

survey of color vision in those cases where the work has been properly done. Organisms covered in detail include frogs, turtles, fish, birds, squirrels, rats, cats, apes, monkeys, and prosimians. The main conclusion that emerges is that all of these organisms have some color discrimination ability. This may be somewhat surprising to readers who have heard the widely repeated view that most mammals are color blind. Jacobs carefully describes how this view arose, showing that it reflects the fact that animals with reduced color discrimination abilities require that the investigator be proportionally more determined before they will yield positive and convincing evidence that they have some ability to discriminate colors.

On the other hand, behavioral evidence has accumulated that suggests that certain birds are capable of making discriminations that are not possible for humans. Birds are perhaps tetrachromats or maybe even pentachromats or hexachromats. Further, physiological data suggest that birds may have the most highly differentiated photoreceptor system. The full extent of the advantage of certain birds over humans has not yet been completely worked out, and Jacobs indicates where additional information would be valuable.

Jacobs concludes with frankly acknowledged speculations, both his own and those of other investigators, on the evolutionary origins and functional utility of color vision. Though the quality of the evidence in support of the speculations varies, the section is provocative because it points out questions for which satisfactory answers do not exist.

The book does suffer from one serious flaw; Jacobs explicitly declined to include data on invertebrates. He justifies this omission by appealing to the differences that are known to exist between vertebrate and invertebrate visual systems. Such differences do exist and are quite well known. But the pertinent question would have to be whether they make a difference as far as color vision is concerned. Would one conclude from a review of both research domains that the principles of organization that are used by invertebrates have no counterparts in those used by vertebrates? Are there not invertebrate preparations that can serve as useful model systems to answer questions that are not readily resolvable when one limits one's attention to vertebrates? An example of such a question is one that recurs throughout Jacobs's book: What is the role of prereceptor ocular filters in modifying or influencing color vision? Jacobs is unable to provide

a definitive answer to this question, and it is unfortunate that he fails to inform the reader of the highly relevant experiments done with invertebrates by a number of investigators.

This criticism notwithstanding, Jacobs has written an excellent summary of vertebrate color vision. It should be valuable as a reference or as a textbook for advanced students.

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(Continued on page 764)

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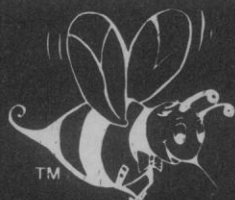
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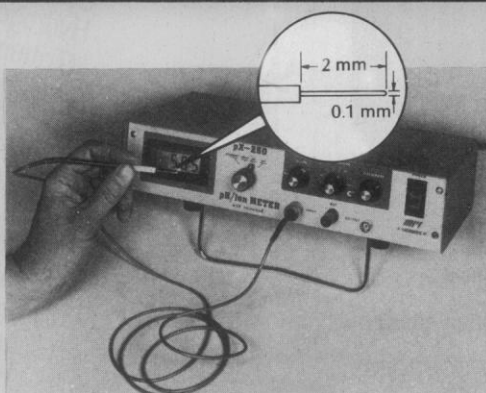
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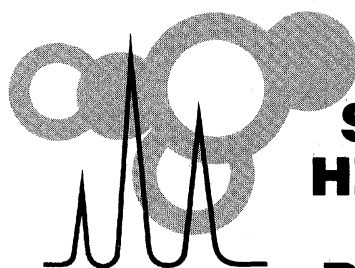
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- **Special Topics** (to be announced)

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(Continued from page 728)

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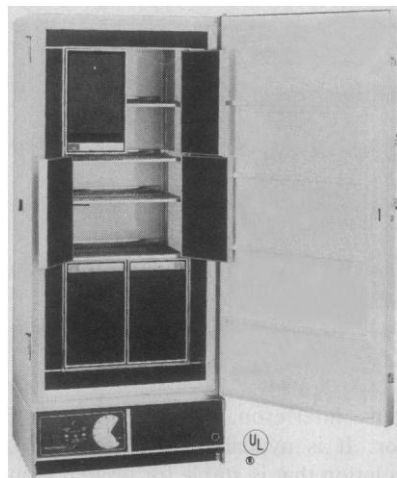
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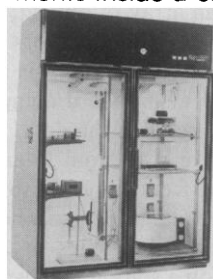
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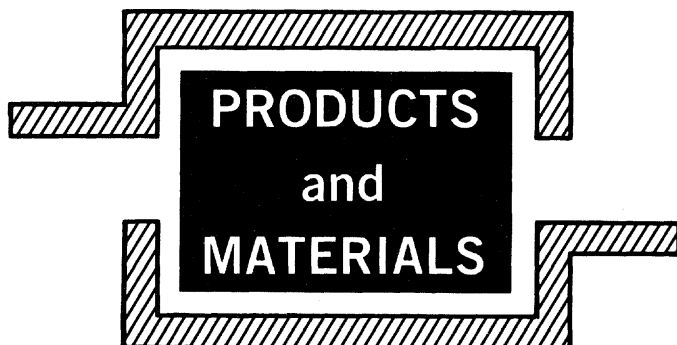
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This unit is designated the "universal" calorimeter. It is not a bomb-type instrument. It is a boxlike device that contains a specimen. The walls of the box contain sensors that detect heat given off by the specimen and produce an electric current. Reactants may be introduced and reaction products may be removed while the unit is sealed. The device is available in sizes from 1 cubic inch internal volume up to room size for a wide range of applications. Thermonetics. Circle 588.

Hybridoma Screening Kits

Two kits are available for rapid screening of culture supernatants for monoclonal antibodies produced by rat or mouse hybridomas. The method employs the Vectastain ABC immunoperoxidase procedure. Samples from clonal supernatants are added to antigen-coated wells. Affinity-purified, biotinylated secondary antibody is then added and, finally, the ABC reagent. Results are determined by observing a color reaction with the peroxidase substrate. Vector Laboratories. Circle 590.

Cell-Specific Lymphokine

Ultrapore Interleukin 1 (human interleukin 1, formerly known as lymphocyte activating factor) is a mediator of certain cell activities. It enhances the proliferative response of T cells to mitogens. It also increases the plaque-forming response of mouse spleen cells. It is prepared from human peripheral blood monocytes and is free of lectins, mito-

gens, interferon, and T cell growth factor. It is available as a sterile frozen solution that is stable for up to 6 months at -20°C . Genzyme. Circle 601.

Sample Processor for Liquid Scintillation Counting

The RSP- β 400 prepares 400 samples in four 100-sample trays at a time. The sealed, disposable trays are analyzed in two detector chambers with integral calibration. The channels are set for commonly used isotopes but they are adjustable. The instrument will store 15 user-defined protocols, 15 efficiency curves, and eight programs in the current queue. Gross counts, counts per minute, or disintegrations per minute may be printed. There is a display screen as well. Waste is minimized and the waste material is put in containers for disposal. Radiomatic Instruments & Chemical. Circle 602.

Aquatic Environment Monitor

The MER-1015 collects ocean water and analyzes its biological and chemical properties with an array of optical, temperature, and conductivity sensors. The underwater collection and analysis module is directed by a shipboard computer that displays and records the data. Data may be recorded or read from 16 analog sensors and two frequency sensors at rates up to 13 readings per second for rapid development of profiles at minimum time spent on a station. Software is available or the user may provide his own. Biospherical Instruments. Circle 603.

Microcomputer and Pulsed Nuclear Magnetic Resonance Analyzer

Praxis II combines a probe; an interface; an Apple II microcomputer with disk drive, Sanyo video monitor, and Epson MX-70 printer; and PnmrLAB software package. The software assists

the operator with menu-driven instructions; accepts input signals from the interface; transmits output to the screen for decisions or transmits curves and data to the printer; controls the one-point-per-microsecond sampling rate, signal averaging, and smoothing; and assists in calibration and provides for additional user programming in BASIC. The probe offers field/frequency of 2.5 kilogauss/10.7 megahertz and 90-pulse widths of 4 microseconds/10 millimeters and 10 microseconds/25 millimeters. Praxis. Circle 604.

Protein Sequencing Solvents

B & J solvents undergo recovery testing with a representative mixture of 16 different PTH amino acid derivatives. This assures higher yields for Edman degradation procedures and guarantees solvents that are pure enough for protein sequencing at the picomole level. Chromatograms are available to document purity and efficacy. Purity ensures that there will be less loss of PTH amino acid derivatives during protein sequencing. Burdick & Jackson Laboratories. Circle 606.

Plotter

The Zeta 8 uses eight capped pens on a single carriage under control of a microcomputer. The device plots in color at 20 inches per second with 2g acceleration. It offers 0.025-millimeter resolution and has a character set of Helvetica-based typefaces. Plotting media include translucent paper, vellum, glossy bond, and clear acetate. Pens may be nylon tip or liquid roller types. Standard interfaces are available for direct link to data acquisition devices and analyzers. Nicolet Zeta. Circle 608.

Literature

pH Electrodes includes more than 700 models of pH, reference, combination pH, ion-selective, and oxidation reduction potential electrodes. Graphic Controls. Circle 593.

Scientific Instruments features oxygen, turbidity, conductivity, and pH meters and colorimeters and electrodes. Chemtrix. Circle 594.

Instruments for Biological and Environmental Sciences includes porometers, area meters, and instruments for radiation measurement. Li-Cor. Circle 615.

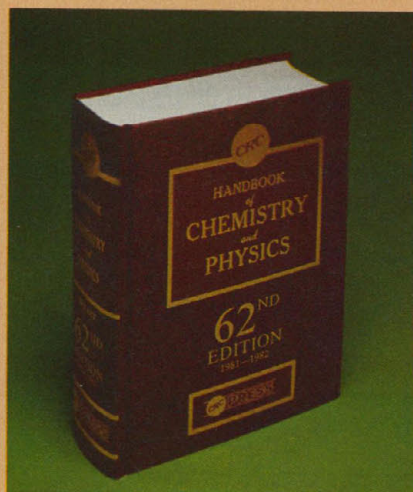
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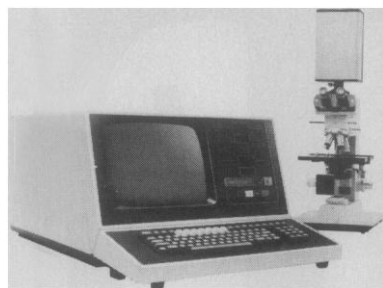
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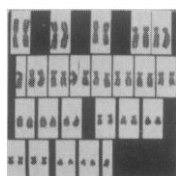
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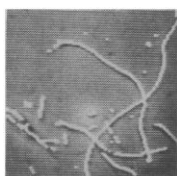


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Science Writer. M.S., environmental health sciences, Ph.D., biology; research experience; training in journalism; currently 1½ years as assistant/associate editor of biweekly national science education magazine for schools; experienced in wide range of journalism skills. Seeks position with newspaper or consumer magazine in Northeast. Box 132, SCIENCE. X

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Immunologist, M.S. Five years of experience. Desires challenging position on interesting project with researcher in industry, government, academe. Hybridoma, immunochemical, and protein separation techniques background. Box 129, SCIENCE. 5/14, 21, 28

Ph.D. 1976. Experience in steroids, tobacco alkaloids, *N*-nitrosamines chemistry, radiopharmaceuticals, antibody production, development of RIA and radiolabeling, drug and carcinogen metabolism, whole body autoradiography, organ culture. Seeking academic or industrial position. Box 131, SCIENCE. X

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POSITIONS OPEN

ASSISTANT PROFESSOR. Tenure-track position available fall 1982. To teach medical bacteriology, medical mycology, protozoology, general biology, and topically oriented graduate courses in field of expertise; advising; committee work. Ph.D. in biology required. Deadline for applications is 4 June 1982. Send letter of application, transcripts, and three letters of reference to: **Dr. Joseph Powell, Chair, Department of Biology, Sonoma State University, Rohnert Park, Calif. 94928. An Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR POSITIONS

The California Institute of Technology, Division of Geological and Planetary Sciences, is seeking candidates for academic appointments in the fields of sedimentary geology and hydrothermal geochemistry. Appointments preferred at the assistant professor level. *Affirmative Action/Equal Opportunity Employer.* Please write, enclosing résumé and bibliography, to: **Barclay Kamb, Chairman, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California 91107.**

ASSISTANT/ASSOCIATE PROFESSOR—FISHERIES, UNIVERSITY OF ALASKA, JUNEAU. The School of Fisheries and Science is recruiting for an assistant/associate professor of fisheries. Candidate should possess a Ph.D. in microbiology with an interest in diseases of fish. Desired is postdoctoral experience in teaching, research, or applied fish pathology. Duties will include teaching, research, and public service in a new, growing School of Fisheries and Science. Incumbent will be expected to teach courses in microbiology and fish diseases and to develop a research program in diseases of fish. This is a 9-month, tenure-track position with full university benefits. Position is subject to availability of funds. Closing date: 16 June 1982; may be extended. A letter of application, current résumé, transcripts, and three letters of reference should be sent to: **Head, Search Committee, School of Fisheries and Science, University of Alaska, Juneau, 11120 Glacier Highway, Juneau, Alaska 99801. Telephone: 907-789-2101. An Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITION: CLIMATOLOGY

The California Institute of Technology is seeking to create a tenure-track faculty position in climatology, defined broadly to include climate history (paleoclimatology), the physics of climate change (climate dynamics), and climate modeling. Possible approaches include geology, geochemistry, oceanography, and the atmospheric sciences. We seek a candidate who will pursue an outstanding research and teaching program aimed at the nature and causes of climatic change. We prefer to make a junior appointment, but academic rank will depend on level of scientific accomplishment. If interested, please send résumé, bibliography, and a description of research interests to: **Barclay Kamb, Chairman, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California 91125. An Equal Opportunity Employer.**

**CENTERS FOR DISEASE CONTROL
DIRECTOR, DIVISION OF
RESPIRATORY DISEASE STUDIES
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SAFETY AND HEALTH**

The Centers for Disease Control invite nominations and applications for the position of director, Division of Respiratory Disease Studies, National Institute for Occupational Safety and Health (NIOSH). The Division conducts and is the Institute focal point for clinical and epidemiologic research on occupational and respiratory disease; carries out health research into effects of alternate energy sources on occupational safety and health. In addition, the Division provides services mandated under the Federal Mine Safety and Health Act of 1977, including health research, medical surveillance, tests of respiratory equipment, and nonenforcement inspections to discover health hazards and develop standards for protecting the health of miners and workers in related industries.

Applicants should have appropriate credentials in science or engineering or a related field; demonstrated ability in research, leadership, and administration in occupational safety and health and international recognition in the field; demonstrated ability to formulate and set goals and objectives; and demonstrated ability to establish and maintain contacts with various groups and organizations.

The position is located in Morgantown, West Virginia.

The position is in the Senior Executive Service with a salary range of \$54,700 to \$58,500 per annum.

Applicants should submit a Personal Qualifications Statement, Standard Form 171 (available at all federal Job Information Centers and federal agencies), to:

Elliott S. Harris, Ph.D.
Chairman, Search Committee
National Institute for Occupational
Safety and Health
Centers for Disease Control
Atlanta, Georgia 30333

Applications must be received by 2 June 1982.

An Equal Opportunity Employer

WASTEWATER TREATMENT, Université du Québec, Institut national de la recherche scientifique (INRS)—INRS, a constituent of the Université du Québec, is a research institute which offers academic programmes at the graduate level only. Applications are invited for a tenure-track position in the area of wastewater treatment at INRS-Eau, a multidisciplinary water research centre located in Québec City. Housed in modern well-equipped facilities within the Québec Complexe scientifique, INRS-Eau is active in the fields of biology, chemistry, hydrology, meteorology, and water resources management.

The successful candidate will be expected to participate in ongoing research projects within the Centre, participate in the development of a strong research programme in wastewater treatment, and teach graduate courses; the approximate commitment is 80 percent research, 20 percent teaching. Doctorate, or the equivalent in published research, required in one of the following fields: sanitary, civil, or chemical engineering; biochemistry; bioengineering. Experience in multidisciplinary teaching and research is highly desirable, particularly in the areas of biotechnology or industrial microbiology. Appointment will be made at the rank of professor, associate professor, or assistant professor, depending on background and experience. Preference will be given to candidates with proven research and teaching capabilities. The working language within the Centre is French, but immediate fluency is not required.

Deadline: flexible. It is hoped that the appointment will take effect no later than 1 September 1982. **Refer to competition number SP 81-24.**

Send curriculum vitae and names of three references to: **Directeur du Personnel, Institut National de la Recherche Scientifique, 2700 rue Einstein, C.P. 7500, Sainte-Foy, Québec, Canada G1V 4C7; telephone: 418-657-2582.**

FLOW CYTOMETRY

Applications are invited for three newly established positions at Oklahoma Teaching Hospitals Flow Cytometry Laboratory. This laboratory has Ortho's System 50H with a 2150 computer and Ortho's Spectrum III, as well as a tissue culture laboratory and support facilities.

Flow Cytometry Supervisor

Position requires a person with at least 48 months of experience in flow cytometry who is capable of performing as well as teaching techniques and procedures used in Flow Cytometry Laboratory, plus performing supervisory duties. Computer programming experience not required but highly desirable. Master's level or higher is desired. Salary very competitive.

Flow Cytometrist

Position requires a person with 12 months of experience in flow cytometry and at least 12 months of laboratory experience in one or more of the following: tissue culture, immunopathology, serology, histology special stains, or special hematology. B.S. degree or medical technologist certification required.

Flow Cytometry Technician

Position requires a person with experience and training similar to those for the flow cytometrist above. Experience in flow cytometry not required but highly desirable. The laboratory would be willing to train a person in flow cytometry techniques if he/she were highly qualified in one of the support areas.

Applicants should send their curriculum vitae, names and addresses of three references, and a description of their experience and interests to:

L. E. DeBault, Ph.D.
SOTH Clinical Laboratories
P.O. Box 26901
Oklahoma City, Okla. 73126
Attention: Diana Alexander
Room EB400, OMH

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Microbiologist

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**Office of Grants Inquiries
Division of Research Grants
National Institutes of Health
Westwood Building, Room 499
5333 Westbard Avenue
Bethesda, Md. 20205
Telephone: 301-496-7441**

REQUEST FOR NOMINATIONS

The NIH invites nominations of individuals from for-profit organizations for membership on its scientific review groups. For further information, please contact:

**NIH Consultant File Project
Suite 212
6400 Goldsboro Road
Bethesda, Md. 20817
Telephone: 301-229-3060**

POSITIONS OPEN

VISITING ASSISTANT PROFESSOR

One-year appointment available at the instructor or assistant professor level to teach a two-quarter sequence in histology and participate in an introductory biology course during the 1982-1983 academic year while faculty member is on leave. Position available 1 September 1982. Send curriculum vitae and the names of three references to: **Dr. Ernest R. Stout, Head, Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.** Application deadline: 4 June 1982.

Virginia Tech is an Affirmative Action/Equal Opportunity Employer.

Tenure-track **ASSISTANT OR ASSOCIATE PROFESSOR** to teach 6 to 9 contact hours per semester at the introductory level and develop an aquatic research program. Ph.D. required with significant experience and a commitment to teaching at the introductory level. Send statement of teaching and research experience and interest to: **Tony Echelle, Department of Zoology, Oklahoma State University, Stillwater, Okla. 74078,** by 1 June 1982. *An Affirmative Action Employer.*

ASSISTANT PROFESSOR OF BIOCHEMISTRY, Louisiana State University (LSU) Medical Center, New Orleans, Louisiana.

The Department of Biochemistry, Louisiana State University Medical Center, invites applications for 12-month tenure-track faculty positions. In addition to the School of Graduate Studies, the Medical Center includes the Dental, Medical, and Nursing Schools and the School of Allied Health Professions. The LSU Medical Center (New Orleans) is in the midst of a multimillion-dollar building program. The department has recently undergone extensive expansion. Applicants should have postdoctoral experience and exhibit potential for developing a strong, independent research program. The research area is open. Interest and excellence in the teaching of biochemistry are also expected. Applicants should send curriculum vitae, bibliography, a short summary (three pages) of research goals, and the names of three references to the following: **Robert Roskoski, Jr., Head, Department of Biochemistry, LSU Medical Center, 1901 Perdido Street, New Orleans, Louisiana 70112.**

The Louisiana State University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR OF DERMATOLOGY, FULL-TIME. Candidates must be Board-certified in dermatology; have prior experience in immunology, photobiology, particularly monoclonal antibodies; and have demonstrated competence in teaching, research, and patient care. *An Equal Opportunity/Affirmative Action Employer.* Résumés should be submitted to: **Department of Dermatology, College of Physicians and Surgeons, 630 West 168 Street, New York, N.Y. 10032.**

ASSISTANT PROFESSOR OF FOOD CHEMISTRY. Tenure-track position starting fall 1982. Seeking Ph.D. in food science, biochemistry, physical chemistry, or related areas with primary interest in proteins. Expected to teach food chemistry courses and an advanced course in food proteins and dispersions and to conduct research in protein chemistry. Send application and names of three references by 1 July 1982 to: **Dr. T. Nishida, Chairman, Search Committee, Burnside Research Laboratory, Department of Food Science, University of Illinois, 1208 West Pennsylvania Avenue, Urbana, Illinois 61801.** *An Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF PHARMACOLOGY. Applications are invited by the Department of Pharmacology, University of Tennessee, for a tenure-track position available 1 July 1982. The applicant should possess the Ph.D. in pharmacology, biochemistry, or a related discipline, or an M.D.; should have approximately 3 years of postdoctoral experience; should have demonstrated excellence in research; and should have an active interest in teaching. The candidate will be expected to establish and support an independent research program. Preference will be given to candidates experienced in biochemical aspects of drug metabolism, neuropharmacology, immunopharmacology, or cancer chemotherapy. Please submit complete curriculum vitae, three letters of reference, and a brief statement of future research plans, no later than 1 July 1982, to: **Dr. Murray Heimberg, University of Tennessee Center for the Health Sciences, Memphis, Tennessee 38163.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR OF BIOCHEMISTRY

A tenure-track faculty position will become available in the Biochemistry Department, College of Medicine, at the University of Nebraska Medical Center in July 1982. Candidates for the position must have postdoctoral experience, previous teaching experience, an established record of research productivity, and funded or pending research grant applications. Only candidates with expertise and experience in the area of DNA/RNA replication and control of protein biosynthesis, DNA remodeling, or control of gene expression need apply. Duties will involve teaching basic and advanced courses in the areas cited above and conducting an independent research program. Salary and academic rank are dependent upon background and experience. Please submit curriculum vitae, a synopsis of a proposed research program, and three letters of recommendation by 31 May 1982. All materials should be sent to: **Dr. William R. Ruegamer, Chairman, Department of Biochemistry, University of Nebraska College of Medicine, Omaha, Nebraska 68105.** *The University of Nebraska is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR IN PHYSICAL BIOCHEMISTRY. A nontenure-track position is expected to become available after 1 September 1982, with an appointment of up to 5 years. Salary: approximately \$20,000. Candidate must have demonstrated ability to perform high-quality research and skill in teaching in the physical sciences. Responsibilities will include teaching one semester of an undergraduate biophysical chemistry course and performing research in conjunction with group studying chromatin structure/function and DNA damage and repair in mammalian cells. Send curriculum vitae, statement of research interests, and three letters of recommendation to: **Dr. Michael J. Smerdon, Biochemistry/Biophysics Program, Washington State University, Pullman, Wash. 99164-4630.** *Equal Opportunity/Affirmative Action Employer.*

DEPARTMENT OF PSYCHOLOGY, Erindale Campus, University of Toronto, seeks tenure-track **ASSISTANT PROFESSOR** in any area of cognitive psychology. Salary range: \$23,000 to \$32,000. Ph.D. and research accomplishment required. Position starts 1 July 1982 or as soon thereafter as mutually agreeable. Send curriculum vitae and three letters of reference to: **Fergus Craik, Erindale College, University of Toronto, Mississauga, Ontario, Canada L5L 1C6,** by 30 June 1982. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

DEPARTMENT OF UROLOGY, College of Physicians and Surgeons of Columbia University, has an opening at the **ASSISTANT/ASSOCIATE PROFESSOR** level for individual with strong research accomplishments in studies of endocrine regulation of gene expression. Individuals sought would work in the New York Male Reproductive Center and should be strong candidates for joint appointment in the basic science department pertinent to their discipline. Interested persons should send résumé, summary of research interests/plans, and names of four references to: **Carl A. Olsson, M.D., Chairman, Department of Urology, College of Physicians and Surgeons of Columbia University, 630 West 168 Street, New York, N.Y. 10032.** *Columbia University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR—VERTEBRATE BEHAVIORAL ECOLOGY Teaching assignment includes ornithology and animal behavior at undergraduate and graduate levels. Research activities should emphasize northern environments. Appointment: September 1982 or later. Send résumé and list of three references by 31 May 1982 to: **R. D. Guthrie, Division of Life Sciences, University of Alaska, Fairbanks, Alaska 99701.** *Equal Opportunity/Affirmative Action Employer.*

BIOENGINEER—University of California, San Francisco (UCSF), plans to recruit a bioengineer in its Division of Cardiology to oversee a computer facility, carry out independent research, teach biostatistics and statistics, and to serve as a liaison with a combined UCSF/Berkeley bioengineering graduate program. The recruitment will be at the level of associate professor. Inquiries should be directed to: **Dr. William W. Parmley, University of California, Division of Cardiology, Room M-1186, San Francisco, Calif. 94143.** *UCSF is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

POSITIONS OPEN

ASSOCIATE RESEARCH SCIENTIST—Cerebrovascular Physiology Laboratory. Doctorate or equivalent. Desire experience in cerebrovascular pathophysiology, pharmacology of cerebral circulation, preparation of papers, grant applications, reports and presentations, knowledge for measuring cerebral blood flow metabolism. Send curriculum vitae to: **Administrator, Department of Surgery, UNIVERSITY OF IOWA HOSPITAL AND CLINICS, Iowa City, Iowa 52242.** *University of Iowa is an Equal Opportunity/Affirmative Action Employer.*

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**John Ryan
AMF Specialty Materials Group
400 Research Parkway
Meriden, Conn. 06450
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CHAIRPERSON DEPARTMENT OF PHARMACOLOGY

Applications are being accepted for chairperson, Department of Pharmacology, University of Miami School of Medicine. Potential candidates should have an outstanding research record, a commitment to teaching medical and graduate students, and ability to provide aggressive leadership for continued scientific excellence and growth of the department.

Submit curriculum vitae by 1 August 1982 to:

**Dr. Karl L. Magleby
Department of Physiology and Biophysics
University of Miami School of Medicine
Miami, Florida 33101**

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

Applications are invited for the position of **DEAN** of the West Virginia University School of Medicine. The position involves the duties of the chief executive and academic officer of the School.

Candidates must have academic administrative experience, preferably in a medical school. Candidates should have a career showing scientific and scholarly activity, and an M.D. degree is preferable.

Letter of application and curriculum vitae, including the names and addresses of at least three professional references, should be forwarded to:

**Alvin L. Watne, M.D.
Chairman, Dean's Search Committee
West Virginia University Medical Center
Morgantown, W. Va. 26506**

The deadline for receipt of applications is 1 July 1982. *West Virginia University is an Equal Opportunity/Affirmative Action Employer.*

DEAN, SCHOOL OF PUBLIC HEALTH AND COMMUNITY MEDICINE UNIVERSITY OF WASHINGTON

Applications and nominations are invited for the position of dean, School of Public Health and Community Medicine. Desired starting date: 1 September 1982, or as soon as possible thereafter. Desired qualifications include an earned doctorate, an established reputation in education related to public health, a strong record of research accomplishment, and demonstrated competence in organizational leadership and management. Salary open.

Deadline for nominations and applications: 31 May 1982. Nominations or applications with résumés should be sent to:

**Committee on the Deanship of the School of Public Health and Community Medicine
Office of the President
301 Administration Building, AH-30
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Seattle, Washington 98195**

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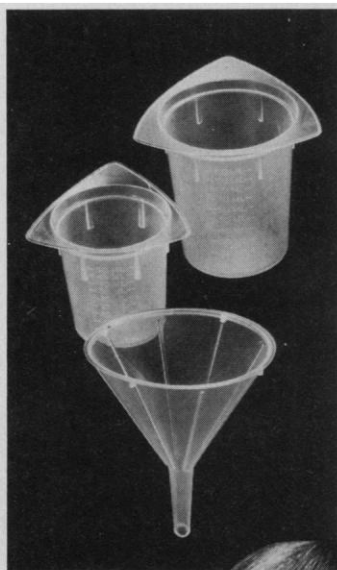
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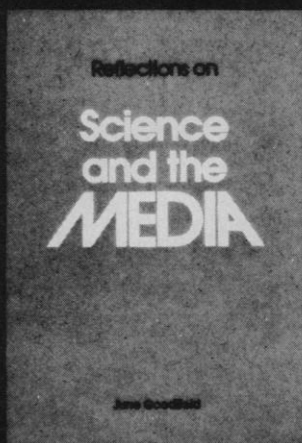


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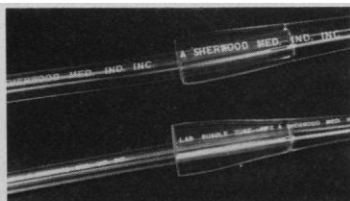
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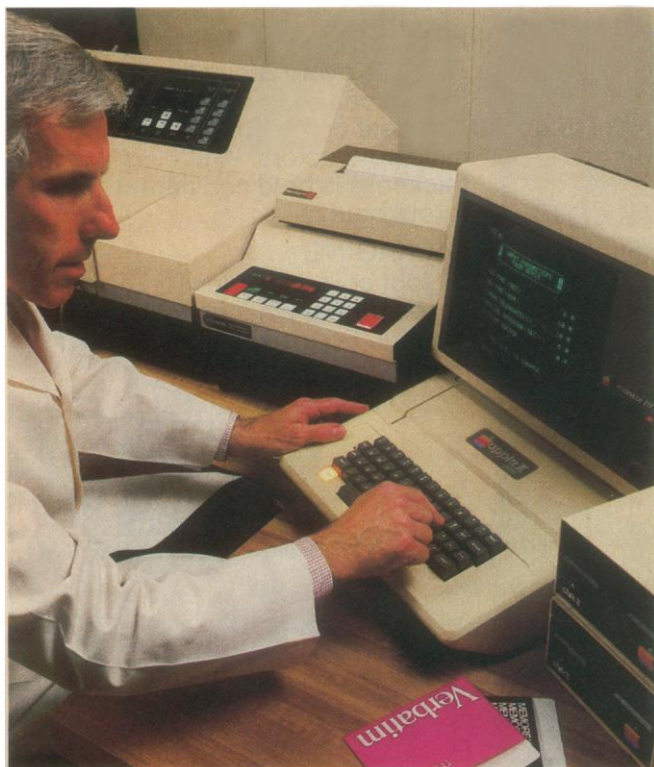
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Molecular Biologist San Francisco Bay Area

Stauffer Chemical Company seeks applications for the position of Molecular Biologist in its expanding biological sciences research group.

Applicants should have a PhD, preferably with postdoctoral experience, and a strong background in recombinant DNA technology. Expertise in any of the following areas is also desired: immunology, nucleic acid chemistry, protein purification, genetics and gene cloning.

The successful applicant will work in a multi-disciplinary environment as part of a research team, and will at the same time be responsible for developing and directing new research programs.

All interested applicants should send a confidential resume, statement of research interest and experience, and the names of three references to: **D. A. Walker, Personnel Manager, Stauffer Chemical Company, 1200 S. 47th Street, Richmond, CA. 94804.** Stauffer is an affirmative action, equal opportunity employer.



CHEMIST/BIOCHEMIST NATIONAL INSTITUTES OF HEALTH

The National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, Public Health Service, Department of Health and Human Services, invites applications for the position of Chemist/Biochemist in the Laboratory of Neuro-otolaryngology. The Laboratory is located within the Intramural Laboratory Research Program, and utilizes laboratory facilities to conduct basic research in the Communicative Neurosciences. The successful candidate will be expected to participate in planning and conducting original, independent and collaborative research studying basic biochemical mechanisms of auditory function. Mandatory requirements include a Ph.D. or equivalent in biochemistry or closely related field with substantial research experience in auditory biochemistry, reflected by a quality record of publications and achievements. Consistent with the interest and objectives of the Laboratory of Neuro-otolaryngology, candidates with an interest and background in the molecular basis of genetic deafness and central and peripheral neurotransmitters will be preferred. This position will be filled through a career Civil Service appointment, subject to competitive procedures proscribed by the Office of Personnel Management. The position will be filled at the General Schedule 13/14 level, with a basic salary range of \$33,586 to \$51,596 per annum. Applications should include Personal Qualifications Statement (SF-171), Curriculum Vitae, Bibliography and the names of three references. Applications should be forwarded by June 14, 1982, to:

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The Air Force Office of Scientific Research, located in Washington DC, invites applications from individuals with background in university and industrial biomedical and behavioral sciences research. An earned PhD is desired. The Director is responsible for Air Force research programs under contract to universities and industry and in Air Force Laboratories. A strong background and publication record in physiology, biochemistry, molecular biology, neurosciences, bioengineering, visual sciences or human factors is essential. Experience should include technical program supervision, planning and budgeting. The position is Senior Executive Service, General, with a salary range presently starting at \$54,755 pa. No prior Government service is required. Send a resume including a list of publications or Office of Personnel Management Standard Form 171, "Personal Qualifications Statement," to:

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(#150-82)

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Applications must be received by 31 May 1982.

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POSITIONS OPEN

The Medical University of South Carolina is conducting a search for a **CHAIRPERSON** for the Department of Psychiatry and Behavioral Sciences. The department has 43 full-time faculty and is responsible for approximately 80 inpatient beds in the University Hospital and the adjacent Charleston Veterans Administration Medical Center. We seek a highly qualified clinician with experience in academic administration, as well as a strong background in investigation and teaching at all levels. Applicants should forward their qualifications, curriculum vitae, and bibliography to: **Dr. Marion C. Anderson, 171 Ashley Avenue, Charleston, South Carolina 29425.** The Medical University of South Carolina is an Affirmative Action/Equal Opportunity Employer.

DIRECTOR, CLINICAL PHARMACOLOGY

The University of Alabama in Birmingham is seeking qualified candidates for the directorship of a newly created program in clinical pharmacology. Substantial space and state support are available. Appointments in an appropriate clinical department and pharmacology are available. Applicants should apply to: **John R. Durant, M.D., Chairman, Search Committee, Clinical Pharmacology, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294.** An Equal Opportunity/Affirmative Action Employer.

DIRECTOR OF CLINICAL IMMUNOLOGY LABORATORY

The Department of Pathology of the Abraham Lincoln School of Medicine has a faculty position opening, available immediately, for director of Clinical Immunology Laboratories. The selected candidate will have responsibilities for service, research, and instruction of medical students and residents. Specialty Boards in clinical pathology and anatomical pathology desirable. The candidate should have experience in immunology research and management of a laboratory section. Faculty appointment will be commensurate with academic experience. Send curriculum vitae to: **Egil Foslien, M.D., Director, University of Illinois Hospital Laboratories, P.O. Box 6998, Chicago, Illinois 60680.**

Equal Opportunity/Affirmative Action Employer

DIRECTOR

Carnegie Museum of Natural History, Carnegie Institute, Pittsburgh, Pa., is seeking qualified applicants for the position of director.

Founded in 1895, Carnegie Museum of Natural History is part of the multifaceted cultural complex of Carnegie Institute. Primarily privately funded, the museum is an institution of national and international importance in collection, preservation, study, and display of items of cultural history. A curatorial staff of over 35 scientists conducts research programs in nine scientific sections (Amphibians and Reptiles, Birds, Botany, Entomology, Invertebrates, Invertebrate and Vertebrate Fossils, Mammals, Man) and at a 1900-acre field station.

The museum is committed to strong public programs through exhibitions and diverse educational and community outreach programs.

Applicants must show evidence of strong scholarly achievement and commitment to scientific research and a willingness to participate in fund-raising efforts, as well as broad administrative experience.

Send letters and résumés by 15 August 1982 to:

**James M. Walton, President
Carnegie Institute
4400 Forbes Avenue
Pittsburgh, Pa. 15213**

University of Michigan Medical School, **DEPARTMENT OF RADIOLOGY**, has on occasion open **FACULTY POSITIONS** within the department and at its affiliated hospitals. Physicians filling these positions will take part in the programs of patient care, teaching, and research of the Department of Radiology. They will supervise the activities of house officers and aid in the teaching of house officers and medical students. Qualified applicants must be American Board of Radiology-certified or Board-eligible. Previous training or work experience in an academic institution as well as demonstration of previous academic research and teaching experience are desirable. Academic rank will depend on qualifications and experience.

Interested applicants should contact: **William Martel, M.D., Acting Chairman, Department of Radiology, University of Michigan Medical School, Ann Arbor, Michigan 48109.** A nondiscriminatory, Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITION

Assistant professor of anatomy. Tenure track. Medical histologist. Experience in the teaching of modern medical histology is required and ultrastructural research interest is highly recommended. Applicants should send statement of interest, curriculum vitae, and three letters of recommendation to: **Dr. Alvin S. Levine, Assistant Dean and Director, Terre Haute Center for Medical Education, Indiana University School of Medicine, 135 Holmstedt Hall, Terre Haute, Ind. 47809.** Indiana University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS—Medical school faculty positions available in epidemiology, parasitology, and medical genetics. Applicants should have M.D. and/or Ph.D. degree and postdoctoral training to eligibility level for Board-certification. Send curriculum vitae and names of three references no later than 15 June 1982 to: **John F. Jackson, M.D., Department of Preventive Medicine, University of Mississippi Medical Center, 2500 North State Street, Jackson, Miss. 39216.** An Equal Opportunity Employer, M/F/V/H.

FACULTY POSITION IN MEMBRANE STRUCTURE

A tenure-track position is available in the area of high-resolution electron microscopy of macromolecular structures. The successful candidate is expected to develop an independent research program on structural studies of macromolecular arrays in natural or synthetic membranes. Current departmental interests include a strong orientation toward studies of membranes and structural studies of proteins, nucleic acids, and viruses by x-ray diffraction methods. Candidates should have at least 2 years of postdoctoral experience in image-processing procedures applied to electron microscopy and/or electron diffraction studies of two- or three-dimensional macromolecular arrays. Please send résumé, description of present and future research plans, copies of recent or most important research papers, and three letters of reference by 15 July 1982 to: **W. A. Cramer, Search Committee Convener, Department of Biological Sciences, Purdue University, West Lafayette, Ind. 47907.**

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THE HEBREW UNIVERSITY OF JERUSALEM

FACULTY POSITION IN BIOCHEMISTRY

The Department of Biochemistry at the **HEBREW UNIVERSITY HADASSAH MEDICAL SCHOOL** invites applications for a tenure-track faculty position. Ph.D. or M.D. degree and postdoctoral training required. Successful candidates are expected to develop independent research in biochemistry or biophysics and teach biochemistry to medical and graduate students. Send curriculum vitae, list of publications, research plans, and names of three references until 30 October 1982 to: **Search Committee, Biochemistry, P.O. Box 1172, Jerusalem, Israel.**

NEW FACULTY POSITION—GENETIC ENGINEERING. The College of Agriculture, The University of Arizona, seeks candidates for a tenure-track position, rank open, departmental affiliation to be arranged. Research interests in recombinant DNA technology as applied to agricultural problems. Experienced candidates with leadership potential preferred, as expansion in this area is anticipated, although all applicants will be considered. Please submit curriculum vitae and letters of recommendation to: **Dr. L. W. Dewhirst, Director, Arizona Agricultural Experiment Station, College of Agriculture, The University of Arizona, Tucson, Ariz. 85721.** Telephone: 602-626-2711. Closing date: 30 June 1982. The University of Arizona is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION—GENETICS AND MOLECULAR BIOLOGY, assistant professor level. Biology department in a small (1700 students), private, coed, liberal arts college seeks a faculty member whose teaching responsibilities will include genetics, biochemistry, microbiology, general biology courses for science majors, and science courses for non-science majors. The appointment will include advising premedical and other preprofessional students. Teaching load: 12 hours (3 premed advising; 9 teaching). Primary interest and commitment must be to quality undergraduate instruction. Ph.D. required; teaching experience preferred. Begin fall 1982. Application deadline: 31 May 1982. Send curriculum vitae, transcripts, and three letters of recommendation to: **Dr. Denton B. May, Academic Dean, King's College, Wilkes-Barre, Pa. 18711.** An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITION—ASSISTANT PROFESSORSHIP

The primary qualification is the potential and desire to develop a strong research program in chemical carcinogenesis. Specific areas of interest include new and innovative approaches to tumor promoter and cocarcinogen identification and mode of action. A Ph.D. in chemical, biological, or pharmaceutical sciences and postdoctoral experience are essential. The applicant will be able to participate in the ongoing carcinogenesis research program in the department and become a member of the Purdue University Cancer Center. The successful applicant will be expected to participate in the teaching of departmental courses at the undergraduate and graduate levels. This is a tenure-track position with the potential for participation in the Purdue University Biochemistry Program. Candidates should provide curriculum vitae, three letters of recommendation, and a description of research interests by 1 August 1982 to: **Dr. W. M. Baird, Department of Medicinal Chemistry and Pharmacognosy, School of Pharmacy, Purdue University, West Lafayette, Ind. 47907.** Purdue University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN CIVIL ENGINEERING

A tenure-track appointment in the Environmental Engineering and Science Graduate Program of the Department of Civil Engineering at the University of Washington is to be made either in air pollution engineering or in hydraulic and coastal engineering. The requirements for the air pollution engineering option are as follows. Responsibilities will include undergraduate and graduate teaching and research supervision. The individual is expected to develop and sustain an independent, sponsored research program. An earned doctorate in civil, environmental, or chemical engineering or related fields and a scholarly record in the area are required. The position becomes available 16 September 1982. Applicants should send a résumé, a research prospectus, and names of at least four references to: **Professor Robert J. Charlson, Department of Civil Engineering, FC-05, University of Washington, Seattle, Wash. 98195,** by 15 July 1982.

MICROBIAL MOLECULAR GENETICIST

A tenure-track assistant professorship available fall semester 1982 for teaching undergraduate- and graduate-level genetics courses. The Ph.D. is required with postdoctoral experience favored. Position requires an ongoing research program in some aspect of microbial genetics. Send applications, curriculum vitae, reprints, statement of research goals, three letters of recommendation, and transcripts to: **Dr. E. A. Grula, Department of Microbiology, LSE-318, Oklahoma State University, Stillwater, Oklahoma 74078.** Deadline for receipt of materials is 15 June 1982. Oklahoma State University is an Equal Opportunity/Affirmative Action Employer.

MICROBIOLOGIST/BIOCHEMIST. We are seeking qualified candidates to fill a GS-11/12 (\$23,500 to \$28,200) research staff scientist position in our Fermentation Laboratory, Northern Regional Research Center, U.S. Department of Agriculture (USDA), Peoria, Illinois. Our research program is targeted toward increasing the fermentative capabilities of microorganisms. Current research is centered on enzymatic pathways that may allow the generation of sugar/chemical products from previously unused agricultural resources. The appointee must be capable of establishing a vigorous, independent research program utilizing modern molecular biological and recombinant DNA methodologies to investigate eukaryotic gene expression and regulation. The incumbent will be involved in devising strategies and conducting experiments leading to genetic manipulation/transformation of selected genes into eukaryotic hosts for maximal expression. Preference will be given to candidates with experience in cDNA cloning. Salary based upon qualifications and experience. Must be a U.S. citizen. Send curriculum vitae and references to: **Dr. R. W. Detroy, Northern Regional Research Center(s), 1815 North University Street, Peoria, Ill. 61604.** Telephone: 309-685-4011. An Equal Opportunity Employer.

NEUROPATHOLOGIST. A faculty position is available in the Department of Pathology, University of California, San Francisco, for a Board-certified or Board-eligible neuropathologist with interest in investigative work. Direct inquiries to: **Edward A. Smuckler, M.D., Ph.D., Department of Pathology, University of California, San Francisco, Calif. 94143.** An Equal Opportunity/Affirmative Action Employer.

DEPARTMENT OF PHYSICS

Chair Of Experimental Physics

Applications are invited from suitably qualified persons, regardless of sex, race, color or national origin, for appointment to above Chair.

The duties of the successful applicants will include the development of teaching and research in Experimental Physics. The department's main research interests have been in nuclear and solid state physics, but suitably qualified applicants with other interests in currently developing fields of Physics are invited to apply.

In this department the Headship is filled on a rotating basis. The incumbent of the Chair of Experimental Physics would be expected to hold the Headship under this arrangement from time to time.

The salary range is \$21,942-\$28,727 per annum. The initial salary will be determined according to the qualifications and experience of the successful applicant. An annual service bonus in accordance with existing Government regulations is also payable and will take the form of 93% of one month's salary. Benefits include pension and medical aid facilities and a housing subsidy, if the applicant is eligible.

Intending applicants should obtain the information sheet relating to this Chair from the Director: Personnel Office, University of the Witwatersrand, Jan Smuts Avenue, Johannesburg, 2001, South Africa with whom applications should be lodged by June 30, 1982.



UNIVERSITY OF THE
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ANNOUNCEMENT

THE HEALTH EFFECTS INSTITUTE announces the availability of seven requests for proposals from investigators.

The Health Effects Institute is a non-profit research support organization. It was established cooperatively by the United States Environmental Protection Agency and the automotive industry but is governed by an independent 3-man Board of Directors: Archibald Cox, Carl M. Loeb Professor, Harvard Law School; William Baker, Chairman Emeritus, Bell Laboratories, and Donald Kennedy, President, Stanford University. The HEI funds research directed to understanding and evaluating the health effects of mobile source emissions. The Research Program was developed by HEI's Health Research Committee whose chairman is Walter Rosenblith, Institute Professor and recently Provost of Massachusetts Institute of Technology.

The seven RFP's being issued by the HEI are focused on the following subjects:

- 1) metabolism and biological effects of nitropyrene and related compounds;
- 2) cellular and biochemical markers related to non-neoplastic chronic lung disease;
- 3) models of populations susceptible to airborne mobile source emissions;
- 4) multifactor interactions in pulmonary carcinogenesis; rodent inhalation models;
- 5) HEI investigatorships (available to post-doctoral level investigators working in areas related to health effects of automotive emissions);
- 6) special access to automotive emissions samples and/or exposure facilities (available to facilities or researchers working in the vehicle emissions/health effects area);
- 7) dose of airborne pollutants to target tissues.

The Health Effects Institute will make available a packet consisting of these seven (7) RFP's, as well as descriptive material about the Institute, to all interested investigators.

All requests and inquiries should be made to or through:

Dr. C. W. Powers
The Health Effects Institute
215 First Street
Cambridge, Massachusetts 02142
(617) 491-2926

PHARMACEUTICAL RESEARCH

Expansion of Pfizer's Central Research Division has created a number of openings for Ph.D. scientists to pursue research aimed at the discovery and development of important new therapeutic agents for metabolic, gastrointestinal and CNS disorders.

The appointees will be expected to initiate innovative research programs from within established multi-disciplinary teams of scientists already engaged in these tasks. Exploitation of novel biological mechanisms and the publication of important findings will be encouraged.

Diabetes Research

Two openings require one individual with a biochemical background and experience in peptide receptor research, and another with cell biology training and an interest in seeking drugs for diabetic complications.

Neuropeptide Research

Position involves looking for drugs which manipulate neuropeptides and requires experience in techniques used to study processing, release, degradation or actions of neuropeptides.

Analgetic Research

Will carry out *in vivo* research into nociception and analgesia. Applicants should hold a Ph.D. in pharmacology, physiology or neurobiology, be skilled in appropriate surgical, behavioral and neurophysiological techniques and be generally knowledgeable on the subject of endogenous peptides altering nociception.

These positions offer excellent opportunity for professional recognition and career growth. In addition, we offer a competitive compensation and benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and brief description of research interests to **Dr. J. K. Larson, Pfizer Central Research, Eastern Point Road, Groton, CT 06340**



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POSITIONS OPEN

THE HEBREW UNIVERSITY OF JERUSALEM DEPARTMENT OF GENETICS

Invites applications for a vacant faculty position. The department consists of 12 faculty members who are engaged in research and teaching on the undergraduate levels, in a wide range of subjects, from molecular biology and cytogenetics to population genetics, but preference may be given to plant molecular biology and/or to applied genetics (with molecular emphasis). Level of appointment will be according to qualifications, on the regular academic scale (lecturer, senior lecturer, associate professor, professor). Candidates should write to: **Dr. G. Simchen, Department of Genetics, The Hebrew University, Jerusalem 91904, Israel.** Enclose detailed curriculum vitae, list of publications, and names of three references, before 1 June 1982.

HEAD OF BIOCHEMISTRY. The University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, invites applications for the head of the Department of Biochemistry. An individual with a proven record of excellence in biochemical research is being sought to provide leadership in the development of research programs within the department. New space and additional state-supported positions will be available to the head. Please send curriculum vitae by 31 May 1982 to: **Dr. William Plunkett, Chairman, Biochemistry Search Committee, Department of Developmental Therapeutics, The University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, Texas 77030.** *Affirmative Action/Equal Opportunity Employer.*

IMMUNOLOGIST/IMMUNOCHEMIST

To apply immunological methods in an interdisciplinary program on the pharmacology of drugs of abuse. Partly supported by postdoctoral funds. Can develop into a tenure-track position. Send curriculum vitae and three letters of recommendation to: **Box LTS, Department of Pharmacology, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029.** *An Equal Opportunity Employer.*

INSECT ANTIHORMONE RESEARCH

Two full-time postdoctoral research positions are available immediately to study: (i) the action of insect juvenile hormone antagonists on isolated insect corpora allata in organ culture and (ii) the biotransformation and fate of hormone antagonists in living insects and various in vitro preparations. Training in insect physiology or biochemistry and experience in either tissue and organ culture techniques or xenobiotic metabolism techniques are desirable. Send résumé, relevant publications, and names of three references to: **W. S. Bowers, Department of Entomology, New York State Agricultural Experiment Station, Geneva, New York 14456.**

NEUROPHYSIOLOGY RESEARCH POSITION

A research appointment is available for participation in studies of the control of eye movements in animals, including primates. Animal models of clinical eye movement disorders will be developed. Completion of postdoctoral training in neurophysiology of eye movements and experience in animal training, eye movement recording and analysis, microelectrode recording, and histochemical/tracer techniques are desirable. Please submit curriculum vitae and inquiries to:

**Robert D. Yee, M.D.
Jules Stein Eye Institute
Department of Ophthalmology
University of California, Los Angeles
School of Medicine
Los Angeles, California 90024**

Equal Opportunity/Affirmative Action Employer

PHARMACOLOGISTS—The University of Nevada School of Medicine has two tenure-track positions open at the assistant/associate professor level (M.D. or Ph.D.). Must have a minimum of 2 years of postdoctoral training and demonstrated research experience in autonomic, cardiovascular, or neuropharmacology. Will be expected to develop an independent, funded research program. Interested persons should send curriculum vitae to: **Dr. David P. Westfall, Chairman-designee, University of Nevada, School of Medicine, Reno, Nevada 89557.** The positions will remain open until satisfactory candidates are found. *The University of Nevada is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

INSECT PHYSIOLOGY POSTDOCTORAL position is available in hormone regulation of reproduction in higher Diptera. Mating, pheromone production, and vitellogenin synthesis will be studied. Applicants should have a Ph.D. in insect physiology or related discipline. Available immediately. Two-year appointment funded by an NSF grant. Send curriculum vitae, description of research experience and interests, and three references to:

**Dr. T. S. Adams
USDA-SEA, MRRL
University Station
Fargo, N.D. 58105**

Equal Opportunity/Affirmative Action Employer

For 1 July 1982: Board-certified or -eligible **PHYSIATRIST** with 2 to 3 years of experience with the severely disabled. Level from instructor to assistant professor. Reply to: **Box 125, SCIENCE. A nondiscriminatory, Affirmative Action Employer. Code 30.**

PHYSICS/MATHEMATICS. Faculty position in liberal arts college related to the American Baptist churches. Duties include teaching physics in pre-medical program and teaching and working with mathematics majors. The applicant would also teach one section in a general education program. Ph.D. is preferred. Send résumé and credentials or request a complete position description from: **Keith Shumway, Academic Vice President, Ottawa University, Ottawa, Kansas 66067.** Salary and rank commensurate with background. *An Equal Opportunity/Affirmative Action Employer.*

The Laboratory for Plasma and Fusion Energy Studies of the University of Maryland needs a **PHYSICIST** with a background in parametric instabilities applied to laser fusion, RF heating of Tokamaks, and RF end-stoppering of mirrors. The candidate must have at least 3 years of postdoctoral experience in dynamical systems including symplectic theory and strange attractors. Require familiarity with VEC-TOR computers; \$26,500. Send curriculum vitae to: **Dr. H. R. Griem, Acting Director, Laboratory for Plasma and Fusion Energy Studies, University of Maryland, College Park, Maryland 20742.** *The University of Maryland is an Equal Opportunity/Affirmative Action Employer.*

DEPARTMENT OF PHARMACOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

POSTDOCTORAL POSITION available immediately for research on cellular mechanisms of reinforcement. Background in single-unit recording and neuropharmacology required. Experience with computers and in vitro preparations desirable. Salary is in accordance with current NIH stipends and is commensurate with experience. Second-year funding is probable.

Send curriculum vitae and names of three references before 1 June 1982 to: **Dr. Larry Stein, Chairman, Department of Pharmacology, University of California, Irvine, Calif. 92717.**

POSTDOCTORAL POSITION RICE UNIVERSITY

The Department of Biochemistry announces the availability, effective 1 September, of a postdoctoral position in the area of metalloprotein structure and function. Prior experience in mitochondrial research and/or spectroscopic techniques would be an advantage. Interested individuals should send a complete résumé, together with the names of three individuals who are willing to provide references for the applicant. All information should be sent to: **G. Palmer, Biochemistry Department, Rice University, P.O. Box 1892, Houston, Texas 77001.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE (NEUROPSYCHOLOGY). We are looking for a psychologist with a background in psycholinguistics, cognitive psychology, and/or neuropsychology to assume a major role in a research project on the language deficits associated with left hemisphere brain damage. This is a 3-year position available immediately. Please send curriculum vitae, including the names of three references, to: **Dr. Eleanor Saffran or Dr. David Caplan, Center for Higher Brain Functions, Department of Neurology, Temple University School of Medicine, 3401 North Broad Street, Philadelphia, Pa. 19140.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

PLANT PHYSIOLOGIST/PLANT BIOCHEMIST. Career Federal Service. Independent research on biochemical and physiological factors related to growth and yield of plants under stress due to insects and environment. Position at North Grain Insects Research Laboratory, South Dakota State University campus, Brookings, S.D. GS-11/12/13. Salary based on qualifications and experience. For applications: **J. Brooks, USDA-ARS-B32, 2000 West Pioneer Parkway, Peoria, Ill. 61615.** Telephone: 309-671-7319. *An Equal Opportunity Employer. Candidates must be U.S. citizens.*

POSTDOCTORAL POSITIONS for recent Ph.D. or M.D.; U.S. citizen or permanent resident; available immediately and starting 1 July 1982; supported by NIH Training Grant (National Research Service Awards), in the area of basic cancer chemotherapy, clinical cancer chemotherapy, cancer biology, or cancer drug development (organic synthesis). Application deadline for immediate position: 1 month. Send résumé indicating area(s) of interest and two or more letters of reference to: **Dr. Sungman Cha, Brown University, Box G, Providence, R.I. 02912.** Telephone: 401-863-3114. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately for research on population renewal and phenotypic diversity of mononuclear phagocytes. Emphasis is placed on immunologically related activities and resistance to infection. Salary: \$16,000, plus fringes. Send résumé and names of three references to: **Dr. Alvin Volkman, Department of Pathology and Laboratory Medicine, School of Medicine, East Carolina University, Greenville, N.C. 27834.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION to study the equilibrium and kinetics of protein-DNA complexes involved in replication. Some of the following techniques will be used: Protein and DNA purification, stopped-flow kinetics, fluorescence spectroscopy, sedimentation, gel electrophoresis, EM, and recombinant DNA techniques. Send curriculum vitae and the names of three references to: **Dr. T. M. Lohman, Department of Biochemistry and Biophysics, Texas A & M University, College Station, Texas 77843.**

POSTDOCTORAL POSITION, cell biology of mononuclear phagocytes, is available 1 June 1982 to study developmental biology of the mononuclear phagocyte system. Strong background in membrane biochemistry or receptor analysis preferred, but individuals well trained in immunology or toxicology would be suitable. Highly qualified individuals should send curriculum vitae and the names of three referees to: **Dr. D. O. Adams, Department of Pathology, Duke University Medical Center, Durham, N.C. 27710.** *Equal Opportunity Employer.*

POSTDOCTORAL POSITION— CHROMOSOMES

Available immediately for studies using monoclonal antibodies of nonhistone chromosomal proteins involved in chromosome structure and mitotic segregation. Recent Ph.D. background in molecular biology and/or protein chemistry. Send curriculum vitae and names of references to: **Dr. David Pettijohn, University of Colorado Health Sciences Center, B-121, Denver, Colo. 80262.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION: ENTOMOLOGY, BIOLOGICAL CONTROL. Department of Entomology and Nematology, University of Florida, invites applications for a 3-year research position for studying the natural enemies of mole crickets (*Scapteriscus* spp.). The incumbent will be stationed in Florida the first year except for preliminary fieldwork in South America. He/she will then spend up to 2 years in temperate South America, probably Uruguay, investigating potential biological control agents for mole crickets and will work with other researchers in the department to establish candidate control agents in Florida. The applicant must have the Ph.D. in entomology, or the equivalent; special training or experience in biological control or insect ecology; and fluency in Spanish. Salary up to \$22,000 per year, depending on qualifications and experience. Appropriate travel and research budgets. Position available 1 July 1982. Send letter of application, résumé, three letters of recommendation, and transcripts no later than 1 June 1982 to: **Dr. T. J. Walker, Department of Entomology and Nematology, University of Florida, Gainesville, Fla. 32611.** *An Equal Opportunity/Affirmative Action Employer*

Quality Assurance

GLP-AUDITOR OF TOXICOLOGY

We are an ethical pharmaceutical company offering a challenging opportunity for a person with a BS degree in Toxicology, Biochemistry, or Pharmacology, preferably with experience in laboratory studies, analyses, and animal experimentation. Exposure to G.L.P.'s is desirable.

The candidate should have good communication (oral and written) skills, and be able to interact effectively with other professionals. The position will have responsibility for the inspection of all phases of drug animal safety studies (acute toxicity, subchronic, chronic, reproduction and teratology studies), auditing the study data, and final study reports. The position will also monitor the toxicology department for compliance with G.L.P.'s. Some travel will be required.

The salary offered will be commensurate with experience and background and include an excellent benefit program.

Please submit resume including salary history and requirements in confidence to:

Personnel Department

Endo Laboratories, Inc.

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Microbiologist

Animal Health Research

Pfizer has an immediate opening for a microbiologist in the Animal Health Division of our Central Research facilities. Responsibilities will include the development of laboratory methodologies leading to the discovery of drugs useful in controlling respiratory diseases of livestock.

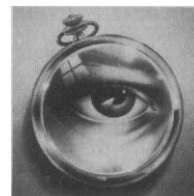
Applicants must have a PhD in microbiology, and preferably 1-2 years postdoctoral experience in either immunology, membrane biochemistry or pathogenesis of bacterial respiratory diseases. Qualified candidates should be creative, highly motivated, project-team oriented, and possess demonstrated problem solving ability.

This position offers excellent potential for professional recognition and career growth; and independent research and publication of significant findings will be encouraged. We are located in an attractive Connecticut shore community and provide competitive compensation plus excellent benefits and relocation assistance. Please send resume and brief description of research interests to: **Dr. J. K. Larson, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.**



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The success and rapid growth of Collagen Corporation is the result of the dedication and capability of our entire organization. Our Marketing, Manufacturing, Research, and Administrative groups work together with an entrepreneurial spirit and a commitment to building a growing, successful organization.

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As an Immunologist you will be responsible for initiating and directing research on the immunologic properties of collagen and other connective tissue components related to theories used on biological implants. You will work closely with scientists in other disciplines in joint projects and must be able to interact with them. Important requirements are a Ph.D. or an M.D. and at least 5 years' proven experience in immunological techniques and their application to connective tissue problems.

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Collagen Corporation



2455 Faber Place
Palo Alto, CA 94303

POSITIONS OPEN

POSTDOCTORAL POSITION IN CARDIAC ELECTROPHYSIOLOGY available immediately to study the role of cell surface molecules in the regulation of calcium homeostasis and arrhythmogenesis in cultured heart cells and canine Purkinje fibers. Send curriculum vitae and three letters of reference to: **Dr. Richard D. Nathan, Department of Physiology, Texas Tech University Health Sciences Center, Lubbock, Texas 79430. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL PROJECT ASSOCIATE

Position available immediately at High Voltage Electron Microscope Facility, University of Wisconsin, Madison. (i) Ph.D. in biological sciences with special interest in immunocytochemistry to develop methods for selective contrasting of specific cellular components in whole mounts and thick sections or (ii) Ph.D. interested in applying low-dose computer-aided high-resolution imaging techniques to crystallizing biological samples. Appointments are for 1 year; renewable until December 1984. Salary to \$20,000, depending on experience. Submit curriculum vitae and three letters of recommendation by 1 June 1982 to: **Hans Ris, High Voltage Electron Microscope Facility, University of Wisconsin, Animal Science Building, Madison, Wis. 53706. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE—CHEMICAL CARCINOGENESIS

Position immediately available for 1 to 4 years for highly qualified individual to study various aspects of chemoprevention in cell culture. Knowledge of cell culture, particularly cell transformation, as well as a good biochemical background, is desirable. Of particular interest at present is the mechanism by which ascorbic acid inhibits and reverses chemical transformation. Send curriculum vitae and the names of three references (with addresses and telephone numbers) whom we may contact to:

**William F. Benedict, M.D.,
Division of Hematology-Oncology
Childrens Hospital of Los Angeles
4650 Sunset Boulevard
Los Angeles, Calif. 90027**

POSTDOCTORAL RESEARCH POSITION at the ETH-Zurich, Switzerland

At the level of "assistant" or "oberassistent" (senior assistant) in the Department of Chemistry (Technisch-Chemisches Laboratorium) in the group of Biopolymers of Macromolecular Science, starting July 1982. Only for academic-oriented, highly qualified Ph.D. in chemistry, biochemistry, or biophysics. Teaching activity in the laboratory for chemistry students. Salary in the range of \$20,000 to \$30,000. Not a permanent position; up to 6 years maximum. Send application, with curriculum vitae, list of publications, and references, to: **Professor Dr. P. L. Luisi, Technisch-Chemisches Laboratorium der ETHZ, Universitätsstrasse 6, CH-8092 Zurich, Switzerland.**

POSTGRADUATE RESEARCH BIOCHEMIST to work with principal investigator on the study of in vivo kinetics of lipid metabolism in rats. Candidate must have background in biochemistry or related area. A background in animal metabolism and surgery and experience in using tracer methods for in vivo kinetic studies are necessary. Salary range of \$15,936 to \$19,848, depending on qualification. Research grant with funding approved through March 1985. Position available 1 September 1982. Application deadline: 15 July 1982.

Apply to: **Dr. M. A. Williams, Department of Nutritional Sciences, University of California, 225 Morgan Hall, Berkeley, Calif. 94720.**

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

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW

A position is available immediately for a Ph.D. to characterize biochemically a growth factor for cholinergic neurons active in CNS neuronal regeneration [Schonfeld *et al.*, *Brain Res.* 229, 541 (1981)] and investigate its role in Alzheimer's disease [Appel, *Ann. Neurol.* 10, 499 (1981)]. Experience in protein isolation, tissue culture, or monoclonal antibodies is desirable. Background in cell biology preferred. Send curriculum vitae and the names of three references to: **Dr. Robert Katzman, Chairman, Department of Neurology, ALBERT EINSTEIN COLLEGE OF MEDICINE, 1300 Morris Park Avenue, Bronx, N.Y. 10461. An Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL TRAINING IN NEUROCHEMISTRY

Several postdoctoral positions in neurochemistry for candidates with Ph.D. or M.D. degrees are available in the Neurochemistry Research Unit at the Missouri Institute of Psychiatry (MIP). MIP is funded by the State of Missouri to promote mental health research. It is one of the leading centers for mental health research. Academically, the Neurochemistry Research Unit is a part of the Department of Biochemistry, University of Missouri-Columbia, the site of the main campus of the state's university system. The laboratory is housed in a modern building that is 3 miles south of Forest Park, St. Louis, Missouri.

The annual stipend, ranging from \$13,380 to \$18,780, is dependent upon experience. The qualifications and interests of the candidates will receive primary consideration. Since additional faculty is being recruited, programs are expected to expand. Applicants are encouraged to inquire for additional information. The following areas of research are being actively pursued or initiated: (i) structure and function of gangliosides in neuronal tissues, (ii) ganglioside-mediated cholera toxin penetration and its subsequent effects on cultured nerve cells, (iii) structure of glycoconjugates, (iv) biosynthesis of gangliosides, and (v) relationship between LSD and serotonin receptors and their postreceptor mechanism.

Please send curriculum vitae and three letters of reference to: **Dr. Ingming Jeng, Unit Chief, Neurochemistry Research Unit, Missouri Institute of Psychiatry, University of Missouri-Columbia, 5400 Arsenal Street, St. Louis, Missouri 63139-1494.**

University of Missouri is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE

Position open for chemist with interest in clinical photobiology. Responsibilities include clinically related research; required expertise in HPLC and cytofluorography. Send résumé to:

**College of Physicians and Surgeons
Box 26
630 West 168 Street
New York, N.Y. 10032**

RESEARCH ASSOCIATE POSITIONS. A limited number of postdoctoral-level positions will, from time to time, become available in the University of North Carolina Dental Research Center. The research programs in the Center include the following areas: mineralization of bone and dental enamel, bone cell culture and hormonal control of mineral metabolism; wound healing and biochemistry of collagen and coagulation proteins; platelet physiology including membrane structure-function studies and the role of calcium and intracellular messengers in platelet function; biomaterials; periodontal diseases; histocytochemistry; developmental biology including teratology; neural mechanisms including pain; and clinically oriented studies related to craniofacial growth and treatment.

Additional information—These positions are designed to attract scientists in the early stages of their careers who desire research experience in a stimulating environment which emphasizes a multidisciplinary approach. Applicants are expected to be able to compete favorably for NIH postdoctoral or similar fellowships.

Interested applicants are invited to send résumés or curriculum vitae to:

**Dr. Philip F. Hirsch, Director
Dental Research Center 210H
University of North Carolina
Chapel Hill, N.C. 27514**

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

SENIOR RESEARCH ASSOCIATE: Ph.D. with at least 3 years of relevant experience in radiobiology and/or chemobiology is needed to supervise a program investigating the interaction of electron-affinic radiosensitizers with chemotherapeutic agents. Candidate should have training in physiology and have had experience with a variety of normal tissue and tumor end points (for example, neurotoxicity, CFU-S and spermatogonia assays, in vitro tissue culture, and so forth). Salary: \$31,000. Send résumé and names of three references to:

**Mary C. Clark
P.O. Box 5816
Stanford, Calif. 94305**

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POSITIONS OPEN

RESEARCH ASSOCIATE IN THEORETICAL ATOMIC PHYSICS. Research on theoretical atomic physics related to high-temperature astrophysical plasmas. Minimum requirements are Ph.D. in physics and demonstrated ability to perform state-of-the-art computations of radiative and collisional processes involving highly stripped ions. Salary range: \$18,000 to \$20,000 for full-time, 12-month continuing appointment, to start as soon as possible. Qualified applicants should contact the **nearest Colorado Job Service Office** and refer to **Job Order Number 2295963. The University of Colorado is an Affirmative Action/Equal Opportunity Employer.**

RESEARCH POSITION IN HUMAN CYTOGENETICS. Ph.D. with experience in cytogenetics is needed to work with cell synchronization and G-banded prophase in human neoplasia. Salary close to \$19,000. Please send curriculum vitae and references to: **Dr. Jorge J. Yunis, Professor, Department of Laboratory Medicine and Pathology, Box 198 Mayo Memorial Building, University of Minnesota, Minneapolis, Minnesota 55455. An Equal Opportunity Employer.**

RESEARCH SCIENTISTS

Advanced Genetic Sciences, Inc. (AGS) is a leader in the field of a growing advanced microbiological techniques to the improvement of agronomic plants and plant biosystems. Founded in 1979, it is well financed, has an outstanding Scientific Board, and its major shareholders include a leading international seed company and a major U.S. chemical company. AGS has an existing laboratory in Manhattan, Kansas. A new laboratory will open in Berkeley, California, during the second half of 1982.

The company is seeking highly motivated **senior scientists** and **postdoctorals** for positions in the areas of:

**Somatic genetics
Tissue culture
Plant molecular biology
Plant genetics and biochemistry
Bacterial genetics
Rhizobacteria**

at its Berkeley laboratory facility. Qualifications for these positions are a Ph.D., a strong desire to participate in genetic engineering of plants and of plant associated microorganisms, and, depending upon the level of the position, varying amounts of experience and publications of recognized merit.

Exceptional Ph.D.'s and postdoctorals have joined our laboratories, ensuring a stimulating and professionally rewarding work environment. In addition, AGS offers competitive salaries, a full benefit package, and the possibility of equity participation.

Please send résumé, academic transcripts, and professional references to:

**Dr. John R. Bedbrook
c/o ADVANCED GENETIC SCIENCES, INC.
P.O. Box 654
Greenwich, Conn. 06836-0654**

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SENIOR RESEARCH SCIENTIST—The Center for Neurochemistry at Wards Island has an opening for a senior research scientist. Minimum of 5 years of experience required in neurochemistry and genetics, in particular, publications in the field of receptors, neurotransmitters, and their genetic analysis, as well as in animal behavior genetics. Proven ability to obtain research grants is necessary. Salary: \$21,000 per annum. Send curriculum vitae to: **Dr. Abel Lajtha, Center for Neurochemistry, Mabon Research Building, Wards Island, New York 10035. Equal Opportunity Employer, M/F.**

Two Positions VIROLOGIST and/or IMMUNOLOGIST ENVIRONMENTAL MICROBIOLOGIST

Two tenure-track assistant professorships are planned for the Department of Microbiology beginning fall semester 1982. The environmental person will teach introductory microbiology and a laboratory instrumentation course. The virologist or immunologist will teach undergraduate and graduate courses in his/her specialty. Ongoing research programs in the areas of expertise will be developed. The Ph.D. is required with postdoctoral experience favored. Send résumé, reprints, three letters of recommendation, and transcripts to: **Dr. E. A. Grula, Department of Microbiology, LSE-318, Oklahoma State University, Stillwater, Oklahoma 74078. Deadline for receipt of applications is 15 June 1982. An Equal Opportunity/Affirmative Action Employer.**

CHEMIST

Position available for a Ph.D. Carbohydrate Chemist to carry out physical characterization of polysaccharides and fundamental studies on their interaction. Experience in CD florescence depolarization and other physical methods required. Experience with chemical and enzymatic modifications would be helpful. Candidate must be able to assume direct project responsibility. Post-doctoral experience in this area would be helpful. Send confidential resume to:

**Director of
Personnel Administration**



**Research & Development
801 Waukegan Road
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biology dept. faculty

Wagner College, a private liberal arts institution, is seeking an **ASSISTANT PROFESSOR-Biology**. A PhD in Zoology with teaching experience is required. Candidate will teach Comparative Anatomy, Embryology, Human Development, and laboratories in General Biology, Human Anatomy and Physiology.

Please submit resume with three (3) letters of recommendation by May 18, 1982 to Mrs Dorothy Whitford, Director of Personnel,

Wagner College
631 Howard Avenue
Staten Island, N.Y. 10301
Equal Opportunity Employer

ASSISTANT/ASSOCIATE PROFESSORS OF ANATOMY AND CELL BIOLOGY

The Department of Anatomy and Cell Biology, University of Cincinnati, College of Medicine, invites applications for two positions at the assistant/associate professor level. Candidates should be able to complement current research activities in metabolic or developmental biology at the molecular or cellular level. The candidate should have 2 to 3 years of postdoctoral experience and be able to conduct an independent research program which is competitive for extramural funding. Teaching experience in the anatomical sciences with special emphasis on gross anatomy is required. Applicants should send a current copy of their curriculum vitae, a brief statement of their research interests, and names of three references to:



Dr. Robert R. Cardell, Jr.
Professor and Chairman
Department of Anatomy
and Cell Biology
University of Cincinnati
Medical College
231 Bethesda Avenue
Cincinnati, Ohio 45267

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Tumor Research Scientist

New England Nuclear, a world leader in the research, development and manufacture of nuclear medical products, is currently seeking to expand its Radiopharmaceutical Research Group.

We are seeking applicants with a broad background and training in tumor biology, biochemistry, pharmacology, physiology, and/or immunology to participate in a research program for the development of new tumor imaging and therapeutic agents, utilizing radioisotopes.

Requirements for this position include a Ph.D. in a relevant biological science and at least two years postdoctoral experience, or a M.S. with a minimum of five years relevant experience. The successful applicant will be responsible for the study of the interaction of potential new agents with tumors.

Interested candidates should send a resume with salary history to Ms. Erin Moore, Personnel Department, New England Nuclear Corporation, 601 Treble Cove Road, Billerica, MA 01862.

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POSITIONS OPEN

RESEARCH INSTRUCTOR. Available 1 July 1982. Ph.D. or M.D. with postdoctoral experience required. Will study factors influencing initiation of hepatocarcinogenesis in rats. Requires knowledge and/or expertise in animal surgery, tumor pathology, analysis of cell proliferation, and carcinogen-induced damage to DNA and DNA repair mechanisms. *Women and minorities are urged to apply.* Curriculum vitae and three letters of reference should be sent by 31 May 1982 to: **Professor David G. Kaufman, M.D., Ph.D., Department of Pathology, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27514. An Affirmative Action/Equal Opportunity Employer.**

STAFF POSITION. We are seeking an outstanding research investigator whose program involves the **ROLE OF MEMBRANES IN DIFFERENTIATION.** The department's research efforts are focused around membranes and membrane-related phenomenon. Salary is competitive. Send curriculum vitae, bibliography, references, and a brief outline of research program to: **Dr. Martin Morrison, Department of Biochemistry, St. Jude Children's Research Hospital, P.O. Box 318, Memphis, Tennessee 38101. Equal Opportunity Employer**

JET PROPULSION LABORATORY (JPL) Synthetic Organic Chemist

Postdoctoral position available for research concerned with the development of fluorine-containing protecting groups of amino acids and the use of the latter derivatives in solid-phase-peptide synthesis (SPPS) monitored by fluorine-19 NMR. Experience in polymer chemistry and/or SPPS desired. Extensive experience in NMR not necessary. Appointment would be for 18 months starting 1 September 1982. Salary in the range of \$15,000 to \$18,000 per year, depending on qualifications. Position open to U.S. citizens or permanent-resident aliens only. Please send curriculum vitae and three letters of recommendation to: **Dr. Stanley L. Manatt, 183-901, or Professional Staffing, Department H28, Jet Propulsion Laboratory, California Institute of Technology, 4800 Oak Grove Drive, Pasadena, Calif. 91109. An Equal Opportunity Employer, M/F.**

ASSISTANTSHIPS

GRADUATE RESEARCH ASSISTANTSHIP

Photosynthesis, translocation, and source-sink relations. Position available June 1982 or later with yearly tax-free stipends of \$7000 and \$7800 for M.S. and Ph.D. students, respectively. Applicants should have a background in plant physiology and/or biochemistry. Send transcript with three letters of reference or call for further details. **Dr. K. E. Koch, Department of Fruit Crops, University of Florida, Gainesville, Fla. 32611; telephone: 904-392-4712.**

FELLOWSHIPS

The University of California, Irvine, College of Medicine, offers a **POSTDOCTORAL FELLOWSHIP IN NEUROPHYSIOLOGY** to work on neuronal mechanisms of alcohol in the CNS. The research primarily involves using extracellular and intracellular recording techniques and a background in electrophysiology is required. *An Equal Opportunity/Affirmative Action Employer.* Interested persons please send curriculum vitae to and request three letters of reference to be sent to: **Nai-Shin Chu, M.D., Ph.D., Department of Neurology, College of Medicine, University of California, Irvine, Calif. 92717. Salary range: \$1328 to \$1654 per month. Position available 1 July 1982.**

POSTDOCTORAL FELLOWSHIP in psychoneuroendocrinology available summer 1982. This is an institutional fellowship funded by an NIMH-sponsored training grant. Strong background in neuroendocrinology preferred. Research training involves studying neuroendocrine mechanisms regulating pituitary-adrenal function in New World primates. Primate experience is not required. To obtain further information, or to submit applications, write: **Dr. Seymour Levine, Laboratory of Developmental Psychobiology, Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, Calif. 94305. An Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS

POPULATION GENETICIST

The Department of Biology, McGill University, invites applications from Canadian citizens and landed immigrants to Canada who desire to be sponsored for an **NSERC University Research Fellowship** position in the field of population genetics. The successful applicant will be cross-appointed to the Centre of Human Genetics and will wish to engage in the investigation of multifactorial genetic disease in man. The position will involve some teaching. NSERC University Research Fellowships are awarded for 5 years, carry a salary at the assistant professor level, and include financial support for research. Submit curriculum vitae, representative reprints, and the names of three referees by 1 August 1982 to: **Dr. W. C. Leggett, Department of Biology, McGill University, 1205 Avenue Docteur Penfield, Montreal, Quebec, Canada H3A 1B1.**

RESEARCH FELLOWSHIPS IN BIOLOGY

The Department of Biology, McGill University, invites applications from Canadian citizens and landed immigrants to Canada who wish to be sponsored for **NSERC University Research Fellowships.** The department has special strength in the areas of cell and molecular biology, ecology and behavior, neurobiology, and human genetics. Applications in these areas will be favoured, but others are welcomed. NSERC University Research Fellowships are awarded for 5 years, carry a salary at the assistant professor level, and include financial support for research.

Send curriculum vitae, representative reprints, and names of three referees by 1 August 1982 to: **Dr. W. C. Leggett, Department of Biology, McGill University, 1205 Avenue Docteur Penfield, Montreal, Quebec, Canada H3A 1B1.**

FELLOWSHIPS IN IMMUNOLOGY AND ENDOCRINOLOGY

The University of Rochester Cancer Center invites applications for postdoctoral positions offering training in cellular immunology, hybridoma technology, immunological antitumor research, and characterization of tumor antigens. Programs in endocrinology include hormonal effects on chromosomal replication, gene expression, cell surface receptors, and cell-cell interactions. Associated programs include research in recombinant DNA technology, regulation of RNA and protein synthesis, and effects of anticancer agents and radiation on tumor models. Applicants are requested to send their curriculum vitae and three letters of reference to: **Dr. Edgar Henshaw, Assistant Director of the University of Rochester Cancer Center, Box 704, 601 Elmwood Avenue, Rochester, N.Y. 14642.**

POSTDOCTORAL FELLOWSHIP—Pharmacokinetics, pharmacology, and drug delivery aspects of organic nitrates. Some experience in gas chromatography desirable. Stipend commensurate with experience. Send curriculum vitae and two letters of recommendation to:

**Dr. Ho-Leung Fung
Department of Pharmaceutics
Cooke Hall
State University of New York at Buffalo
Buffalo, New York 14260**

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MARKETPLACE

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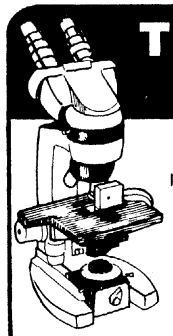


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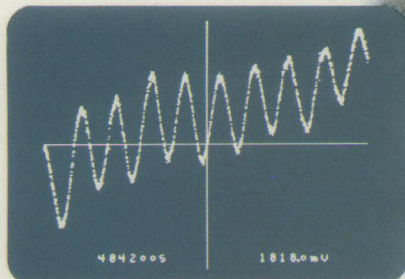


Fig. 1: 5-day section of earth tide record centered 2-1/2 days from start. Sun and moon are in phase (new moon).

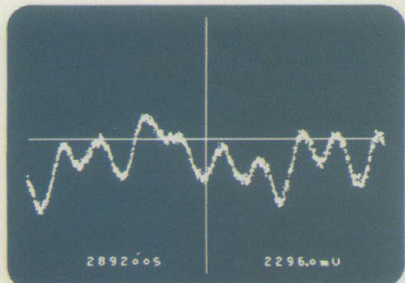


Fig. 2: 5-day section of earth tide record when sun and moon are in quadrature (6 hours apart).

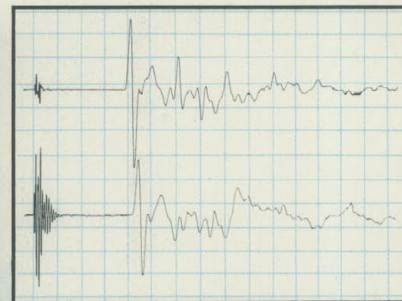


Fig. 3: Plot of pressure waves in seismic core samples.

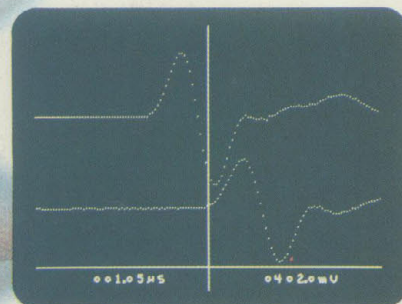


Fig. 4: Screen expansion of waveforms plotted in figure 3.

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* Waveforms courtesy of Bob Peet and Jack Schwarz of Sandia National Laboratories and the R & D Laboratory of the ARCO Oil and Gas Company.

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