

in a uniform, orderly way. The editor provides a concluding discussion and a comparison with oceanic basalts. Those who seek to carve into their gateposts a definitive statement on the origins of these rocks will look here in vain. The essential volcanology of magma delivery is also missing. Nevertheless, we find some gifted integrations of magma genesis, geochemistry, and isotopic chemistry, particularly for the North Atlantic Tertiary Province. We also find very welcome accounts of remote occurrences not often discussed in our literature, particularly those of Brazil, Ethiopia, Siberia, and China. Specialists will be interested to know that the Ethiopian basalts are not in fact mostly alkaline but tholeiitic except at upper levels. Others will be interested to learn that felsic (acid) lavas commonly occur among the basaltic lavas.

Most of all, readers will welcome the wealth of modern chemical and isotopic data of high quality (a special interest of the editor) and the good critical interpretation throughout this volume. They will deplore the absence of an index and a pooled list of references, and, most curiously of all, the lack of a table listing the sizes, ages, and effusion rates of the major flood basalts; I had to find the list above in a recent paper by H. Yoder (*S. Afr. J. Geol.* 91 [2], 139–56 [1988]). Comparison of his list and the contents shows some gaps in each; the book omits the older occurrences. But it tells most of us what we needed to know, in compact form.

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Books Received

- Acousto-Ultrasonics.** Theory and Application. John C. Duke, Jr., Ed. Plenum, New York, 1988. x, 353 pp., illus. \$75. From a workshop, Blacksburg, VA, July 1987.
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- The Commonwealth of Science.** ANZAAS and the Scientific Enterprise in Australasia, 1888–1988. Roy MacLeod, Ed. Oxford University Press, New York, 1988. xvi, 417 pp., + plates. \$45.
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- Elements of Calculus.** G. Don Allen, Charles Chui, and Bill Perry. 2nd ed. Brooks/Cole, Pacific Grove, CA, 1988. x, 534 pp., illus. \$38.
- Encyclopedia of Telecommunications.** Robert A. Meyers, Ed. Academic Press, San Diego, CA, 1988. xii, 575 pp., illus. \$49.95.
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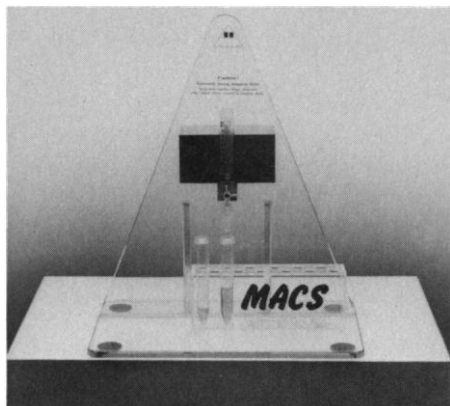
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Literature

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POSITIONS OPEN

ANIMAL NUTRITIONIST position with primary responsibility for comprehensive applied research program in fish nutrition, diet formulation, feed technology, and feeding strategies. Require Ph.D. or M.S. with minimum of 4 years of experience. Desire strong background in general animal nutrition, comparative physiology, biochemistry, and analytical instrumentation analysis. Send letter of application with résumé by 26 May 1989. For further information, contact: Dr. Robert A. Busch, Clear Springs Trout Company, P.O. Box 712, Buhl, ID 83316. Telephone: 208-543-8217 Fax: 208-543-5608.

ANIMAL PHYSIOLOGIST. Search reopened. Assistant professor, tenure-track, beginning August 1989; teach two courses per semester with laboratories; animal physiology, comparative vertebrate anatomy, human anatomy, another course for majors or non-majors; supervise undergraduate research; advise. Ph.D. required. Seton Hill College is a Catholic liberal arts college for women, 35 miles east of Pittsburgh. By 2 June 1989, send three letters of recommendation, statement of teaching and research goals, equipment needs, curriculum vitae, and transcripts to: **Sister Bernadette Fondy, Ph.D., Department of Biology, Seton Hill College, Greensburg, PA 15601.** An Equal Opportunity/Affirmative Action Institution.

The University of California, Davis, School of Medicine, is recruiting for a full-time faculty member to be jointly appointed, 50% in the Department of Pharmacology and 50% at the California Primate Research Center. Appointment will be at the **ASSISTANT OR ASSOCIATE PROFESSOR** level commensurate with qualifications and experience. Candidates must have a Ph.D. and experience in reproductive and developmental pharmacology/toxicology. Responsibilities will include teaching at the medical and graduate student level.

A letter outlining research and teaching background and identifying current research interests, along with curriculum vitae and the names of three references, must be received by 1 August 1989.

Reply to: **Larry G. Stark, Ph.D., Professor and Chairman, Department of Pharmacology, School of Medicine, University of California, Davis, CA 95616.**

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

POSITIONS OPEN

APPLIED SCIENTISTS sought, B.S., M.S., Ph.D., for environmental permitting. Prefer training and/or experience in southeastern United States. Expertise sought in botany, wildlife, wetlands, CAD, GIS, water quality, statistics. Send résumé to: **Personnel Department, Breedlove, Dennis and Associates, Inc., 2412 Forsyth Road, Orlando, FL 32807. An Equal Opportunity Employer.**

ASSISTANT PLANT PATHOLOGIST AT WSU-PROSSER (IAREC)

Position is available 1 October 1989, or as soon as a qualified candidate is selected. This is a tenure-track, 100% research appointment, to conduct research on hop, grapevine, and other selected crops. Candidate will assume leadership in planning and implementing research programs, plant pathology, and cropping systems management. Strong background in virus and fungal diseases is desired. Position located at Washington State University's Irrigated Agriculture Research and Extension Center (WSU-IAREC), Prosser, Washington, where over 35 scientists work with 35 to 40 crops. Ph.D. is required; a degree or training in plant pathology is preferred. Salary is commensurate with training and experience. Send résumé, copies of publications, transcripts, and at least three letters of reference, by 1 August 1989, to: **Dr. G. S. Santo, Search Committee Chairman, POB 30, WSU-IAREC, Prosser, WA 99350. Telephone: 509-786-2226. WSU is an Equal Opportunity/Affirmative Action Employer. Members of ethnic minorities, women, Vietnam-era or disabled veterans, persons with disability, and/or persons between the ages of 40 to 70 are encouraged to apply.**

ASSISTANT PROFESSOR APPLIED MATHEMATICS

Assistant professor level of applied mathematics. This is a tenure-track position. A person is sought with an active research program in the application of mathematics and/or statistics to toxicology and occupational medicine. Candidates are sought who have an interest in the mathematical modeling of biological events. Current research programs involve modeling carcinogen biochemistry, neurotoxicity of chemicals, pharmacokinetics of xenobiotic chemicals, deposition of chemicals in the respiratory tract and cancer surveillance. Active collaboration in one or more of these areas is available. Teaching responsibility for basic statistics and decision theory to medical and graduate students. Excellent computational facilities, including supercomputing, available.

Send curriculum vitae and names of five references to: **Dr. D. B. Menzel, Professor and Chairman, Department of Community and Environmental Medicine, University of California, Irvine, CA 92717.**

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

ASSISTANT RESEARCH SCIENTIST FLOW CYTOMETRY: New York University (NYU) Medical Center is seeking an individual to operate and manage a flow cytometry facility. The facility has an Ortho 50H dual laser sorter and a FAC scan analyzer. It is a core laboratory and serves the needs of a diverse group of scientists engaged in basic research in immunology, hematology, molecular biology, and cell biology. Responsibilities include operation, troubleshooting and maintenance of the sorters, data analysis, collaborative experimental design, and training/teaching of users. Candidate must have 2 years of experience with a master's or bachelor's degree in science plus equivalent experience. Excellent salary and benefits package. Send curriculum vitae to: **Joan Harmon, Personnel Department, NYU Medical Center, 550 First Avenue, New York, NY 10016. Equal Opportunity Employer M/F.**

ASSISTANT RESEARCH SCIENTIST IN ENDOCRINOLOGY with experience in measurement of steroid receptors and studies on the mechanism of hormone action in the Department of Physiology and Endocrinology. Ph.D. in endocrinology with 4 years of relevant experience required. Salary: \$25,000 per annum. Qualified applicants apply with résumé to: **Georgia Department of Labor, 601 Greene Street, Augusta, GA 30913, or to the nearest Georgia Job Service Center. Control #GA 5349466.**

POSITIONS OPEN

ASSISTANT PROFESSOR

Tenure-track assistant professor position for individual with research interests in nutrition and international health or nutrition and immunology/infectious diseases. We are looking for a highly motivated individual with well-developed ideas for pursuing his or her own independent research program. The Division of International Health and Public Health Nutrition has opportunities for field research in Latin America and the Caribbean. Individuals with strong laboratory backgrounds and an interest in international work are also encouraged to apply. The successful applicant will have a Ph.D. or M.D. degree with postdoctoral research experience and good potential for supporting his or her research via extramural grant support. Send curriculum vitae and three letters of reference to: **Dr. Jose O. Alvarez, Search Committee, 303 Tidwell Hall, School of Public Health, University of Alabama at Birmingham, Birmingham, AL 35294. Telephone: 205-934-1732.**

UAB is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS

Tenure-track position with a joint appointment in the Departments of Ophthalmology and Biochemistry and Molecular Biophysics is available for an individual interested in conducting independent research in the molecular biology of the visual system. We are particularly interested in control of gene expression and development, gene-related disease processes, and DNA repair and mutation. Applicants should have strong postdoctoral experience in some aspect of molecular biology and a good publication record. *Columbia University takes Affirmative Action to ensure Equal Opportunity.* Send curriculum vitae and names and addresses of three references to:

**Dr. Abraham Spector
College of Physicians and Surgeons
Columbia University
630 West 168th Street
New York, NY 10032**

ASSISTANT PROFESSOR CARDIOVASCULAR/BIOCHEMICAL PHARMACOLOGY

Applications are invited for a tenure-track assistant professor position in the Department of Pharmacology and Division of Cardiovascular Disease at the University of Alabama at Birmingham. Applicants should have a Ph.D. in relevant area with two or more years of postdoctoral training. Interest and expertise in endothelial cell biology and function in vivo and in vitro, EDRFs and EDCFs, signal transduction and second messengers studies is desired. The successful candidate will be expected to develop an independent research program with outside funding. Competitive salary and reasonable start-up funds are available. Send curriculum vitae and three letters of reference to: **Dr. David D. Ku, Search Committee Chairman, Department of Pharmacology, UAB Station, Box 402, Birmingham, AL 35294.**

UAB is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT OR ASSOCIATE PROFESSOR PHYSIOLOGY AND BIOPHYSICS

Three tenure-leading faculty positions are available at the assistant or associate professor levels. Candidates should be trained in either microcirculatory control, neural control of the circulation or cellular or molecular cardiovascular physiology. A doctoral degree plus 2 years of postdoctoral experience is required. Faculty are expected to develop active independent research programs and to participate in the teaching programs of the department. Salary, benefits, and set-up funds are attractively competitive. Applicants should submit curriculum vitae, a letter of research goals, and the names and addresses of three references by 30 June 1989 to:

**Irving H. Zucker, Ph.D.
Chairman
Department of Physiology and Biophysics
University of Nebraska College of Medicine
42nd and Dewey
Omaha, NE 68105**

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

POSITIONS OPEN

ASSISTANT PROFESSOR (RESEARCH SCHOLAR) FACULTY OF MEDICINE DEPARTMENT OF PHYSIOLOGY UNIVERSITY OF ALBERTA \$32,564 to \$46,700

Applications are invited for the position of assistant professor (research scholar) in the area of renal physiology. Qualifications include a Ph.D. or M.D. degree and a demonstrated outstanding ability for independent research. The successful candidate will participate in the department's teaching program (both graduate and undergraduate) and other academic activities. The position will depend upon funding through an external agency such as The Alberta Heritage Foundation for Medical Research, and the effective date of employment is dependent upon the success of the application.

The University of Alberta is committed to the principle of equity in employment.

Interested applicants should submit their curriculum vitae, an outline of proposed research, and the names of three referees by 30 June 1989 to:

**Dr. Peter K. T. Pang
Professor and Chairman
Department of Physiology
University of Alberta
Edmonton, Alberta
T6G 2H7**

ASSOCIATE INVESTIGATOR. Research in signal transduction in human neutrophils and rat lung macrophages. This is a hard money position to work with digital image analysis and fluorescence spectroscopy on an NIH-funded project. Background in computers, UNIX, MS-DOS, signal analysis, biophysics and cell biology desirable. Ph.D./M.S. or equivalent experience. Position can be structured for postdoctoral applicants as well. Position available immediately. Reply and curriculum vitae to: **Thomas D. Coates, M.D., Division of Hematology, Childrens Hospital of Los Angeles, 4650 Sunset Boulevard, Los Angeles, CA 90027. Telephone: 213-669-2352.**

ASSOCIATE RESEARCH SCIENTIST: Execution of synthetic organic techniques involved in research in chemistry of antifungal agents and separation science in an effort to realize new and novel chemical structures. Isolate and characterize new derivatives involving use of high-pressure liquid chromatography equipment. Use of various sophisticated spectroscopic instruments to ascertain structure and purity. Use of high field nuclear magnetic spectrophotometers for obtaining structural information. Analysis, evaluation and initial interpretation of experimentation concerning synthetic organic techniques. M.S. in medicinal chemistry with concentration in synthesis of nuclear anti-viral agents and antifungal agents. Coursework must include use of high-pressure liquid chromatography equipment and high field nuclear magnetic resonance spectrophotometers. No experience necessary. Forty hours per week; \$36,000 per year. Send résumé in duplicate to: **J.O. # 3049023, Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.**

RESEARCH ASSOCIATE BIOCHEMIST AND/OR JUNIOR FACULTY POSITION

Multidisciplinary group interested in developing novel therapeutic strategies for melanoma therapy based on cytotoxic melanin precursors, seeks a Ph.D. chemist/biochemist with experience related to melanin synthesis, intermediary metabolism, or anti-melanoma pharmaceutical development. Unique opportunity for creative scientists to work independently and in collaboration with a team of organic chemists, biochemists and cell biologists in a well-funded laboratory with modern facilities for synthetic, organic and radiosynthetic chemistry, analytical biochemistry, tissue culture and in vivo animal studies. Competitive salary commensurate with education and experience. *The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.* Interested applicants should send curriculum vitae to:

**William D. Bloomer, M.D.
Professor and Chairman
Department of Radiation Oncology
University of Pittsburgh
230 Lothrop Street
Pittsburgh, PA 15213**

POSITIONS OPEN

BIOCHEMIST: Position open for biochemist. Primary responsibilities: not more than 20% of time teaching medical biochemistry to medical students and at least 80% of time for research. Please send curriculum vitae detailing teaching experience, research interests, grant track record and the names of three references to: **Dr. Arnold L. Nagler, Associate Dean, Basic Sciences, New York College of Osteopathic Medicine, Old Westbury, NY 11568.** *Affirmative Action/Equal Opportunity Employer.*

BIOLOGICAL SCIENCE ADMINISTRATOR. Business manager of Biology Department, Texas A&M University. Senior staff member, responsible for non-academic matters of 40-faculty member department. The Department conducts research and teaching in a range of biological topics with competitive research funding exceeding \$3 million annually. Individual will plan and supervise fiscal management, \$3.25-million departmental budget, and administrative activities; supervise support staff. Required: bachelor's degree in science, business or related field, 2 years of experience in higher education administration. Preferred: Previous experience in research administration and acquisition of extramural funding, and a biological science background. Salary: commensurate with experience. Send curriculum vitae and names of references by 15 June 1989 to: **Dr. T. C. Hall, Head, Department of Biology, Texas A&M University, College Station, TX 77843-3258.** *TAMU is an Affirmative Action/Equal Opportunity Employer.*

BIOLOGY: Tenure-track position at the **ASSISTANT PROFESSOR** level. Starting date is 15 August 1989. Emphasis will be vascular plant taxonomy. Ph.D. required by starting date. Successful applicant will participate in the undergraduate/graduate program in biology and will develop a research program in plant taxonomy. Teaching responsibilities will include plant taxonomy, possibly mycology and economic botany. The selected candidate will also participate in our freshman biology course for nonmajors. Submit letters of application, curriculum vitae and the names, addresses, and telephone numbers of three references to: **Dr. George R. Hoffman, Chair, Department of Biology, University of South Dakota, Vermillion, SD 57069.** Preference given to applications received by 25 May 1989. *Equal Opportunity/Affirmative Action Employer.*

CELLULAR BIOLOGIST. The David M. Clark Center, Arkansas Children's Hospital invites applications for a tenured-track assistant professorship beginning fall 1989. Applicants should have a Ph.D. and 2 years of postdoctoral training. The appointee will join investigators focusing on pediatric cardiac and lung disease. The individual would establish independent research and participate in collaborative projects involving pulmonary vascular or myocardial cells. Prior experience with these tissues is desirable but not a requirement. Opportunities for teaching and joint appointments exist with the basic science divisions of the University of Arkansas for Medical Sciences. Send curriculum vitae, statement of research interest, and names of three references to: **A. Francine Tryka, M.D., The David M. Clark Cardiovascular Center, 800 Marshall, Little Rock, AR 72202.**

CELLULAR IMMUNOLOGIST. Full-time research position available with immunology/molecular biology group studying human autoimmune diseases. Ph.D. and extensive experience with B cell cloning, and B cell studies required. Expertise with cell sorting using Coulter Epic C desirable. *An Equal Opportunity Employer.* Send résumé to: **Dr. Vincent Agnello, ENRM Veterans Hospital (151), 200 Springs Road, Bedford, MA 01730.**

CHAIRMAN, DEPARTMENT OF MEDICINE

Four hundred thirty-five-bed acute-care community teaching hospital seeking Chairman, Department of Medicine. Responsible for Internal Medicine Residency Program and Transitional Year Residency Program. Serves as Administrative Physician in Department of Medicine. Apply by submitting curriculum vitae to: **Richard D. Herman, M.D., Chairperson, Search Committee for Chairman, Department of Medicine, St. Luke's Hospital, 801 Ostrum Street, Bethlehem, PA 18015.** *An Equal Opportunity Employer.*

Opportunities in Pharmaceutical Research

Continued expansion at Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company, has created the following openings in our Reproductive Toxicology Section:

Senior Scientist

The duties of this position will be to study the deleterious effects of new drugs on the reproductive processes. The successful candidate will assist in the design, execution and analysis of studies which focus on the mother, embryo/fetus, newborn and weaning. The position will also involve supervisory responsibilities and drug discovery team participation.

Requirements for this position include a Ph.D. in Reproduction Biology or closely allied field, 1-3 years' post-doc experience in reproductive toxicology, knowledge of GLPs; experience in embryo culture techniques is necessary.

Assistant Scientists

The duties of these positions will be to conduct reproductive and developmental toxicology studies and will include neuropharmacological/behavioral testing.

Requirements for these positions include a BS degree in biological sciences and 1-5 years' experience in these areas: animal handling, safety evaluation studies, neuropharmacological/behavioral testing and offspring evaluation techniques.

Qualified candidates should send resume, salary requirements and reference list (indicating position desired) in confidence to: **Ms. S. Hultquist, PARKE-DAVIS, 2800 Plymouth Road, Ann Arbor, Michigan 48105.**

PARKE-DAVIS

DIVISION OF WARNER-LAMBERT COMPANY

"Equal Opportunity in Action"

Research Scientist/ Pharmacokinetics

Triton Biosciences Inc., a subsidiary of Shell Oil Company located in the San Francisco Bay Area, is a fully integrated pharmaceutical and diagnostics company focused on product development opportunities in the areas of cancer, AIDS and other serious diseases. We currently have an opening for a Pharmacokinetics Research Scientist.

Your duties will entail design of pre-clinical and clinical pharmacokinetic studies for pharmaceutical compounds, selecting contract laboratories to perform these studies, analyzing pharmacokinetic data and writing reports and summaries for regulatory submission. Experience with pharmacokinetics computer programs, particularly NONLIN, is highly desirable. You should have a PhD in Pharmaceuticals or Pharmaceutical Chemistry with a research emphasis in pharmacokinetics and 0-2 years of relevant experience. Some travel is required.

Triton offers competitive salaries and benefits, including relocation assistance. For consideration, send your resume with cover letter highlighting your qualifications and including the names of three references to Triton Biosciences Inc., Employment—Dept. JJB, 1501 Harbor Bay Parkway, Alameda, CA 94501. EEO/AA employer.



Triton Biosciences Inc.

POSITIONS OPEN

CLINICAL LABORATORY HEMATOLOGIST

The University of Washington School of Medicine, Department of Laboratory Medicine, is recruiting a junior faculty assistant director of the Clinical Hematology Laboratories at the University Hospital. Candidates should be Board-certified in clinical pathology and have demonstrated competence in the diagnosis of lymphomas, leukemias, and immunodeficiency diseases with expertise in flow cytometry, immunocytochemistry, and molecular biology. Please submit curriculum vitae by 1 June 1989 to: **J. C. Detter, M.D., Department of Laboratory Medicine, University of Washington, SB-10, Seattle, WA 98195.** The University of Washington is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR CLINICAL RESEARCH CENTER MEDICAL RESEARCH INSTITUTE OF DELAWARE (MRID)

The Medical Research Institute of Delaware seeks a clinical research scientist/administrator for an exciting career opportunity involving the development and direction of its Clinical Research Center (CRC). Contributing members to the Institute include the Du Pont Company, ICI Americas Inc., the Jefferson Medical College, the Medical Center of Delaware, and the University of Delaware. The CRC will focus initially on clinical pharmacology studies in normal human volunteers and will be involved with studies with the faculty of the contributing institutions. The Director must have ability in research and administration and will interact with the medical, education, and health care communities, including state and national agencies. Candidates should have an M.D. degree, Board certification with eligibility for medical licensure in Delaware, and credentials warranting a faculty appointment at the Jefferson Medical College and the University of Delaware. Send letters of application, curriculum vitae, and three letters of reference to: **Peter Chodoff, M.D., M.P.H., Christiana Hospital, P.O. Box 6001, Newark, DE 19718.** MRID is an Equal Opportunity Employer.

DIRECTOR OREGON INSTITUTE OF MARINE BIOLOGY

The University of Oregon is seeking a resident Director for the newly rebuilt Oregon Institute of Marine Biology (OIMB) in Charleston, Oregon (starting date, September 1990). Applicants with an internationally recognized basic research program, evidence of administrative skills, and demonstrated commitment to excellence in undergraduate and graduate education should send a letter of interest, résumé and recent publications, and have letters sent from three referees to: **Chair, OIMB Search Committee, Department of Biology, University of Oregon, Eugene, OR 97403. Telephone: 503-686-4526.** Deadline for applications: 30 June 1989. Target decision date, September 1989 or earlier.

The Director's position will be tenurable in the Department of Biology at the associate or full professor level; salary is negotiable. We especially seek a marine ecologist as director who will complement our present departmental strengths in population ecology and physiology. The Institute operates year-round with resident faculty, staff, and students. It has immediate access to estuarine salt marshes and mud flats, diverse rocky intertidal habitats, high energy beaches, and open ocean.

The University of Oregon is an Equal Opportunity/Affirmative Action Institution.

The Division of Endocrinology/Metabolism/Clinical Nutrition, Department of Medicine, at Oregon Health Sciences University, has a position available for a **DIVISION HEAD.** Must have a proven record of accomplishment in clinical medicine, teaching, research and administrative activities at the associate professor/professor level. The Division has six full-time faculty positions with interests in lipid and calcium metabolism, diabetes, and hyperthalamic pituitary disorders. Interested candidates should send curriculum vitae along with the names and addresses of three references to: **Dr. William M. Bennett, Professor and Head, Division of Nephrology L-463, Oregon Health Sciences University, 3181 S.W. Sam Jackson Park Road, Portland, OR 97201.** OHSU is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

THE UNIVERSITY OF TEXAS AT DALLAS DIRECTOR OF THE INSTITUTE FOR ENVIRONMENTAL SCIENCES

The University of Texas at Dallas seeks applications for a non-faculty research scientist position as Director of the newly established Institute for Environmental Sciences (IES). Through the use of simulation modeling, including analysis of model reliability, IES will address significant environmental issues by conducting multidisciplinary research that integrates scientific, social, and economic concepts. Aggressive leadership will be required to launch the institute and to persuade specialists from diverse backgrounds to participate in IES research. The successful applicant will be an established scientist with competence in computer-based modeling, the ability to secure external funding, and experience administering multidisciplinary teams. Preferred areas of specialization include: systems ecology or surface or groundwater hydrology. Salary will be commensurate with experience and qualifications. Applications must be received by 15 June 1989 (indication of sex and ethnicity is requested for statistical purposes but is not required) and must contain a résumé and a list of references who can be contacted. Applications should be sent to:

Search # 290
The University of Texas at Dallas
P.O. Box 830688
Richardson, TX 75083-0688

The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

DIRECTOR, OFFICE OF BIOLOGICAL PRODUCT REVIEW \$68,700 to \$76,400

In addition, physicians may be eligible for a retention bonus of up to \$20,000 per annum.

Incumbent directs 90 professional and support staff in the evaluation and regulation of biological products presented for investigational use or for market release. Applicants should have an M.D. degree from an approved medical school or a doctorate in a related biological or physical science; experience at the executive level in planning, directing and evaluating broad scientific research or regulatory programs and activities which demonstrate the ability to effectively coordinate and productively integrate the multidisciplinary efforts of a scientific, professional and technological workforce; administrative or managerial experience at the executive level which demonstrates strong leadership abilities in a scientific environment; and experience which indicates the ability to implement Equal Employment Opportunity Programs.

Application for Federal Employment, SF-171, is required and must be received by 12 June 1989.

For additional information contact: **Mr. John Anderson, Division of Human Resources Management, Food and Drug Administration, Room 4B-09, HFA-408, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857. Telephone: 301-443-1755.**

An Equal Opportunity Employer.

Geo-Centers, Inc., a rapidly growing professional services research and development firm, specializing in chemical materials, biological and optical sciences, has an immediate opening for an **ELECTRON MICROSCOPY TECHNICIAN.** This position involves the preparation of samples for microscopic analysis, assist with the maintenance of SEM and TEM systems, obtain and develop micrographs and video recordings of samples, and perform freeze fracture preparations. The successful applicant should have demonstrated practical experience in the operation and maintenance of SEM/TEM facilities, and possess a B.S. degree in chemistry, physics, or biochemistry. Geo-Centers, Inc., offers competitive salaries, relocation assistance, and an outstanding benefits package. *U.S. citizenship required.* Qualified candidates are urged to send their résumé, along with salary requirements and history to: **Geo-Centers, Inc., 10903 Indian Head Highway, Ft. Washington, MD 20744. Attention: Deborah Hall-Greene/Code 2128.** Geo-Centers, Inc., is an Equal Opportunity/Affirmative Action Employer (Principals Only).

POSITIONS OPEN

DIRECTOR CLINICAL RESEARCH CENTER

Northwestern University seeks a Director for its Clinical Research Center (CRC). Candidates should hold an M.D. degree, be eligible for a senior faculty appointment with tenure and must have achieved national recognition for a biomedical research program. Candidates should have previous experience as the Director or Associate Director of a CRC or comparable experience. *The search committee wishes to identify and interview qualified women or minority candidates for this position.* Applications or nominations, including curriculum vitae and a letter describing the candidate's qualifications in detail, should be submitted to: **Donald Nutter, M.D. Northwestern University Medical School, Morton 4-656, 303 East Chicago Avenue, Chicago, IL 60611-3008.** Applications must be received by 1 August 1989. Northwestern University is an Equal Employment Opportunity/Affirmative Action Employer. Employment eligibility verification required upon hire.

FACULTY POSITION MICROBIOLOGY AND IMMUNOLOGY

Applications for a tenure-track assistant professorship are invited from candidates with a background in immunology utilizing molecular and/or cellular technologies. Candidates should have a Ph.D. or M.D. with proven ability or high potential for an independent, funded, productive research program. Send curriculum vitae, bibliography, and statement of research and teaching interests to:

John M. Lehman, Ph.D.
Department of Microbiology/Immunology #A-68
Albany Medical College
47 New Scotland Avenue
Albany, NY 12208

The Albany Medical Center is an Equal Opportunity/Affirmative Action Employer.

UNIVERSITÉ DE MONTRÉAL

The Department of Pathology of the University of Montreal Medical School invites applications for the following **FACULTY POSITIONS:**

(A) Associate or full professor M.D. and/or Ph.D. with experience in research in oncology and molecular biology. The selected candidate will be expected to act as the scientific coordinator of a developing group in oncogenetic research and to share teaching responsibilities, mostly at the graduate level. A good knowledge of the French language is preferable. Salary will be commensurate with academic level.

(B) Research professor M.D. and/or Ph.D. interested in developing research in molecular genetic or molecular biology. The candidate will integrate a research group in oncogenetics and will share responsibilities in teaching at all levels. The candidate's profile should allow competitiveness for the obtaining of external research funds in the 2 years following his or her arrival. A good knowledge of the French language is preferable.

Send curriculum vitae and the names of three referees by 15 June 1989 to: **Dr. Jean Michaud, Chairman, Department of Pathology, Université de Montréal, P.O. Box 6128, Station "A," Montréal, Québec, H3C 3J7.**

In accordance with Canadian immigration requirements, this advertisement is directed in priority to Canadian citizens and permanent residents of Canada. The University of Montreal is an Equal Opportunity Employer.

MICROBIOLOGY POSITION in 4-year liberal arts college, starting no later than February 1990. Excellence in college teaching emphasized. Must teach in the various areas of microbiology, immunology and cell biology, or introductory biology. Credentials for associate or full professor appointment preferred. Letter, transcripts, and three letters of recommendation to: **Dr. Edgar Webber, Chair, Microbiology Search Committee, Natural Sciences, Keuka College, Keuka Park, NY 14478.** Affirmative Action/Equal Opportunity Employer.

MOLECULAR BIOLOGY RESEARCH Ph.D.

Oncology research position immediately available. Focus on c-abl oncogene and growth factors. Salary \$21,640 per year with benefits. Reply: **Frank Andrews, M.D., Department of Medicine (111), VA Medical Center, 1660 South Columbian Way, Seattle, WA 98108. Telephone: 206-764-2475 or 2878.** U.S. citizenship, Equal Opportunity Employer, Hispanics, women, and minorities are encouraged to apply.

POSITIONS OPEN

FARM ADVISOR-GROUNDWATER TOXICOLOGY (Santa Clara, Alameda, Contra Costa and San Mateo Counties). Headquarters: Santa Clara County. The University of California, Division of Agriculture and Natural Resources, Cooperative Extension is seeking a career-track academic candidate to develop, conduct and evaluate educational and research programs to address specific, identified problems within the subject areas of groundwater toxicology, groundwater pollution and toxic materials for the residents of southern San Francisco Bay Area. Minimum Master's degree or equivalent combination of education and experience in a field related to groundwater toxicology, groundwater pollution and/or toxic materials required. Doctorate level course work or field experience preferred. Additional course work or experience in an agricultural science preferred. Knowledge of Cooperative Extension policies and procedures desirable. Assure Affirmative Action in development and delivery of programs. Beginning salary, Cooperative Extension Assistant Advisor rank, commensurate with experience and professional qualifications. For complete description and application, contact: University of California Division of Agriculture and Natural Resources Personnel, 6th Floor, 300 Lakeside Drive, Oakland, CA 94612-3560. Telephone: 415-987-0088. Close 30 June 1989. Refer to #A-89-055. Affirmative Action/Equal Opportunity Employer M/F/H.

MARINE GENE PROBE LABORATORY DALHOUSIE UNIVERSITY

The Marine Gene Probe Laboratory (MGPL), recently established with funds from the Government of Nova Scotia, will occupy a leading position in basic and applied research in fish and shellfish genetics.

MGPL is seeking to appoint:

RESEARCH ASSOCIATES POSTDOCTORAL FELLOWS SCIENTIFIC TECHNICAL STAFF GRADUATE STUDENTS

Experience of recombinant DNA and an interest in fish/shellfish genetics is essential. These are term appointments for 3 years, renewal contingent on funding. Salaries will be commensurate with experience and competitive internationally.

The MGPL is located on Dalhousie University campus in a dynamic Biology Department with strong links to the Departments of Biochemistry and Oceanography, the Canadian Federal Government Laboratories of the Department of Fisheries and Oceans, and the Bedford Institute of Oceanography. *In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. Other applicants will be considered if no candidates meeting the above criteria are available. Dalhousie University has a policy of Affirmative Action in hiring qualified women academic staff.* Applications including a full curriculum vitae and three references should be sent to: Dr. R. W. Doyle, Marine Gene Probe Laboratory, Department of Biology, Dalhousie University, Halifax, Nova Scotia, Canada B3H 4J1 before 15 June 1989.

CENTERS FOR DISEASE CONTROL CENTER FOR INFECTIOUS DISEASES DIVISION OF HOST FACTORS MOLECULAR BIOLOGIST

A position is available to study molecular and cellular responses of human lymphoid cells involved in immunodeficient, autoimmune, and/or infectious diseases. This position is with Dr. Steven McDougal, Clinical Immunology Branch, Division of Host Factors. A M.D. or Ph.D. is preferred with postdoctoral or appropriate research experience. Applicants should be capable of collaborative and independent investigations as evidenced by publications. Salary range: \$34,580 to \$53,460, depending on experience. To apply, please send curriculum vitae and three names and addresses of references by 1 August 1989, to:

Mr. William Nelson
Personnel Management Office, Room 1/1058
Centers for Disease Control
1600 Clifton Road, NE
Atlanta, GA 30333

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Schering

Research Scientists

*If advancing
pharmaceutical innovations
is what you have in mind,
come to
Schering-Plough Research.*

We're a progressive \$3-billion pharmaceuticals leader recognized worldwide for our dedication to discovery. We have the following rewarding research opportunities:

Scientist, Drug Metabolism

Requires BS in Chemistry or Biology and 7 years' experience or an MS with 5 years' experience. Background in HPLC, knowledge of drug metabolism and demonstrated strengths in modern analytical techniques essential.

Associate Scientist, Biotechnology/Biochemistry

Requires BS in Biochemistry and 4 years' experience or an MS with 2 years' experience. Background with purification and characterization of proteins is essential. Experience with techniques using column chromatography, HPLC, gel electrophoresis, and use of antibodies for detecting proteins preferred.

Assistant Scientist

Will support drug safety metabolism studies at our Lafayette, NJ Toxicology/Pathology lab. Requires BS in Biological or Animal Sciences and 2 years' experience in both Histology and Necropsy techniques, or an MS degree.

We provide competitive salaries and an excellent benefits package. For prompt, confidential consideration, send resume to: Ms. P. Valendo, Schering-Plough Research, 60 Orange Street, Bloomfield, NJ 07003. We are an equal opportunity employer.

What you have in mind, we put in action.



Schering-Plough

SENIOR RESEARCH BIOCHEMIST

The Merck Sharp and Dohme Research Laboratories is currently offering an excellent career opportunity for a Biochemist within the Antifungal Discovery Group in the Department of Exploratory Microbiology and Genetics. The group is responsible for the identification of targets for inhibition of antifungal drugs, the development of screens with which to select potential inhibitors, and confirmation of the mode of action of new inhibitors by development of assays for specific inhibition. The successful candidate will have responsibility for establishing an independent and high caliber research program founded on the research goals of the group. The incumbent will direct and perform basic and applied research on the biochemistry of fungal processes, particularly membrane-associated functions. A Ph.D in Biochemistry or equivalent and significant postdoctoral experience is desired. Relevant interest and experience in enzyme purification, assay development and biochemical pathway dissection is preferred. Knowledge of fungal physiology and/or genetics a plus. Ability and desire to work as part of a team toward the development of antifungal antibiotics is essential.

Merck Sharp and Dohme Research Laboratories are located in Rahway, New Jersey, approximately 25 miles from New York City. Our salaries, benefits, and growth potential are excellent. Interested candidates should submit their curriculum vitae with the names of three references and salary requirements to **Ms. Dolores Barefield, Merck Sharp and Dohme Research Laboratories, P.O. Box 2000, WBD-362, Rahway, New Jersey 07065.**



Merck & Co., Inc.

UNIVERSITY of GUELPH

DEPARTMENTS OF VETERINARY MICROBIOLOGY AND IMMUNOLOGY AND

MOLECULAR BIOLOGY AND GENETICS

Applications are invited for a tenure track position as assistant professor immunology. Responsibilities include research and teaching in the area of immunogenetics, particularly applications of molecular genetics to antibody design and production. The principal orientation is towards health maintenance in veterinary and human medicine. The position will be central to a collaborative research program involving immunologists, geneticists and microbiologists. Appointment will be made in the Department of Veterinary Microbiology and Immunology with a joint appointment in the Department of Molecular Biology and Genetics. Applicants should have a PhD in immunology with emphasis on the molecular genetics of immunoglobulins and monoclonal antibodies.

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Subject to final budgetary approval.

Please address enquiries to Dr. Bruce Wilkie, Chairperson, Department of Veterinary Microbiology and Immunology, Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada, N1G 2W1. Applications will be accepted until June 30, 1989 or until the position is filled.

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**POSTDOCTORAL FELLOWSHIPS IN HUMAN
 AND PRIMATE DEVELOPMENT**

The Laboratory of Comparative Ethology is seeking outstanding candidates for several postdoctoral fellowships beginning October 1989, to study all aspects of human and primate development, including perceptual, cognitive, emotional, and social behaviors from infancy to adulthood. Doctoral training in psychology, biology, sociology, anthropology, or statistics is required. Candidates must be U.S. citizens or permanent residents. Salary range is from \$24,000 - \$27,000 depending on research experience. Relevant laboratories are directed by Drs. Marc H. Bornstein, Michael E. Lamb, John Newman, Stephen J. Suomi, and David Symmes. A CV and three letters of reference should be sent to:

**Fellowship Committee
 Laboratory of Comparative Ethology
 NICHD/NIH
 9000 Rockville Pike
 Building 31, Room B2B15
 Bethesda, Maryland 20892**



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This position is responsible for developing new laboratory applications and protocols for existing products, to act as a resource of technical knowledge for our marketing and technical service departments, to present technical seminars to university and industrial customers, and to participate in technical training for our field sales force. Minimum requirements include laboratory experience in Immunology, Molecular Biology, or Protein Chemistry and a Ph. D. in a related field. Excellent communication and public speaking skills are required. This position will require approximately 10% travel. Please respond to Dept. R.M.



PROTEIN CHEMISTS

These positions are responsible for purification, conjugation and characterization of immunoreagents for diagnostic test development. Minimum requirements include a B.S. Degree in Chemistry or Biochemistry plus 2 years post-graduate experience in protein chemistry. Preference will be given to applicants with a basic knowledge of preparative and analytical immunochemistry. Please respond to Dept. G.F.S.



At Boehringer Mannheim, we offer an exciting and challenging work environment as well as an excellent compensation and benefits program. If you meet the above requirements and would like to join an organization that is a leader in its field, we invite you to send your resume with salary history for confidential consideration. Please designate which position is of interest. To inquire about other opportunities not listed above, please call our job line at (317) 845-7035. Human Resources, Boehringer Mannheim, P.O. Box 50100, 9115 Hague Road, Indianapolis, IN 46250. An Equal Opportunity Employer

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POSITIONS OPEN

MOLECULAR CELL PHYSIOLOGISTS

The Department of Physiology and Biophysics of the University of Texas Medical Branch at Galveston invites applications for tenure-track positions at the assistant, associate, and full professor levels. Individuals with demonstrated competence in molecular approaches to cell physiology are especially encouraged to apply. Candidates must have Ph.D. and/or M.D. degrees. Salaries and start-up funds are highly competitive. The Department offers a stimulating scientific environment and is deeply committed to high-quality research and teaching. Send complete curriculum vitae, including publications list, brief statement of future research plans, and names and addresses of three references, to: **Mrs. Ann Elbert, Department of Physiology and Biophysics, University of Texas Medical Branch, Galveston, TX 77550.** *UTMB is an Equal Opportunity/M/F/H/V Affirmative Action Employer. UTMB hires only individuals authorized to work in the United States.*

MOLECULAR GENETICIST to conduct studies on the molecular mechanisms involved in neoplastic development. Must have at least 3 years of postdoctoral experience in the identification and expression of mammalian genes. Extensive experience with viral (including retroviral) vectors in cell lines and transgenic mice that express active oncoproteins and other products in inducible and constitutive expression systems is required. Extensive experience in the use of molecular diagnostic techniques such as the polymerase chain reaction to identify genetic abnormality in cancer cells is required. Annual starting salary is \$44,000. Submit curriculum vitae to: **The Squire Institute for Medical Research, Human Resources Department 100, P.O. Box 4000, Princeton, NJ 08543.** *An Equal Opportunity Employer.*

NEUROSCIENTIST, RESEARCH ASSOCIATE/INSTRUCTOR. Research position open immediately to study the electrophysiology and anatomy of basal forebrain cholinergic neurons in mammals. Candidates should have a Ph.D. in an appropriate discipline plus experience in immunohistochemistry and/or electrophysiology of CNS neurons. \$20,000 first year, 1 to 3 years of support. Send curriculum vitae and name of three references to: **Dr. Robert T. Matthews, Department of Medical Anatomy, Texas A&M University, College Station, TX 77843.**

NEUROSCIENTISTS, CELL AND MOLECULAR BIOLOGISTS. Tenure-track faculty positions open in gross and microscopic anatomy. Research interests in neurosciences, cell and molecular biology. Rank and salary commensurate with experience. Research start-up funds available. Send curriculum vitae, statement of research interests, and the names and addresses of three references to: **Dr. James C. Story, Chairman, Department of Anatomical Sciences, Meharry Medical College, 1005 D. B. Todd Boulevard, Nashville, TN 37208,** by 17 July 1989. *An Equal Opportunity/Affirmative Action Employer.*

OB/GYN FACULTY POSITION—POSTDOCTORAL—The Department of Obstetrics and Gynecology, University of Oklahoma Health Sciences Center in Oklahoma City is seeking an individual with research interest in endometriosis. Training in immunology, biochemistry; Ph.D. required. Must be skilled in student and resident teaching, research design, and statistical analysis. Send curriculum vitae and bibliography to: **Robert A. Wild, M.D., Associate Professor, Department of Obstetrics and Gynecology, University of Oklahoma College of Medicine, P.O. Box 26901, 4SP720, Oklahoma City, OK 73190.**

PHARMACOLOGIST: Faculty/research, assistant professor position for appropriate Ph.D. or Pharm.D. Qualifications and experience must include strong medical school teaching skills and research accomplishments. Interested qualified candidates are invited to send curriculum vitae including teaching experience, statement of research interests, research background, prior and current funding, and the names of three references to: **Robert E. Mancini, Ph.D., D.O., Associate Dean for Academic and Research Affairs and Chairman, Department of Pharmacology/Toxicology and Experimental Therapeutics, New York College of Osteopathic Medicine, Box 170, Old Westbury, NY 11568.**

POSITIONS OPEN

OREGON HEALTH SCIENCES UNIVERSITY CENTER FOR RESEARCH ON OCCUPATIONAL AND ENVIRONMENTAL TOXICOLOGY NEUROTOXICOLOGICAL SCIENCES

Newly created, state-supported, multidisciplinary Center in neuroscience-rich environment seeks potential or established independent **SCIENTISTS** primarily to conduct basic research on molecular and cellular mechanisms underlying adverse actions of chemicals on the mammalian nervous system. Special interest areas in xenobiotic-receptor-gene interactions, perturbations of gene-product expression and their relationship to neurodegenerative diseases. Other areas include behavioral toxicology; analytical and synthetic chemistry; chronotoxicology; developmental neurobiology and mutagenesis; geronto-neurotoxicology; immunoneurotoxicology; neuroepidemiology; molecular neurophysiology; molecular toxicogenetics; neuroendocrine and neurosensory toxicology; toxicogenosy; and tumorigenesis. Ten scientist and staff scientist positions available (start-up 1989 to 1991) on term, tenure-track or tenure appointments equivalent to assistant, associate or full professor, depending on qualifications, experience and potential. Salaries competitive with other major universities, with 50%+ generated from funded research. Submit fully developed application by 9 June 1989 to: **Dr. P. S. Spencer, Director and Senior Scientist, Center for Research on Occupational and Environmental Toxicology, Oregon Health Sciences University, P.O. Box 8366, Portland, OR 97207-8366.** *Oregon Health Sciences University is an Equal Opportunity Affirmative Action Employer.*

PHYSICAL OCEANOGRAPHER—CIRCULATION MODELER. The National Ocean Service has a GS-13 vacancy with duties that include application of circulation models to estuaries, verification measurements, and information products. Experience in circulation modeling required. Quality ranking factors include: extensive knowledge of physical oceanography and advanced mathematics; knowledge of engineering related to oceanographic measurements and data quantity; knowledge of automatic data processing. Submit SF171 to arrive no later than 30 May 1989 to: **NOAA/NCASC Personnel Division, 11420 Rockville Pike, Rockville, MD 20852.** For a copy of Vacancy Announcement NC/N-89-72NJH, call: 301-443-8105. Additional technical information can be obtained from **Dr. Henry R. Frey** at 301-443-8510.

PHYSIOLOGY OF SPACEFLIGHT

Physiologist to manage NASA Space Shuttle experiments on cardiovascular, endocrine and renal responses to weightlessness in small and large primates. Ph.D. required with strong academic record of research and publications in relevant field. Send résumé and three references to: **Dr. Susanne Churchill, Associate Director, Institute for Circadian Physiology, 677 Beacon Street, Boston, MA 02215;** by 1 June 1989.

POSTDOCTORAL FELLOW: One position available to participate in studies of DNA repair in mammalian cells. Will join research group utilizing enzymatic, mutational and molecular techniques to elucidate processes of DNA repair induced by x-rays and anticancer alkylating agents. Must have previous experience in biochemistry and/or molecular biology. Starting salary depends on experience. Send résumé with names of two references to: **W. D. Henner, M.D., Ph.D., Oregon Health Sciences University, L586, 3181 S.W. Sam Jackson Park Road, Portland, OR 97201.** *Equal Opportunity Employer.*

POSTDOCTORAL FELLOW: A postdoctoral position is available in the Department of Cardiothoracic Surgery of the New England Medical Center Hospitals and Tufts University School of Medicine beginning 1 July 1989 or earlier. Research will concentrate on the role of humoral mediators in solid organ preservation for transplantation. Salary commensurate with experience. Send curriculum vitae to: **Raymond J. Connolly, Ph.D., Director of Surgical Research, Box 37, New England Medical Center, 760 Washington Street, Boston, MA 02111.** *New England Medical Center is an Equal Opportunity Employer.*

POSITIONS OPEN

POLLUTION-CONTROL TECHNICIAN to conduct tests and field investigations to obtain data for use by company engaged in sewer systems flow studies and sewer systems flow measuring devices, using computerized instrumentation monitoring systems. Determines sources and methods of controlling pollutants in water and soil utilizing knowledge of engineering and physics. Collects samples of gases from sewer systems to assist in evaluation of atmospheric pollutants. Collects water samples from streams and lakes to assess pollution problem. Prepares samples to testing, records date, and prepares summaries and charts for review. Must have B.S. in physics. Must be able to extensively travel to job sites which may be located anywhere in the United States. Placing instruments in sewer systems by going through a manhole is routine daily work. \$27,000 per year plus per diem and company van for travel. Résumé to: **Mrs. Armstrong, Alabama State Employment Service, P.O. Box 428, Huntsville, AL 35804.** Job Order No. AL0589248.

POSTDOCTORAL FELLOW: Two positions: (i) analysis of rat liver adhesion molecules (ii) characterization of hepatic or pancreatic stem cells. Competitive salaries. Candidates with a Ph.D. or M.D., and experience in molecular genetic, developmental, or immunological methods should submit their curriculum vitae, reprints, and names of three references to: **Dr. Douglas Hixson, Medical Oncology, Rhode Island Hospital, 593 Eddy Street, Providence, RI 02903.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW IN INSECT BEHAVIOR: A recent Ph.D. graduate in animal behavior, ecology, entomology or a related field is sought to collaborate on studies of sexual selection and behavior in field crickets. Research includes field work and studies in a modern and well-equipped laboratory. Responsibilities include assisting in supervision of graduate and honors research students and some undergraduate teaching. The initial appointment is for 1 year and is renewable. Intended starting time is fall/winter, 1989. Send curriculum vitae including the names, addresses, and telephone numbers of three referees by 15 July 1989 to: **Dr. William H. Cade, Department of Biological Sciences, Brock University, St. Catharines, Ontario, Canada L2S 3A1.** *In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Brock University is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION available June 1989 or thereafter, for studies of bacterial chromosome structure, involvement of DNA gyrase, and function of prokaryotic repetitive sequences. This project will employ biochemical, recombinant DNA, and modern molecular biological techniques. Experience in nucleic acid biochemistry and enzyme purification preferred. Electron microscope expertise desirable. Send curriculum vitae and names/telephones of three references to: **Dr. G. Ferro-Luzzi Ames, Biochemistry Department, University of California, Berkeley, CA 94720.**

POSTDOCTORAL POSITION available immediately to study regeneration in the central and peripheral nervous system. Both in vivo and in vitro models will be used. Experience with animal models, cell biology, immunocytochemistry and tissue culture desirable. Send curriculum vitae, names, addresses, and telephone numbers of three references, and a brief description of research experience to: **R. Pitas, Gladstone Foundation Laboratories for Cardiovascular Disease, University of California, P.O. Box 40608, San Francisco, CA 94140-0608.**

POSTDOCTORAL POSITION TUMOR VIROLOGY NYU MEDICAL CENTER

We have recently discovered RNA covalently linked to SV40 TAg and to the oncogene product p53. The RNAs, the bonding and the possible significance to oncogenic transformation will be studied. Must be U.S. citizen or permanent resident. Send curriculum vitae and names of three references to:

**Dr. Robert Carroll
Department of Pathology
New York University Medical School
550 First Avenue
New York, NY 10016**

POSITIONS OPEN

POSTDOCTORAL OR RESEARCH POSITION AVAILABLE IN CELLULAR IMMUNOLOGY FOR Ph.D. OR M.D.

Studies deal with immunopharmacology of immunosuppressive agents including mechanisms of action at the cellular and molecular level, and use in tolerance induction as part of a major program in transplantation.

Salary is commensurate with experience and begins at \$24,000.

Send curriculum vitae together with names of three references to: **Marvin R. Garovoy, M.D., Director, Immunogenetics and Transplantation Laboratory, University of California, 513 Parnassus Avenue, Health Sciences East, Room 520, San Francisco, CA 94143.**

The University of California is an Equal Opportunity/Affirmative Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITION available for a scientist interested in the enzymology and molecular biology of peptide hormones including angiotensin, natriopeptins and hypothalamic peptides. Send résumé and three references to:

**Professor I. B. Wilson
Department of Chemistry
and Biochemistry
University of Colorado
Boulder, CO 80309-0215**

The University is an Equal Opportunity Employer.

POSTDOCTORAL POSITION IN HIV RESEARCH FOR NUCLEIC ACID CHEMIST

A postdoctoral/research associate position is available immediately. We need a colleague to join in our effort to scale up synthesis of antisense oligonucleotides and to join in collaborative studies on their chemotherapeutic effect against HIV and other viral diseases. Both unmodified and internucleotide phosphate backbone modified analogs of oligodeoxynucleotides are under study. [*Proc. Natl. Acad. Sci. U.S.A.* **85**, 5507-5511 (1988); *ibid.*, pp. 7079-7083; *ibid.*, pp. 7448-7451.] The candidate should have a strong background in synthetic nucleic acid chemistry. Salary will depend on degree of experience. Contact: **Dr. Sudhir Agrawal (508-842-8921, extension 325) or Dr. Paul Zamecnik (508-842-8921, extension 331)** or else send curriculum vitae and names and telephone numbers of three references to either of the above: **c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

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POSTDOCTORAL POSITION MOLECULAR ENDOCRINOLOGY

Available summer 1989 to study glycoprotein hormone gene expression using recombinant DNA and gene transfer procedures. Salary competitive. Send résumé and three references to: **Dr. Margaret A. Shupnik, Box 511, University of Virginia Health Sciences Center, Charlottesville, VA 22908.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS

Two postdoctoral positions are available in a multidisciplinary program to study the molecular biology of the largest and most destructive group of viral plant pathogens, the potyviruses. Laboratories in the Departments of Biochemistry, Agronomy and Plant Pathology at the University of Kentucky are engaged in studies of synthetic infectious RNA transcripts, transgenic plants carrying potyviral genes, cistron mapping, polyprotein processing, function of viral proteins, and replication strategy of potyviruses. The salary is \$20,000 and positions are available immediately. Applicants should submit curriculum vitae and name of three references to either:

Robert E. Rhoads **Arthur G. Hunt**
Department of Biochemistry **Department of Agronomy**
MS 607 Medical Center **N212L Agricultural**
University of Kentucky **Sciences North**
Lexington, KY 40536 **University of Kentucky**
 Lexington, KY 40546

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

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**Human Resources Department
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POSITIONS OPEN

POSTDOCTORAL POSITION

Available for research on mechanisms of pathogenicity of streptococci and *Bacteroides*. Work involves transposon mutagenesis, gene cloning, and chemical characterization of virulence factors. Requirements include a recent Ph.D. in microbiology or related field and experience in molecular biology, bacterial physiology, or biochemistry. Appointment is for up to 3 years. Please send curriculum vitae and three letters of recommendation to: **Dr. M. W. Stinson, Department of Microbiology, School of Medicine and Biomedical Sciences, State University of New York, Buffalo, NY 14214.** *SUNY is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately for a cell biologist to study endocytosis and the interactions of pathogens with plants. The applicant should have experience in biochemical, molecular, and ultrastructural techniques. Prior work need not be with plants or in plant pathology. One-year appointment (renewable for two). Competitive salary. Send curriculum vitae, names of three references, and relevant publications to: **Dr. Lawrence R. Griffing, Department of Biology, Texas A&M University, College Station, TX 77843; telephone: 409-845-1625.** *TAMU is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION

Postdoctoral position available immediately in a multidisciplinary viral immunology research center to study the immune responses to human cytomegalovirus. Experience in molecular biology or immunology is required. Send curriculum vitae, research experience, and three letters of recommendation to:

**Ms. Marge Moore
Biomedical Research Institute
Children's Hospital of St. Paul
345 North Smith Avenue
St. Paul, MN 55102**

POSTDOCTORAL POSITION available immediately to participate in research directed toward a molecular understanding of cell differentiation and reproduction in the filamentous fungus *Aspergillus nidulans*. Classical and molecular genetic approaches will be used to investigate the expression of essential genes and biochemical functions of gene products. Experience in molecular biology or genetics is desirable. Send résumé and three letters of reference to **Dr. Bruce L. Miller, Department of Bacteriology and Biochemistry, University of Idaho, Moscow, ID 83843.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION—BOTANY—to study maternal and paternal effects on pollen tube growth, ovule fertilization, and embryo development. Skills in structural botany and interest in ecological/evolutionary questions required. Begins 1 September 1989. Send curriculum vitae and three letters of reference to: **Dr. D. L. Marshall, Biology Department, University of New Mexico, Albuquerque, NM 87131** by 10 June 1989. *UNM is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN MOLECULAR NEUROBIOLOGY. Immediate opening on NIH grants to study the neurotrophic effects of the insulin-like growth factor gene family, nerve regeneration, synaptogenesis, or pathogenesis of diabetic neuropathy. Location near scenic Rocky Mountains. Submit curriculum vitae with names, and telephone numbers of three references to: **Dr. Douglas Ishii, Physiology Department, Colorado State University, Fort Collins, CO 80523.** *CSU is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS

Several postdoctoral positions are available immediately to work on channel protein—structure and function. Research experience in membrane biophysics, molecular biology or protein engineering is required. Send résumé, reprints, and two names of references to: **Dr. Mauricio Montal, University of California San Diego, La Jolla, CA 92093-0319.** *An Equal Opportunity/Affirmative Action Employer.*

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SCIENTISTS AND ASSOCIATE SCIENTISTS

Positions are currently available for protein chemists, molecular biologists, organic and analytical chemists with strong backgrounds in structural chemistry and separation sciences.

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SEQUENCING—investigate/develop new chemical methodologies for the analysis of proteins. Experience in sample preparation, protocol development and methods troubleshooting required.

A BS, MS or PhD in Biochemistry, Analytical or Organic Chemistry, or an equivalent combination is required. Practical laboratory experience from 1–5 years and indepth understanding of instrumentation essential. (Ref. #SCI89KW)

Qualified candidates may send their resume, (INDICATING THE REFERENCE CODE), to Applied Biosystems, Inc., H.R. Dept., 850 Lincoln Centre Drive, Foster City, CA 94404. We are an equal opportunity employer.



Regulatory Toxicologists (Senior and Postdoctoral)

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Senior Toxicology Program Manager

The successful candidate will have a PhD in Toxicology or related medical field and 3 to 5 years of industrial, government or contract laboratory experience in toxicology. Knowledge of whole animal toxicology is essential. You will design, monitor and review the full range of toxicity testing performed in-house or on-contract for EPA and FDA registrations of pesticides and animal drugs.

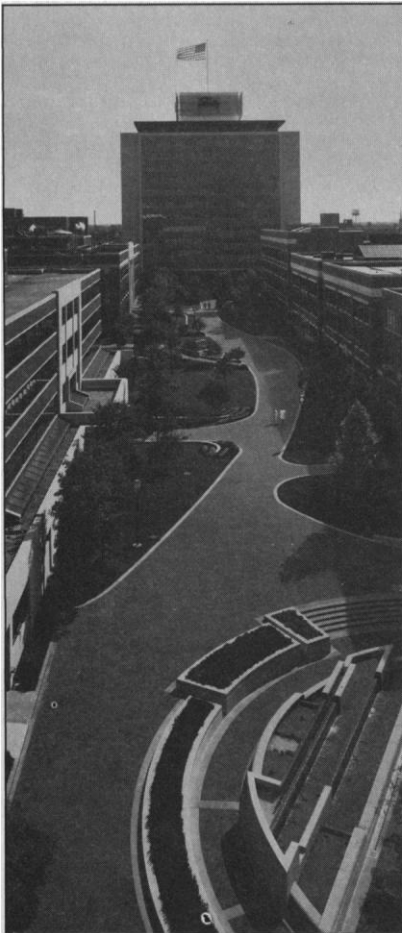
Postdoctoral in Regulatory Toxicology

We offer a postdoctoral position which requires a PhD in Toxicology or related medical field.

American Cyanamid offers a competitive compensation and benefits package. For prompt and confidential consideration, please forward your resume and salary history, indicating the position of your specific interest, to the Employment Office, Dept. SC-55, American Cyanamid Company, Agricultural Research Division, P.O. Box 400, Princeton, New Jersey 08540. An Equal Opportunity Employer, M/F/H/V.

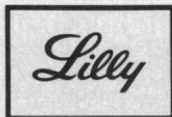


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Molecular and Cell Biology Research



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To further build its research capabilities, Lilly is seeking self-motivated, innovative scientists to plan, organize, and manage programs for the Molecular and Cell Biology Division.

The ideal candidates will have a Ph.D. in biochemistry or molecular biology and at least two years of postdoctoral research experience in one of the following areas:

- Receptor cloning and/or study of mechanisms that modulate receptor response to ligand binding.
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- Transcriptional regulation of receptor genes.

In addition, these scientists must have the leadership capabilities needed—technical, communication, interpersonal, and organizational skills—to build a research program.

Eli Lilly and Company is committed to scientific excellence. Lilly provides a stimulating professional atmosphere with many opportunities for collaborative, multidisciplinary research. The company offers an attractive total compensation program. Entry level and salary will be based upon each candidate's experience.

For prompt consideration, please forward your *curriculum vitae* to:

John W. Crooks, Manager
Ph.D. Recruitment (MCB)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

Senior Research Biologist

FMC CORPORATION, a Fortune 150 leader in the field of Agricultural Chemical Research, is looking for a Senior Research Biologist to support our insecticide research.

This position will be responsible for the laboratory profiling of potential insecticide field candidates, including test design, result interpretation and follow-up testing. This individual will also participate in the selection and recommendation of candidate insecticides for initial field testing.

As Research Biologist you will be responsible for design and coordination of FMC's field screening and field evaluation program on a worldwide basis including the analysis of field results and the preparation of product profiles prior to hand-off to full commercial development.

In addition, the position offers staff supervisory, safety and security responsibilities. Individual will also have the opportunity to participate in frequent presentations to management.

Job candidates must possess a PhD in Entomology with 3-5 years post-PhD industry experience desirable, including experience conducting field trials involving major pest crop market segment. Individual should also be familiar with the strengths and weaknesses of commercial insecticides.

FMC offers an R & D center in a prime location, challenging work, and excellent benefits and a salary commensurate with your experience. Please forward your resume to: **Melody Evans, Dept. 89-24, FMC CORPORATION, Chemical R & D Center, Box 8, Princeton, NJ 08543.** Females are encouraged to apply. Equal Opportunity Employer, M/F.

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Associate Director / Director Regulatory Affairs

Merck, Sharp and Dohme Research Laboratories, the world leader in Pharmaceutical Research, is seeking an experienced scientist for the position of Associate Director/Director for its Regulatory Affairs Department in Blue Bell, PA. The successful candidate will have an M.D. or Ph.D. and possess 5 to 10 years scientific experience in at least two of the following areas: Molecular Biology, Virology, Vaccine Development, Quality Control, Clinical Infectious Disease or Regulatory Liaison.

Major responsibilities will include liaison with regulatory agencies worldwide regarding a wide range of issues involving vaccines, biologicals and anti-virals, providing the Company with input regarding worldwide regulatory requirements, and directing our research laboratories in meeting these requirements.

Merck offers excellent salary opportunities and a benefits program that includes a tax sheltered income program, group life insurance, major medical and dental coverage, educational assistance and relocation. Our facilities are located in an attractive suburban Philadelphia area.

Interested candidates should submit their resume and salary requirements in complete confidence to:

Janet E. Adams (BL1-1)

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PENNSTATE



The Pennsylvania State University
College of Medicine

NEUROSCIENCE RESEARCH IN ANESTHESIA

The Department of Anesthesia of The Pennsylvania State University College of Medicine and the University Hospital of The Milton S. Hershey Medical Center is inviting applications for a research faculty position to begin in the Summer or Fall of 1989. The Department presently has four areas of concentration in research related to physiology and pharmacology of the anesthetic state: including cardiovascular, pulmonary, neurophysiological and neuropharmacological areas. We are seeking candidates with a Ph.D. or M.D. qualification with substantial post doctoral experience in one or more of the following areas: mechanisms of drug action, neurotransmitters, membrane receptors, signal transduction, ion-channels, and mechanisms of consciousness. We are particularly interested in candidates who are able to relate their research to the questions of mechanisms of pain and anesthesia. Significant research accomplishment and demonstrated ability to obtain independent funding are essential. Excellent opportunities exist for research collaboration and a joint appointment in a basic science department and participation in the Neuroscience Program.

Applicants should submit, prior to May 26, 1989, curriculum vitae, reprints, statement of current and planned research interests, and names of at least three references to:

Julien F. Biebuyck, M.B., D.Phil.
Eric A. Walker, Professor and Chairman
Department of Anesthesia
THE PENNSYLVANIA STATE UNIVERSITY
COLLEGE OF MEDICINE
THE MILTON S. HERSHEY MEDICAL CENTER
P.O. Box 850
Hershey, PA 17033

Equal Opportunity/Affirmative Action Employer

DEPARTMENT OF SURGERY POSTDOCTORAL RESEARCH FELLOWSHIPS METROHEALTH MEDICAL CENTER CASE WESTERN RESERVE UNIVERSITY

The Surgery Department at MMC/CWRU announces the availability, beginning July 1, 1989, of several Postdoctoral (M.D. and/or Ph.D.) research fellowships.

A fundamental goal of basic research in the Surgery Department is the application of basic biochemical, immunological, biophysical, and morphological methods to important biological questions related to the surgical disciplines. Special areas of methodology currently emphasized in the Department include: a wide range of fluorescence methods (steady-state, lifetime, polarization, FRAP, phosphorescence), basic immunology and cellular immunology, differential scanning calorimetry, and FPLC and HPLC protein, peptide, and phospholipid isolation and characterization. Extensive facilities also exist in the Department for tissue culture and basic molecular biological studies.

Applicants experienced in biophysical chemistry, membrane biophysics, spectroscopy, immunology, and molecular biology who are interested in applying these disciplines to model as well as biological systems are encouraged to apply. Clinically trained applicants interested in gaining the expertise to apply basic methodology to biomedical problems should also consider applying. Specific areas of research will depend on the Fellow's interests as well as those of the Department. Substantial independence in the execution and development of research problems will be afforded each fellow. Stipends are approx. \$27,000. Call (216) 459-4456 for more detailed information.

MetroHealth Medical Center & Case Western Reserve University are both Equal Opportunity Employers which encourage applicants from qualified minority groups and women.

BEHAVIORAL PHARMACOLOGIST Pharmaceutical Products Division

The growth and development of Abbott Laboratories over the last 101 years has been an exciting process. We've achieved our world leadership position through aggressive and well-funded research in diverse medical areas. Our Pharmaceutical Products Division is one such area where discoveries and innovations are constantly being made.

We are seeking a Ph.D. level behavioral pharmacologist to become part of an interdisciplinary team which seeks to identify novel therapeutic agents for disorders of cognitive function. The successful candidate will work in an environment committed to research in CNS therapeutic agents, using the most advanced approaches in neurobiology and chemistry to achieve these goals. A minimum of 2 years postdoctoral experience, and a record of demonstrated scientific achievement are required. Previous industrial experience and expertise in behavioral testing related to cognitive function are highly desirable.

In addition to excellent salaries and a benefits package that includes profit sharing and a stock retirement plan, we offer a beautiful suburban location approximately 30 miles north of Chicago. For consideration, please send your resume with salary history to: **Patricia Handy, Corporate Placement, Dept. SCI/5-12, Job #0001, Abbott Laboratories, 1 Abbott Park Road, Abbott Park, IL 60064.** (To facilitate handling your resume, please indicate Job number on your cover letter or resume.) Abbott is an Affirmative Action Employer.

ABBOTT LABORATORIES



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CNS Pharmacology Postdoctoral Fellowship Pfizer Pharmaceuticals

A postdoctoral fellowship in CNS pharmacology is now available in our New Drug Development group located in New York City. As a member of a multidisciplinary project team, you will have the opportunity to apply pharmacologic principles to the preclinical and clinical development of new drugs. The fellowship covers a 1-2 year period. Qualified individuals will have completed all requirements for the doctoral degree and have no more than one year of post-doctoral (non-industry) experience. For further information contact: Charlene Mirett, Associate Personnel Manager, Pfizer Pharmaceuticals, 235 East 42nd Street, New York, NY 10017. An equal opportunity employer.



Associate Scientists/ Scientists Protein Biochemistry

Smith Kline & French, a leader in Pharmaceutical Research, has exciting opportunities for Scientists to join its expanding Protein Biochemistry Department. The selected individuals will design, conduct and interpret experiments involving the purification and characterization of vaccine, diagnostic and therapeutic protein candidates as part of our broad programs in the new research area of biopharmaceuticals.

The successful candidate(s) will have:

- BS/MS in Biochemistry or Chemistry with 2+ years laboratory experience in protein purification and characterization.
- Experience in column chromatography including HPLC, FPLC, etc.
- Experience in state-of-the-art techniques in protein analysis including SDS-PAGE, Western blotting and ELISA.
- Excellent oral and written communication skills.
- High motivation with the ability to work independently and as a team member.

Our beautiful, new research facility is located in suburban Philadelphia, near Valley Forge. Smith Kline & French provides a stimulating and challenging environment with opportunity for professional growth. We offer an attractive compensation and benefits package. For confidential consideration, please forward your resume to: N. Hasson, H0105, Smith Kline & French Laboratories Research & Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

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BIO-ANALYTICAL CHEMIST

BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc. is engaged in the discovery, development, manufacture and marketing of novel therapeutic agents. The following position is available in the department of Drug Metabolism and Pharmacokinetics at our Research and Development Center, located in DANBURY, CT.

This position is responsible for performing the following activities:

- Developing new methods for quantitation of compounds in plasma and tissue.
- Preparing qualitative comparisons of metabolite profiles in various species.
- Isolating metabolites for identification.
- Developing isolation methods for metabolites labeled with trace radioactivity.
- Developing clean-up procedures and methods for quantitation of drugs and metabolites.
- Serving as representative for the department on project and development teams.

Requirements include a Bachelor's or Master's Degree in Analytical Chemistry, Biochemistry or similar discipline with a number of years related experience. Ability to analyze data, troubleshoot instrumentation and a familiarity with computers. Experience with a variety of chromatographic systems (TLC, HPLC, LC, GC) and isolation, identification and quantitation of trace compounds in complex biological matrices.

BOEHRINGER INGELHEIM offers a competitive salary and benefits package including relocation assistance, modern facilities and the opportunity to have your contributions recognized. If interested, please send your curriculum vitae to Dept. JC-1S-948, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. We are an equal opportunity employer m/f/h/v.



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SCIENCE
The Global Weekly of Research

UPCOMING
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ISSUE

Frontiers in Biotechnology: Genetic Engineered Species

JUNE 16, 1989

This issue of *SCIENCE* highlights a turning point in science, the point at which basic, theoretical science — knowledge of gene regulation and growth regulation, for example — begins to yield practical benefits to mankind.

The issue concentrates on what is being done with the technology and the potential for the future rather than on the technology itself. For example:

- How genetically-altered species of plants, animals and bacteria will transform the world's agriculture and the pharmaceutical industry.
- How scientists are developing the capability to precisely introduce changes into desired genes and to restore gene function in ways that will revolutionize gene therapy.

This issue will be referred to, discussed, and retained. Lead articles are listed below:

Topics

Homologous Recombination
in Mammalian Systems
Perspectives in Genetically
Engineered Plants
Perspectives in Genetically
Engineered Animals

Genetically Engineered
Bacteria
Genetic Engineering
of Filamentous Fungi

Bonus: Full page ads in this issue will also be studied by Harvey Research

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NEUROSCIENTISTS

Faculty Positions Open

Tenure-track Appointment. Associate or Assistant Professor. Rank and salary commensurate with career development. Research, service, and teaching. Participate in graduate training program. Minimum requirements: Ph.D.; 2 years of postdoctoral experience in neuroscience research; and funded and/or fundable research program.

Fixed-term Appointment. Research Assistant Professor or Research Associate. Rank and salary commensurate with career development. Position funding and continuation dependent upon extramural grant funds. Minimum requirements: Ph.D. with research in neuroscience.

Send letter of application, curriculum vitae, and names of 3 references to: **Dr. Carl R. Morgan, Department of Anatomy and Cell Biology, East Carolina University, School of Medicine, Greenville, NC 27834-4354.** East Carolina is a constituent institution of the University of North Carolina, an Affirmative Action/Equal Employment Opportunity Employer. Federal law requires proper documentation of identity and employability at the time of employment. It is requested that this documentation be included with curriculum vitae. Applications should be received by **16 June 1989.**

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study the structure-function relationships of the glycoprotein of feline immunodeficiency virus (FIV). Applicants with experience in recombinant DNA methodologies, particularly in the construction and screening of genomic and cDNA libraries preferred. Annual salary range \$20,000 to \$25,000, dependent upon experience. Please send curriculum vitae and names of references to: **Dr. Edward Stephens, Department of Infectious Diseases, College of Veterinary Medicine, Box J-137, J. Hillis Miller Health Center, University of Florida, Gainesville, FL 32610-0137.** The University of Florida is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION IN BIOCHEMICAL PHARMACOLOGY for recent Ph.D. interested in the biochemical modulation of anticancer drug activity. Research in the use of nucleoside transport inhibitors to increase the selectivity of antimetabolites against human tumors growing in culture or as xenografts in mice. [J. Biol. Chem. 263, 19419 (1989)] Salary \$22,000 to \$25,000. Send curriculum vitae and names of four referees to: **Judith A. Belt, Ph.D., Department of Biochemical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, P.O. Box 318, Memphis, TN 38101.**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION IN NEUROBIOLOGY

Associate needed for study of axon growth and synapse formation. Send curriculum vitae, a description of experience and career goals, and names of three references to: **Dr. Kenneth J. Muller, Department of Physiology and Biophysics, University of Miami School of Medicine, P.O. Box 016430, Miami, FL 33101.** For further information, call: 305-547-6821.

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS available immediately to study biochemical and molecular mechanisms of chemical carcinogenesis. Projects in several areas are available using mouse epidermis in vivo and/or keratinocyte culture models including: (i) DNA-repair mechanisms in keratinocytes in relation to differentiation stage and type and location of DNA lesion; (ii) role of oxidation in epidermal toxicity and skin tumor promotion by anthrones; and (iii) role of epidermal protein kinase C and other signal transduction pathways in mediating genetic differences in gene expression and tumor promotion in inbred mouse strains. Background in enzymology, free radical biochemistry, or molecular biology techniques would be helpful. Salary negotiable. Send curriculum vitae and the names and addresses of three references to: **Dr. John DiGiovanni, University of Texas M. D. Anderson Science Park, Research Division, P.O. Box 389, Smithville, TX 78957.** The University of Texas M. D. Anderson Cancer Center is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately for Ph.D. with strong background in mammalian cell biology/membrane biochemistry to join a research project investigating mammary epithelial cell differentiation, under the direction of **Dr. Karen Thompson.** Emphasis will be placed on determining if stage-specific markers for normal mammary epithelial cell development can be defined.

Send curriculum vitae with complete reference information to: **Children's Hospital Oakland—Research Institute, Human Resources Department 1455, 747 52nd Street, Oakland, CA 94609.** Equal Opportunity Employer.

RESEARCH ASSOCIATE with graduate degree or experienced **RESEARCH ASSISTANT** with B.S. or A.B. and knowledge of cell culture techniques, blotting and other molecular biology procedures, and/or protein chemistry. Ongoing research program involves mechanisms of promotion of biosynthesis of inhibitors of hemostatic enzymes; including specific mRNA production by human cells, analysis of certain plasma proteins, using functional and analytical techniques including coagulation and enzymatic assays, and gel electrophoresis. Salary commensurate with qualifications; immediate opening. **Children's Hospital Research Foundation (CHRF), Elland and Bethesda Avenues, Cincinnati, OH 45229 (Dr. V. H. Donaldson).** Telephone: 513-559-4244. CHRF is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITIONS available for recent Ph.D.'s to participate in an active research program on the structure, regulation and expression of DNA repair genes in human cells. Current efforts focus on the transcriptional expression of DNA repair genes and the intracellular localization of DNA repair enzymes in relation to DNA damage and repair. Submit curriculum vitae and the names of three references to: **Dr. Michael A. Sirover, Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS IN INSECT ENDOCRINOLOGY available 1 June 1989 to study (i) molecular aspects of a juvenile hormone receptor gene in *Drosophila* (T. Wilson) or (ii) ecdysone regulation of male accessory gland genes in *Tenebrio* (G. Happ). Experience in molecular biology or biochemistry preferred. Send curriculum vitae to either of the above at: **Department of Zoology, University of Vermont, Burlington, VT 05405.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH position available to work on the molecular cell biology of phagocyte oxidant and anti-oxidant systems. A Ph.D. or equivalent in molecular biology or a related field is preferred. Contact: **Dr. Peter E. Newburger, Departments of Pediatrics and Molecular Genetics—Microbiology, University of Massachusetts Medical School, Worcester, MA 01655.** Telephone: 508-856-4225. The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE

A position is available at the level of postdoctoral research associate to teach medical physiology to first-year medical, dental, and pharmacy students, to teach graduate level course in physiology, to conduct interdisciplinary research on the central nervous system effects of bacterial products and immune response modifiers, and to direct support personnel. Other special requirements are: knowledge and experience in use of HPLC and gas chromatography, knowledge and experience in use of mass spectrometry, experience in microbiological techniques including growth of bacteria and isolation of various bacterial products and relevant publications. The annual salary will be \$24,000. Applicants with a Ph.D. degree send curriculum vitae and the names of three references to: **Jack Hiltzheim, Tennessee Job Service, 1309 Poplar, Memphis, TN 38104.** An Equal Opportunity Affirmative Action Employer. Minorities and women are encouraged to apply.

POSTDOCTORAL RESEARCHER REGULATION OF I-A EXPRESSION THE OHIO STATE UNIVERSITY

Postdoctoral position available 1 July 1989 to study regulation of MHC Class II expression that is controlled by the Bcg gene. Applicants should have a Ph.D. degree with experience in membrane biochemistry, molecular biology, immunology or microbial-host cell interactions. Please send a copy of your curriculum vitae and names of three references to: **Dr. Bruce S. Zwilling, Department of Microbiology, The Ohio State University, 484 West 12th Avenue, Columbus, OH 43210.** The Ohio State University is an Affirmative Action/Equal Opportunity Employer and specifically invites and encourages minority and women applicants.

The Department of Chemistry, Yale University, invites applications for a tenured position at the level of **PROFESSOR** in the area of organic chemistry, especially as it relates with other areas of chemistry such as theory, materials science, and biochemistry. We are conducting a parallel search for those interested specifically in synthetic organic chemistry. An outstanding, established teacher-scholar is sought whose research interests will complement those of the current staff. The position is to be occupied in the academic year 1989 to 1990.

Applicants should submit curriculum vitae, and a list of publications to: **Professor Peter B. Moore, Chairman, Department of Chemistry, Yale University, 225 Prospect Street, P.O. Box 6666, New Haven, CT 06511-8118** before June 1989. Yale University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL RESEARCH IN NEUROBIOLOGY—The Arizona Research Laboratories (ARL) Division of Neurobiology, a research unit devoted to cellular, developmental, and molecular neurobiology and neuroethology of insects, invites inquiries from potential postdoctoral trainees. Applicants should send résumé, statement of interests and plans, and names and addresses of three references to: **Dr. John G. Hildebrand, Director, ARL Division of Neurobiology, 611 Gould-Simpson Building, University of Arizona, Tucson, AZ 85721.** The University of Arizona is an Equal Opportunity/Affirmative Action Employer.

PROTEIN AND NUCLEIC ACID BIOCHEMIST HOWARD HUGHES MEDICAL INSTITUTE AT THE MASSACHUSETTS GENERAL HOSPITAL

A unique and exciting opportunity is open for an appropriately qualified biochemist to operate a Microchemical Facility equipped with state-of-the-art instrumentation. Functions of the facility include protein microsequencing, peptide and nucleic acid synthesis and characterizations. The studies involve the design of protein analogs of important hormone ligands and components of nuclear transcription factors. In addition to supervision of the facility, opportunities exist for independent and/or collaborative research on the structural and functional aspects of bioactive proteins. Prerequisites are a M.S. or Ph.D. degree in biochemistry. Top salary and extensive benefits are available. Send résumé to: **Joel F. Habener, M.D., Howard Hughes Medical Institute, Wellman 3, Massachusetts General Hospital, Boston, MA 02114.**

RESEARCH ASSOCIATES AND Ph.D.'s IN MARINE SCIENCES

Several positions on: production and export of phytoplankton to (a) larval and adult scallops and (b) cod larvae (with **L. Legendre**); transport/feeding/survival of (c) scallop larvae (with **J. J. Dodson**) and (d) cod larvae (with **L. Fortier**); (e) aquaculture of scallops in open waters (with **J. H. Himmelman**); (f) development of clonal antibody for identification of scallop larvae (with **J. J. Dodson**); (g) small-scale hydrodynamics of larval scallop settlement (with **E. Bourget**). Research associates: Ph.D. preferably with postdoctoral experience [except (g): research engineer]. Laval University is French-speaking, but research may be conducted in English. Send curriculum vitae, representative reprints, names, addresses, and telephone numbers of three referees, and specify a firm date of availability, to: **GIROQ, Département de biologie, Université Laval, Québec, Québec, Canada, G1K 7P4.**

RESEARCHER/INFECTIOUS DISEASE IMMUNOLOGY to perform research on projects related to T cell responses to bacterial polysaccharides based on previous experience with tissue culture. Work relates to T cell responses to bacteria, namely a host's response to polysaccharide antigens. Will investigate properties of T cells which respond to human bacterium pathogen *Bacteroides fragilis*. Will work in isolation of clones of polysaccharide-specific T cells. Must use previous experience in T cell manipulation and in animal models of infection to: expand T cells responsive to polysaccharide in vitro; clone T cells which respond to polysaccharide; characterize those cells; define which cells are present in abscesses mice develop in response organism; measure release of lymphokines (mediators) from immune cells; and define their role in affecting response. Will instruct other research associates in growth of antigen-specific T cell clones involving cloning and characterization of *herpes simplex virus*-specific T cells. Candidate must possess an M.D. in medicine together with 1 year in position offered. Must also possess demonstrated expertise in producing and maintaining murine and human T cells lines and clones; demonstrated expertise in in vivo transfer of cells; demonstrated expertise in performing research involving small animal laboratory techniques; demonstrated expertise in cell culture techniques; demonstrated expertise in functional and biochemical characterizations of T cell products. Salary is \$35,000 per year for 5-day, 40-hour work week. Résumés only to: **Massachusetts Department of Employment and Training, Charles F. Hurley Building, 19 Staniford Street, Boston, MA 02114.** Job Order #9550. Equal Opportunity Employer.

Molecular Biologist Cell Biologist

Somatix Corporation is a growing biotechnology company developing applications of somatic cell delivery systems in the field of human gene therapy. We are seeking talented scientists to join with us in investigating and building the foundations of a new and exciting technology in human health care. Research positions are available for qualified individuals at the Ph.D., M.S. and B.S. level.

Staff Scientists

Molecular Biologist Candidate should possess a Ph.D. in molecular biology, virology or related discipline and have a strong background including publication record in molecular cloning, screening cDNA libraries, DNA sequencing and experience with PCR technology. The successful candidate will be expected to contribute to the development of gene expression systems designed to address the specialized requirements of our ongoing cell biology programs.

Cell Biologist Candidate should possess a Ph.D. and have extensive experience in cell biology, biomatrix materials or angiogenesis. The successful candidate will be expected to contribute to the development of somatic cell-based delivery systems.

We offer a competitive salary and benefits package including stock options. **Somatix** combines a stimulating academic research environment with the opportunities to be found in a start-up company with excellent career potential for its employees. Qualified individuals should apply to: **Somatix Corporation**.

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1 Kendall Square, Building 650, Cambridge, MA 02139

TOXICOLOGY

MAMMALIAN TOXICOLOGIST

FMC Corporation, a Fortune 150 international machinery and chemical corporation has an opening for a Mammalian Toxicologist at our Chemical Research and Development Center located in Princeton, NJ. Responsibilities will include evaluating and interpreting data from mammalian toxicology programs and preparing risk assessments; assisting in the compilation and dissemination of technical information; acting as study director/study monitor for Mammalian Toxicology programs; assisting registration specialists with toxicology studies necessary for registration of industrial and agricultural chemicals; and preparing MSDS's and product literature.

Position requires an MS/PhD degree in Toxicology or related field, and/or up to 2 years industrial experience. FMC offers excellent salary and benefits package. Please send resume with salary requirements to: **FMC CORPORATION, Dept. 89-27, P.O. Box 8, Princeton, NJ 08543. ATTN: Personnel Manager.** Equal Opportunity Employer, M/F.

FMC®

DIRECTOR

Department of Biosciences and Bioengineering

Southwest Research Institute has an immediate opening for a senior professional to head its **Department of Biosciences and Bioengineering**.

The Department is currently engaged in contract research and development work for both industrial and government clients in the general areas of biomedical instrumentation, field and clinical evaluations, human factors and performance assessment, toxicology and applied pharmacology. These activities are supported by well-established institute divisions in such fields as chemistry and chemical engineering, engineering and materials sciences, automation and data systems, and others.

Applicants should possess advanced degrees in bioengineering and/or biosciences related to the above mentioned areas and have a strong background in medical and physiological effects. Applicants should also possess superior management skills and leadership ability as well as a proven track record in contract research and development. Knowledge of and experience with regulatory agencies would be considered a positive factor.

Southwest Research Institute is a nonprofit research and development organization conducting contract research and development at a current annual volume in excess of \$180M, with a current regular staff of over 2,300. An excellent benefits program is available for all regular staff and our salary structure is highly competitive.

Resumes may be forwarded in complete confidence to: **Mr. C.J. Luna, Sr. Personnel Specialist, Southwest Research Institute, Personnel Dept. #373, P.O. Drawer 28510, 6220 Culebra Road, San Antonio, Texas 78228 or call collect (512) 522-3378.** Equal Opportunity/Affirmative Action Employer.



**Southwest
Research
Institute**
San Antonio, Texas

POSITIONS OPEN

Need one **RESEARCH ASSOCIATE** to perform studies on maternal drug abuse and neurochemical development of offspring. Contact: **Dr. Theodore A. Slotkin, Department of Pharmacology, Box 3813, Duke University Medical Center, Durham, NC 27710.** *Duke University is an Equal Opportunity/Affirmative Action Employer.*

SENIOR CHEMIST—Responsibilities include supervising the research and development of new inks and related materials in connection with the company's ink projects; characterizing and defining suitable inks for print testing; checking compatibilities and setting up analytical quality control methods. Oversee the work of three chemists. An applicant must have (i) a Master of Science degree with a concentration in either inorganic or physical chemistry, and (ii) either 2 years of experience as a senior chemist or 5 years of experience in physical or inorganic chemistry. Also required is a strong background in and knowledge of organic chemistry, including dye and solvent chemistry; a strong background in and knowledge of analytical chemistry, including HPLC, GC, FTIR, UV-VIS and AA, and also including fluorescent or colorimetry; and a strong background in and knowledge of surface chemistry and solution chemistry. Salary range: \$47,000 to \$53,000 per year. Send résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.** Refer to job order #3042844.

STUDY DIRECTOR TOXICOLOGY

Hazleton Laboratories America, Inc., has an opportunity for a toxicologist with a strong scientific background and excellent communication skills. Responsibilities include:

- Serve as study director on toxicology studies
 - Prepare protocols, study schedules, resource estimates
 - Prepares interim and final reports
 - Communicates and consults with clients
 - Provides technical/scientific expertise for other areas
- Requirements include the following:
- Ph.D. in toxicology or a related science
 - Three years of experience in the field
 - Effective client communication skills

Send letter of introduction and résumé to: **Personnel Manager, Hazleton Laboratories, P.O. Box 7545, Madison, WI 53707.**

An Equal Opportunity Employer.

THEORETICAL NEUROBIOLOGY

The Neurosciences Institute (NSI) invites applications for positions as **INSTITUTE FELLOWS IN THEORETICAL NEUROBIOLOGY**. The NSI supports an in-house research program dedicated to developing experimentally testable theoretical models of neural systems. Current models include simulations of pharmacological effects on neuronal networks, the design of network automata, and analysis of visual systems. Advanced supercomputer facilities are available.

Institute Fellows are appointed for 2 years with the possibility of renewal and receive stipends that depend on qualifications and experience. Applicants should be at the postdoctoral or assistant professor level and must have a background in experimental or theoretical neuroscience or related fields.

The NSI is an independent organization located on the campus of The Rockefeller University in New York City. The NSI serves as the home of the Neurosciences Research Program and is an international center of study and research for distinguished visiting neuroscientists. Fellows have opportunities to use the Institute's extensive facilities and to interact with visiting scientists.

Applicants should send a short statement of research interests, curriculum vitae, and the names of three references to: **Dr. W. Einar Gall, Research Director, The Neurosciences Institute, 1230 York Avenue, New York, NY 10021.**

Molecular Virologist

The Department of Medical Microbiology and Infectious Diseases, University of Alberta invites applications for a faculty position in virology.

Applicants should have a PhD degree with at least three years of postdoctoral research experience. The successful candidate is expected to develop a strong extramurally funded research program in the area of molecular virology. Priority will be given to individuals with expertise in the application of molecular approaches to the understanding of the pathogenesis of retroviral diseases. Up to 75% of time will be devoted to research, with the remaining time available for participation in undergraduate and graduate teaching, including the supervision of graduate students. Salary and rank will be commensurate with training and experience. Annual salary range for 1988-89: Asst. Prof. C\$33,144 to C\$47,280; Assoc. Prof. C\$41,390 to C\$59,534; Prof. C\$52,730. The successful candidate will be eligible to apply for salary and establishment funding support by competitive application from the Alberta Heritage Foundation for Medical Research.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

The closing date for application is June 30, 1989.

Please send applications consisting of detailed curriculum vitae, statement of research program, reprints of the applicant's five most significant publications and the names of three referees to:

Dr. David L. J. Tyrrell, Chairman, Department of Medical Microbiology and Infectious Diseases, 1-41 Medical Sciences Building, The University of Alberta, Edmonton, Alberta, T6G 2H7, Canada.

The University of Alberta is committed to the principle of equity in employment.

HUGH KNOWLES CHAIRS AUDIOLOGY AND HEARING SCIENCE NORTHWESTERN UNIVERSITY

Northwestern University announces the establishment of two endowed chairs, the *Hugh Knowles Chair in Audiology* and the *Hugh Knowles Chair in Hearing Science*. Each Chair, funded by a generous gift from Knowles Electronics, Inc., will be filled by faculty of distinguished scholarly achievement or unusual promise and developing international reputation. Applicants for the Audiology Chair should be Ph.D. scholars with an interest in auditory system function, having quantitative background (e.g., bioengineering, computer science or psychoacoustics). Applicants for the Hearing Science Chair should be Ph.D. or M.D. scholars with accomplishments in basic or clinical neuroscience and an interest in either higher nervous system function or neurobiology of the peripheral auditory system. These positions will be filled at either the full or associate professor level. Generous start-up funds, laboratory space and a competitive salary are provided.

Applications and nominations are invited. Review of applications will begin immediately, but these positions will remain available until filled. Please send curriculum vitae along with a letter of interest to:

Chair, Search Committee
Audiology and Hearing Impairment Program
Northwestern University
2299 Sheridan Road
Evanston, IL 60208

*Northwestern University is an EO/AA Employer.
Hiring is contingent upon eligibility to
work in the United States.*

MANAGER, COLLABORATIVE RESEARCH

We are a growing International division of Baxter Healthcare Corporation. Today as we strive to meet new long-term objectives, an outstanding opportunity is offered at one of our Deerfield locations.

We have need of a Scientist to manage outside, contracted research programs. These programs cover a broad range of nutrition research, from basic science to clinical studies and are international in scope. The successful candidate will have a Ph.D. in biochemistry, nutrition, or physiology and from 1-3 years of postdoctoral experience. Experience in metabolism research and some exposure to clinical research are desirable.

A highly competitive salary and comprehensive benefits program is included in this total package. Immediate attention will be given to those individuals who submit their resumes with salary history and expectations. Please send resume to: **Baxter Healthcare Corporation, c/o Bentley, Barnes & Lynn, Inc., 420 N. Wabash Ave., Dept. S-0232, Chicago, IL 60611.** (All resumes will be forwarded unopened and immediately to Baxter.) Equal Opportunity Employer.

Baxter

**AUSTRALIAN NATIONAL UNIVERSITY
POSTDOCTORAL FELLOW/RESEARCH
FELLOW/SENIOR RESEARCH FELLOW,
NORTH AUSTRALIA RESEARCH UNIT
RESEARCH SCHOOL OF PACIFIC STUDIES**

Task: to initiate work on policy problems associated with the use, development and conservation of the natural resources, especially savanna land, of Northern Australia. **Qualifications:** A PhD in economics, agricultural economics, or natural resource management and experience in the analysis of resource related problems is essential. Postgraduate research experience in the relationships between social and ecological sciences would be an advantage. **Post:** Full time research, available January 1990, location, Darwin, Australia. Secondments from other institutions considered. **Details:** A short statement of proposed research is to be submitted with the application. Further details from the Executive Director, NARU, PO Box 41321, Casuarina, NT 0811, Phone (089) 275 688, FAX (089) 450 752. Closing date: 30 June 1989. Ref: PA 30.3.3.

Senior Research Fellow; A\$42,582–A\$50,619 p.a.; Research Fellow; A\$30,737–A\$40,100 p.a.; Postdoctoral Fellow Grade 1 (fixed point); A\$26,617–A\$30,360 p.a. **APPOINTMENT:** Senior Research Fellow/Research Fellow up to three years, possibility of extension to five years; Postdoctoral Fellow normally two years, possibility of extension to three years. **APPLICATIONS** should be submitted in duplicate to the Registrar, The Australian National University, GPO Box 4, Canberra ACT 2601, Australia, quoting reference number and including curriculum vitae, list of publications and names of at least three referees. The University reserves the right not to make an appointment or to appoint by invitation at any time. Further information is available from the Registrar.

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Dept. #393

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RESEARCH ASSOCIATE — DRUG DELIVERY

Dept. #394

Candidates for this position must have a BS or MS in Chemistry or a related discipline and experience with lipid vesicles and emulsion micro-emulsion technology. Experience with one or more of the following techniques — FTIR, Gel Electrophoresis, HPLC, light scattering, NMR and DSC — is desirable.

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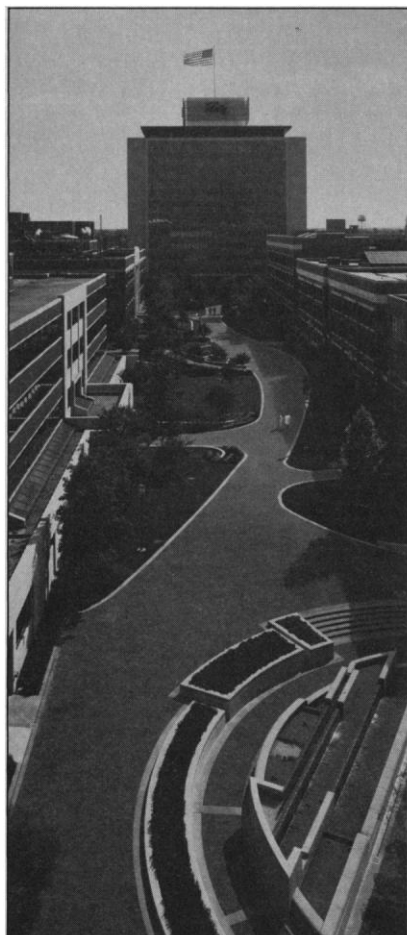
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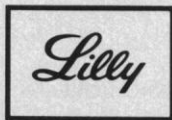
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- To direct laboratory efforts investigating the cardiac and hemodynamic effects of new pharmaceuticals and agrichemicals in the context of toxicology research and safety assessment, utilizing a variety of conscious animal models and state-of-the-art instrumentation.
- Must have Ph.D. in pharmacology, physiology, or a related discipline. (Postdoctoral training is preferable, but not essential.)
- Laboratory experience in the design, execution, and analysis of hemodynamic parameters in whole animal preparations is required.
- Experience with the programming or use of laboratory computers is necessary.

In addition, this scientist must have the leadership capabilities needed—technical, communication, interpersonal, and organizational skills—to build a research program.

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John W. Crooks, Manager
Ph.D. Recruitment (CTR)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

POSITIONS OPEN

SENIOR FACULTY POSITION MOLECULAR BIOLOGIST

The Department of Molecular Biology and Biochemistry at Wesleyan University invites applications for a tenured position at the associate or full professor level. The position was made possible in part by a grant to the University from the Howard Hughes Medical Institute. The Molecular Biology and Biochemistry Department has a strong Ph.D. program, complemented by similar programs in biology and chemistry. Areas of strength in the life sciences include molecular, cell and developmental biology, genetics, neurosciences, molecular biophysics, and biochemistry.

We seek a person of demonstrated scientific accomplishment who uses molecular genetic approaches to study fundamental problems in biology. Further information may be obtained from: **Dr. Lewis Lukens at 203-347-9411, extension 2309.** Interested applicants should send curriculum vitae, summary of research plans, and names and addresses of five referees to: **Search Committee, Department of Molecular Biology and Biochemistry, Wesleyan University, Middletown, CT 06457.**

Wesleyan University is an Equal Opportunity/Affirmative Action Employer. We encourage applications from minority candidates and women.

SENIOR RESEARCH ASSOCIATE for university in central Ohio to conduct scholarly research in areas of molecular spectroscopy and reaction dynamics using various lasers. Publishes articles in peer-reviewed journals. Requires Ph.D. in chemistry or physics and 2 years of experience operating, maintaining, and modifying Nd:YAG, excimer and pulsed dye lasers and use of these lasers in the production of tunable coherent light in the extreme ultraviolet (less than 200 nanometers); 1 year of experience operating and maintaining optical mixing crystals, photo-multipliers and vacuum and air monochromators; one or more publications in the area of molecular spectroscopy and reaction dynamics in scholarly journals. Forty hours per week; 8 a.m. to 5 p.m.; \$29,800 per year. Qualified applicants reply by résumé to: **C. Bussard, JO#1167300, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

STABLE ISOTOPES POSTDOCTORAL POSITIONS

University of California, Santa Barbara. Applications are invited for two stable isotope postdoctoral positions available 1 July 1989. Research involves studies of the mechanisms responsible for the distribution of oxygen and hydrogen isotopes in plants and applications of stable isotope of these elements to problems in plant physiology, physiological ecology and paleoclimatology. For examples, see *Plant Physiol.* **82**, 211, 423 and 428 (1986) and *Geochim. Cosmochim. Acta* **52**, 2189 (1988). Training in plant biology desired; no experience with isotopes required. Annual salary: \$23,892 to \$35,832.

Submit résumé, including discussion of research interests, and the names, addresses, and telephone numbers of three references to: **Michael DeNiro, Geological Sciences Department, University of California, Santa Barbara, CA 93106.** Deadline: 12 June 1989. *UCSB is an Equal Opportunity/Affirmative Action Employer. Proof of U.S. citizenship or eligibility for U.S. employment will be required prior to employment (IRCA 1986).*

VISION SCIENTIST

A basic research position in vision science, with joint appointments in the R. S. Dow Neurological Sciences Institute and Department of Ophthalmology of Good Samaritan Hospital and Medical Center is available for a Ph.D. or M.D. with research interests at the cellular or sub-cellular level. Generous start-up funds and space are committed to this position. Level of appointment dependent upon prior research accomplishments. Postdoctoral research experience required. Opportunity exists for interaction with the 16 basic neuroscience research laboratories (four dedicated to vision research) that are affiliated with the R. S. Dow Neurological Sciences Institute, and with clinicians in the Department of Ophthalmology. Send curriculum vitae and names of three references by 31 June 1989 to: **M. W. Kaplan, Ph.D., Chairman, Vision Scientist Search Committee, R. S. Dow Neurological Sciences Institute, Good Samaritan Hospital and Medical Center, 1120 N.W. 20th Avenue, Portland, OR 97209-1595.** *An Equal Opportunity Employer.*

POSITIONS OPEN

SENIOR RESEARCH SCIENTIST. Ph.D. in virology/microbiology required. Seeking an experienced, highly qualified virologist willing to work with human immunodeficiency virus in a laboratory setting. Strong molecular biology background essential with capability to develop and carry out AIDS research projects. Please send curriculum vitae and names of three references to: **Dr. A. E. Friedman-Kien, Department of Microbiology, New York University Medical Center, 550 First Avenue, New York, NY 10016.** *An Equal Opportunity Employer M/F.*

AWARDS

RESEARCH AWARDS

The International Life Sciences Institute Research Foundation (ILSI Research Foundation) announces that two awards for basic research projects in toxicology and nutrition, each of up to \$100,000 over 3 years, will be made in 1990. The purpose of the awards is to encourage innovative, young investigators in basic biomedical sciences to apply modern knowledge and techniques to basic problems related to comparative toxicology or specific nutritional effects on growth and development. The closing date for applications is 1 September 1989. For further information, write: **ILSI Research Foundation, 1126 16th Street, NW, Suite 100, Washington, D.C. 20036.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP

The Hypertension Research Division at Henry Ford Hospital is a multi-disciplinary laboratory in the Heart and Vascular Institute, involved in the study of vasoactive substances in the regulation of blood pressure. An opportunity is available for a Ph.D. or M.D. within a productive environment which integrates cardiovascular and renal physiology, biochemistry, pharmacology, molecular biology and medicine. A variety of projects and exposure to different techniques are available, depending upon prior research experience or the motivation of the applicant. Salary and benefits are negotiable depending upon previous experience. Applicants should send their curriculum vitae and two references (or "letters of reference") to:

Dr. Oscar A. Carretero
Division Head
Hypertension Research Division
7123 E & R Building
Henry Ford Hospital
2799 West Grand Boulevard
Detroit, MI 48202

ACADEMIC FELLOWSHIPS IN NEONATAL-PERINATAL MEDICINE/CELL AND MOLECULAR BIOLOGY. Advanced training in cell and molecular biology integrated with clinical training, leading to competence as a physician-scientist with sub-board eligibility in neonatal-perinatal medicine is offered in an innovative 3- to 5-year program. Mentor-based research training is available in: computer-enhanced imaging, developmental gene regulations, molecular biology of antioxidant systems, infectious agents, inherited disease, and signal transduction, molecular toxicology of oxidants, neutrophil biology, protein phosphorylation and protein phosphatases, pulmonary macrophage biology, and type II pneumocyte biology. Contact: **David Warburton, M.D., Academic Training Program in Neonatal-Perinatal Medicine/Cell and Molecular Biology Department of Pediatrics, USC School of Medicine, Childrens Hospital of Los Angeles, Box #83, 4650 Sunset Boulevard, Los Angeles, CA 90027.** Telephone: 213-669-2101; FAX 213-664-6917.

POSTDOCTORAL FELLOWSHIPS IN MOLECULAR BIOLOGY at Harvard Medical School. Unexpected openings exist in July 1989 for two individuals holding Ph.D. or M.D. degrees for NIH-supported postdoctoral training in molecular biology of ion transport proteins. Strong backgrounds in biochemistry required. Only U.S. citizens or permanent residents are eligible. Send curriculum vitae and three references to: **Dr. Barry M. Brenner, Director, Renal Division, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115.** *HMS/BWH are Equal Opportunity Employers.*

CONFERENCES

Conference on:
**THE BIOLOGICAL ACTIONS OF
EXTRACELLULAR ATP**
sponsored by The New York Academy of Sciences
Adam's Mark Hotel, Philadelphia, PA
27 to 29 November 1989

For further information: **Conference Department, The New York Academy of Sciences, 2 East 63rd Street, New York, NY 10021.** Telephone 212-838-0230.

**FIRST INTERNATIONAL CONFERENCE ON
WASTE MINIMIZATION AND CLEAN TECHNOLOGY: MOVING TOWARD THE 21ST CENTURY**

Geneva, Switzerland, 29 May to 1 June 1989. International Conference Center. Features plenary sessions, workshops, and technical tours.

To register, contact: **Ms. M. Mowery, APWA, P.O. Box 94310, Chicago, IL 60678-4310.** Telephone: 312-667-2200; FAX: 312-667-2304.

**IMAGING IN MEDICINE AND BIOLOGY:
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6 to 8 September 1989
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Philadelphia, Pennsylvania

Session topics and lead speakers:

Imaging of the Nervous System
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Cell Imaging
Lee Peachey, Ph.D., University of Pennsylvania
Imaging of Organ Systems
Alexander Margulis, M.D., University of California, San Francisco
Structural Imaging
Thomas Budinger, M.D., Ph.D., University of California, Berkeley
Human Image Understanding
Ellen Hildreth, Ph.D., Massachusetts Institute of Technology

Contact: **Dr. Dov Jaron, Biomedical Engineering and Science Institute, Drexel University, 32nd and Chestnut Streets, Philadelphia, PA 19104.** Telephone: 215-895-2215; Fax: 215-895-4983.

TRAINING PROGRAMS

Position available for postdoctoral or graduate **RESEARCH TRAINING** in the molecular biology of hemoparasites. Program emphasizes identification, cloning and characterization of genes encoding parasite antigens for preparation of subunit vaccines. Send curriculum vitae and names, addresses, and telephone numbers of three current references to: **Dr. John B. Dame, Department of Infectious Diseases, College of Veterinary Medicine, Box J-137, J. Hillis Miller Health Science Center, University of Florida, Gainesville, FL 32610-0137.** *The University of Florida is an Equal Employment Opportunity/Affirmative Action Employer.*

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