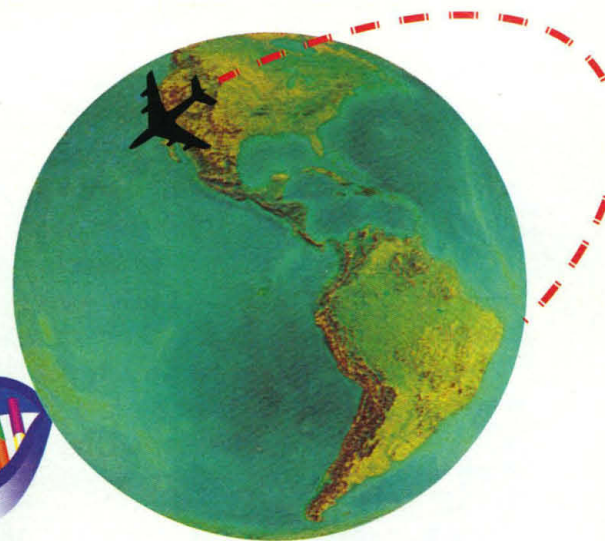


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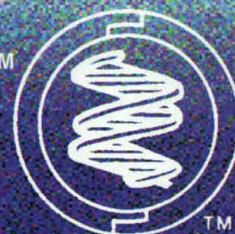
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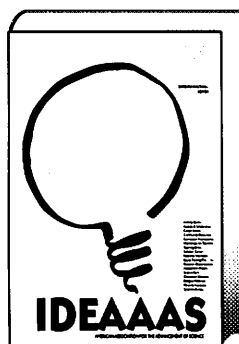


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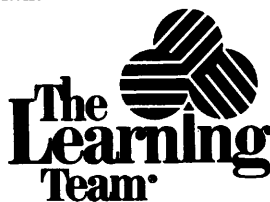
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Data courtesy of Dietlind Stapel, University of Hannover

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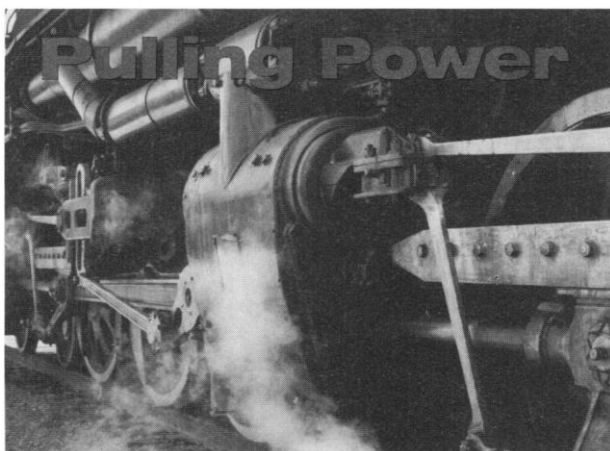
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IN MOLECULAR BIOLOGY 1995

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Call for entries

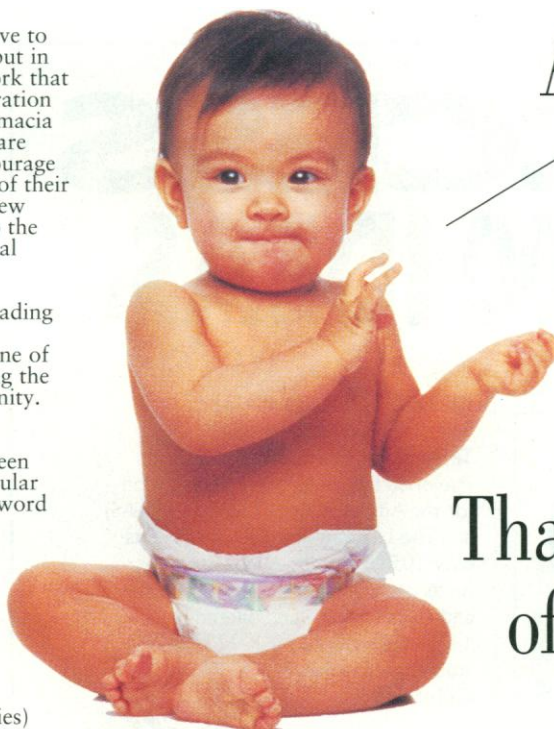
You must be a recent Ph.D. graduate (awarded between 1 January and 31 December 1994) working in molecular biology. Submissions must be in the form of a 1000 word essay, in English, on your thesis, highlighting the significance of its contribution and overall implications in the field. The winning essay will be published in SCIENCE. Closing date for entries is 5 July 1995. The prizes will be presented in Stockholm, Sweden, during December 1995.

Full details can be requested from the administrator, at the address below, or via Internet to:
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**1995
Mentor Awards
Call for Nominations**

Lifetime Mentor Award (10 or more years)
Mentor Award (less than 10 years)

The American Association for the Advancement of Science (AAAS) invites nominations for the 1995 Mentor Awards. The two categories are *Lifetime Mentor Award* and *Mentor Award*. These annual awards honor individuals who, during their careers, demonstrate extraordinary leadership to increase the participation of women of all racial/ethnic groups; African American, American Indian, and Hispanic men; and/or people with disabilities in science and engineering fields and careers.

A prize of \$5000 and a commemorative plaque for the *Lifetime Mentor Award* will recognize an individual who has mentored and guided significant numbers of students from these underrepresented groups to the completion of doctoral studies and/or who has impacted the climate of a department, college, or institution to significantly increase the diversity of students pursuing and completing doctoral studies. This individual will have served in such a role for 10 years or longer.

The Mentor Award, a prize of \$2,500 and a commemorative plaque, will recognize an individual who has mentored a significant number of students over a period of less than 10 years.

The AAAS Mentor Awards are administered by the Committee on Opportunities in Science (COOS).

*Deadline for the 1995 Mentor Awards
nominations is 1 August 1995*

The 1995 Awards will be presented during the Association's Annual Meeting in Baltimore, MD in February 1995.

For more information on the AAAS Mentor Awards please contact Yolanda S. George or Paula Lee at (202) 326-6670.

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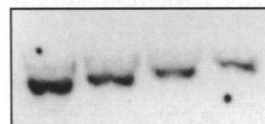
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Body Composition Analysis Instrument

The Em-Scan Model SA-3000 for small animal body composition analysis makes use of the principle of total body electrical conduc-



tivity as a noninvasive method to measure lean body mass, percent body fat, and total body water. The methodology measures the ionic content of the electrolytes found in the hydrated tissues of the subject. The basic principle is that lean tissue conducts electricity 20 times more effectively than either fat

or bone. A low-level electromagnetic field, less than that of a small radio, surrounds the subject in the detection chamber. The amount of energy absorbed by the subject is detected by the instrument and the body composition is calculated by the computer using a species-specific calibration equation. **Em-Scan. Circle 141.**

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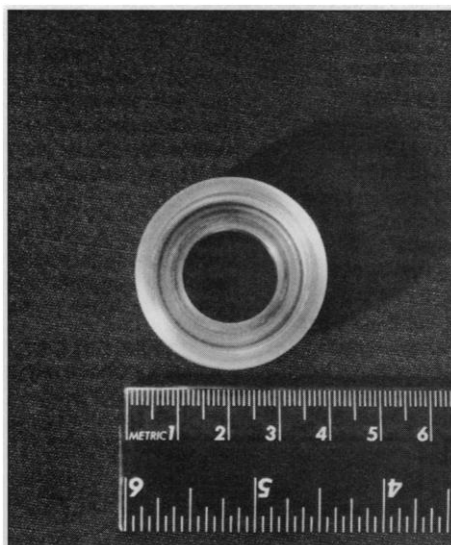
The data for each sample can be summarized with rose diagrams, circular histograms, linear histograms, and raw data points. **Kovach Computing Services. Circle 144.**

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Cover Slip Clamp Chamber

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Literature

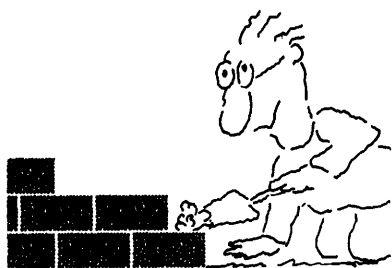
Filters is a six-page brochure with a full line of chromatography filter products including disposable syringe filters for general clarification of high-performance liquid chromatography samples, unique tip syringe filters for micro volume sample filtration, vacuum mobile phase filtration apparatus, and more. **Phenomenex. Circle 147.**

Catalogue 1995 covers products in the categories of nucleic acid labeling and detection; protein studies; cloning, gene expression, and polymerase chain reaction; sequencing; in situ hybridization; membranes; autoradiography; enzymes; radiochemicals; cellular communication assays; and more. **Amersham Life Science. Circle 148.**

Dionex PD40 Diode Array Detector describes how this detector can improve productivity of high-performance liquid chromatography. **Dionex. Circle 149.**

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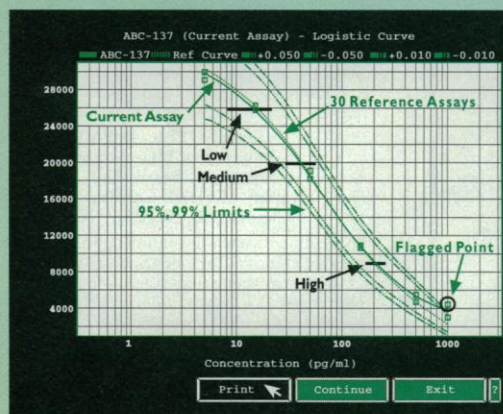
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Listed below are some of the outstanding research training opportunities that are currently available at the National Institutes of Health.

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Michael R. Maurizi, PhD

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The group is focused on the mechanisms of how DNA-binding transcriptional activators communicate with RNA polymerase II transcription machinery to regulate messenger RNA synthesis, with emphasis on the role of TBP-associated factors (TAFs) and other coactivators*. A strong background in molecular biology and/or protein chemistry and/or yeast genetics is required. Laboratory of Molecular Growth Regulation (OE-76), NICHD, Building 6, Room 416, 6 CENTER DR MSC 2753, BETHESDA MD 20892-2753.

**Nature*, 367, 484, 1994; *PNAS*, 91, 3520, 1994

Immunology

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Antigen processing and presentation of polysaccharide-protein conjugate vaccines are being investigated. Emphasis will be placed on differences between thymus independent and thymus dependent immunization for polysaccharides antigens. Experience in working with cell fractionation and lysosomes/endosomes is desirable. Applicants must have less than five years postdoctoral experience. Laboratory of Molecular and Developmental Immunology, Division of Monoclonal Antibodies (OE-76), FDA/CBER (HFM-555), Building 29B, Room 5E08, 1401 Rockville Pike, Rockville, MD 20852-1448.

Molecular Hematology

Griffin P. Rodgers, MD

Molecular analysis of the transcriptional regulation of fetal and adult globin genes in cultured erythroid cells and transgenic animals is being studied. The work focuses on the effect of specific drugs on the activation of gene transcription and DNA binding proteins which interact with specific regulatory elements in globin and other relevant genes. Applicants must have a strong background in molecular and cellular biology and have at least three years of postdoctoral experience. Laboratory of Chemical Biology (OE-76), NIDDK, Building 10, Room 9N318, 10 CENTER DR MSC 1822, BETHESDA MD 20892-1822.

Neurotoxicology and Neuroimmunopathology

Melvyn P. Heyes, PhD

A biologist position is available to investigate the functional and clinical significance of the accumulations of the neurotoxin, quinolinic acid, in CNS immune activation, including AIDS, infectious diseases and autoimmune conditions. Applicants should have experience in the

quantitative evaluation of neuropathologic and/or functional responses to immune or excitotoxin-mediated CNS damage, as well as experience with the use of *in vivo* animal models of inflammatory neurologic diseases and have less than five years of postdoctoral experience. Laboratory of Clinical Science (OE-76), NIMH, Building 10, Room 3D40, 10 CENTER DR MSC 1261, BETHESDA MD 20892-1262.

Reproductive Biology and Toxicology

Masahiko Negishi, PhD

The molecular events underlying the abnormal development of the reproductive system associated with exposure to xenobiotic estrogens such as diethylstilbestrol (DES) are being investigated. Of particular interest is the biochemical and molecular analysis of transient and permanent alterations in the estrogen-responsive (e.g., lactoferrin) and -metabolizing (e.g., sulfotransferase) genes and the implications for human health disease. Laboratory of Reproductive and Developmental Toxicology (OE-76), NIEHS, P.O. Box 12233, MD B3-02, Research Triangle Park, NC 27709.

Viral Vaccines

Judy A. Beeler, MD

Areas of investigation include mechanisms by which viral envelope glycoproteins mediate cell fusion. Candidates should be experienced with gene cloning, mammalian cell expression systems and protein biochemistry. Applicants must have less than five years of postdoctoral experience. Laboratory of Respiratory Viruses (OE-76), FDA/CBER, Division of Viral Products (HFM 463), 1401 Rockville Pike, Rockville, MD 20852-1448.

Additional Postdoctoral Fellowship Opportunities

For an on-line listing of additional postdoctoral openings, you may access the NIH EDNET Bulletin Board POSTDOC conference via Internet (wylbur.cu.nih.gov) or modem (1,301-402-2221 or 1,800-358-2221) with parameters set at "7,Even,1". When connected to NIH, type in "vt100" for terminal emulation, "F5E" for initials, and "AJL1" for account number.

The Postdoctoral Research Fellowship Opportunities catalog, which describes intramural laboratories at the NIH, is also available by request. An electronic version of the catalog may be accessed via the Internet using either the Gopher Information System (gopher.nih.gov) or the World Wide Web (<http://www.nih.gov>). When connected, select *Research Opportunities at the NIH*. If you would like to request a catalog or have further questions, please contact the NIH Office of Education, Building 10, Room 1C129, 10 CENTER DR MSC 1158, BETHESDA MD 20892-1158, 301-402-1603, Fax 301-402-0483.

To Apply

If you hold a doctoral degree (e.g., PhD, MD/PhD, MD, DO, DDS, DMD or DVM) accompanied by previous laboratory research experience, and would like to be considered for one of these positions, please send a cover letter, *curriculum vitae*, bibliography, and statement of research interests to the address listed with each position. In addition, please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.



National Institutes Of Health

Office Of Education

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POSITIONS OPEN

ASSISTANT PROFESSOR OF PHYSIOLOGY

The Department of Physiology, Midwestern University invites applications for a tenure-track faculty position at the level of ASSISTANT PROFESSOR. Candidates must have an earned doctoral degree, two years of post-doctoral experience, and demonstrate the potential to develop an independent research program capable of attracting extramural funding. Research should complement existing strengths in the Department: energy metabolism, ion transport and neural control of the cardiovascular system. Ability to contribute effectively to departmental teaching programs, particularly neuroscience, is essential. Interested individuals should send their curriculum vitae, a synopsis of research interests, the names of three references, and reprints of representative publications to: **Dennis J. Paulson, Ph.D., Chairman, Department of Physiology, Midwestern University, 555 31st Street, Downers Grove, IL 60515. Equal Opportunity Employer/Minority/Female/Disabled.**

DIRECTOR OF MEDICAL RESEARCH

Applications are invited for the position of SCIENTIFIC DIRECTOR of the Lawson Research Institute (LRI) and VICE-PRESIDENT RESEARCH at St. Joseph's Health Centre, London, Ontario, Canada.

The LRI has earned international renown in its chosen pinnacle research programs. This position offers interaction with outstanding researchers in the following areas: (1) maternal, fetal and newborn health; (2) medical diagnostic imaging; (3) hormones and cell regulation; (4) gerontology; and (5) clinical and outcomes research. Individuals with interests in these areas or in other related areas of medical and health research are invited to apply.

Applicants should have a Ph.D. and/or M.D. degree, extensive administrative experience, demonstrated leadership skills, and an internationally recognized and funded biomedical research program. An appointment will be offered in an appropriate department(s) of The University of Western Ontario. Salary and start-up funds are negotiable. The deadline for receipt of applications is May 5, 1995.

Applications should be addressed to: **Mr. P. Maurice, Chair, LRI Board, c/o Room F143, St. Joseph's Health Centre, 268 Grosvenor Street, London, Ontario N6A 4V2 Canada.** In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents. St. Joseph's Health Centre is an Equal Opportunity Employer.

POSTDOCTORAL POSITIONS

Positions are now available to study either the involvement and mechanism of activation of cell cycle-related protein kinases in apoptotic signal transduction (Lahti et al., *Mol Cell Biol*, 15:1-11, 1995; Xiang et al., *J Biol Chem*, 269:15786-15794, 1994) or the physical alteration of the genes encoding these protein kinases in childhood neuroblastoma (Lahti et al., *Nature Genetics*, 7:350-375, 1994). Individuals are needed to work on all aspects of these projects involving biochemical, molecular, cellular, and molecular genetic analyses. Recent Ph.D., M.D., or M.D./Ph.D. with experience in molecular biology, molecular genetics, biochemistry, cell biology, or related field is required. Send curriculum vitae and three references to: **Dr. Vincent Kidd, St. Jude Children's Research Hospital, P.O. Box 318, Memphis, TN 38101-0318. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS available to study the molecular basis of insulin signal transduction, including the role of PI 3'-kinase in cellular proliferation and metabolic regulation. Experience in molecular/cell biology is required. Send curriculum vitae and have three letters of reference sent to: **Dr. Jonathan M. Backer, Department of Molecular Pharmacology, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, New York 10461. FAX: 718-829-8705. An Equal Opportunity Employer.**

POSTDOCTORAL ASSOCIATE: We are looking for a person with knowledge of population and ecosystem spatial modeling and GIS systems. Project is coordinated between **Susan Haig** and **Lewis Oring** (University of Nevada-Reno) and focuses on factors affecting shorebird success in the western Great Basin. Work begins August 1995, salary \$28,000 plus per year for one to four years. Send letter of interest, résumé, and names/telephone numbers of three references to: **Susan Haig, NBS, Oregon State University, 3200 SW Jefferson Way, Corvallis, OR 97331. Telephone: 503-750-7482; Email: HaigS@fsl.orst.edu.**

POSITIONS OPEN



Agricultural Research Service
United States Department of Agriculture

RESEARCH VETERINARIAN

Research Veterinary MEDICAL OFFICER, GS-12/13 (\$42,641 to \$50,706 per annum), USDA, Agricultural Research Service (ARS), Southeast Poultry Research Laboratory, Athens, Georgia. The incumbent is responsible for developing new information and improving methods for diagnosis, control, and prevention of selected viral disease of poultry. Special emphasis has been placed on avian influenza, which is a clinically variable disease caused by Type A influenza viruses that sporadically and unpredictably infects poultry. The incumbent is expected to identify promising areas of research, define research goals, and complete the remainder of the research process. ARS invites Veterinarians with a Ph.D. in Microbiology or related Health Science and knowledge of Poultry Industry with emphasis on Poultry Health to apply. Knowledge of animal health and skill in molecular biological and virologic procedures and their application to solving disease problems are highly desirable traits. For information regarding the position requirements contact: **Dr. David E. Swayne, Laboratory Director, USDA, ARS, Southeast Poultry Research Laboratory, Telephone: 706-546-3432.** For information about the application requirements contact: **Carol Gramlich, USDA, ARS, HRD, 6305 Ivy Lane, Room 341, Greenbelt, MD 20770-1435. Telephone: 301-344-3377.** Applicants MUST BE U.S. CITIZENS. Applications must include announcement number: ARS-D55-061 (\$-5-003). Applications must be postmarked by June 30, 1995. USDA is an Equal Employment Opportunity Employer.

POSTDOCTORAL POSITION PLANT CELL BIOLOGY University of Lausanne

A three-year POSTDOCTORAL POSITION is available to study the function of two novel solute transporters recently cloned in *Arabidopsis*. The project involves the use of immunocytochemical localization, mRNA *in situ* hybridization, and expression of transporters in transgenic plants and heterologous systems, such as yeast and *Xenopus* oocytes. Applicants with experience in microscopy and molecular biology are encouraged to apply. Send curriculum vitae and the name of three references to: **Dr. Yves Poirier, Institut de Biologie et Physiologie Végétales, University of Lausanne, CH-1015 Lausanne, Switzerland. Email: YPoirier@ulys.unil.ch.**

Two POSTDOCTORAL POSITIONS are immediately available to study intercellular Ca²⁺ signaling between different cell types, including epithelial/endothelial-smooth muscle interactions as well as excitable and non-excitable cell communication (*Mol. Cell. Endocrinol.*, 98: 173, 1994). Techniques include video and confocal microscopy, photochemistry, electrophysiology and molecular biology. One position requires electrophysiology experience. Send curriculum vitae with statement of interests to: **Dr. Michael J. Sanderson, Physiology, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01655. Telephone: 508-856-6024; FAX: 508-856-5997.**

The University of Massachusetts Medical Center is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS in Mechanochemical Transduction (two): First position to study molecular mechanisms of mechanochemical signal transduction in endothelial cells and osteoblasts. In particular, focusing on G-proteins, G-protein coupled receptors, and the cytoskeleton. Second position to study molecular biology of mechanically induced gene expression in endothelial cells and osteoblast. Send letter, curriculum vitae, names and addresses of three references and statement of goals to: **Dr. John A. Frangos, Department of Bioengineering, University of California, San Diego, 9500 Gilman Drive, Mail Code 0412, San Diego, La Jolla, CA 92093-0412. The University of California, San Diego is an Equal Opportunity Educator and Employer.**

POSTDOCTORAL POSITION available immediately to conduct research toward elucidating the mechanism of pathogen-derived resistance. Experience with plant viruses, protoplast preparation and strong molecular biology skills preferred. Send curriculum vitae and names of three references by July 1, 1995, to: **Dr. Brandt Cassidy, Plant Biology Division, The Samuel Roberts Noble Foundation, P.O. Box 2180, Ardmore, OK 73402-2180.**

POSITIONS OPEN

PROTEIN BIOCHEMIST/ENZYMOLOGIST POSTDOCTORAL POSITION

A two-year POSTDOCTORAL FELLOWSHIP position is available (salary, \$26,000 per year) at the University of California Berkeley-Plant Gene Expression Center, Albany, California. The project is to carry out biochemical characterization and structural function analysis of 1-aminocyclopropane-1-carboxylic acid (ACC) synthase isoenzymes of *Arabidopsis* expressed in *E. coli*. ACC synthase is a pyridoxal phosphate-containing enzyme with structural and functional similarities to aminotransferases. The enzyme is responsible for the biosynthesis of ACC, the precursor of the plant hormone ethylene. Qualified individuals should send a curriculum vitae to: **Dr. Athanasios Theologis, Plant Gene Expression Center, 800 Buchanan Street, Albany, CA 94710.** The position is available from September 1, 1995. The University of California is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION, Neurobiology—Mount Sinai School of Medicine offers an immediate opening for an individual to study the binding site structure of serotonin 5-HT₂ receptors using chemical and molecular approaches. Unique environment in a research group encompassing molecular biology, pharmacology, biophysics and computational molecular modeling. An independent, academically oriented candidate is desired with experience in physical chemistry of macromolecules, and/or molecular engineering. Interest and experience in cell biology and/or molecular pharmacology are preferred. Send curriculum vitae and telephone numbers of three references to: **S. C. Sealfon, Neurobiology, Box 1065; Telephone: 212-241-7075; FAX: 212-996-9785; Email: sealfon@msvax.mssm.edu; or H. Weinstein, Department of Physiology and Biophysics, Box 1218; Telephone: 212-241-6530; FAX: 212-860-3369; both at Mount Sinai Medical School, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.**

UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE

POSTDOCTORAL POSITION available immediately to study translocation of proteins across mitochondrial membranes. Outstanding training opportunity in molecular cell biology, biochemistry and yeast genetics. Previous research experience in molecular biology or cell biology is preferred. U.S. citizenship or permanent residency required. Send curriculum vitae, description of previous research experience, and name, address and telephone number of three references to: **Deb Kumar Pain, Ph.D., University of Pennsylvania, School of Medicine, D403 Richards, Philadelphia, PA 19104-6085. Affirmative Action/Equal Opportunity Employer.**

CELL BIOLOGY/IMMUNOLOGY

POSTDOCTORAL POSITIONS. Two positions available for studies involving *Toxoplasma gondii* host cell interactions. Multidisciplinary group with interests in attachment, invasion, motility, and immune response of the host to this intracellular parasite. Reply with curriculum vitae and summary of research interests to: **Drs. L. H. Kasper and J. D. Schwartzman, Dartmouth Medical School, Department of Microbiology, Hanover, NH 03755-3842. Dartmouth is an Equal Opportunity/Affirmative Action Employer. Women are encouraged to apply.**

POSTDOCTORAL RESEARCH SCIENTIST. Two-year position available July 1, 1995, for a Marine Chemist or Geochemist to study the sediment geochemistry, paleoceanography and paleoclimatological impact of global ocean nutrient cycles (N, P, Si). Applicants must have a recent Ph.D. in Chemical Oceanography or a related field with a background in stable isotope, trace element and/or nutrient geochemistry. Send résumé, statement of research interests and the names and addresses of three references to: **Dr. Philip N. Froelich, Director, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA 30332-0340. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS in Molecular Neuroscience—Johns Hopkins University—are available to study neurodegeneration and novel neuronal messengers. Investigations will involve gene transfer technology (viral and stem cell), manipulation of genes in YACs and cloning of novel genes. Experience in molecular biology, yeast or viral genetics desirable. Current funding for two to three positions for three years. Please send curriculum vitae to: **Drs. Valina and Ted Dawson, Department of Neurology JHU, 600 North Wolfe Street-Path 210, Baltimore, MD 21287. Equal Opportunity/Affirmative Action Employer.**

National Cancer Institute / National Institutes of Health / Public Health Service

CANCER PREVENTION FELLOWSHIP PROGRAM

The Division of Cancer Prevention and Control (DCPC), NCI, is accepting applications for the Cancer Prevention Fellowship Program (CPF). The purpose of this program is to train individuals from a multiplicity of health science disciplines in the field of cancer prevention and control. The program provides for: *Master of Public Health training* (at accredited university programs); *Participation in the DCPC Cancer Prevention and Control Academic Summer Course* (open to physicians and scientists interested in learning the principles and practice of cancer prevention and control); *Working at DCPC directly with individual preceptors* on cancer prevention and control projects; *Brief field assignments* in cancer prevention and control programs at other institutions. Funding permitting, Fellows will be accepted for up to three years of training, beginning July 1, 1996. Benefits include selected relocation and travel expenses, paid federal holidays, and participatory health insurance.

Eligibility

M.D., D.D.S., or D.O. from a U.S., territorial, or Canadian Medical School. Foreign medical graduates must have current USMLE or ECFMG certification and appropriate experience, e.g., one year residency in a training program approved by the Accreditation Council for Graduate Medical Education.

Or

Ph.D. or other doctoral degree in a related discipline (epidemiology, biostatistics, and the biomedical, nutritional, public health or behavioral sciences). Foreign education must be comparable to that received in accredited U.S., territorial, or Canadian institutions.

Plus

The applicant must be a U.S. citizen or resident alien eligible for citizenship within four years.

For details and an application catalog either call, fax or send a postcard or letter with your name, home address, and where you heard about the program to:

Douglas L. Weed, M.D., M.P.H., Ph.D., Director
Cancer Prevention Fellowship Program
Division of Cancer Prevention and Control
National Cancer Institute
Executive Plaza South, Suite T-41
6130 EXECUTIVE BLVD MSC 7105
BETHESDA MD 20892-7105

Further Inquiries: Mrs. Barbara Redding - tel: (301) 496-8640; fax: (301) 402-4863; email REDDINGB@dcpceps.nci.nih.gov

DEADLINE FOR RECEIPT OF APPLICATIONS: SEPTEMBER 1, 1995

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Abbott Laboratories knows what it takes to bring innovative health care products to market. For over a century, we've been setting new standards in R&D spending, and providing our scientists with unparalleled support. Now, you could join us as a research scientist, and play a major role in developing tomorrow's health care technologies.

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You will work on the discovery of anti-inflammatory and immunosuppressant drugs.

The chosen candidate will possess a PhD in a biological science — preferably immunology or biochemistry — and 2-4 years of post-doctoral experience. Research experience in cellular activation and signal transduction mechanisms is essential. Experience in assay development for drug discovery in the pharmaceutical industry is a plus.

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We currently seek a highly motivated, enthusiastic individual to participate in the development of polymeric drug delivery systems for protein drugs. Candidates must have a BS or MS in Science, Engineering, or Pharmaceuticals and at least 2 years' experience in polymers and drug delivery. Knowledge of basic protein chemistry and drug-polymer interactions is preferred.

At Amgen, you'll find our approach to scientific research as rewarding as it is effective. We offer a highly competitive compensation and benefits package that includes a retirement and savings plan, an on-site fitness center, and three weeks' vacation. Please mail your resume/c.v. to: Amgen Inc., Staffing, Job Code: OXP-SC-2401, Amgen Center, Thousand Oaks, CA 91320-1789. Principals only, please. For information on other research opportunities available at Amgen, please call 1-800-446-4007. EEO-Affirmative Action Employer M/F/D/V. We recognize that diverse perspectives are a key factor in the process of discovery.

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**Director, Research Animal Resources
University of Minnesota**

The University of Minnesota is seeking a Director of Research Animal Resources (RAR). The Director has University-wide responsibilities for policies regarding the care and management of research animals and serves as the University's attending veterinarian. The major programs are on the Minneapolis and St. Paul campuses, but also include the Duluth campus and the Hormel Institute in Austin, Minnesota. The Director of RAR has direct responsibility for managing an AAALAC accredited, centralized program of laboratory animal care and use that complies with all federal, state, and local animal welfare regulations and encompasses 65,000 sq ft of geographically decentralized space. Responsibilities include supervising the Animal Care Section of RAR, which employs over 50 people, and the Comparative Medicine Division, which includes 3 veterinarians and associated support staff who provide clinical care, post-operative care, anatomic and clinical pathology services, and related professional services. The annual budget of RAR exceeds \$2M. The Director reports directly to the Assistant Vice President for the Academic Health Center.

Candidates must have a DVM, DMV, or foreign equivalent. Board certification by the American College of Laboratory Animal Medicine is required. Requirements also include a minimum of three years of significant administrative experience in the care and managing of research animals. This experience must encompass personnel and budgetary responsibilities. Also required is a record of research accomplishments in the candidate's area of interest that would qualify the individual for appointment as a tenured faculty member. Appointment at the level of associate or full professor in an appropriate college, school, or department is available. Preferably, the successful candidate will maintain an active research program. Individuals should submit a letter of interest, a curriculum vitae, and the names of three references to:

Chair, Search Committee, Academic Health Center, Office of the Provost, University of Minnesota, Box 501, 420 Delaware Street S.E., Minneapolis, MN 55455

Closing date for receipt of applications is June 1, 1995.

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

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Within our Angiology division, you will take part in the study of the role of the extracellular matrix in the contractility of diseased veins, using cultures of vascular smooth muscle cells. Qualified to PhD level, you should have a strong background in biochemistry and in molecular and cellular biology. You wish to enrich your experience of research in collaboration with a high-level multidisciplinary team. The position is a limited duration contract of 18 months.

Thank you for sending your application (handwritten letter, CV and photo) quoting reference 61538 to Media System, 6 impasse des Deux Cousins, 75849 Paris Cedex 17, France.

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ALANEX Corporation is a rapidly growing San Diego based drug discovery company dedicated to developing novel drugs for the treatment of metabolic and cardiovascular disorders. We currently have an opening in our Pharmacology Department for a team-oriented individual. The successful candidate will be responsible for the *in vitro* characterization of novel drugs. The position requires a Ph.D. and 1-4 years of postdoctoral training, and extensive experience with radioligand binding and functional assays to characterize drug-receptor interactions. Receptor cloning and mutagenesis experience is desirable.

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**FACULTY
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A faculty position at the level of Assistant, Associate, or Full Professor is available at the New England Eye Center, Tufts University School of Medicine, to conduct ophthalmic laser research and to develop novel techniques for optical tomography and laser surgery. Potential candidates should have a strong background in optics and lasers, good communication skills, and an ability to work closely with clinical investigators. A Ph.D. degree in physics, biomedical engineering, biophysics, optics, or related field is preferred. Successful candidate will develop his or her own independent research program. Please send CV and three letters of recommendation to Carmen A. Puliafito, M.D., Director, New England Eye Center, 750 Washington Street, Boston, MA 02111, FAX 617-636-4215.

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RESEARCH SCIENTIST

Saint Francis Campus

Saint Francis Hospital and Medical Center located in Hartford, Connecticut is seeking candidates to join our Department of Research to establish new programs in vascular biology. Candidates should have completed a doctoral degree and a postdoctoral fellowship and have prior experience in vascular biology. Candidates will be eligible for an appointment at the University of Connecticut School of Medicine. Interested candidates should send resume and references to:

Dr Ernesto Canalis, Saint Francis Hospital and Medical Center, 114 Woodland Street, Hartford, CT 06105-1299, Fax: (203) 548-5415.



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Neurobiology and Development of the Leech

August 5 - 26, 1995

For graduate students, postdoctoral students, and independent investigators interested in applying diverse experimental approaches (electrophysiology, biophysics, cellular and molecular biology) to the study of the nervous system and development of a single organism. Studying the segmental nervous system and embryo of the leech, participants will master a variety of techniques that can be applied to most other preparations, including vertebrates. Limited to 12 students.

Principles of signaling and synaptic transmission are examined using intracellular and extracellular recording to characterize individually identified ganglionic neurons. Results are correlated with animal behaviors and with neuronal morphology as revealed by intracellular staining with fluorescent dyes or HRP. Students will also use patch clamp techniques to study whole cell and single channel transmembrane currents *in situ* and in isolated neurons in culture.

Building on the notion that detailed knowledge of the structure and function of the nervous system constitutes a well-defined endpoint for developmental studies, students will also learn techniques and concepts of modern experimental embryology, including lineage tracing, cell cycle analysis and the analysis of gene expression by *in situ* hybridization and immunohistochemical procedures.

This course is supported in part by grants from the Grass Foundation and by the International Brain Research Organization.

Directors: Pierre Drapeau, McGill University, and Martin Shankland, Harvard Medical School.

Application Deadline: **May 16, 1995.** Tuition: \$1,500 (Room & board available at no additional charge.) Financial assistance is available to qualified applicants. Funding for non-U.S. citizens has been generously provided by IBRO.

Contact: Admissions Coordinator, Marine Biological Laboratory, Woods Hole, MA 02543; tel (508) 289-7401; Internet: admissions@mbi.edu



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The MBL is an EEO Affirmative Action Institution

National Institutes of Health

BIOORGANIC CHEMIST

The Genetics and Biochemistry Branch, National Institute of Diabetes and Digestive and Kidney Diseases, seeks an outstanding candidate to carry out studies on the molecular mechanisms of homologous recombination and the structure of the triplex intermediates involved in this process. The candidate must have a Ph.D. (or its equivalent) in bioorganic chemistry and at least five years of postdoctoral training in nucleic acid chemistry related to understanding higher-order DNA structures (including chemical and photo-footprinting); experience in peptide chemistry is also essential. Applicant should be familiar with methods of molecular biology and biochemistry, protein and peptide purification (FPLC, HPLC), physical chemistry (including Raman spectroscopy and circular dichroism). Research experience in the biochemistry of multistranded DNA structures (triplexes, quadruplexes) and molecular mechanisms of general recombination must be proved by publications or preprints. Starting salary (\$31,000-41,000) commensurate with qualifications and experience. U.S. citizenship or permanent residency is required for this position. Interested candidates should submit CV, several reprints, summary of research interests and names of three references within 30 days of publication to:

**R. Daniel Camerini-Otero, Genetics and Biochemistry
Branch, National Institutes of Health (NIDDK),
Building 10, Room 9D20, 10 Center Drive MSC 1810
Bethesda, MD 20892-1810**

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ANALYTICAL ASSAY SCIENTIST

PRIZM Pharmaceuticals, Inc., is a private company engaged in the development of therapeutic products based on the regulation of growth factors and their receptors.

The research scientist selected for this hands-on position will develop and validate immunoassays and other bioanalytical methods in biological fluids (ELISA, RIA, Western, HPLC) for the characterization of protein and peptide-based products to support pharmacokinetic, safety evaluation, and drug delivery studies. The qualified candidate will eventually develop robotic methods for high-volume assays and assays for analysis of clinical samples. A Ph.D. and at least 4 years of postdoctoral experience are required. Knowledge of GLP/GMP compliance issues and strong written and verbal communication skills are essential. Industry experience is highly desired.

Please send your C.V. to: PRIZM Pharmaceuticals, Inc., Human Resources, 11035 Roselle Street, San Diego, CA 92121, FAX 619/625-0050. An equal opportunity employer.



Cellular and Molecular Neurobiology Postdoctoral Positions

Postdoctoral positions are available at the Worcester Foundation for Experimental Biology to study cellular and molecular aspects of neurobiology. These positions are supported by an NIH Training Grant and individual investigator awards. The faculty and their research interests are:

Hagan Bayley: *Protein kinases in neuronal modulation/caged peptides and proteins.*

Justin Fallon: *Molecular mechanisms of synaptogenesis.*

F. Rob Jackson: *Molecular genetic analysis of circadian rhythms and other neural functions in Drosophila.*

Michele Jacob: *Neuronal synapse formation: regulation of gene expression; targeting to synaptic domains.*

Daniel Kilpatrick: *Transcriptional regulation of neuronal differentiation.*

José Lemos: *Stimulus-secretion coupling at nerve terminals, identifying their calcium channels and molecular mechanisms underlying neurotransmitter release.*

Robert O'Connell: *Neurobiology of quality perception in olfaction including stimulus detection, transduction, coding and behavior.*

Alonzo Ross: *Neurotrophin receptors, signal transduction and differentiation.*

Richard Vallee: *Microtubule motor proteins; synaptic GTPase dynamin.*

Zuoshang Xu: *Structure and function of neurofilaments and their neuronal physiology and pathology.*



Send curriculum vitae and names of references to the faculty member(s) of interest, c/o Human Resources, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545, USA. An Equal Opportunity/Affirmative Action Employer M/F/H.

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CENTRE FOR RESEARCH ON INTRODUCED MARINE PESTS

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Division of Fisheries, Hobart, Tasmania

The CSIRO Division of Fisheries is Australia's largest marine living resources research group. It undertakes a diverse range of strategic and tactical research in support of the fishing and mariculture industries, and the management of environmental impacts in coastal and estuarine waters. The Division has recently established a Centre for Research on Introduced Marine Pests (CRIMP), which will provide a national focus for research aimed at assessing and minimising the impacts of introduced pest species in Australian waters. We are seeking two research scientists to fill key positions in the Centre to develop and lead major research projects.

Biological Control/Marine Invertebrate Parasitologist

Ref No FC95/11

We wish to appoint an innovative scientist to develop and apply biological control techniques in the marine environment. The Biological Control Project will have substantial core funding and an opportunity to draw on expertise in the Centre and other CSIRO research groups dealing with biological control, integrated pest management and genetic manipulation in terrestrial contexts. The appointee will lead a team that will evaluate the effectiveness and specificity of potential predators, parasites and pathogens with the aim of introducing one or more as control agents and evaluating their impacts on introduced pest populations. The appointee will have research experience or a strong research interest in biological control and/or marine invertebrate parasitology, and a demonstrated capacity to integrate multidisciplinary research areas to achieve desired outcomes. The appointee must have a PhD or equivalent experience and a strong commitment to a team approach to research.

Invasion Biologist/Marine Invertebrate Ecologist

Ref No FC95/12

We seek an enthusiastic research scientist with expertise in invasion biology to develop theoretical frameworks and lead field projects to assess the susceptibility of Australian marine communities to colonisation by exotic species, and develop management strategies that will minimise the opportunities for exotic species to establish and spread. The appointee will work closely with Centre biologists involved in the survey, monitoring and ecosystem impacts of introduced species, and divisional modellers developing spatial models and techniques for ecological and economic risk assessment. The appointee will have a PhD or equivalent, a research background in invasion biology and theory, experience in ecological modelling and sampling design, and a sound understanding of marine community dynamics.

Both positions are fully (12 month) funded and come with research support staff and significant operating budgets. There are good opportunities for securing additional external support for both project areas.

The appointees will be located at the CSIRO Marine Laboratories, Hobart, Tasmania. The laboratories are Australia's largest centre for marine research, housing over 250 staff involved in oceanographic, fisheries and marine ecological studies.

Term is for five years with the possibility of the position being made indefinite (* Tenured).

Please contact Dr Ron Thresher (phone 61 02 325 378, fax 61 02 325 485), e-mail ron.thresher@ml.csiro.au for further information. Mrs Sue Spinks (phone 61 02 325 452, e-mail sue.spinks@ml.csiro.au) will provide a detailed job description and selection criteria.

Applications addressing the selection criteria and quoting the appropriate reference number should provide details of your qualifications, work experience, the names of at least two referees and be addressed to **The Administrative Manager, CSIRO Division of Fisheries, GPO Box 1538, Hobart, Tasmania 7001, Australia** by 19 May 1995.

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In the Institute for Pharmacy and Food Chemistry, Science Faculty II (Biology, Chemistry and Pharmacy), the following position is available from 1. 10. 1996:

Chair of Pharmaceutical Chemistry (C4-Professor)

(Successor to Prof. Dr. H. Achenbach)

The responsibilities include adequate representation of the subject of Pharmaceutical Chemistry in research and teaching. The research interests of the candidate should be in a topical area of Pharmaceutical Chemistry.

The qualifications for this position are a completed university degree, excellent teaching skills, a doctoral degree and habilitation, or proven alternative equivalent scientific achievements. The license as a pharmacist is desirable.

The successful candidate must be under 52 years of age at the time of appointment.

The University of Erlangen-Nürnberg aspires to increase the proportion of women in research and teaching, and specifically requests applications from female candidates.

Applications from disabled candidates of the same aptitude will be given preference.

Applications containing the usual documents (curriculum vitae, list of publications and teaching activities, certified copies of testimonies and certificates) should be sent before May 30, 1995 to: Dekan der Naturwissenschaftlichen Fakultät II (Biologie, Chemie und Pharmazie) der Universität Erlangen-Nürnberg, Universitätsstraße 40, 91054 Erlangen, Germany.

**Friedrich-Alexander-Universität
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MEDIZINISCHE EINRICHTUNGEN MOLECULAR BIOLOGIST

**Dept. of Dermatology
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University of Düsseldorf
Announcement No. 67 E/95**

Postdoctoral position available from July 1995 for 3 years to isolate skin cancer-associated genes by differential display. Salary according to German BAT Ib/Ia (ca. DM 93 600,-per year).

Qualified and interested candidates should send c.v. including publication list and evidence of German citizenship or legal authorization to work in Germany which is not limited to a particular employer to:

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POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP Hormone Action/Reproductive Biology

Positions available in an NIH-sponsored training program on the cellular and molecular mechanisms of hormone action relating to reproduction. Eleven laboratories participate in this intradepartmental program having expertise in the action of androgens, estrogens, progesterins, gonadotropins, cell division, proliferation, gene regulation, and structural biology. Please send curriculum vitae and three letters of reference to:

Dr. David Toft
Department of Biochemistry and Molecular Biology
Mayo Graduate School
200 First Street SW
Rochester, MN 55905

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POSTDOCTORAL FELLOWSHIPS CANCER BIOLOGY

The Committee on Cancer Biology (begin July 1, 1995) and the Cancer Biology Training Program (begin September 1, 1995) are seeking applications from qualified applicants. The University of Chicago offers an interdisciplinary program of postdoctoral training in preparation for research and teaching in the field of cancer biology. **FELLOWSHIPS** are for one year, renewable for two. Applicants should apply directly to Cancer Biology faculty. For more information, including faculty research descriptions and addresses, please contact: **Mr. Larry Hill, Ben May Institute MC 6027, University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.** The University of Chicago is an Affirmative Action/Equal Opportunity Employer.



SOIL PHYSICIST

The United States Department of Agriculture, Agricultural Research Service, Poultry Production and Product Safety Research Laboratory, Fayetteville, Arkansas is seeking a **RESEARCH SOIL PHYSICIST**. The incumbent will work with a team of scientists to establish the effect of land application of poultry and animal waste on the quality of surface and ground water. The incumbent's research program is expected to define those variables that influence surface runoff and subsurface water flow in soils. It is expected that hydrology models for runoff and subsurface water flow will be developed, evaluated, and used to establish best management practices for the use of poultry and animal wastes. Incumbent must have knowledge of agronomy, soil science, and soil physics. A Ph.D. degree is desirable and the incumbent must be a United States citizen. Salary is commensurate with experience (\$35,578 to \$50,706 per annum). For information on the research program and position, contact: **William Huff, 501-575-2104.** For information on application procedures/forms, contact: **Gina Moore, 301-344-1924.** Applications in response to this advertisement should be marked **ARS-S-5-004.** Applications must be postmarked by June 9, 1995. Mailing address:

USDA, ARS, Personnel Operations Branch
Southern Section
Room 341-A, 6305 Ivy Lane
Greenbelt, MD 20770

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SCIENTIST FISHERIES ECOLOGY

The Wildlife Conservation Society, founded in 1895 as the New York Zoological Society, seeks candidates for a new position managing fisheries conservation programs within the Critical Ocean Wildlife Recovery Initiative, a major new program thrust of the Society, based at the New York Aquarium in Brooklyn. Will be responsible for efforts to conserve fish species and fisheries as well as conducting scientific research and field projects. Requirements: Ph.D. or equivalent in fisheries ecology or related field, strong modeling background, demonstrated interpersonal, presentation, and team management skills. Title/salary commensurate with experience. Send curriculum vitae, a summary statement of conservation, policy, and research interests, and references to: **Human Resources, Box A, WCS, 2300 Southern Boulevard, Bronx, NY 10460.**

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POSITIONS OPEN

RESEARCH ASSOCIATE POSITION AVAILABLE WITHIN A DYNAMIC MOLECULAR MEDICINE PROGRAM

A **RESEARCH ASSOCIATE** position is available to study the molecular biology of the mechanisms controlling pancreatic secretion during alcohol ingestion. This project will apply advanced methodologies to examine a powerful new paradigm of pancreatic control encompassing neurohormonal regulation and adaptive mechanisms. All work will be performed within two recently renovated Molecular Biological Core Facilities. The successful candidate will be a highly motivated individual with extensive experience in molecular biology and the ability and ambition to contribute to several related projects. Preference will be given to candidates with experience in differential display. This position, available 1 July 1995, has full fringe benefits and is secured by an NIH grant to **Dr. David C. Whitcomb**. Applicants should send a detailed curriculum vitae and the names of four references to: **Dr. Garth D. Ehrlich, 737 Scaife Hall, Department of Pathology, University of Pittsburgh, Pittsburgh, PA 15261.** The University of Pittsburgh is an Equal Opportunity Employer.

RESEARCH ASSISTANT

The University of Virginia Department of Medicine seeks a **RESEARCH ASSISTANT** for the Division of Endocrinology and Metabolism. Candidates should be able to independently conduct *in vivo* and *in vitro* experiments in rats (experimental design, surgical techniques, treatment, sampling methods), measure specific hormones in blood samples and mRNAs in the pituitary, prepare manuscripts and presentations to scientific meetings. Submit curriculum vitae and three letters of reference by June 1, 1995, to: **Daniel J. Haisenleder, Ph.D., University of Virginia, Department of Medicine, 5041 MR-4 Building, Charlottesville, VA 22908.** The University of Virginia is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE for university in central Ohio. Lab research in pharmacokinetics, drug metabolism and disposition; small animal surgery; identification of drugs and products of their metabolism using radiolabelled compounds; mass spectrometry; nuclear magnetic resonance (NMR); gas chromatography and high performance liquid chromatography (HPLC); identification, purification and biochemical characterization of specific enzymes involved in drug metabolism pathways; publishing papers in peer-reviewed professional journals. M.S. in chemistry or biochemistry and three years of research experience in above-described duties or in chemical enzymology, organic and analytical chemistry, protein purification, NMR, HPLC, mass spectrometry, and assisting with small animal surgery. Or, in the alternative, a Ph.D. and one year of experience in the above-described duties or requirements; experience may be gained concurrent with degree. 40 hours per week, 8 am to 5 pm, Monday to Friday, \$26,220 per year. Send two résumés and cover letters (no calls) to: **L. Eggleston, JOB No. 1056, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

COURSES AND TRAINING

PLANT BIOCHEMISTRY 1995

The DOE/NSF/USDA Triagency-supported Plant Biochemistry Research and Training Center at Washington State University will conduct a training course in plant biochemistry July 15-28, 1995. The course is designed to teach fundamental principles as well as the latest advances in areas including structure-function of plant organelles; ion transport; photosynthesis; carbohydrate and lipid biosynthesis and metabolism; nitrogen fixation and amino acid metabolism; synthesis, catabolism, physiology and mechanism of action of plant hormones; synthesis and catabolism of unique plant products such as terpenoids, alkaloids, cyanoglucosides, phenylpropanoids; signaling mechanisms in plant defense responses toward pests and pathogens; metabolic regulation; protein synthesis and intracellular targeting of macromolecules. Funds have been allocated to partially offset travel and housing expenses for up to 40 participants. For further information and an application form, contact: **Ms. Karen Maertens, PBRTC, Institute of Biological Chemistry, Washington State University, Pullman, WA 99164-6430.** Telephone: 509-335-5496; FAX: 509-335-7643; Email: maertens@wsuvm1.csc.wsu.edu.

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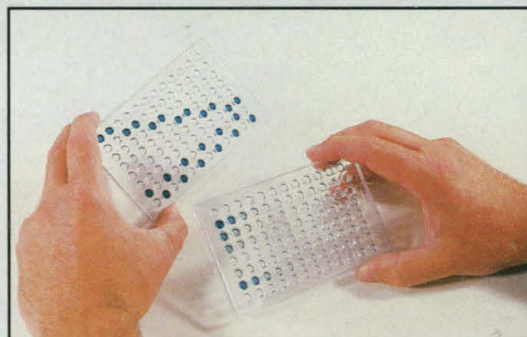
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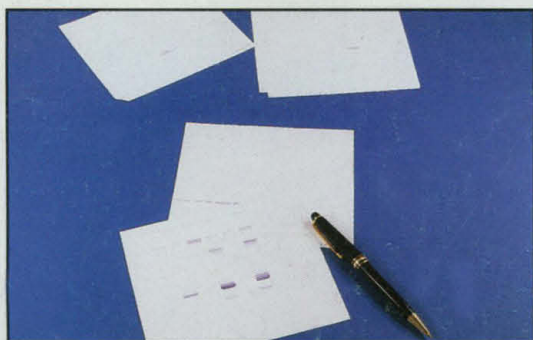
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