.

One position is for study of photosynthetic mechanisms of nitrogen reduction in heterocysts of cyanobacteria. Optical and EPR spectroscopic techniques are applied to isolated heterocysts and photosynthetic membrane preparations. A Ph.D. in plant physiology or biochemistry, with experience in photohydrogen production, nitrogen fixation or hydrogen assimilation research, preferably in cyanobacteria, is desirable.

The other position is for study of electron flow and energy conversion mechanisms in higher plant photosynthesis. Techniques used include optical and EPR spectroscopy of intact chloroplasts and isolated membrane complexes. A Ph.D. in biochemistry, plant physiology or biophysics, with experience of bioenergetic and electron transport systems, preferably in photosynthesis, is desirable.

Initial appointments will be for one year, at a minimum salary of \$14,000 per year, with possibility of extension.

Candidates should send resume and names of three referees to Dr. Geoffrey Hind, Biology Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973

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NATIONAL
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PLANT GENETICS/ CELL CULTURE

The INTERNATIONAL PLANT RESEARCH INSTITUTE (IPRI) expects new research associate positions in plant protoplasts, cell genetics, and mass culture. Join our group of top quality research scientists in the San Francisco Bay area. Applicants must have advanced degrees in biology, biochemistry, bioengineering, or microbiology. Excellent salary and benefits package. Please send curriculum vitae and professional references to:

Personnel Department

IPRI

**853A Industrial Road
San Carlos, California 94070**

Project Management: Gas Distribution

GRI is sponsoring projects to develop a more efficient, cost effective operation of the natural gas distribution network in several target areas: improved technologies to reduce pipe installation, replacement and maintenance costs; techniques to improve the accuracy and reduce the costs of metering systems and enhance operational efficiency; and materials testing for new piping, fittings, and joining methods.

As a scientific organization which finances, plans and manages R&D programs for the natural gas industry, project management positions are available to professionals with an M.S. in Physics or related engineering disciplines; creative research background is desirable; no previous gas industry experience is required. Those seeking consideration should forward their credentials to: J.R. QUILLINAN.

**GAS RESEARCH INSTITUTE
8600 West Bryn Mawr Avenue, Dept. S/153
Chicago, IL 60631**

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GROUP LEADER

Immunoassay Development

Becton Dickinson Research Center, with laboratories in picturesque Research Triangle Park, North Carolina, is seeking an experienced Research Scientist to lead a small group in the development of non-isotopic immunoassay systems.

The successful candidate will have a PhD in a Biological Science, plus 3 or more years of active participation in immunoassay systems development. Persons with supervisory experience will be given preference.

We offer the advantages of a sunbelt location, modern laboratories, a creative work environment, attractive salary, an excellent employee benefit package including relocation assistance and the opportunity to be a significant contributor in the dynamic health care field. Persons interested in this immediate opportunity should send their resume, including a list of references, to: F. R. Wilson,

**BECTON DICKINSON
RESEARCH CENTER
P.O. Box 12016
Research Triangle Park, N.C. 27709**
An Equal Opportunity Employer M/F/H/V

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DICKINSON**

POSITIONS OPEN

RESEARCH POLYMER CHEMIST. Perform research on synthetic polymer structure and morphology using microscopy and scattering techniques. Required: Ph.D. in polymer chemistry and advanced degree in chemical engineering; research experience in polymer solution behavior, polymer crystal formation and morphology, polymer filament formation and treatment, and application of neutron scattering to polymer characterization; minimum of 2 years of academic postdoctoral experience and 2 years of industrial polymer research experience. Salary: \$3000 per month. Send résumé, including list of publications, to: **Employment Services Division, Delaware State Department of Labor, 801 West Street, Wilmington, Del. 19801.** An Equal Opportunity Employer, M/F.

RESEARCH POSITION

RESEARCH POSITION, at University Hospital, to study cell-mediated immunity in human cancer. Doctorate required. Candidates must have experience in immunological and cell culture techniques, background in tumor immunology, and personality suitable for some patient contact. Excellent salary and benefits. Please send résumé to: **Herta Tegtmeier, Immunochimistry Research, Evanston Hospital, 2650 Ridge Avenue, Evanston, Ill. 60201.**

SURGICAL PATHOLOGY UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE

The Department of Pathology and Laboratory Medicine seeks to fill one tenure-track position in surgical pathology at the level of assistant professor. The individual must have demonstrated competence in general surgical pathology, as well as an area of expertise in which a significant research program can be initiated and maintained. Areas of endeavor might include pathophysiology of renal, hepatic, or endocrine disease, ultrastructure aspects of disease for the biology of neoplasia. Ability to teach at both graduate and undergraduate levels is required. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.* Please send curriculum vitae and three references to:

Dr. James E. Wheeler
Acting Director, Surgical Pathology Division
Department of Pathology and Laboratory Medicine
Hospital of the University of Pennsylvania
3400 Spruce Street/GI—Box 527
Philadelphia, Pa. 19104

SURGICAL PATHOLOGY UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE

The Department of Pathology and Laboratory Medicine seeks to fill one tenure-track position in surgical pathology at the level of assistant professor. The individual must have demonstrated competence in general surgical pathology, with diagnostic proficiency in metabolic bone disease. The individual must be interested in participating in the development of an interdepartmental center for studies in metabolic bone disease. A research program is expected, with the ability to have or attract independent funding. Teaching at the graduate and undergraduate levels is required. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.* Please send curriculum vitae and three references to:

Dr. James E. Wheeler
Acting Director, Surgical Pathology Division
Department of Pathology and Laboratory Medicine
Hospital of the University of Pennsylvania
3400 Spruce Street/GI—Box 527
Philadelphia, Pa. 19104

THEORETICAL OCEANOGRAPHER/OCEAN MODELER. Will carry out independent research on problems of ocean dynamics with emphasis on the development and application of numerical models of large-scale ocean circulation. Requires background in physical oceanography/geophysical fluid dynamics equivalent to the Ph.D., and mathematical abilities for and experience in the development of numerical models of ocean circulation. This position is available about 1 September 1981. Please send curriculum vitae, publications list, salary history and requirements, and five references to: **Margareta Domecki, NATIONAL CENTER FOR ATMOSPHERIC RESEARCH, P.O. Box 3000, Boulder, Colorado 80307.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

RESEARCH SCIENTIST

Southern Research Institute, with a staff of 600, has a position available in chemical carcinogenesis research for a Ph.D. in pharmacology, toxicology, physiology, or a D.V.M. Previous experience with laboratory rodents in a carcinogenicity/toxicology laboratory is preferred. Duties involve participation in ongoing carcinogenesis bioassay program, including supervision and coordination of all aspects of bioassay. Send résumé to:

Denise D. Johnson
Personnel Office

SOUTHERN RESEARCH INSTITUTE

2000 Ninth Avenue South
Birmingham, Alabama 35255

An Equal Opportunity/Affirmative Action Employer

SENIOR STAFF OFFICER ENVIRONMENTAL MUTAGENESIS

The Board on Toxicology and Environmental Health Hazards of the National Academy of Sciences is seeking a senior professional in the area of environmental mutagenesis. The individual will be responsible for overseeing a broad program aimed at the assessment of scientific data relating to the impact of chemical mutagenesis on human health. A Ph.D. degree or equivalent with evidence of experience and scholarly contributions to the evaluation of risks to human health from chemical mutagens is required. Effective written and verbal communication is essential. The appointment is anticipated to have a duration of 14 months, beginning on or about 1 August, with some possibility of continued employment thereafter. Applicants should submit, in confidence, curriculum vitae to: **Dr. Robert G. Tar-diff, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418.** Equal Opportunity Employer.

Full-time appointment in the Department of Psychiatry, University of Michigan School of Medicine, as **STAFF PSYCHIATRIST** with responsibilities for teaching and supervision of psychiatric residents, internal medicine residents and medical students in both a psychiatric outpatient setting and a primary care setting, as well as limited direct patient care. Emphasis on teaching of interviewing techniques, diagnosis, use of biological and psychological tests, use of psychotropic medications, and aspects of emotional illness care in a primary care setting. Tenure-track appointment at academic rank appropriate to qualifications and experience, with salary funded jointly by the Departments of Psychiatry and Internal Medicine; latter portion is contingent on successful renewal of federally funded project proposal. Send curriculum vitae and names and addresses of three references to: **Wiecher van Houten, M.D., Department of Psychiatry, University of Michigan, Riverview Building, Ann Arbor, Michigan 48105.** A nondiscriminatory, Affirmative Action Employer.

VIROLOGY TECHNOLOGIST. Work under general supervision, a Ph.D. virologist in 85-person hospital laboratory. Requires experience doing virological studies, skill in maintaining basic virological laboratory equipment, experience in cell culture and in working with chemical reagents. Experience in virology diagnosis preferred. Starting salary: \$1360 to \$1529, contingent on directly related experience. No FICA deduction. **Personnel Department, Southern Nevada Memorial Hospital, 1800 West Charleston Boulevard, Las Vegas, Nevada 89102.** An Equal Opportunity (including the handicapped)/Affirmative Action Employer.

VISITING SCIENTIST POSITION The Joint Institute for the Study of the Atmosphere and Ocean (JISAO) University of Washington

VISITING SCIENTISTS with background in atmospheric sciences or physical oceanography and interests in dynamical and/or geochemical aspects of climate variability. Term of appointment: 1 year, renewable for a second year subject to the approval of the Council. Closing date: 15 September 1981. Send curriculum vitae and a brief research prospectus to: **Director, JISAO, c/o Department of Atmospheric Sciences, AK-40, University of Washington, Seattle, Wash. 98195.**

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POSITIONS OPEN

Emory University School of Medicine Department of Ophthalmology

The Department of Ophthalmology of the Emory University School of Medicine invites applications for the position of **RESEARCH ASSOCIATE—BIOCHEMIST/ENZYMOLOGIST.** The position requires a Ph.D. degree in a scientific discipline plus a minimum of 4 years of postdoctoral experience in the field of inflammatory mediators, cell culture, protein purification, and connective tissue metabolism. Work will include research on the mechanisms of corneal destruction. This position is available immediately and includes a minimum salary of \$20,000, depending on experience. Apply in person to: **Georgia Department of Labor, One Peachtree Street, Atlanta, Georgia, control number 74004.** An Equal Opportunity/Affirmative Action Employer.

RESEARCH SCIENTIST, Drug Analysis and Disposition, at Burroughs Wellcome Co. Primary responsibility will be the development of drug immunoassay procedures and their application to disposition studies in animals and humans. Candidates must have an M.S. degree in organic or analytical chemistry or equivalent experience/training, or a B.S. degree in chemistry with 1 to 3 years of experience/training in drug analysis and disposition. Experience in drug immunoassay development and application desirable. Good oral and written communication skills necessary. **BURROUGHS WELLCOME CO.**, a progressive pharmaceutical company, has close research contact with three major universities. Interested candidates should forward curriculum vitae to: **Employment Supervisor, BURROUGHS WELLCOME CO., 3030 Cornwallis Road, Research Triangle Park, N.C. 27709; or telephone COLLECT between 10 a.m. and 2 p.m.: 919-541-9090, extension 4649.** An Equal Opportunity/Affirmative Action Employer.

RESOURCE MANAGEMENT RESEARCH—Applications are invited for a joint position as assistant director of Westwater Research Centre, and assistant professor in the School of Community and Regional Planning (SCARP) at University of British Columbia (UBC). Westwater conducts natural and social sciences research on freshwater and coastal resource management issues and maintains strong ties with several departments and schools at UBC, including SCARP. Applicants should have a background in one of the social sciences, and experience in the management of interdisciplinary research projects. Duties will include originating and undertaking research; sharing the administrative responsibilities for Westwater; teaching a graduate workshop course in SCARP; and supervising graduate students. Salary is competitive and negotiable, depending on qualifications. Send full curriculum vitae and names of three referees to: **Dr. T. G. Northcote, Chairman, Search Committee, Institute of Animal Resource Ecology, University of British Columbia, Vancouver, British Columbia, Canada V6T 1W5.**

VERTEBRATE ECOLOGIST

Assistant Research Zoologist position at the Hastings Natural History Reservation, 25 miles south-east of Monterey in the Carmel Valley, California, a university-administered area of 2000 acres with broad sclerophyll woodland, chaparral, and savanna protected since 1935. Applicants must have a Ph.D. degree, preferably with postdoctoral experience. Special consideration will be given candidates with active, field-oriented research interests in mammals, birds, or reptiles. Responsibilities include share of administration of both reservation facilities and research program with the resident director. Interaction with Berkeley campus (125 miles) expected, including possibility of intermittent teaching, but willingness to settle and work in small, isolated rural station is of paramount importance. Position to be filled on an 11-month basis, with 1 month of annual vacation; starting salary would range from \$21,600 to \$23,800.

Starting date: July 1982; appointment to be made by 1 January 1982. Inquiries, which should include curriculum vitae, list of publications, reprints or preprints, a brief description of applicant's research interests and goals, and names and addresses of at least three individuals from whom letters of reference may be obtained, should be addressed by 15 September 1981 to: **Dr. David B. Wake, Director, Museum of Vertebrate Zoology, University of California, Berkeley, California 94720.** The University of California is an Equal Opportunity/Affirmative Action Employer.

GENETIC TOXICOLOGIST

MAMMALIAN CELL MUTAGENESIS

The Life Sciences Division of IIT Research Institute, a not-for-profit Chicago-based research organization, has an immediate opening for a Genetic Toxicologist.

Individual must supervise, perform, evaluate, and report mammalian cell mutagenicity studies, and perform independent research. In addition, the candidate will assist other personnel in evaluation of data from other *in vivo* and *in vitro* mutagenicity assays. Some travel required.

A Ph.D. is required, with academic training and at least 2 years postdoctoral experience in mammalian cell mutagenesis. Send resumes, names of three references, and salary history to:

Ms. L. Amft
Professional Staffing



IIT RESEARCH INSTITUTE
10 W. 35th St.
Chicago, Illinois 60616

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PHARMACEUTICALS/DIAGNOSTICS

Commercial Development Manager

Cetus Corporation, a leader in the commercial application of biotechnology, is seeking a highly motivated scientist with market analysis/commercial development experience to assume responsibility for the commercial development of opportunities in pharmaceuticals and diagnostics. Responsibilities will include market research, market strategy recommendations, and participation in project planning and monitoring. In addition to recent market development experience, candidates should have a strong research background in cell biology and/or immunology; experience with *in vitro* diagnostics is particularly desired. Successful applicants will join an outstanding team of scientists and managers in a highly motivated, goal-oriented atmosphere. Please send resume and salary expectations, in confidence, to:

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CLINICAL INFORMATION DIRECTOR

E.R. SQUIBB & SONS, INC., a worldwide leader in the pharmaceutical and proprietary drug field, has a key opening for an individual to join our Medical Affairs Department. This position is responsible for the management of the Clinical Information Department which accounts for the data base for clinical information in total. The operations include data retrieval, summarization and document generation, primarily for the registration of drugs.

The successful candidate must have a relevant PhD Degree (or equivalent) with a broad background in the life sciences, data operations, and computer applications. Requirements include at least 8 years experience in leading a team of information scientists in a computer supported environment.

We offer an excellent starting salary, commensurate with experience and potential, and a comprehensive benefits package. Qualified applicants should forward a detailed resume with salary requirements, in complete confidence to: **Ms. Carol Morgan, Dept. JM, E.R. SQUIBB & SONS, INC., P.O. Box 4000, Princeton, NJ 08540.** Equal Opportunity Employer, M/F/H.

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POSITIONS OPEN

Massachusetts Institute of Technology (MIT) SENIOR FACULTY VACANCY POLYMER MATERIALS SCIENTIST

The Department of Materials Science and Engineering at MIT has a senior faculty vacancy for a polymer materials scientist with an outstanding record of research in polymer physics (theoretical or experimental). The interests and talents of the successful candidate should couple effectively with those of the faculty of the Department of Materials Science and Engineering. Teaching responsibilities will include the future development of one or more graduate level subjects in the field of polymer science as well as involvement in the undergraduate materials science curriculum.

Applications should be addressed to:

**Professor Walter S. Owen, Department Head
Department of Materials Science and Engineering
Room 8-307**

**Massachusetts Institute of Technology
Cambridge, Massachusetts 02139**

Deadline for receipt of applications: 1 September 1981.

Massachusetts Institute of Technology is an Equal Opportunity/Affirmative Action Employer.

WORKSHOP

LEGIONNAIRES' DISEASE DETECTION WORKSHOP

16 to 20 August 1981

by the Fresh Water Institute

at Rensselaer Polytechnic Institute, Troy, N.Y. The workshop will present the detection, quantitation and control of *Legionella* in heat rejection and potable water systems. The workshop will provide participants with all skills necessary to analyze samples, assess cooling systems and effect chemical treatments. *Designed for:* personnel in air conditioning, refrigeration, heating, sanitation, and waterworks who have had experience and training in microbiology; microbiologists; microbial ecologists. **Registration fee: \$650. For registration application and information, call: Fresh Water Institute, telephone: 518-270-6757.**

PROGRAM

CAREER CHANGE OPPORTUNITY FOR SCIENCE Ph.D.'s

This unique accelerated program offers science Ph.D.'s the opportunity to obtain a doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in industry, education and research, administration and private practice. Contact: **The Dean of Admissions, The New England College of Optometry, 424 Beacon Street, Boston, Mass. 02115.**

ASSISTANTSHIPS

GRADUATE STUDENT RESEARCH ASSISTANTSHIPS of \$9,000 available in an active molecular genetics laboratory working in the areas of regulation of DNA repair and mutagenesis in bacteria with emphasis on DNA-protein regulatory interactions and determinants of protease specificity. Apply in writing, sending three letters of recommendation, transcripts, and GRE scores, to: **Dr. D. Mount, Department of Molecular and Medical Microbiology, College of Medicine, University of Arizona, Tucson, Arizona 85724. An Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP. Two-year postdoctoral fellowship for research training in developmental biology related to visual system. Work related to basic mechanisms in normal and abnormal retinal development. Supported by NIH training grant. Send curriculum vitae to: **Moshe Lahav, M.D., Department of Ophthalmology, Tufts-New England Medical Center, 171 Harrison Avenue, Boston, Mass. 02111. An Affirmative Action/Equal Opportunity Employer.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS FOR RESEARCH TRAINING IN HYPERTENSION

Fellowships are available for postdoctoral training in hypertension to individuals with the M.D. or Ph.D. degree. This multidisciplinary training program provides opportunities for research in pharmacological, physiological, and biochemical approaches to cardiovascular, renal, neural, and endocrine mechanisms in hypertension.

For further information contact:

**Dr. E. G. Schneider
University of Tennessee
Center for the Health Sciences
894 Union Avenue
Memphis, Tennessee 38163**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL FELLOW IN OVARIAN BIOCHEMISTRY

Beginning 1 September 1981, a postdoctoral fellowship position is available for a recent Ph.D. Projects involve the study of ovarian biochemistry and physiology: mechanism of LH action on ovarian tissue, mechanism of ovulation, role of prostaglandin in ovarian function. Stipend is commensurate with NIH fellowship.

Forward résumé, synopsis of Ph.D. thesis or reprints, and name of three references to: **The Director of The Endocrine Laboratory (D-5), University of Miami School of Medicine, P.O. Box 016960, Miami, Fla. 33101.**

POSTDOCTORAL FELLOWSHIP MEDICAL PHYSICS

A postdoctoral position will be available 1 August 1981 in the Medical Physics Division, Department of Therapeutic Radiology, Tufts-New England Medical Center. Research opportunities exist in hyperthermia, dosimetry, computer-assisted treatment planning, and other topics in radiological science. Fellows will participate in the formal course offerings and clinical physics training program offered by the division, which covers all branches of radiology. Applicants must be U.S. citizens or permanent residents.

Send curriculum vitae, the names of three references, and a statement of career goals to: **Dr. E. S. Sternick, Medical Physics Division, Tufts-New England Medical Center, 171 Harrison Avenue, Boston, Mass. 02111.**

Interdisciplinary Postdoctoral Research Fellowships in the Biomedical and Behavioral Sciences.

A training program has been funded to promote interdisciplinary research in mental retardation, autism, and other developmental disabilities. Fellows collaborate with research scientists on human and nonhuman research in neuroanatomy, neurochemistry, neuroendocrinology, psychopharmacology, neurology, genetics, and behavioral psychology. Available 1 January 1982, for 1 to 3 years. Ph.D. or M.D. plus evidence of interdisciplinary research potential required. Send curriculum vitae, representative reprints, and three references to: **Dr. Stephen R. Schroeder, Biological Sciences Research Center, 136 DDDL/BSRC 220H, University of North Carolina School of Medicine, Chapel Hill, North Carolina 27514. Application deadline is 1 October 1981.**

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

TRAINEESHIPS

POSTDOCTORAL FELLOWSHIPS IN NEUROBIOLOGY.

An expanding multidisciplinary research program concerned with the neurobiology of development and regeneration has several openings commencing 1 September 1981 and extending for 2 years. The research areas included in the program are development of visual system, axonal sprouting in the cat spinal cord, behavioral correlates of recovery of function, survival and death of neurons during development, axonal regeneration, synaptic plasticity in the developing autonomic nervous system, and the development of biogenic amines and receptors. Send curriculum vitae and names of three references to:

**Dr. Leonard L. Ross
Department of Anatomy
The Medical College of Pennsylvania
3300 Henry Avenue
Philadelphia, Pa. 19129**

TRAINEESHIPS

MOLECULAR AND CELL BIOLOGY

POSTDOCTORAL RESEARCH TRAINEESHIPS

are offered in a multidisciplinary research institute. (i) **Biochemistry:** structure and functions of biological membranes; biological regulation mechanisms with emphasis on hormonal action; receptor functions and cellular messengers; and control of normal and neoplastic growth (W. Y. Cheung, M. Morrison, and G. Schobbaum); (ii) **Immunology:** regulation of antibody formation; macrophage functional heterogeneity and characterization of macrophage receptor functions and structures (F. L. Adler, M. Fishman, and W. S. Walker); (iii) **Pharmacology:** human and animal cancer chemotherapy; drug-induced changes in DNA replication and repair synthesis; genetic, biochemical and physiological approaches to analysis of mechanisms of drug resistance in human cells (T. P. Brent, A. Fridland, and A. Welch); and (iv) **Virology:** molecular biology and epidemiology of viruses; eukaryotic gene expression and regulation (A. Granoff, D. Kingsbury, and R. G. Webster). Applicants must be citizens or permanent residents of the United States. Please send curriculum vitae, names of three references, and a brief statement of career objectives to: **Dr. M. Fishman, Division of Immunology, St. Jude Children's Research Hospital, 332 North Lauderdale, P.O. Box 318, Memphis, Tenn. 38101.**

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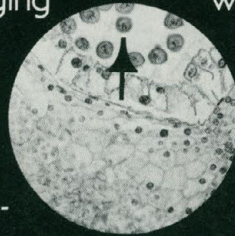
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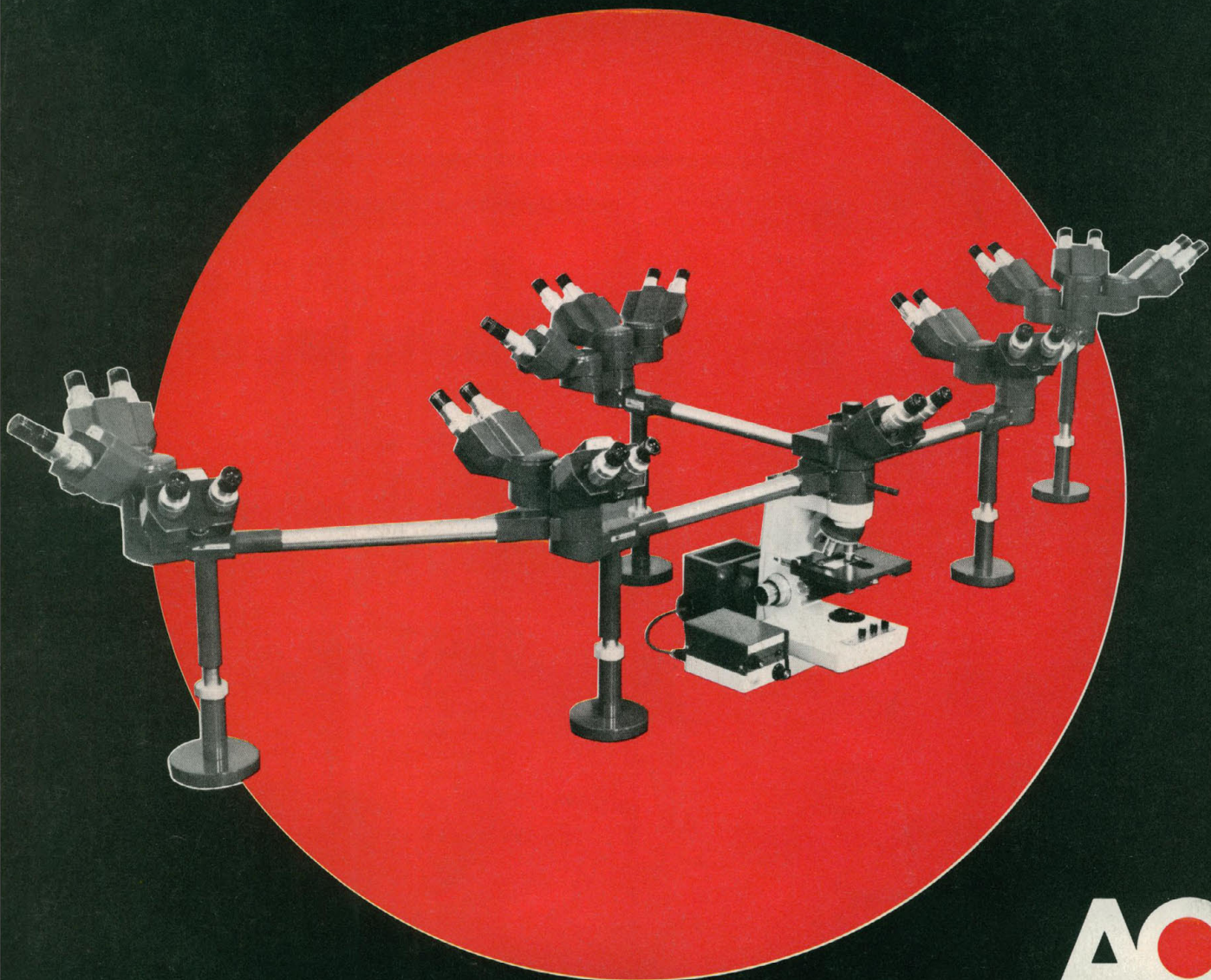
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