Products & Materials

Software for Recording Observational Data

EVENTLOG is a computer program designed for human observers who must score and record observational data. EVENT-LOG turns the keyboard keys into userdefined timers, each identified with a specific event to be observed. For example, in an animal behavioral study, the "E" key could be designated to mean "eating," and the "G" key to mean "grooming." When the animal begins exhibiting one of these behaviors, the observer presses the corresponding key, holding it down until the behavior ceases. The precise times at which the key is pressed and released are recorded for subsequent analysis. Simultaneous and overlapping events can also be recorded. EVENTLOG requires an IBM PC, PC-XT, PC-AT, PS/2, or compatible; DOS 2.10-3.40; and 384 K memory. A color monitor is preferable. CONDUIT. Circle 437.

Image Processing for the Macintosh II

IPLab/Spectrum is new color image processing software for the Macintosh II line of computers. The program processes and displays images in full color with up to eight bits allocated to each of the red, green, and blue components. Users can decompose a full-color image into a color component set for processing, then merge images to recreate a color image. Signal Analytics. Circle 444.

Disposable Replica Plater

The Accutran disposable replica plater features a precision nylon velvet surface and a molded support designed to conform to the agar surface. The design ensures a high fidelity of replication for various organisms with widely different colony morphologies, with up to 12 replicas per master plate. Replicas are made by lowering the plates



onto the Accutran replica plater, which allows for visual control of the contact between the agar and the transfer surface. Alignment bumpers guide plates into place and prevent the collection of moisture on the perimeter of the transfer surface that can cause colony smearing. The Accutran replica plater is provided sterilized, in packages of 25, 100, or 500 units. Schleicher & Schuell. Circle 436.

Still for Ultrapure Water

The OSMOSTILL provides 1 megohmcm pyrogen-free ultrapure water for a wide variety of laboratory applications, including reagent solutions, dilution of laboratory samples, and glassware rinsing. The OSMO-STILL features a single-effect still and storage tank enclosed in a compact cabinet. The low-velocity evaporators of the still are fabricated of tin-coated copper to produce pure steam from raw or pretreated water supplies. Osmonics. Circle 446.

Analytical Balance for Protected Samples

For high-precision weighing of protected samples, the GA Series of electronic balances has an enclosed weighing chamber. Three models are available with capacities to 200 g. One model offers dual range: the 200-g capacity, with 0.1-g readability, can be switched to 40-g capacity with readability to 0.01 g. In all models, the large fully enclosed weighing chamber is accessible from sides and top. Ohaus. Circle 567.

Kit to Prepare Proteins for Sequencing

Proteins to be sequenced are often blocked at the NH_2 -terminus. In such cases, the usual recourse is to cleave the protein to generate new NH_2 -termini and separate the resultant peptide fragments. The Probe-Design Peptide Separation System allows the user to prepare proteins for sequencing without the need to perform high-performance liquid chromatography or purchase additional specialized reagents. The kit uses reliable and straightforward methods (cyanogen bromide cleavage and high-resolution SDS minigel separation) to generate unblocked, purified peptide fragments from 100 to 250 picomoles of target protein. The target protein need not be pure in solution; a gel band may even be used as the starting material. The end products are peptide fragments immobilized on a membrane and ready for sequencing. Promega Corp. Circle 443.

Semi-Dry Gel Blotter

Researchers can now quickly process polyacrylamide gels and transfer proteins from as many as six gels at a time with the new Buchler Instruments Semi-Dry Blotter. The unit's flat, non-flaking electrode plates serve as heat sinks, eliminating the need for external cooling, and produce a uniform electrical field that allows complete, even protein transfers. The blotter requires only milliliters of buffer solution. A built-in safety feature prevents electrical shock by prohibiting operation if the cathode plate cover is not properly secured. VWR Scientific. Circle 573.

Literature

Classic LC Electrophoresis presents eight complete systems for low-pressure liquid chromatography applications, a new peakdetecting fraction collector, and new electrophoresis power supplies and apparatus. Also included are variable wavelength and multiwavelength detectors, a gel scanner, fractionators for centrifugal density gradients, and peristaltic pumps for LC and general lab use. Isco. Circle 454.

Gold Conjugates: Complementary/Interactive Systems describes a line of gold conjugates that offer versatility and sensitivity in analytical procedures and are alternatives to radioimmunossay and enzyme-linked immunosorbent assay. There are more than 50 products in three complementary systems. Sigma Chemical Co. Circle 455.

Integral 4000 Liquid Chromatograph is an 18-page brochure that provides a broad overview of an instrument designed for the routine analysis laboratory. Perkin-Elmer. Circle 459.

SterilchemGARD is an eight-page brochure detailing a new exhaust vertical laminar flow biological safety cabinet. Baker Co. Circle 462.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year, and is mailed on issue date. Personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference. SCIENCE re-serves the right, in its discretion, to decline to publish advertisements submitted to it.

LINE CLASSIFIED ADVERTISEMENTS

DEADLINE: Thursday, 10 a.m., 2 weeks prior to issue date. Advertising is accepted only in writing.

POLICIES: All classified ads will be edited and typeset according to SCIENCE style guidelines. NO ABBREVIA-TIONS. Any deadline for applications stated in ad must be at least 2 weeks after date of publication.

CLASSIFICATION: SCIENCE publishes line classified CLASSIFICATION: SCIENCE publishes line classified ads under the following headings: Positions Open, Employment Agencies, Situations Wanted, Courses and Training, Meetings, Announcements, and Mar-ketplace. Advertisers should specify classification de-sired; however, SCIENCE reserves the right to decline classification requests which it believes may be mislead-tion to reaction ing to readers.

Ing to readers. **RATE:** \$41 per line, \$410 minimum, per week. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces per line. No charge for use of blind box number. No agency commission for ads less than 40 lines. To ESTIMATE ad cost, structure ad copy on a 52-character line; include any desired head-ing on 32-character lines. Each line of heading, one line of white space between heading and body of ad, and all partial lines (including centered reply information, if desired) are counted as full lines. Multiply total number of lines × \$41 = approximate cost of ad, per week. (This is an approximate cost ONLY. Allow for variation be-tween estimated lines and actual typeset lines and resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment. SCIENCE cannot provide proofs of typeset ads.) **CREDIT CARDS:** SCIENCE accents MasterCard and

CREDIT CARDS: SCIENCE accepts MasterCard and VISA.

PREPAYMENT DISCOUNT: A 3% cash discount is granted to all prepaid line ads. Prepayment in U.S. dollars by checks drawn on U.S. banks is required for all

BOXES AND LOGOS: Any 1-column line classified ad can be boxed and/or published with logo. No extra production charge for use of box or logo. For boxed ads, one line equals 48 characters and spaces; two addition-al lines will be added to cost of ad to allow for top and bottom rules. Logos are billed according to number of lines needed to accommodate logo.

Ines needed to accommodate logo. SITUATIONS WANTED ADS: As a service to AAAS members in good standing, SCIENCE offers free place-ment of Situations Wanted ads for individuals seeking full-time or part-time employment. A blind box may be used. Ads must be submitted in writing with text of 20 words or less, not including address or box number, and are limited to two insertions per member in each calen-dar year. Please enclose SCIENCE mailing label includ-ing AAAS membership number when submitting ad.

CANCELLATIONS: Deadline for cancellations is 10 a.m. Tuesday, 10 days prior to issue date.

Address ad copy or requests for information to:

SCIENCE Classified Advertising 1333 H Street, NW, Room 940 Washington, DC 20005 Telephone: 202-326-6555 FAX: 202-682-0816

DISPLAY PERSONNEL ADVERTISEMENTS

For rates, deadlines, and information about fractional display ads (1/6 page and larger) and all **Marketplace** listings of available products and services, contact:

Scherago Associates, Inc. 1515 Broadway New York, NY 10036 Telephone: 212-730-1050 FAX: 212-382-3725

RESPONSES TO EMPLOYMENT ADS

Applicants should read Positions Open ads carefully in order to submit all required material when responding, and should especially check for any stated deadline for receipt of applications. SCIENCE encourages appli-cants for positions to investigate employment laws, non-discrimination policies, visa requirements, and cultural differences in the country advertising for employees.

To reply to a blind box ad, address correspondence to:

Box (give number) SCIENCE Classified Advertising 1333 H Street, NW, Room 940 Washington, DC 20005

POSITIONS OPEN

ASSISTANT PROFESSOR. A new position will become available in January 1991 for a qualified individual who has demonstrated ability to conduct productive basic research in one of the following areas of tumor immunology: membrane structure and function, control of gene expression, cytolytic mechanisms. Minimal qual-ification will include Ph.D. or M.D. degree with postdoctoral experience. Applications consisting of curriculum, vitae, a summary of research accomplishments, reprints of three selected publications, and three letters of reference should be sent to: Dr. Eva Lotzová, Chief, Section of Natural Immunity, Department of General Surgery, The University of Texas, M.D. Anderson Cancer Center, 1515 Holcombe Boulevard, Box 18, Houston, TX 77030. We are an Equal Opportunity/ Affirmative Action Employer.

ASSISTANT PROFESSOR. PLANT PHYSIO-LOGICAL ECOLOGIST. Applications are invited for a tenure-track position beginning fall 1991. Ph.D. re-quired. Teaching duties will include plant ecology, plant physiology, introductory botany, and advanced coursework in the applicant's specialty area. Development of an active research program in the area of physiological ecology of vascular plants is expected. Salary commensurate with experience. Please submit curriculum vitae, description of teaching and research interests, transcripts, our letters of recommendation by 16 January 1991 to: Dr. L. S. Baum, Chairman, Search Committee, Department of Biology, Northeast Louisiana Univer-sity, Monroe, LA 71209. An Equal Opportunity Employer.

BOTANIST

ASSISTANT PROFESSOR, tenure-track, to teach introductory botany and advanced courses in area of expertise; direct undergraduate research; participate in student advising, departmental work and faculty governance. Send application, curriculum vitae, transcripts, and three letters of references by 2 January 1991 to: Dr. Bruce W. Haggard, Biology Department, Hendrix College, 1601 Harkrider, Conway, AR 72032. An Equal Opportunity/Affirmative Action Employer.

MICROBIOLOGIST/BOTANIST. The University of Richmond invites applications for a tenure-track po-sition in biology at the ASSISTANT PROFESSOR level. The appointee will be responsible for undergraduate introductory courses in microbiology and botany. In addition, development of advanced undergraduate and M.S.-level courses in microbiological areas of his/her specialty will be expected. Preference will be given to those who will develop an active research program in plant microbial interactions and will involve undergraduate students. Candidates must have the Ph.D. degree and postdoctoral experience is desirable. Submit résumé, undergraduate and graduate transcripts, a statement of research plans, and three letters of reference to: Dr. F. B. Leftwich, Department of Biology, University of Rich-mond, VA 23173. Consideration of applications will begin on 15 December 1990. The University of Richmond is an Equal Opportunity/Affirmative Action Employer andencourages application from women and minority candidates.

PLANT MOLECULAR SYSTEMATIST/EVO-PLANT MOLECULAR SYSTEMATIST/EVO-LUTIONARY BIOLOGIST. The Department of Plant Biology, University of Illinois at Urbana-Cham-paign, invites applications for a full-time, tenure-track position at the ASSISTANT PROFESSOR level for appointment in August 1991. Applicants must have a Ph.D. and research experience in the phylogenetic studies of plants using molecular biology approaches. The ap-pointee will be expected to conduct research in the evolutionary relationships of plants and to contribute to both graduate and undergraduate teaching programs, solution including the introductory course in plant systematics. Salary is negotiable, dependent on the applicant's qualifications.

Applications, which must include curriculum vitae, a summary of research and teaching interests, and the names and addresses of at least three referees, are to be names and addresses of at least three referees, are to be sent to: Dr. John R. Laughnan, Search Committee Chairman, Department of Plant Biology, University of Illinois, 289 Morrill Hall, 505 South Goodwin Avenue, Urbana, IL 61801. Telephone: 217-333-2919 or 217-333-3261. Interviews may be conducted before the closing date of 18 January 1991, but all applications received by the closing date will receive full consideration. The University of Illinois is an Affirmative Action Faul Opportunity Employer Action/Equal Opportunity Employer.

POSITIONS OPEN

GENETICIST

One-year leave replacement; begins August 1991. ASSISTANT PROFESSOR rank. Teach one-semester course in general genetics for biology majors; teach biology; participate in introductory biology sequence. Ph.D., and commitment to liberal arts education and cultural diversity. Send interest letter, curriculum vitae, transcript and names of three references by 31 January 1991, to: Genetics Search, University of Puget Sound, P.O. Box 7297, Tacoma, WA 98407. An Equal Oppor-tunity/Affirmative Action Educator/Employer.

BROWN UNIVERSITY ASSISTANT PROFESSORS: (1) MOLECULAR GENETICS (2) MÓLECULAR PHARMACOLOGY

The Division of Biology and Medicine announces two full-time, assistant professor, ten-ure-track faculty positions in a large, strongly interactive faculty unit which covers undergraduate and graduate programs in the biological sciences as well as the basic medical sciences courses for an 8-year continuum, the Program in Liberal Medical Education. We seek individuals with a doctoral degree, at least 2 years of postdoctoral training, potential for excellence in teaching, and the ability to develop an indepen-dent, externally funded research program. The

Appointments will begin on or after 1 July 1991. MOLECULAR GENETICS applicants should address in their research central issues in prokaryotic or eukaryotic genetics. General teaching responsibilities include participation in undergraduate and graduate courses in molecular biolo

MOLECULAR PHARMACOLOGY applicants should address molecular structure-funcion relationships in such physiological targets of drug action as ion channels, cell surface recep-tors, or enzymes, applying molecular biology techniques such as a site-directed mutagensis approach to protein function. General teaching responsibility includes the pharmacology course for medical students as well as participation in undergraduate and graduate instruction. Opportunities exist for interactions with a

wide range of faculty in the Division of Biology and Medicine and in the university. Applicants should submit a résumé including research and teaching experience, future research plans, and a list of publications; enclose representative re-prints; and have three letters of reference sent to: Division of Biology and Medicine, Brown University, Providence, RI 02912, in care of Dr. Susan Gerbi, Box G-J323, for the molecular genetics position or Dr. Edward Hawrot, Box G-B487, for the molecular pharmacology position

Applications are expected by 4 January 1991. Screening will begin on that date and continue until a successful candidate has been identified or the search is closed. We encourage applications from women and minority candidates. Brown is an Equal Opportunity/Affirmative Action Employer.

PLANT BIOLOGY THE OHIO STATE UNIVERSITY

This is a 9-month, tenure-track position at the AS-SISTANT PROFESSOR level. We seek a Ph.D. plant biologist who is utilizing modern approaches to the study of any of the three following areas: ecophysiology, molecular evolution, or stress physiology. Postdoctoral experience is preferred. It is expected that the successful candidate will develop a vigorous, externally funded research program, direct graduate students, teach an advanced course in his/her specialty area, and teach one course in a sequence in plants, people, and the environ-ment for nonscience majors. Salary is negotiable. Send curriculum vitae, reprints, statement of research interests and teaching philosophy, and three letters of recommen-dation by 15 December 1990 to: Dr. D. J. Crawford, Search Committee, Department of Plant Biology, The Ohio State University, 1735 Neil Avenue, Co-lumbus, OH 43210. The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Applications from nen and minorities are strongly encouraged.

THE UNIVERSITY OF TEXAS AT DALLAS

The program in Cognition and Neuroscience in the School of Human Development at the University of Texas at Dallas announces the availability of a faculty position in the area of neuroscience. We seek a cellular, systems, or behavioral neuroscientist with an interest in nervous system modeling and research and teaching expertise in either neuroanatomy or neurochemistry. Candidates must possess a Ph.D. and should provide evidence of scholarly productivity and a commitment to graduate education in an interdisciplinary context. The position is advertised at the **ASSISTANT PROFES-SOR** level, but a more senior appointment may be available for a highly qualified candidate.

position is advertised at the ASSISTANT PROFES-SOR level, but a more senior appointment may be available for a highly qualified candidate. Salary, teaching loads and research support are highly competitive. Indication of sex and ethnicity for Affirmative Action purposes is requested but not required. Please send letter, curriculum vitae, and the names of three references by 15 December 1990 to: Academic Search #549, 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.

BIOLOGIST. Nine-month, tenure-track position, rank of **ASSISTANT PROFESSOR**, to begin 1 September 1991. Ph.D. in biology that includes a concentration in at least one of the following or related areas: developmental biology, behavioral biology, population/ evolutionary biology, with a commitment to undergraduate teaching. Teaching responsibility will be primarily in the area of human anatomy and physiology. Instruction in the introductory survey biology program will be required as needed. Teaching upper division courses in area of specialization may be available on a limited basis. Completed applications will be accepted until 11 January 1991. Submit letter of application, official transcript(s), three letters of recommendation, and current curriculum vitae to: **Dr. Wayne R. Faircloth, Department of Biology, Valdosta State College (VSC), Valdosta, GA 31698.** *VSC is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR ANIMAL PHYSIOLOGIST

The Department of Zoology at Arizona State University invites applications for a tenure-track position at the level of **ASSISTANT PROFESSOR**. Applicants should work at the molecular level, preferably with interests in membrane phenomena (e.g., hormone and transmitter receptors, ion channels, signal transduction, transport systems). Applications from other areas of molecular physiology will be considered. Candidates are expected to develop independent, externally funded research programs, and to contribute to graduate and undergraduate teaching. The successful candidate must have a Ph.D. and preferably postdoctoral experience. Please submit curriculum vitae, three letters of recommendation, and a letter of application including a specific statement of research and teaching interests to: Dr. **Richard Satterlie, Department of Zoology, Arizona State University, Tempe, AZ 85287–1501. Telephone: 602-965-3571. Deadline is 15 January 1991, or the 15th of each month thereafter until the position is filled. Projected starting date is 16 August 1991. Applications from two individuals for a single shared appointment will be considered. Arizona State University is an Affirmative Action/Equal Opportunity Employer.**

BIOLOGY POSITIONS

Indiana University of Pennsylvania invites applications for four tenure-track ASSISTANT PROFESSOR positions beginning fall 1991. Candidates holding the doctorate preferred. Freshwater biology: background in environmental studies preferred, to teach specialty on main campus and teach general biology on Punxsutawney campus, 28 miles from Indiana. Environmental health: to teach environmental protection and either epidemiology or toxicology; coordinate program accreditation. Comparative physiology: experience with invertebrates preferred to teach both human physiology and comparative physiology. Cellular immunology: to teach both graduate and undergraduate courses. Each position includes teaching general course offerings in the department. Send cover letter indicating teaching and research goals, curriculum vitae, undergraduate and graduate transcripts, and three letters of reference by 15 January 1991 to: Dr. Allan Andrew, Chair, Department of Biology, Indiana University of Pennsylvania, Indiana, PA 15705. Equal Opportunity/Affirmative Action Employer.

23 NOVEMBER 1990

POSITIONS OPEN



UNIVERSITY OF MANITOBA FACULTY OF DENTISTRY

ASSISTANT PROFESSOR

Applications are invited for a term position at the rank of assistant professor beginning 1 April 1991 in the Department of Oral Biology, Faculty of Dentistry, University of Manitoba. The department is responsible for teaching basic biological sciences, together with related areas in dentistry, to undergraduate, graduate, and dental hygiene students. Oral biology has active M.Sc. and Ph.D. programs and members of the department conduct research into connective tissue, mechanisms of secretion, endocrine function, salivary physiology, and microbial ecology and metabolism. Applicants should have a Ph.D. degree and be trained in microbial molecular biology and have a good knowledge of anaerobic microbiology and metabolism. The successful applicant will initially be expected to develop an active research program in aspects of the molecular biology of oral anaerobic bacteria, ideally with an emphasis on cell surface structure. Salary commensurate with qualifications and experience.

tions and experience. The University of Manitoba encourages applications from qualified women and men, including members of visible minorities, aboriginal people, and persons with disabilities. The university provides a smoke-free work environment. Priority consideration will be given to Canadian citizens and permanent residents.

Applicants should submit their curriculum vitae and an outline of their research goals and arrange for three letters of reference to be sent to: Dr. G. H. Bowden, Professor and Head, Department of Oral Biology, Faculty of Dentistry, University of Manitoba, 780 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E OW2. Deadline for applications is 1 February 1991.

ASSISTANT PROFESSOR. The Department of Pharmacodynamics, College of Pharmacy, University of Florida (UF), is searching for an assistant professor for a tenure-track position to join a department of pharmacologists and physiologists. Applicants must hold a Ph.D. degree, have postdoctoral training, and proven ability to conduct independent research. The candidate will be required to develop an independent research program, actively seek extramural funds, participate in team teaching of physiology and pathophysiology, and participate in graduate student training. Current research areas of the faculty are aging, neuroendocrinology, cardiovascular pharmacology, toxicology, and temperature regulation. Position will be available July 1991. Applicants should send curriculum vitae, description of research interests, and have three letters of reference sent by 15 February 1991 to: Dr. Maureen Keller-Wood, Chairman, Search Committee, Department of Pharmacodynamics, Box J-487, JHMHC, University of Florida, Gainesville, FL 32610. UF is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR MOLECULAR/CELLULAR NEUROBIOLOGY

The Department of Neurobiology and Physiology, Northwestern University invites applications and nominations for a tenure-track faculty position at the rank of **ASSISTANT PROFESSOR** beginning the fall of 1991. Outstanding applicants working in any area of neuroscience will be considered, although candidates working in molecular or cellular neurobiology are particularly encouraged to apply. There are 21 faculty members in the department with research programs in sensory neurobiology, neuroendocrinology, development, and plasticity. The department is a central component of the newly formed Institute for Neuroscience consisting of over 70 faculty members. Our department and the Department of Biochemistry, Molecular Biology and Cell Biology form the life sciences division on the Evanston campus. Applicants should have a Ph.D., or M.D., and have completed postdoctoral training. Currier ulum vitae, list of publications, a description of current and future research, and three letters of recommendation should be sent to: Dr. Lawrence Pinto, Search Committee Chairman, Department of Neurobiology and Physiology, Northwestern University, 2153 Sheridan Road, Evanston, IL 60208. The department encourages applications from women and minority candidates. Affirmative Action/Equal Opportunity Employer. Hiring is contingent upon eligibility to work in the United States.

POSITIONS OPEN

MICROBIOLOGIST AND PLANT SYSTEMATIST ST. OLAF COLLEGE

The Department of Biology at St. Olaf College invites applications for two positions at the **ASSISTANT PROFESSOR** level. The microbiologist opening is a tenure track position. Responsibilities include teaching one lecture section and laboratories in general microbiology, an introductory course in cell biology/genetics, and developing a course in an area of interest.

The second position is a 2-year sabbatical replacement in the areas of plant systematics, environmental studies and ecology. The first year of the appointment (1991 to 1992), the individual will serve as the sabbatical replacement for our plant ecologist and teach courses in principles of ecology, field ecology, and environmental studies. The second year, the individual's teaching responsibilities will include a course in plant taxonomy and participation in introductory courses in organismic biology, and environmental studies.

Qualifications for the positions include a Ph.D., demonstrated interest and ability in teaching, and a desire to participate in research with undergraduate students. Both positions will begin 1 September 1991. Send curriculum vitae, undergraduate and graduate transcripts, a statement of teaching and research interests, and the names of three references to: Dr. Ted Johnson, Chair, Department of Biology, St. Olaf College, Northfield, MN 55057. The decalline for applications is 7 January 1991. St. Olaf College is a co-educational liberal arts college of the Evangelical Lutheran Church of America. St. Olaf College is an Equal Opportunity Employer.

CALIFORNIA INSTITUTE OF TECHNOLOGY

The Computation and Neural Systems (CNS) program at Caltech is conducting a search for a tenure-track **ASSISTANT PROFESSOR** on the engineering side of CNS, for which the term of initial appointment is normally four years. CNS is an interdisciplinary Ph.D. program established in 1986 that brings together engineers and scientists who are applying ideas from neurobiology to the development of new computational devices and systems and biologists who are investigating how computation is done in the nervous system. Areas of interest include motor control, learning, speech, vision and artificial neural networks. The appointee will be expected to develop a strong research activity and to teach courses in his or her specialty. Applicants should send a résumé, including list of publications; a brief statement of research accomplishments and goals; and the names of at least three references to: **Professor Y. Abu-Mostafa, Caltech 116-81, Pasadena, CA 91125**. *Caltech is an Equal Opportunity Employer and it specifically encourages women and minorities to apply.*



MOLECULAR BIOLOGIST

The Institute of Chemical Toxicology, Wayne State University, is seeking to fill tenure-track faculty positions at the **ASSOCIATE/FULL PROFESSOR** level in the area of eukaryotic molecular biology. Preference will be given to applicants interested in regulation of gene expression to include those with experience in oncogenes, growth factors, retroviruses, and in the molecular/ cellular effects of toxic substances and carcinogens (e.g., DNA repair). Applicants in other areas of eukaryotic molecular biology will be given serious consideration. The Institute of Chemical Toxicology offers a researchintensive environment and faculty are expected to develop vigorous, independent, extramurally funded research programs. Excellent new laboratories, equipment, support facilities, and generous start-up funds are available. Candidates should have a Ph.D., M.D., or D.V.M. degree and a strong track record in research. Send curriculum vitae and a brief description of research

> Dr. Raymond F. Novak Institute of Chemical Toxicology Wayne State University 2727 Second Avenue, Room 4000 Detroit, MI 48201

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

UNIVERSITY OF PENNSYLVANIA

The Department of Physiology seeks to fill several tenure-track positions, preferably at the ASSISTANT **PROFESSOR** level, that will become available during 1991. Candidates with demonstrated strength in experimental approaches to the study of cellular and/or molecular mechanisms are encouraged to apply. Please send curriculum vitae, a statement of research interests, and names of three references to whom the committee may write for further information. Applications should be sent to:

Faculty Search Committee Department of Physiology University of Pennsylvania Philadelphia, PA 19104–6085

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

ASSISTANT PROFESSOR NEUROBIOLOGY UNIVERSITY OF CALIFORNIA, RIVERSIDE

The Department of Biology, University of California, Riverside, invites applications for a tenure-track position in neurobiology. The appointment will be effective 1 July 1991 with duties commencing in September, and will be made at the assistant professor level.

Requirements for the postdoctoral training, demonstrated excellence in research, and a commitment and ability to teach. Preference will be given to candidates in behavioral or systems neurobiology.

ogy. The successful candidate will be expected to establish a strong research program, teach undergraduate and graduate courses, and participate in the interdepartmental Neurosciences Program.

To apply, send curriculum vitae, statement of research and teaching interests, copies of representative publications, and arrange to have sent three to five letters of recommendation by 15 January 1991 to: Neurobiology Search Committee, Department of Biology, University of California, Riverside, CA 92521.

The University of California is an Equal Opportunity/ Affirmative Action Employer and minority and female candidates are encouraged to apply.

EXPERIMENTAL BIOPHYSICS CITY COLLEGE OF CITY UNIVERSITY OF NEW YORK (CUNY)

The Physics Department of the City College of CUNY seeks an experimental biophysicist. Tenure track, any rank but prefer ASSISTANT OR ASSOCIATE PRO-FESSOR. Start-up funds will be available. Candidate will join NIH-sponsored research center involving several departments. Send curriculum vitae, description of research interests, and at least three references letters to: **Professor Philip Baumel, Chair, Department of Phys**ics, City College of New York, New York, NY 10031. Applications received by 1 February 1991 will receive full consideration. An Affirmative Action/Equal Opportunity Employer, M/F/H/V.

ASSISTANT/ASSOCIATE PROFESSOR MYCOTOXIN RESEARCH

The Department of Plant Pathology and Microbiology at Texas A&M University invites applications for a tenure-track position (50% research, 50% teaching) at the assistant or associate professor level. We seek an individual that will develop a vigorous research program addressing basic biological processes relating to mycotoxin production and its role in natural environments. This individual will also assume a lead role in the application of current technology for the reduction of mycotoxin contamination in human and animal foods. Successful applicants will be expected to have a role in the development of our undergraduate program in bioenvironmental sciences and teach a graduate course in the individual's area of expertise. Candidates with postdoctoral experience, record of scholarly research, and expertise in molecular biology, and/or microbial ecology will be given preference. We strongly encourage applications from women and minority persons. Screening of applicants will begin 15 January 1991. Applicants should submit curriculum vitae, statement of professional goals and research interests, and three letters of reference to: Dr. Charles Kenerley, Chair of Search Committee, Department of Plant Pathology and Microbiology, Texas A&M University, College Station, TX 77843. **POSITIONS OPEN**

MICROBIAL GENETICS AND MARINE ECOLOGY FLORIDA INTERNATIONAL UNIVERSITY



Two faculty positions at the ASSISTANT OR AS-SOCIATE PROFESSOR levels are anticipated for the fall of 1991. We seek a MICROBIAL GENETICIST to interact with an energetic and growing faculty of 23 in the Department of Biological Sciences, seven of whom have research interests in microbiology and molecular biology. The research specialty is open. In addition, we seek a MARINE ECOLOGIST with strengths in population biology/genetics or physiology ecology, though other specialties will also be considered. The positon is expected to complement the research interests of seven current marine biology faculty. The successful candidates for both positions will teach undergraduates and graduate students in their area of specialty. Postdoctoral training and a vigorous research program are expected. FIU, the newest member of the State University System of Florida, is a rapidly growing, Ph.D.-granting institution with over 22,000 students. Apply with curriculum vitae, three letters of recommendations, and recent publications to: Dr. John C. Makemson, Chair, Microbial Genetics Search Committee, or Dr. L. Scott Quackenbush, Chair, Marine Ecology Search Committee, Department of Biological Sciences, Florida International University University Park, Miami, FL 33199. Applications must be postmarked by 27 Deember 1990. FIU is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT OR ASSOCIATE PROFESSOR AMERICAN MEDICINE OR HEALTH CARE

The Department of History (Liberal Arts and Sciences) and the Program in Medical Humanities and Social Sciences (College of Medicine) at the University of Illinois at Urbana-Champaign seek an individual whose specialty is in 20th-century medicine or health care in America. Scholars in public policy are encouraged to apply. The appointee, jointly appointed, will have teaching responsibilities in both departments and will be expected to maintain an active research program. Salary negotiable. Rank: assistant or associate professor. For full consideration send applications by 15 December 1990 to: Richard W. Burkhardt, Ph.D., 309 Gregory Hall, 810 South Wright Street, Urbana, IL 61801. Telephone: 217-333-4193. Equal Opportunity/Affirmative Action Employer.

PLANT ECOLOGIST. Tenure-track PROFES-SOR/ASSOCIATE PROFESSOR position starting 1991–92 academic year. Candidate must have a strong field orientation and to bring modern approaches and techniques to research on terrestrial problems in Hawaii. The Botany Department's commitments include the investigation of mechanisms in the ecology and evolution of Hawaiian ecosystems and species. Responsibilities include research, teaching, and service; courses could include introductory botany or biology, upper-division ecology, and a specialized graduate course. Ordinarily 1.00 FTE Natural Sciences faculty are expected to teach three courses per academic year. Send curriculum vitae, reprints, statement of research and teaching interests, and names of three referees to: Chair, Ecology Search Committee, Botany Department, University of Hawaii at Manoa, 3190 Maile Way, Honolulu, HI 96822. Closing date for receipt of applications: 4 January 1991. Inquiries accepted by FAX: 808-956-3923. An Equal Opportunity/Affirmative Action Employer.



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POSITIONS OPEN

MARINE ECOLOGY

The Alabama Marine Environmental Sciences Consortium (MESC) announces the availability of a faculty position at the ASSISTANT/ASSOCIATE PROFES-SOR level to complement a growing program in estuarine and shelf ecology. Applicants with expertise in larval/zooplankton ecology, with particular emphasis on the biotic and abiotic factors that influence the recruitment of marine species, are especially sought.

Successful applicants are expected to develop a vigorous research program and must have demonstrated a strong potential to attract extramural funding. Teaching responsibilities normally include two courses per year (on the quarter system). Courses are taught year round, with a summer program of nearly 100 undergraduate and graduate students in residence. Graduate student advisement is strongly encouraged and may be facilitated by joint appointment at an MESC member university. Such an appointment is negotiated through the MESC administration. Salary is for 10 months and is competitive. MESC is an independent agency of Alabama higher

MESC is an independent agency of Alabama higher education, housed at the Dauphin Island Sea Lab, a 36-acre campus with office, laboratories, library, and dormitory facilities located 35 miles south of Mobile, Alabama. The laboratory, located at the confluence of Mobile Bay and the Gulf of Mexico, operates the 65-foot RV. A. E. Vernil, several smaller vessels, and a 15,000gallon recirculating seawater system. Applications including curriculum vitae and statement of research and teaching interests, along with the names and addresses of three references, should be sent to:

Dr. Kenneth L. Heck, Jr. Marine Environmental Sciences Consortium P.O. Box 369 Dauphin Island, AL 36528 FAX: 205-861-4646

Deadline for receipt of applications will be 15 January 1991, with an anticipated starting date of October 1991.



TOXICOLOGIST

The Institute of Chemical Toxicology, Wayne State University, which occupies approximately 30,000 square feet of renovated laboratory space, invites applications/ nominations for tenure-track faculty positions at the **ASSOCIATE/FULL PROFESSOR** level. Preference will be given to candidates having a strong background in areas related to respiratory toxicology or immunotoxicology. Excellent applicants in other areas of toxicology will be given serious consideration. The successful applicants will be expected to develop vigorous, independent, extramurally funded research programs. Excellent new laboratories, equipment, support facilities, and generous start-up funds are available. Candidates should have a Ph.D., M.D., or D.V.M. degree and a strong track record in research. Send curriculum vitae and a brief description of research interests to:

Dr. Raymond F. Novak, Director Institute of Chemical Toxicology Wayne State University 2727 Second Avenue, Room 4000 Detroit, MI 48201

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

GENETICIST. The Department of Biology, University of North Carolina, Chapel Hill, seeks a geneticist investigating problems at the cellular or molecular level. The appointment will be effective 1 July 1991 at the level of ASSISTANT, ASSOCIATE, OR FULL PROFES-SOR. The department anticipates expansion in this area including the recently advertised position for a developmental geneticist/developmental biologist. Applicants should send curriculum vitae, a statement of research interests and four letters of recommendation by 31 January 1991:

Chairman, Genetics Search Department of Biology University of North Carolina Chapel Hill, NC 27599–3280

The University of North Carolina is an Equal Opportunity/ Affirmative Action Employer and encourages applications from women and minorities.

CLINICAL NEUROSCIENTIST POSITION

Applications are invited for a tenure-track position at the ASSISTANT, ASSOCIATE, OR FULL PRO-FESSOR level. We seek someone for a primary or joint appointment in a clinical or basic science department or division who has a record of research and teaching excellence in any area of investigative neuroscience. The successful candidate must have the M.D. degree and be Board-certified or Board-eligible in a clinical neuroscience specialty. Applications including curriculum vitae and three to five references should be mailed to: Dr. George F. Martin, Department of Cell Biology, Neurobiology and Anatomy, 4066 Graves Hall, 333 West 10th Avenue, The Ohio State University, Columbus, OH 43210 by 31 January 1991 or until the position is filled. The Ohio State University is an Equal Opportunity/ Affirmative Action Employer.

CHAIR, DEPARTMENT OF EDUCATION AMERICAN MUSEUM OF NATURAL HISTORY

The American Museum of Natural History has, as one of its principal missions, the education of the public about natural science and human history. We are looking for an individual who will provide leadership in the area of educational programming. This individual will be responsible for developing and coordinating programs for school groups, programs for special communities, adult lecture series, and field trips. The individual will also participate in exhibition planning. The chair supervises a staff of 22. Experience in the field of museum education highly desired; doctorate in natural science, anthropology, or education preferred. *Women and minorities are encouraged to apply*. Send letter and curriculm vitae by 15 January 1991 to:

Dr. Aldona Jonaitis Vice President for Public Programs American Museum of Natural History 79th Street at Central Park West New York, NY 10024 An Equal Opportunity Employer.

An Equal Opportunity Employer.

CHAIRPERSON DEPARTMENT OF BIOLOGICAL SCIENCES

Department chairperson position available July to August 1991. The chairperson is expected to provide leadership in teaching, research, and grantsmanship. The department has 16 full-time faculty, and awards the B.S. and M.S. degrees. Areas of active faculty research include ecology, ecotoxicology, immunology, neurophysiology and comparative physiology, and molecular genetics. Research specialty of candidates is less important than leadership ability. The chairperson should have a record of scholarship appropriate for tenured appointment as a member of the Purdue University graduate faculty. Review of completed application will begin 22 January 1990 and continue until the positon is filled. To apply, send curriculum vitae, a statement of research interests and career goals, and names and addresses of three references to: Chair, Search and Screen Committee, Department of Biological Sciences, Indiana University Purdue University at Fort Wayne, Fort Wayne, IN 46805–1499. FAX: 219-481-6880. An Affirmative Action/Equal Opportunity Employer.

Ph.D. AUDIOLOGIST CLINICAL DIRECTOR

The Development of Otorhinolaryngology and Human Communication, University of Pennsylvania School of Medicine, seeks a Ph.D. audiologist clinical director to supervise clinical programs in cochlear implantation, vestibular testing, and intraoperative monitoring. The applicant must have demonstrated expertise, at least 5 years of experience, and referred publications in multimodality evoked potentials, with specialized expertise in intraoperative and intensive care monitoring of evoked potentials and quantitative EEG. Expertise in topographic brain electrical activity mapping is required. Academic rank and salary will be commensurate with the candidate's experience and qualifications. The university provides a highly competitive salary and benefits. Interested applicants should submit curriculum vitae to: Robert A. Hendrix, M.D., Department of Otorhinolaryngology and Human Communication, University of Pennsylvania School of Medicine, 3400 Spruce Street, 5 Silverstein, Philadelphia, PA 19104.

The University of Pennsylvania is an Equal Opportunity Employer.

23 NOVEMBER 1990

DEPARTMENT OF VISION SCIENCES



The University is seeking to appoint an exceptional individual to make a major contribution to the development of research in Vision Sciences. Proven academic excellence and an ability to take a leadership role in research and attract funding are of paramount importance.

The new professor will have the opportunity to extend the Department's research, building upon the present strengths of the Department in Clinical Neurophysiology research and Ophthalmic and Physiological Optics. Candidates with a record of leadership in any area of Vision Sciences will be welcomed, provided they have an imaginative approach to collaboration both within the Department and with other University Departments such as Pharmaceutical Sciences; Computer Science and Applied Mathematics; Electrical Engineering and Applied Physics. Interest in strengthening links with outside organisations will be encouraged, particularly through participation in distance-learning via Aston's Centre for Extension

Education.

The Department is housed in self-contained accommodation offering outstanding facilities and equipment.

Anyone wishing to discuss the post informally, from personal interest or to advise others, may approach Dr. A.D. Perris, Chairman of the Search Committee, or the Vice-Chancellor, Professor Sir Frederick Crawford. Telephone: 021-359 3611.

Participation in consultancy work will be encouraged. A continuing appointment, secondment, or limited-term contract will be considered, with appropriate remuneration.

Further information may be obtained from: The Personnel Officer (Academic staff),



Aston University, Aston Triangle, Birmingham B4 7ET quoting reference number 9036/313.

ASTON UNIVERSITY

DIRECTOR, CANCER RESEARCH

The Upjohn Laboratories Division of the Upjohn Company is seeking applications for the position of Director, Cancer Research. The individual we are seeking to direct our multi-disciplinary cancer research program will be a distinguished scientist with a background in cellular/developmental biology, genetics or molecular biology with proven ability to lead research efforts and possessing a strong interest in antineoplastic drug discovery. The successful candidate will also maintain their own active research effort. Of particular interest are individuals applying molecular and cell biology efforts to the study of cellular growth and differentiation. Although direct experience in the biology of neoplasia is desirable, individuals with applicable experience and interests (e.g. signal transduction, cell adhesion, intercellular interactions) and ability to apply research findings to cancer therapy are also particularly encouraged to submit their curriculum vitae. A PhD and/or MD with an established record of scientific excellence as evidenced with publications and/or patents is necessary for this position.

At Upjohn, we are committed to the scientific development of our staff, participation in scientific publications, and participation at scientific meetings is encouraged. Our laboratories are located in downtown Kalmazoo, a mid-sized community in southwestern Michigan, midway between Detroit and Chicago. The region is surrounded by rolling hills, numerous lakes and woodlands and provides immediate access to abundant culture and recreational pursuits. Upjohn offers a highly competitive compensation and benefits package in a community with reasonable housing and living costs. Qualified candidates are invited to submit their curriculum vitaes, cover letters and list of publications to: The Upjohn Company, Corporate Recruiting/Position 5721-HA, 7000 Portage Road, Kalamazoo, MI 49001-0199. Please refer to position code 5721-HA in your correspondence. An Equal Opportunity Employer M/F.

Our Commitment To Scientific Excellence Continues...



The University of Queensland, Gatton College

Equal Opportunity in Employment Is University Policy The University of Queensland GATTON COLLEGE

FOUNDATION CHAIR IN NATURAL SYSTEM MANAGEMENT DEPARTMENT OF MANAGEMENT STUDIES (Tenurable)

The University of Queensland, Gatton College has an established program of teaching of protected area, wildlife and natural systems management. It is seeking to appoint a Professor of Natural Systems Management to provide academic leadership in the further development of teaching and research in this area and to undertake teaching and research appropriate to his/her expertise.

The appointee will also be required to act as Head of Department of Management Studies for an initial term of five years. Teaching within the Department is oriented to applied management with major foci in natural systems management, rural management and agri-business; it also teaches in the areas of economics, marketing, quantitive analysis and biometrics.

Qualifications Applicants should hold relevant postgraduate qualifications and have an established reputation in natural science, natural resource or systems management or a related area, and be able to demonstrate a sound understanding of educational philosophy within the University sector, together with proven administrative ability.

Salary is at the Professorial level (\$A67812 per annum). An additional loading of \$2400 per annum is payable for Headship of the Department.

Method of Application An original plus three copies of an application and resume should be forwarded to: The College Registrar, The University of Queensland, Gatton College, Lawes, Queensland, 4343, by 11th January, 1991.

Applicants in the United Kingdom should lodge one further copy with the Appointments Officer, Association of Commonwealth Universities, 36 Jordan Square, London, WCIH OPF by the same date.

Applications should include details of three referees.

Further information is available by phoning (075) 620 219.

OIL SPILL EXPERT

Shell Oil Company in Houston, Texas has an

employment opportunity for an oil spill expert. We're seeking an individual with several years

experience, and a background in engineering or

chemistry. The position requires working

up, depending on experience and credentials.

If interested, please send your resume to:

the job and satisfactory results from a drug screen.

RESEARCH FELLOWSHIPS IN GERONTOLOGY AT THE UNIVERSITY OF MICHIGAN

Postdoctoral research fellowships, supported in part by training grants from the National Institute on Aging are available at the University of Michigan Institute of Gerontology. Stipends and related expenses will be provided to qualified applicants. Postdoctoral trainees must have completed a Ph.D., M.D. or equivalent degree. Prospective faculty mentors represent the behavioral, biological, clinical and social sciences, and the humanities as follows:

W. A. Achenbaum, PhD	J. Kuwada, PhD
R. C. Adelman, PhD	J. Liang, PhD
F. L. Bookstein, PhD	R. Miller, MD, PhD
S. F. Bradley, MD	D. Rosenblatt, MD, PhD
B. Carlson, MD, PhD	A. B. Schultz, PhD
J. A. Faulkner, PhD	D. G. Steel, PhD

- J. A. Faulkner, PhD
- B. E. Fries, PhD

W

- A. Gafni, PhD J. B. Halter, MD
- A. R. Herzog, PhD
- N. Krause, PhD
- L. M. Verbrugge, PhD B. Villeponteau, PhD W. Weissert, PhD

M. Supiano, MD

B. Troen, MD

PhD

Candidates should forward a letter of interest, identification of potential faculty mentor, complete curriculum vitae and bibliography, graduate transcript, representative article (if available), and at least three letters of recommendation to: Dr. Richard Adelman, Institute of Gerontology, the University of Michigan, 300 North Ingalls, Ann Arbor, MI 48109-2007. The application deadline is March 31, 1991. The University of Michigan is an Equal Opportunity/ Affirmative Action Employer.

Postdoctoral **Position Available**

The Cellular Differentiation Section in the Human Genetics Branch of the National Institute of Child Health and Human Development, National Institutes of Health, is seeking a postdoctoral or medical fellow to participate in ongoing studies on the molecular biology of human reproduction. The major laboratory emphasis are the molecular mechanisms regulating the expression of alkaline phosphatase, pregnancyspecific B1-glycoprotein (a member of the immunoglobulin superfamily), and PP14 (a progesterone-regulated endometrial protein), three pregnancy associated genes. The candidate should have received their Ph.D or M.D. within the last five years. Send curriculum vitae to:

Dr. Janice Chou Building 10, Room 9S242 National Institutes of Health 9000 Rockville Pike Bethesda, MD 20892 Phone: (301) 496-1094 Fax: (301) 496-0234

U.S. Citizenship or permanent residency required An Equal Opportunity Employer

BioTechnica International, Inc. (BTI), a world leader in the development and application of next generation technologies in agriculture, biomolecules, and diagnostics, has positions available at our Cambridge, Massachusetts DNA Chemistry facility.

DNA Chemistry

Available positions, one at the Ph.D. level, focus on oligonucleotide synthesis and DNA se-quencing, using state-of-the-art instrumentation.

Candidates must be highly motivated, able to respond to the needs of a diverse and active research staff, and have demonstrated experience in one or more of the following experience in one or more of the following areas: chemical synthesis of oligodeoxyribo-nucleotides, including reagent purification, trouble shooting, specialized syntheses involving non-standard residues, and product quality control; DNA sequencing, including Sanger dideoxy methodology, sequencing strategies, data acquisition, handling, refinement, analysis, and assembly, and computer applications in DNA sequence analysis.

BioTechnica offers exceptional benefits in a stimulating environment focused on goal achievement. Salaries are based on experience.

Reply with resume to Human Resources Department, BioTechnica International, Inc., 85 Bolton Street, Cambridge, MA 02140.

BioTechnica

Inc.

International,

BTI is an equal opportunity/ affirmative action employer.

B.E. Stubbs Shell Oil Company Dept. ENV P.O. Box 2463 Houston, TX 77252

knowledge of oil spill technology, treatment chemicals, spill response, and scientific aspects of fate and effects of oil in the environment. M.S. or Ph.D academic credentials recommended. Candidate should have broad scientific background, and be skilled in personal communications and computers. Duties will include advising management, sup-

porting emergency response teams, interfacing with government agencies, and managing oil spill related research. Salary range \$60,000 and

Employment is contingent upon meeting the physical requirements of

We are an equal opportunity employer. Candidates must be legally authorized to work in the United States.



Molecular Biologists

Pfizer Inc is an international leader in the research and development of health care products. The Department of Molecular Genetics Research plays a vital role in the drug discovery research process. Thus, in addition to being integral members of an innovative research department, our molecular biologists also are important constituents of our drug discovery teams.

Our approach to drug discovery encourages individual creativity as an important element in guiding a team effort toward a therapeutic target. This philosophy results in an environment that is challenging to the individual while enhancing group productivity. Scientific growth and development are stimulated by frequent interactions with prominent scientists in academia and medicine as well as with members of the research community within Pfizer.

Due to the continuing expansion of the department, there are several positions for PhD molecular biologists. You are expected to have completed at least two years of postdoctoral studies and to have an excellent record of published research. In addition, candidates are required to provide three references which speak to their scientific innovation and independence.

cDNA Library Construction

You should have proven expertise in the construction of cDNA libraries and the use of innovative screening strategies to identify novel genes. Experience in generating subtraction libraries and expression cloning would be distinct advantages.

Transgenic Animals

In recognition of the important role transgenic animals play in modeling a variety of human diseases, Pfizer is developing a transgenic animal group within the Molecular Genetics Department. You should be proficient in constructing transgenes and in the various techniques for generating transgenic animals.

We offer a stimulating research environment and an excellent opportunity for professional recognition and advancement. In addition, we provide a competitive salary/benefits package and an opportunity to live in an attractive Connecticut shore community. Qualified applicants should submit their resume and references in confidence to: Dr. Jerry K. Larson, Assistant Director, Employee Resources, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



Bringing science to life.

RESEARCH SCIENTIST Crustacean Molecular Genetics

The Australian Institute of Marine Science is seeking to appoint a scientist to undertake fundamental and strategic research as part of the mariculture research and development group concentrating on the genetic improvements of penaeid prawns. Applicants should have experience and interest in molecular genetics, particularly of genes controlling growth or reproduction of invertebrates.

The salary offered will be determined by the qualifications and experience of the successful candidate and will be within the range A\$33,445 to A\$40,916. Applicants should have appropriate post-graduate degrees and post-doctoral experience. Applications, including a complete curriculum vitae and the names of at least 3, but not more than 5 referees, should be forwarded to:

The Secretary Australian Institute of Marine Science PMB No. 3 Townsville MC QId 4810 AUSTRALIA

For further information on the position, please contact Dr Joe Baker or Dr John Benzie. A description of selection criteria and conditions of employment can be obtained from the Personnel Manager.

Telephone (6177) 78 9211, Facsimile (6177) 72 5852. Applications close 30 January 1991.

AIMS is an equal employment opportunity employer. AB1 90/12-44563 UNIVERSITY OF GENEVA FACULTY OF MEDICINE

A position of:

FULL PROFESSOR OR ADJUNCT PROFESSOR OF MEDICAL GENETICS

in the Department of Molecular Genetics and Mirobiology is open for October 1991.

Candidates should have a large experience in medical genetics (clinic, research and genetic counseling). An academic appointment is desirable. Fluency of spoken and written French is required.

Information and application procedure is available from: Secrétariat de la Faculté de Médecine-Centre Médical Universitaire-1, rue Michel Servet-1211-Genève 4-Switzerland. Applications (curriculum vitae and list of publications in 10 exemplars) should be forwarded to the same address until December 31, 1990.

CHAIRPERSON of the Department of Environmental Sciences/ASSOCIATE DIRECTOR, ENVI-RONMENTAL PROGRAMS of New Jersey Agricultural Experiment Station (NJAES), Cook College, Rutgers, The State University of New Jersey, New Brunswick, New Jersey.

The Environmental Sciences Department has a multidisciplinary teaching, research, and extension mission focused on the challenges to the environment. The 26-faculty member program offers B.S., M.S., and Ph.D. degrees with specialties that include water and wastewater treatment, air pollution and industrial hygiene, soil science, fate and transport of contaminants in ecosystems, exposure assessment, and radiation.

Responsibilities: The appointee will provide leadership to achieve excellence in teaching, research, and public service by recruiting and developing an expanding faculty, facilitating multidisciplinary and multidepartmental team research, and identifying and attracting external program funding. As associate director, the appointee will be responsible for programmatic leadership of all NJAES environmental programs. The associate director is involved in program planning, attracting external funding, and coordinating the NJAES program with state and federal programs. A major responsibility is the development of multidisciplinary teams to study environmental problems. Serves as a member of NJAES

Qualifications: The appointee will have a Ph.D. in a field aligned with departmental programs and a distinguished record of grantsmanship, teaching, and internationally recognized research. Successful prior administrative experience in an academic setting is highly desirable.

Send résumé to: Search Committee for Chairperson, Environmental Sciences Department, P.O. Box 231, Cook College, Rutgers, The State University, New Brunswick, NJ 08903.

Rutgers University is an Affirmative Action/Equal Opportunity Employer.

EXECUTIVE DIRECTOR

Tall Timbers Research Station conducts ecological research on natural resource management, wildlife habitat management, fire ecology, and game animals.

Candidates must have a thorough knowledge of ecological land management. They must demonstrate interest in the types of research Tall Timbers conducts. Administrative experience dealing with government and private foundations is required, in addition to an ability to foster relationships with the local community and other scientific institutions.

Each candidate must have a master's (preferably a doctoral) degree in some area of field biology and must possess strong knowledge of relevant research. Please send résumés to:

Search Committee Route 1, Box 678 Tallahassee, FL 32312

Tall Timbers is an Equal Opportunity/Affirmative Action Employer.

ENVIRONMENTAL SPECIALIST III: COOR-DINATOR. Salary range: \$2337.38 to \$3938.48 per month. Requirements: A bachelor's degree with a major in one of the physical or natural sciences or engineering and 3 years of professional experience in environmental protection, regulation, or health; one of the physical or natural sciences or engineering; or a master's degree in one of the physical or natural sciences or engineering and 2 years of professional experience as described above; or a doctorate in one of the physical or natural sciences or engineering; or 2 years of experience as an Environmental Specialist I or higher with the State of Florida. Job Duties: Preference will be given to applicants with experimental design and ecological modeling. Candidate's primary job will be editing papers and reports for scientific content, syntax, and proper grammar. The candidate should have excellent administrative, supervis sory, and communication skills; be proficient in editing for proper grammar, style, and usage; and be familiar with publishing procedures. Send State of Florida Marine Research Institute, 100 Eighth Avenue, Southeast, St. Petersburg, FL 33701–5095. Deadline by: 5:00 p.m., 10 December 1990. Equal Opportunity/Affirmative Action/Veterans Preference Employer.

POSITIONS OPEN

DEAN

Louisiana State University (LSU) Medical Center is seeking applicants for the position of Dean of the School of Medicine in Shreveport. The dean is the chief administrative officer and is responsible for the educational, research, and clinical programs conducted at LSU Hospital. The school enrolls 400 medical students, 210 house officers, 80 graduate students and conducts continuing medical education programs.

LSU is the major state institution of higher learning with eight campuses and 52,840 students. LSUMC is committed to excellence in research and construction will begin soon on a \$35-million Biomedical Research Institute sponsored by the Biomedical Research Foundation of northwestern Louisiana. The medical center was recently designated as a Center of Excellence for Arthritis and Rheumatology.

and Rheumatology. Applicants should have a M.D. or Ph.D. degree and considerable academic administrative experience. Applications should include curriculum vitae, the names of three references, and should be submitted to: Ronald B. George, M.D., Chairman, Dean Search Committee, LSU School of Medicine in Shreveport, P.O. Box 33932, Shreveport, LA 71130.

LSU is an Affirmative Action/Equal Opportunity Employer.

ASSOCIATE PROVOST UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER OKLAHOMA CITY, OKLAHOMA

The Health Sciences Center invites applications for the position of associate provost. The associate provost is the senior academic staff person reporting to the provost. He or she has broad responsibilities for administrative support of the full range of activities of the Office of the Provost, but with a primary focus on academic affairs. The associate provost represents the Health Sciences Center within the university and externally.

Center within the university and externally. In respect to academic affairs, the associate provost functions in a staff line capacity and assists the provost in policy department and analysis, in monitoring program quality, and by coordinating and advising about the research, education, and academic service programs of the Health Sciences Center.

The associate provost must have an earned doctoral degree, must be a successful academician at a senior professorial level, and must have extensive successful experience as an academic administrator at an academic health center.

Applications should be sent to: Office of the Provost, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, OK 73190 on or before 21 December 1990.

The University of Oklahoma is an Equal Opportunity Employer.

ASSOCIATE LABORATORY DIRECTOR CLINICAL CYTOGENETICS

LGS/LABORATORIES FOR GENETIC SER-VICES, INC., located in the Texas Medical Center, Houston, Texas, is seeking clinical cytogenetic applicants to fill the position of ASSOCIATE LABORATORY DIRECTOR. LGS, a private genetic diagnostic laboratory, serves a large national referral base for prenatal diagnostic studies, adult and pediatric genetic disorders and acquired neoplasias. LGS has formal academic affiliations with the Texas Medical Center. These academic affiliations enhance the professional advantages of the position. The laboratory currently occupies over 5000 square feet and will expand to 10,000 square feet in 1991. Biotechnology research and development is currently operative in both molecular and instrumentation areas and will expand with the new facilities. Requirements include a doctoral level degree and American Board of Medical Genetics certification or eligibility. Experience in molecular genetics is preferred but not required. Benefits are commensurate with experience. Please submit curriculum vitac, personal statement, and three professional references with addresses and phone numbers to: Peggy Pearce Caskey, President, LGS/ Laboratories for Genetic Services, 6410 Fannin, Suite 918, Houston, TX 77030. Telephone: 713-797-9322; FAX: 713-797-9731. LGS is an Affirmative Actor/Equal Opportunity Employer.

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POSITIONS OPEN

VICE PRESIDENT FOR HEALTH SCIENCES UNIVERSITY OF MINNESOTA

The primary functions of the vice president for health sciences are the following:

• Serves as the university's officer responsible for the maintenance of quality, accountability, fiscal stability, and accreditation standards for all education, research, and service programs and activities of the Health Sciences center. The health sciences include the Colleges of Pharmacy and Veterinary Medicine, the Medical School, the Schools of Dentistry, Nursing, and Public Health and the University Hospital and Clinic on the Twin Cities campus and the School of Medicine on the Duluth campus.

• Carries out the policies of the university and objectives of the president.

• Provides, in consultation with other vice presidents, leadership in planning and development of resource management for the university.

Candidates for this position should have the following attributes: a requisite terminal degree in health sciences related field, a distinguished record of teaching and scholarly activity that will permit consideration for professional rank with tenure by the appropriate college, a distinguished record of scientific and administrative achievement in a health sciences field, a record of Affirmative Action, a demonstrated commitment to research and instruction in the health sciences, demonstrated skills to provide leadership on political issues and processes necessary at state and federal levels, and effective communication and interpersonal skills necessary to work within a complex organization.

Please submit curriculum vitae by 31 January 1991 to: Dr. John S. Najarian

Regents' Professor Jay Phillips Chair in Surgery Department of Surgery University of Minnesota Box 195 UMHC Minneapolis, MN 55455

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

ANATOMY AND PHYSIOLOGY KANSAS STATE UNIVERSITY COLLEGE OF VETERINARY MEDICINE

The Department of Anatomy and Physiology invites applications for three **FACULTY POSITIONS** with appointments beginning 1 July 1991. Candidates should have demonstrated originality and productivity in research and should have an interest in professional and graduate education. It is expected that the successful candidates will have extramurally funded research programs or will have an established research program with considerable potential for securing funding.

ASSISTANT PROFESSOR, tenure-track appointment. Preference will be given to individuals with research interests which compliment the interests of the department; i.e., comparative exercise physiology, molecular biology, neuroscience, or reproductive endocrinology. Must be able to teach either microscopic or gross anatomy. D.V.M. and/or Ph.D. required.
ASSISTANT PROFESSOR, tenure-track position. Preference will be given to individuals with an emblished account in the neuroscipace and

ASSISTANT PROFESSOR, tenure-track position. Preference will be given to individuals with an established research program in the neurosciences and with teaching expertise in either microscopic or gross anatomy. D.V.M. and/or Ph.D. required.
RESEARCH ASSOCIATE, 2-year appointment

• RESEARCH ASSOCIATE, 2-year appointment with the possibility of becoming a tenure-track position at the end of 2 years. Preference will be given to individuals with an active research program in rumen physiology. D.V.M. and/or Ph.D. required.

Applications should include a cover letter indicating the position being applied for, curriculum vitae, a statement of research and teaching interests, three letters of recommendation, and reprints of three representative publications. The closing date for all applications is 15 January 1991. Send applications to: Dr. Jon D. Dunn, Professor and Head, Department of Anatomy and Physiology, VMS 228, College of Veterinary Medicine, Kansas State University, Manhattan, KS 66506.

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

Bristol-Myers Squibb Pharmaceutical Research Institute

Postdoctoral Fellow Program

The Bristol-Myers Squibb Pharmaceutical Research Institute is continuing to expand our efforts in basic biomedical research. New research laboratories are currently under construction at our research headquarters in Princeton, New Jersey. More than at any time in the past, our commitment to basic biomedical research, both at the Institute and through our academic research alliances has never been stronger.

Our Postdoctoral Fellowship Program offers outstanding opportunities for scientists to gain significant postdoctoral training in the basic research programs pursued at the Institute and in collaboration with our research alliances. Postdoctoral Fellowships are awarded for 1 - 3 years.

MOLECULAR BIOLOGY

Remesh Kumar, Ph.D.

This position is involved with research projects involving the analysis of genes encoding tyrosine phosphatases and their regulation in lymphocytes and other cells. Requires experience in one of the following: molecular biology, T-cell biology and/or biochemistry. Experience with DNA cloning, expression, T-cell development/activation, PCR and sequencing is required. Reply to: **Dept. # 178A.**

Michael Rosenberg, Ph.D.

Two post-doctoral positions are available in a basic research developmental genetics laboratory studying proto-oncogene expression and function during gametogenesis and embryogenesis of the mouse. The laboratory utilizes both transgenic mouse and ES cell technologies, insertional mutagenesis, and in situ hybridization. Candidates should have a background in either developmental genetics, molecular genetics, reproductive biology, or cell biology. Reply to: **Dept. # 178B.**

MACROMOLECULAR CRYSTALLOGRAPHY

Dr. Steven Sherrif

Antibody-Antigen Complexes - study molecular recognition using antibody-antigen binding as a model system. Antigens include proteins such as lysozyme and staphyloccal nuclease and small molecules including digoxin. Reply to: **Dept. # 178E.**

Dr. John Sack

Calmodulin - Study the structural effects of various mutations on the calcium-binding protein, calmodulin, in order to understand the biochemical activity of the mutant proteins. Reply to: **Dept. # 178F.**

MOLECULAR BIOLOGY OF MACROMOLECULES

Shi Chung Ng, Ph.D.

This position is responsible for applying existing gene expression systems in bacillus and E. coli to maximize expression of antibody fragments (Fv and sFv). Your focus will include systems for bifunctional and chimeric monoclonal antibody fragments constructed by recombinant DNA technology. Requires experience in Molecular Biology or related field in gene expression. Reply to: **Dept. # 178C.**

NMR SPECTROSCOPY

Dr. Luciano Mueller

Elucidate structures and dynamics of proteins and their complexes to DNA and ligands, develop NMR methods, in particular, heteronuclear multi-dimensional spectroscopy. Reply to: **Dept. # 178D.**

MACROMOLECULAR CHEMISTRY

Gary Matsueda, Ph.D.

Opportunities in the organic chemistry of peptide synthesis - development of new protecting groups and peptide-resin linkages; and in the immunochemistry and protein biochemistry of Factor XIII and other transglutaminases. Reply to: **Dept. # 178G.**

CELL BIOLOGY

Richard Gregg, M.D.

Position available in a large, integrated research group investigating the regulation of lipid and lipoprotein metabolism. In this position, you will perform research into the mechanism and regulation of the assembly and secretion of macromolecular complexes within the endoplasmic reticulum. The approaches to the research will rely upon molecular and cellular biological techniques. Reply to: **Dept. # 178H.**

In addition to a comprehensive salary and benefits program, we offer the opportunity to participate in a variety of seminars and symposia; work on non-proprietary research projects and require publication of research results.

Please forward your resume to (including dept. code#): Bristol-Myers Squibb Pharmaceutical Research Institute, Human Resources Department, P.O. Box 4000, Princeton, NJ 08543-4000. An equal opportunity employer.



ImmunoGen, Inc. is a rapidly growing biotechnology company dedicated to the development of immunotoxins and other cancer therapeutics. We are seeking a talented scientist and research associates to join us in exploring new approaches to human disease. Candidates should enjoy taking the initiative in solving scientific problems to achieve near-term and long-term goals.

... widening the therapeutic window.

Staff Scientist in Cell Biology

Candidate should hold a Ph.D. in cell biology, immunology or related disciplines and have a strong research background in mammalian cell biology or in-vitro immunology. Recent graduates are welcome to apply.

Research Associates

Two research positions at B.S./M.S. level are available in our Pharmacology/Toxicology department to develop and utilize animal models for evaluating safety and efficacy of immunoconjugates for cancer therapy. Applicants should have between 3-5 years of laboratory experience in the fields of tumor biology, immunology, pharmacology and/or tissue culture. Attention to detail, good communication skills and the ability to work with minimal supervision are essential.

ImmunoGen offers an excellent salary and benefits package including 100% paid Health and Dental Insurance and Tuition Assistance. The company is located in a new, fully equipped, state-of-theart laboratory in Cambridge, midway between the campuses of HARVARD and MIT.

Please send a detailed resume including three references and a statement describing your scientific interests and career goals. All responses will be acknowledged. Reply to:

> Jeanne A. Horgan Personnel Department ImmunoGen, Inc. 148 Sidney Street Cambridge, MA 02139.

IMMUNOGEN, INC.

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BIOLOGICALS

We're Lederle Laboratories, a division of American Cyanamid Company and an international leader in the research, development and manufacture of viral and bacterial vaccines. Right now, we are seeking two scientists to join the Biologicals Research and Development Group at our Rockland County facility.

Ph.D. Scientist Quality Control

Interacting with Research and Clinical, you will be responsible for developing cell culture and immunological assays for use in quality control testing of current and new vaccines.

A Ph.D. and two years of post-doctoral experience in Virology, Microbiology or Immunology are required; experience with computers and microprocessed instruments desirable.

Biochemist/Microbiologist Bacterial Vaccine Production Supervisor

Experience in polysaccharide and protein purification, bacterial fermentation and immunochemical and biochemical assays is required as are a BS in Biochemistry, Microbiology or other related field and supervisory experience. At least four years of production or laboratory experience and familiarity with CGMPS and FDA regulations are also essential; an MS degree is preferred.

We offer a state-of-the-art facility just 25 miles north of New York City,

competitive salaries and excellent benefits. For consideration, please forward your resume indicating position of interest, with salary history, in confidence, to: Daniel Nemeczek,

Professional Employment Representative, Lederle Laboratories, American Cyanamid Co., Pearl River, NY 10965. An equal opportunity employer m/f.

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POSITIONS OPEN

ENTOMOLOGY CURATOR. Applications solicited for assistant or associate curator. Responsibilities consist of collections-oriented research on systematics of a group of insects or arachnids, active participation in management of a major collection, development of external funding for research and collections, and participation in public program activities. Doctorate required, special consideration given to specialists in orders other than Hymenoptera, Diptera, and Lepidoptera. Send curriculum vitae, description of research interests, collection management and public program experience, grant/contract funding, and names of three references by 1 February 1991 to: Dr. Charles Hogue, Entomology Section, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007. Telephone: 213-744-3363. An Equal Opportunity Employer.

FACULTY POSITION IN PROTEIN STRUCTURE/FUNCTION

The Department of Biochemistry, Baylor College of Medicine, is seeking highly qualified faculty candidates with a research interest in some aspect of modern protein structure and function. Appointment is anticipated at the tenure-track **ASSISTANT PROFESSOR** level, although applications from more senior investigators will be considered. This position provides recently renovated laboratory space, institutional start-up funding, limited teaching requirements, and an excellent opportunity to build a research program within a large and interactive research community. The candidate must have demonstrated excellence in research and is expected to develop a strong, independent research program and to participate in graduate and medical education. The department has approximately 30 faculty, 40 Ph.D. students, and 40 postdoctoral fellows and provides a stimulating and supportive environment for academic research and education. Applicants should send curriculum vitae, reprints of recent publications, a statement of future research plans, and arrange for three letters of recommendation to be sent to: **Proteins Search Committee, Department of Biochemistry, Baylor College of Medicine is an Equal** *Opportunity/Affirmative Action Employer.*

THREE FACULTY POSITIONS, ANIMAL BI-OLOGY. As part of our expanding program, the Department of Biological Sciences invites applications for three full-time, tenure-track positions at the ASSIST-ANT PROFESSOR rank. We seek individuals utilizing molecular and cellular skills on invertebrate or vertebrate systems in the areas of developmental biology, genetics, and endocrinology. Applicants must have the Ph.D., postdoctoral research experience, and teaching competence. Successful candidates are expected to develop extramurally funded research programs and to engage undergraduate and graduate students in research. Competitive start-up funds will be provided. Review of applications will begin 31 December 1990 and continue until the positions are filled. Send a letter of application, curriculum vitae, reprints, statement of research goals, and three letters of reference to: Dr. H. Bernard Hartman, Chairman, Department of Biological Sciences (DGE), Duquesne University, Pittsburgh, PA 15282. Duquesne University, an Affirmative Action/Equal Opportunity Employer, strongly encourages applications from women and minority candidates.

BIOCHEMISTRY/MOLECULAR BIOLOGY. The North Central College Biology and Chemistry Departments seek a broadly trained person to teach biochemistry and molecular biology, and to be involved in introductory courses in both departments. Ability to teach cellular biology a plus. This tenure-track joint appointment starts September 1991. Ph.D. and commitment to excellence in undergraduate teaching and research within a liberal arts setting required. For more detail, call: Dr. Paul Sutton at 708-420-3492. North Central College is a comprehensive institution of 2600 students located 30 miles west of Chicago in the heart of Illinois' Research and Development corridor.

students located 30 miles west of Chicago in the heart of Illinois' Research and Development corridor. Send letter of application, curriculum vitae, graduate and undergraduate transcripts, and have three letters of recommendation sent to: Meredith Russell, Secretary to the Biology/Chemistry Search, North Central College, P.O. Box 3063, Naperville, IL 60566–7063. Review of applications begins 7 January 1991 and continues until the position is filled. We particularly welcome applications from women and minorities. Equal Opportunity Employer.

SCIENCE, VOL. 250

Clarkson University is seeking applications for a TEN-URE-TRACK POSITION IN CELL BIOLOGY. The successful applicant should posses a Ph.D. or equivalent, and have at least 2 years of postdoctoral experience. Applicants interested in the biochemical or molecular analysis of intracellular regulatory processes in eukaryotes are especially encouraged to apply. Interaction with established investigators in one or more of the following areas is expected: microbial physiology/molecular biolo-gy, behavioral/cellular neurobiology, toxicology, genet-ics. Area of teaching is flexible, but applicants should be able to contribute to an undergraduate cell biology core course, as well as providing upper level and graduate courses in the area of speciality. Send curriculum vitae, brief statement of research interests, and names of three references to: Dr. A. E. Linkins, Dean, School of Science, Clarkson University, Potsdam, NY 13699– 5800. Review of applications will begin 1 January 1991 and continue until position is filled. *Clarkson University is* an Affirmative Action/Equal Opportunity Employer. Position Posting #230.

FACULTY POSITIONS McMASTER UNIVERSITY INSTITUTE FOR MOLECULAR BIOLOGY AND BIOTECHNOLOGY

The newly inaugurated Institute for Molecular Biology and Biotechnology seeks to build a group composed of independent, but interactive scientists interested in the molecular biology of development. Three positions are available at the ASSISTANT OR ASSOCIATE PRO-FESSOR level. Applications are invited from molecular and developmental biologists whose research interests include but are not limited to the role oncoproteins play in development, the regulation of gene expression, growth and differentiation factors, and gene targeting in embryonic stem cells. Candidates should hold a Ph.D. or M.D. degree and have a minimum of 2 years of postdoc-

toral experience. Successful candidates will be provided with newly renovated laboratories, start-up funding, an operating grant and salary support from McMaster University and from a Terry Fox Team Development Grant awarded by the National Cancer Institute of Canada.

Applicants should send a current curriculum vitae, a statement describing their research accomplishments and future goals, and the names of three references to: Dr. John A. Hassell, Institute for Molecular Biology and Biotechnology, McMaster University, 1280 Main Street West, Hamilton, Ontario, Canada, L8S 4K1.

FACULTY POSITIONS DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY THE UNIVERSITY OF CHICAGO

The Department of Biochemistry and Molecular Biology at The University of Chicago wishes to invite applications and nominations for two tenure-track positions to be filled in the 1990-1991 academic year. We are directing our current search to two specific areas: the study of biological macromolecules by two-dimensional NMR and the biochemistry of nucleic acid-protein inter-actions. Candidates should have a doctoral degree, sig-nificant postdoctoral research experience, a strong record of research accomplishment, and demonstrable potential for the development of an independent research career in an academic setting. Applications should include curric-ulum vitae, a list of publications, a summary of current research activities and future research plans, and the names of at least four individuals from whom letters of reference may be solicited. While we have no formal deadline, we would appreciate receiving applications by 15 January 1991. Please send applications or nomina-

Marvin W. Makinen Department of Biochemistry and Molecular Biology The University of Chicago Chicago, IL 60637

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

POSTDOCTORAL POSITION. To study the molecular mechanism of a virus fusion reaction. Experience in molecular biology, protein biochemistry and/or virol-ogy is desirable. Available winter-spring 1991. Please send curriculum vitae and names of three references to: Dr. Margaret Kielian, Department of Cell Biology, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. An Equal Opportunity Employer.

23 NOVEMBER 1990

WILDLIFE **EXPERT**



Shell Oil Company in Houston, Texas has an employment opportunity for a terrestrial ecologist/wildlife expert. We're seeking an individual with a background in terrestrial ecology or wildlife science and several years experience. Secondary skills should include good chemistry background and statistics. Similar related backgrounds will be considered. The position requires working knowledge of general ecological principles as they relate to the terrestrial environment. M.S. or Ph.D academic credentials recommended. Candidate should have broad scientific background. Previous experience with the following a plus: working with regulatory agencies; environmental monitoring design; skilled in personal communications, microcomputer skills. Duties will include advising management, supporting emergency response teams, interfacing with government agencies, managing environmental research programs, and participation on industry environmental committees. Salary range \$60,000 and up, depending on experience and credentials.

Employment is contingent upon meeting the physical requirements of the job and satisfactory results from a drug screen.

If interested, please send your resume to:

B.E. Stubbs Shell Oil Company Dept. ENV P.O. Box 2463 Houston, TX 77252

We are an equal opportunity employer. Candidates must be legally authorized to work in the United States.

Computational Chemistry is our key to innovation.

ARRIS Pharmaceutical Corporation is an aggressive new company with a unique approach to computer aided drug discovery. We are looking for innovative Computational Chemists to work on exciting discovery projects based on the latest developments in molecular biology. You'll team up with AI scientists who are experts in pattern and shape recognition in a unique environment, where we are exploring new ways of designing drugs.

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This key member of our group will bring 5-10 years of pharmaceutical industry experience in the area of molecular modeling of proteins and small organic molecules.

Scientists

We are seeking PhD Scientists with a minimum of 2 years' postdoctoral experience in molecular dynamics.

Send your vitae to: ARRIS Pharmaceutical Corporation, P.O. Box 2603, South San Francisco, CA 94080. An Equal Opportunity Employer.

ARRIS Pharmaceutical Corporation





Itural United States rch Department of e Agriculture

PLANT PHYSIOLOGIST SOUTHERN REGIONAL RESEARCH CENTER NEW ORLEANS, LOUISIANA

The Cotton Fiber Bioscience Research Team is seeking a plant physiologist to join a group analyzing cotton fiber growth and development for improved fiber quality. The successful candidate will be responsible for determining the mechanisms involved in cotton fiber elongation and maturation, analyzing the relationship between fiber elongation and secondary wall synthesis, determining the role of the cytoskeleton in fiber development, analyzing single fibers for organelle distribution during wall synthesis, and correlating reversal frequency with fiber quality parameters. Requirements include a Ph.D. with knowledge in plant physiology and biochemistry, electron and light microscopy, 'mminocytochemistry, and cell and molecular biology, cspecial'y wall synthesis and cell clongation. Salary is commensurate with experience, GS/M 12–13 (\$35,000 to \$55,000). For further information, contact: Dr. Donna Gibson, 504-286-4430, or Dr. Barbara Triplett, 504-286-4275. For information on application procedures and forms, contact: Judy Harrington, 301-344-1506, by 15 December 1990. Applications should be marked S-0-015 and must be received by 1 January 1991. ARS is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITION. Available to study the molecular biology of winter dysentery coronavirus and immunity to these viruses in cattle. Relevant experience in immunology and training in molecular virology including monoclonal antibodies and nucleic acid hybridization and cloning is desired. Send résumé and three reference letters to: Dr. Linda Saif, Food Animal Health Research Program, OARDC/Ohio State University, Wooster, OH 44691.

POSTDOCTORAL POSITION. Available immediately to participate in research on biochemical, molecular, and genetic studies of DNA replication and repair in the simple eukaryote, *Dictyostelium discoideum*. Strong background in molecular biology and/or biochemistry preferred. Send curriculum vitae and three letters of reference to: Dr. R. A. Deering, Molecular and Cell Biology, 201 Althouse Laboratory, Pennsylvania State University, University Park, PA 16802. An Afirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITIONS. Available in a laboratory studying subcellular distributions and modifications of GTP-binding regulatory proteins [see J. Biol. Chem. 264, 13298–13305 (1989)]. Projects will employ a variety of cell and molecular biological techniques, including those of recombinant technology, site-directed mutagenesis, and transfection. Please send curriculum vitae and description of research experience to: Dr. David Manning, School of Medicine, University of Pennsylvania, Philadelphia, PA 19104–6084.

POSTDOCTORAL POSITION. For research in urologic aspects of infertility and incontinence. Will work in close collaboration with the medical faculty. Training in endocrinology and/or physiology desired. Send curriculum vitae to: Joseph R. Drago, M.D., or M. Guill Wientjes, Ph.D., Division of Urology, Ohio State University, 456 West 10th Avenue, Columbus, OH 43210. Telephone: 614-292-4055. The Ohio State University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION PREIMPLANTATION GENETICS

The Genetics and IVF Institute seeks a scientist who will focus on genetic testing of human preimplantation embryos. The person selected will develop molecular tests for several inherited disorders, and will collaborate with our experienced in vitro fertilization team (over 400 pregnancies), and clinical and laboratory staffs in the areas of reproductive medicine, embryology/cryobiology, and genetics. Suburban Washington, DC location. Send curriculum vitae and names of three references to: Anne Maddalena, Ph.D., Molecular Genetics Laboratory, Genetics and IVF Institute, 3020 Javier Road, Fairfax, VA 22031. **POSTDOCTORAL POSITION**. Available immediately for studies of mitochondrial membrane transport proteins. Of primary interest is the phosphate transport protein (PTP) which has been suggested to act also as a receptor for the import of nuclear-coded proteins into mitochondria (*Nature* 347, 424 (1990). The protein is being characterized with various chemical probes and mutants are being generated from its gene in yeast. Individuals with training in molecular biology and/or in (membrane) protein biochemistry are invited to send their curriculum vitae and names of three references to: Dr. Hartmut Wohlrab, Boston Biomedical Research Institute/Harvard Medical School, 20 Staniford Street, Boston, MA 02114. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS. Are available and anticipated in NIH funded projects on control of gene expression in protozoan parasites. The projects are investigating RNA editing, viruses and episomes, and antigenic variation. Candidates with a conceptual and technical background in molecular biology, and motivated by interests in RNA processing, control of gene expression, and developmental biology are preferred. Applicants will be sent descriptions of the research projects and references to publications. Send curriculum vitae, statement of research interests, and three letters of recommendation to: Dr. Kenneth Stuart, Seattle Biomedical Research Institute and University of Washington, 4 Nickerson Street, Seattle, WA 98109– 1651. Equal Opportunity Employer.

POSTDOCTORAL ASSOCIATES. Two positions are available to study fungal (1-3) β -glucan synthase. Research will involve purification of enzyme activity as well as molecular cloning of the relevant genes. Experience with protein purification or molecular biology is essential. Please submit curriculum vitae with names of references to: Dr. C. Selitrennikoff, Department of Cellular and Structural Biology, University of Colorado Health Sciences Center (UCHSC), 4200 East 9th Avenue, B-111, Denver, CO 80262. UCHSC is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP IN MOLEC-ULAR IMMUNOLOGY. Position available immediately at a new NIH-supported Clinical Research Center. Person will be expected to maintain and screen recombinant libraries for antibody production, develop applications, and establish a related fundamental research program. Applicants must have a Ph.D. degree, including experience in immunology and molecular biology. Please send curriculum vitae and three letters of reference by 15 December 1990 to: Dr. Ambika Mathur, Department of Oral Science, School of Dentistry, University of Minnesota, 515 Delaware Street, S.E., Minneapolis, MN 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

NATIONAL INSTITUTE ON AGING SENIOR STAFF FELLOWSHIP IN POSITRON EMISSION TOMOGRAPHY

National Institutes of Health, Public Health Service, senior staff fellowship is available beginning July 1991 for studying human brain function and metabolism in relation to aging and disease (e.g., Alzheimer's disease, geriatric, depression), using positron emission tomography (PET) to measure cerebral metabolism and blood flow. PET measures are combined with other imaging techniques (magnetic resonance), neuropsychological testing, and neuropharmacology. Responsibilities include writing and conducting clinical protocols and limited clinical care on an eight-bed clinical research unit. Positron, which is tenure track, is an excellent opportunity for neurologists, psychiatrists, or other clinicians interested in brain function and disease who are planning research careers. M.D. degree and medical license are required. Fellows work in Laboratory of Neurosciences (S. I. Rapoport, M.D., chief), National Institute on Aging, Bethesda, Maryland. Starting salary is commensurate with training and experience.

For further information, contact: M. B. Schapiro, M.D., Chief, Brain Aging and Dementia Section, Laboratory of Neurosciences, National Institute on Aging, Building 10, Room 6C-414, National Institutes of Health, 9000 Rockville Pike, Bethesda, MD 20892. Telephone: 301-496-4754. NIH is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIPS. At the Public Health Service, National Institutes of Health, National Cancer Institute, Frederick Cancer Research and Development Center (NCI-FCRDC), Laboratory of Molecular Oncology (LMO). NCI-IRTA (Intramural Research Training Award) fellowships for U.S. citizens are available for up to 3 years with stipends starting at \$25,000 per year. Research interests: ets oncogene family: the role in T cell activation: Drosophila and Xenopus proto-oncogenes; eukaryotic gene regulation; transcriptional activation; protein; DNA interactions; cancer genes; mechanisms of leukemogenesis/hematopoiesis; human and animal retroviral proteins and receptors; cellular regulation of retroviruses. Send curriculum vitae and the names and addresses of three references to: Dr. Takis Papas, Laboratory of Molecular Oncology, NCI-FCRDC, P.O. Box B, Frederick, MD 21702– 1201. Telephone: 301-846-1576. NCI is an Equal Opportunity Employer.

MAYTAG POSTDOCTORAL FELLOW IN ZOOLOGY ARIZONA STATE UNIVERSITY

Two-year postdoctoral research fellowship emphasizing collaborative research with a faculty member in the Department of Zoology. Further information and application forms, which must include a research plan developed in consultation with a faculty sponsor, are available from the address below. Applicants must not have received a doctoral degree prior to 1987 and must not currently hold a permanent faculty position. Application deadline: 30 January 1991. Starting date: 16 August 1991. Applications from two individuals wishing to share the position will be considered. Arizona State University is an Equal Opportunity/Afirmative Action Employer. Contact: Dr. Michael C. Moore, Chair, Maytag Fellow Search Committee, Department of Zoology, Arizona State University, Tempe, AZ 85287–1501. Telephone: 602-965-3571.

POSTDOCTORAL FELLOW CRYSTALLOGRAPHIC STUDY OF PROTEIN/DNA COMPLEXES AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)

My laboratory is moving to the Department of Biology at MIT in July 1991 and will have a position for a highly motivated postdoctoral fellow who could collaborate on the crystallographic study of protein/DNA complexes and help set new directions for the laboratory. The position should be ideal for someone who also is interested in using structural data to help design new DNA-binding proteins and is interested in helping to develop new methods for the crystallization of protein/DNA complexes. For further information, please contact: **Carl O. Pabo**, Department of Molecular Biology and Genetics, Johns Hopkins University School of Medicien, 725 North Wolfe Street, Baltimore, MD 21205 (telephone: 301-955-3967; FAX: 301-955-0831; BIT-NET: PABO@JHUIGF).

POSTDOCTORAL FELLOWSHIP IN CARDIOVASCULAR BEHAVIORAL MEDICINE

The Department of Psychiatry, University of California, San Diego invites applications for a 1 to 2 year postdoctoral fellowship to pursue research on the human behavioral physiology of blood pressure regulation. The applicant should have a Ph.D. degree with broad interdisciplinary training. Skills in any of the following areas would be particularly valuable: neuroendocrinology, receptor physiology, psychophysiology, coding of nonverbal behavior, biostatistics, or behavioral medicine. We seek a recent Ph.D. who has demonstrated exceptional promise for excellence as a scholar scientist and who is able to connect broadly diverse research inquiries. Applicants should have three letters of recommendation sent independently and should provide curriculum vitae as well as a personal statement regarding their qualifications for the position. Files should be complete by 31 January 1991. The position becomes available late spring or early summer 1991. Forward correspondence to: Joel E. Dimsdale, M.D., Director, Program in Consultation/ Liaison Psychiatry and Behavioral Medicine, University of California, San Diego (UCSD), (T-004), La Jolla, CA 92093–0804. UCSD is an Equal Opportunity/ Affirmative Action Employer.

RESEARCH Scientists

Numerical Modeller (Ecosystem Processes)

Chemical Oceanographer (Organic Biogeochemistry)

The Australian Institute of Marine Science seeks to appoint two experienced scientists to undertake fundamental and strategic research on oceanographic, biogeochemical and ecological problems of an inter-discplinary nature. Program research activities are primarily orientated toward field and numerical studies of systems - level phenomena and processes in tropical marine systems.

Interested applicants should seek further information on the positions and the Institute by contacting either Dr. Miles Furnas or the Personnel Manager by telephone +61 77 789211, facsimile +61 77 725852 or AIMS.AUSTRALIA/OMNET.

Applications close on 31st January 1991 with the Secretary, Australian Institute of Marine Science, PMB No. 3, Townsville MC, Queensland, Australia 4810.

AIMS is an equal employment opportunity employer. AB1 90/12-44527



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SCIENCE Magazine New Lab Service Department 1515 Broadway New York, NY 10036



The National Center for Biotechnology Information (NCBI), National Library of Medicine (NIH), invites applications from postdoctoral investigators and faculty members for its Scientific Visitors Program. The program is designed to foster collaborations between NCBI's scientific staff and extramural scientists as well as to provide on-site training in computational biology. Reimbursement of travel costs including transportation, lodging, and per diem will be provided to periodic scientific visitors. Visitors on continuous assignment will be paid a stipend and a dislocation allowance and will be reimbursed for round-trip travel. Applicants for the program shall include a resume and description of research plans; applications will be peer-reviewed. This is an equal opportunity program open to all qualified persons without regard to race, sex, religion, age, color, handicap, or national origin. Administration of the Scientific Visitors Program is provided by Oak Ridge Associated Universities to whom requests for information and application forms should be directed:



NCBI Scientific Visitors Program Oak Ridge Associated Universities P.O. Box 117 Oak Ridge, Tennessee 37831-0117

Postdoctoral Scientist

Renal Pharmacology

SmithKline Beecham, a worldwide leader in pharmaceutical research is seeking a postdoctoral scientist to join its Renal Pharmacology Group. In collaboration with their supervisor, the selected individual will select and pursue a suitable independent research project involving studies on the mechanisms involved and possible therapeutic intervention in chronic renal failure and in specific, diabetic nephropathy. In addition, he/she will communicate findings to scientific community via oral presentation and written manuscripts.

We are interested in scientists that have an M.D. or Ph.D. in Pharmacology, Physiology or related subject. They must also have research experience with *in vivo* techniques measuring renal and/ or cardiovascular parameters, demonstrated research productivity as evidenced by their publication record and good oral and written communication skills. It is also desirable to have experience in histological techniques.

Based in a state-of-the-art research facility in suburban Philadelphia near Valley Forge, PA, SmithKline Beecham Pharmaceuticals offers the challenge and opportunity to learn in a scientifically intense environment, structured on creativity, teamwork and commitment. We offer a competitive compensation/benefits/relocation package. For confidential consideration, please submit your C.V. and the names of three references to: Nancy Hasson, Employment Administrator, H0161, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.



HEI

The Health Effects Institute Request for Applications For Research Funds

The Health Effects Institute announces its third set of Requests for Applications (RFAs) of 1990.

The Health Effects Institute is a non-profit corporation that supports studies to evaluate the health effects of automotive emissions. It is funded jointly by the U.S. Environmental Protection Agency (EPA) and the automotive industry. Current research is investigating the health effects of a wide variety of pollutants, including methanol, carbon monoxide, ozone, and diesel emissions.

Applications are now being solicited for research in the following area:

RFA 90-6: Theoretical Approaches to the Analysis of Health Effects of Complex Mixtures

Development of theoretical approaches to the analysis of complex mixtures which describe the following:

- The development of separation methods to isolate components of complex mixtures.
- The development of methods which can be used to determine interactive effects of toxic compounds.

Preliminary applications are also being solicited for other research designed to assess health effects of automotive emissions.

Materials describing the Health Effects Institute, the preparations of applications, and more specific details of the research topics are available.

Requests and inquiries should be directed to:

Dr. Jane Warren, Director of Research The Health Effects Institute 141 Portland Street, Suite 7300 Cambridge, MA 02139 Telephone: (617) 621-0266

Letters of intent for RFA 90-6 should be submitted no later than January 22, 1991. Applications for RFA 90-6 will be accepted until February 25, 1991. Preliminary applications will be accepted at any time.

The Health Effects Institute

Postdoctoral Research Fellowships

The PARKE-DAVIS Pharmaceutical Research Division of Warner-Lambert has initiated a multidisciplinary postdoctoral research program which will provide exciting opportunities to conduct basic studies in areas of potential therapeutic utility. The following Fellowships are currently available in the Pathology and Experimental Toxicology Department.

Immunotoxicology (Fellowship V)

The Fellow will characterize peripheral blood lymphocytes from various species. These studies will include the use of in-vivo and in-vitro techniques, including cell purification, foreign cell recognition, lymphokine production and time course monitoring, to define the activity of cluster-designated (CD) lymphocyte subpopulations. The project will also include application of these findings in the assessment of candidate drugs. Applicants should have a PhD in immunology, toxicology or a related field, with experience in flow cytometry and primary cell culture techniques.

Molecular Mechanisms of Cell Proliferation (Fellowship 3190)

The successful candidate will participate in studies on cellular and molecular aspects of cell proliferation mechanisms in normal and pathological tissues using in-vivo and in-vitro models. Applicants should have a MD, MD PhD or PhD in biochemistry, experimental pathology, cell biology or other relevant field. Knowledge of receptor/enzyme systems, in-situ hybridization, PCR and other molecular biology techniques would be added advantages.

Appointments are for one year, renewable for a second year. Compensation includes \$32,000 annual salary with relocation expenses and an attractive benefits package. Our modern research facilities are located adjacent to the University of Michigan in an outstanding living and working environment. Send letter of application with curriculum vitae and names of three references to Box JDM915, Human Resources, PARKE-DAVIS Research Division, Warner-Lambert Company, 2800 Plymouth Road, Ann Arbor, MI 48105. Please indicate the Fellowship you are applying for. "Smoke-Free Work Environment"

"Equal Opportunity in Action"



RESEARCH ASSOCIATES

Amgen has emerged as a leader in the development of human therapeutic products through applications of biotechnology. Our success in the development of human erythropoietin for the treatment of anemia associated with end stage renal disease has placed us at the forefront of the biotechnology industry. As a result of our continued commitment to research, we have several opportunities for experienced Research Associates to contribute to the development of a number of research programs at Amgen.

PROTEIN CHEMISTRY

Responsibilities for this position will include isolation and characterization of glycoproteins and oligosaccharides. Qualified candidates must have a Bachelor's degree in a relevant discipline and a minimum of two years' experience in the purification of proteins. Experience with HPLC, FPLC and other liquid column chromatography methods as well as with basic methods for the analysis and separation of proteins is essential. Knowledge of glycoprotein and oligosaccharide biosynthesis and characterization is desirable.

MOLECULAR BIOLOGY

We currently have several opportunities for individuals to participate in a variety of research programs leading to the cloning, expression and characterization of various cellular growth factors. Applicants for these positions must have a Bachelor's or Master's degree and a minimum of two years' experience in basic molecular biology techniques including recombinant DNA technology and mammalian tissue culture. Experience in various bioassays, viral titration and mammalian cell transfection is highly desirable.

Amgen offers a stimulating and challenging research environment on the leading edge of the biotechnology industry. Our commitment to excellence in research has created a truly unique environment that fosters scientific creativity. Our location northwest of Los Angeles offers all the advantages of living in Southern California without the concerns typically associated with the Los Angeles area. We also offer an excellent compensation and benefits package with extensive relocation assistance.

If you have the necessary qualifications and would like to be a part of a company that places a high value on both research and its human resources, please send a resume, in confidence, to:

AMGEN, INC. Recruitment, Dept. #560 Amgen Center Thousand Oaks CA 91320-1789



Postdoctoral Researchers

Genentech, a leader in the field of biotechnology, has two exceptional opportunities for Postdoctoral Researchers in our Protein Chemistry and Mass Spectrometry groups.

The first position involves the optimization of electrospray ionization for high sensitivity measurement of peptides and proteins on single and triple-quadrupole mass spectrometers. These studies will include on-line separations by HPLC and CZE as well as sequencing by Tandem mass spectrometers. The second position will study the mechanisms involved with the control of hormone secretion from pituitary and neurological tissues. Both openings require a Ph.D. in Biochemistry, Chemistry or a related field and similiar experience.

Genentech offers an excellent salary and benefits package. For immediate consideration, please send your resume with 3 references to Yvonne Davino, Genentech, Inc. Dept. SYDV, 460 Point San Bruno Blvd., South San Francisco, CA 94080. EOE.



FACULTY POSITION INSTITUTE FOR BIOMOLECULAR SCIENCE UNIVERSITY OF SOUTH FLORIDA

The University of South Florida Institute for Biomolecular Science, a multidisciplinary consortium of University faculty and scientists, invites applications for a tenure-track position at the level of Assistant or Associate Professor. Candidates should have a Ph.D. in biochemistry, molecular biology or related discipline with a minimum of three years of postdoctoral research experience. This is one of four positions which will be filled by the Institute over the next two years as part of a State-funde expansion program. The position is funded through the Institute, with academic appointment in the Department of Biochemistry and Molecular Biology in the College of Medicine. Excellent laboratory facilities, start-up funds and opportunities for collaboration are available. Title and salary (nationally competitive) will be commensurate with qualifications and experience with preference for entry-level candidates. This position offers an excellent opportunity for professional growth in an attractive living and working environment. Duties of the position include establishment of a strong, independent research programs, directing graduate students; and contributing in the area of university and professional service. Selection of final candidates will be based on: 1) research accomplishments and publication record, 2) area of proposed research in relation to current research programs and interests, 3) potential contributions to teaching and graduate programs, d) letters of evaluation, 5) grant support (for candidates currently holding a faculty-level appointment). Applicants should send a curriculum vitae, a statement of research horescreated. Candidates and future plans and reprints of representative recent publications. Candidates and future plans and reprints of representative recent publications. Candidates and future plans and reprints of representative recent publications. Candidates and publications to teaching and the sender of research horescreated. Programs and interesty applications to teaching and professi

IBS Faculty Search Committee c/o Dr. R. Kennedy Keller Dept. of Biochemistry and Molecular Biology - MDC 7 12901 Bruce B. Downs Blvd. University of South Florida Tampa, Florida 33612-4799

The University of South Florida is an Equal Opportunity/Affirmative Action Employer and encourages applications from minorities, women and the handicapped.

FELLOWSHIPS IN REPRODUCTIVE BIOLOGY NORTHWESTERN UNIVERSITY

Postdoctoral and predoctoral fellowships are available in reproductive biology for outstanding students. A diverse but cohesive program offers research in biochemical, molecular, cellular, physiological, and behavioral aspects of reproduction. Participating faculty include: **Erwin Goldberg** (immunology and reproductive biochemisty); **Mary Hunzicker-Dunn** (ovarian protein kinase, adenylyl cyclase); **Jon Levine** (neuroendocrinology); **Daniel Linzer** (molecular endocrinology); **Kelly Mayo** (gene regulation in the mammalian neuroendocrinology); **Joseph Takahashi** (circadian rhythms and photoreception); and **Fred Turek** (circadian rhythms and photoperiodism). Send curriculum vitae and names of three references to: **Dr. Daniel Linzer, Department of Biochemistry, Molecular Biology, and Cell Biology, Northwestern University, 2153 Sheridan Road, Evanston, IL 60208–3520.**

Applicants must be eligible for the NIH Training Program (U.S. citizen or permanent resident).

An Equal Opportunity Employer.

COLUMBIA UNIVERSITY POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE

A position is available at the postdoctoral/research associate level to participate in an ongoing study on the molecular basis of transformation induced by radiation. This is an exciting and growing field of research in which our group has made several recent advances. The individual will be working with an established group of molecular biologists, cell biologists, and physicists. A competitive salary is guaranteed for a minimum of 2 years. A background in biochemistry or molecular biology is preferred. Please send application materials including curriculum vitae and three letters of reference to:

Dr. Greg A. Freyer Center for Radiological Research 630 West 168th Street Columbia University New York, NY 10032 An Equal Opportunity/Affirmative Action Employer.

GRADUATE STUDIES IN BIOTECHNOLOGY THE UNIVERSITY OF CHICAGO

The NIH-funded graduate training program in biotechnology at the University of Chicago, in collaboration with Abbott Laboratories, is accepting applications for the 1991–1992 academic year. The program plan has flexibility to accommodate candidates with different backgrounds and interests. Students can pursue a Ph.D. degree in any of five degree-granting units, including the Department of Biochemistry and Molecular Biology, the Department of Molecular Genetics and Cell Biology, the Department of Chemistry, the Committee on Genetics, the Committee on Virology, and the Committee on Immunology.

Interested students should apply directly to a participating department or committee. Further information may be obtained from:

Dr. Lucia B. Rothman-Denes Director, Biotechnology Training Program Department of Molecular Genetics and Cell Biology The University of Chicago 920 East 58th Street Chicago, IL 60637

POSTDOCTORAL/RESEARCH ASSOCIATES

The Cell Biology Laboratory, investigating cellular and molecular mechanisms of growth and differentiation of human epithelial cells, is seeking research associates to study molecular mechanisms of epithelial cell immortalization and transformation in vitro. Applicants are expected to have previous experience in epithelial cell culture, gene amplification, transfection of cells with subgenomic DNA, and other molecular biology techniques. Please send curriculum vitae and names and addresses of three references to: Dr. D. P. Chopra, Institute of Chemical Toxicology, Wayne State University, 2727 Second Avenue, Room 4000, Detroit, MI 48201.

Wayne State is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

C. H. BEST INSTITUTE POSTDOCTORAL FELLOWSHIP

Postdoctoral fellowship in diabetes research, molecular endocrinology, molecular biology, differentiation, reproductive biology, immunology, structure and function of membranes, or lipid metabolism. Tenable in the Banting and Best Department of Medical Research for 2 years after 1 July 1991 with a competitive stipend available to new Ph.D.'s or candidates with less than 2 years of postdoctoral training by 30 June 1991. Send curriculum vitae, transcripts, and three letters of reference, preferably before 15 December 1990 to: Dr. Irvine B. Fritz, Fellowship Committee Chairman, Banting and Best Department of Medical Research, University of Toronto, Toronto, Ontario, Canada M5G 1L6.

POSTDOCTORAL RESEARCH TRAINING FELLOWSHIPS in endocrinology, metabolism, diabetes for M.D. or Ph.D. graduates are available at Emory University School of Medicine utilizing eleven training faculty in six basic and clinical departments. *Must be U.S. national or permanent resident.* M.D. applicants must have U.S. residency experience. Send curriculum vitae, statement of research and career objectives, and two letters of reference to: Lawrence S. Phillips, M.D., Program Director, Emory University School of Medicine, 69 Butler Street, S.E., Atlanta, GA 30303. An Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE

Available for a recent Ph.D. to study novel pathways of polycyclic aromatic hydrocarbon (PAH) metabolism. Previous experience in cell culture, synthesis, and characterization of PAH-metabolites and their DNA-adducts desirable. Career advancement possible. Send curriculum vitae and names of three references to: **Dr. Trevor M. Pennsylvania School of Medicine, Philadelphia, PA 19104–6084.**

RESEARCH ASSOCIATE. To conduct independent research relating to the elucidation of enzyme mechanisms. Will be responsible for the purification of protein from bacterial sources which will be utilized for stopped-flow and steady-state kinetic analysis. Will design experimental protocols, conduct the experiments, and then interpret the data via a kinetic model. The experiments must be conducted at controlled oxygen concentration. Will prepare technical reports for publication and professional presentation. Salary: \$1,785 per month, 40 hours per week. Requires Ph.D. in analytical and inorganic chemistry and 2 years of related experience in research in enzyme kinetic modeling. Apply at the **Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. #5424676**. Ad paid by an Equal Employment Opportunity Employer.

PROTEIN BIOCHEMIST. Proficient in purification and characterization of connective tissue proteins including ion-exchange, gel filtration and affinity chromatography, isoelectric focusing, HPLC, electrophoresis, blot transfer, and monoclonal and polyclonal antibodies.

Requirements include a doctorate in biochemistry or biology and at least 2 years of practical experience. Forty hours per week: salary negotiable. Position located at University of California, Los Angeles. Résumé only to: Suzie Eisenbach, 1000 Veteran

Avenue, Room A3-34, Los Angeles, CA 90024.

MICROBIOLOGIST

The Solar Energy Research Institute (SERI) has an immediate opening for a microbiologist who will plan, design and execute microbiological experimental research for conversion of biomass to fuels through culturing of cellulase producing microorganisms and purification of enzymes. The candidate will also perform growth and cellulase enzyme production experiments with 2 to 4 new microorganisms each year. ELISA and immuno-precipitation assays will also be developed for purified cellulase antigens.

Qualifications include a M.S. degree in microbiology, biology, or biochemistry. Hands-on experience in microbial culturing, enzyme purification, monoclonal antibody development, and cellulase assays are also required.

development, and cellulase assays are also required. Please send résumé to: Human Resources Department, #2320-654, SERI, 1617 Cole Boulevard, Golden, CO 80401. Women and minorities are encouraged to apply. We are an Equal Opportunity Employer.

POSITIONS OPEN

RESEARCH ASSOCIATE POSITONS. Are available for highly motivated recent Ph.D.s to investigate effects of phosphorylation of troponin subunits by protein kinase C on reconstituted cardiac actomyosin Ca^{2+-} activated MgATPase and contractility of cardiac myocytes and other cardiac preparations. Pathophysiology of troponin phosphorylation in animal models will also be studied.

Send application and curriculum vitae to: Dr. J. F. Kuo, Department of Pharmacology, Emory University School of Medicine, Atlanta, GA 30322, by 4 January 1991.

Emory University is an Equal Opportunity Employer.

The Department of Pediatrics of the University of Pennsylvania School of Medicine, Children's Hospital of Philadelphia, is recruiting for a **RESEARCH ASSIST-ANT PROFESSOR** in the Division of Oncology. We are seeking a Ph.D. with postdoctorate experience in the application of recombinant DNA and monoclonal antibody technologies to the detection and diagnosis of cancer. Should have experience of cloned genes in *E. coli* and the use of fusion proteins for immunization, screening, and epitope analysis of monoclonal antibodies. Address replies with curriculum vitae to: **Audrey Evans**, **M.D.**, **Division of Oncology**, **Children's Hospital of Philadelphia**, **34th Street and Civic Center Boulevard**, **Philadelphia**, **PA 19104**. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

MOLECULAR BIOLOGIST/GENETICIST

The Molecular Genetics Department of Northrup King Company is recruiting a Ph.D. molecular biologist/ geneticist to conduct research with RFLPs in plant breeding. Experience in molecular biology and genetics will be required. Interaction with plant breeders and statisticians is required to accomplish project goals. Starting salary will be commensurate with experience and accomplishments. Send applications/résumé to:

Kate Schweich Attention: RFLP Northrup King Company Research Center Highway 19 Stanton, MN 55018–9662 An Equal Opportunity Employer.

RESEARCH SCIENTIST POSITIONS

The U.S. Army Medical Research Institute of Chemical Defe.se (USAMRICD) is the Department of Defense's lead laboratory in research for defense against chemical warfare agent toxicity. USAMRICD is part of the Aberdeen Proving Ground complex located 30 miles northeast of Baltimore on the Chesapeake Bay. USAM-RICD has several full-time civilian research positions available in the pharmacology, toxicology, and chemistry fields with the starting grade of GS-12 or a grade commensurate with education and experience. Typical research includes the development of testing models and execution of research plans to evaluate the efficacy and safety of candidate drugs against cholinesterase inhibitors, DNA alkylating agents, and other metabolic toxins. A Ph.D. is highly desirable. U.S. citizenship is required and applicants must be able to obtain a security (dearance. To apply, send résumé to: Ms. Mary Boggs, U.S. Army Aberdeen Proving Ground Support Activity, Civilian Personnel Office, Attention: STEAP-CP-RT, Aberdeen Proving Ground, MD 21005–5001. An Equal Opportunity Employer.

University of Minnesota, Department of Biochemistry: SCIENTIST. Duties: do research in protein engineering. It involves analysis of optical properties of folding, and cell membrane transport by electric stimulation. Teach biochemistry laboratory procedures and instrumentation. Minimum qualifications: M.S. physical chemistry and 2 years of research experience in relaxation kinetics and model of cell membrane and protein chemistry. Salary: \$2126 per month; 40 hours per week. Apply with résumé to: Jeff Schaub, 140 Gortner Laboratory, 1479 Gortner Avenue, St. Paul, MN 55108. University of Minnesota is an Equal Employment Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

AAAS/1991–92 Science & Engineering Fellowships

CONGRESSIONAL

AAAS Congressional Science & Engineering Fellows Program

Fellows spend one year on Capitol Hill working with Members of Congress or congressional committees as special assistants in legislative and policy areas requiring scientific and technical input. Two fellowships will be offered, with annual stipends of \$38,000.

EXECUTIVE BRANCH

AAAS-Sloan Executive Branch Science & Engineering Fellows Program

Fellows work in the White House Office of Science and Technology Policy, for one or two years, providing expertise in industrial R&D, technology transfer, international competitiveness, and related issues. Two Fellows will be selected: one a scientist or engineer with at least 15 years experience, at a minimum annual stipend of \$75,000; the other with about five years experience, at a minimum stipend of \$40,000. Applicants must be U.S. citizens.

DIPLOMACY

AAAS Science, Engineering, & Diplomacy Fellows Program

Fellows work in international affairs on scientific and technical subjects for one year, either in foreign policy at the U.S. Department of State or in international development for the U.S. Agency for International Development. Approximately 12 Fellows will be selected. The annual stipend varies with experience, starting at approximately \$36,000. Applicants must be U.S. citizens.

ENVIRONMENTAL

AAAS Environmental Science & Engineering Fellows Program

Fellows work as special research consultants with the Office of Research and Development of the U.S. Environmental Protection Agency for 10 weeks in the summer. The detailed, future-oriented research assists ORD in assessing the significance of long-range environmental problems. The stipend is \$850 a week. Applicants must be permanent residents of the U.S. Ten Fellows will be selected.

Applicants should be postdoctoral to mid-career scientists and engineers, from any physical, biological, or social science or any field of engineering.

The programs are designed to provide each Fellow with a unique public policy learning experience; to make practical contributions to the more effective use of scientific and technical knowledge in the U.S. government; and to demonstrate the value of science and technology in solving important societal problems.

All Fellows participate in a rigorous orientation on the relevant congressional and executive branch operations and foreign affairs plus a year-long seminar series on issues involving science, technology, and public policy.

The application deadline is January 15, 1991, for the Congressional, Diplomacy, and Executive Branch programs and March 1 for the Environmental program. The three year-long programs begin in September 1991, and the 10-week Environmental program begins in June.

For additional program information and application instructions, write: Directorate for Science and Policy Programs (FPO) American Association for the Advancement of Science 1333 H Street, NW, Washington, DC 20005 + 202/326-6600

INDOOR AIR EXPOSURE RISK ASSESSMENT RESEARCH

The Lawrence Berkeley Laboratory's Indoor Environment Program is seeking two highly qualified scientists for the following career openings:

• STAFF SCIENTIST II. 100% (C/6164): Direct studies of human cell mutations resulting from environmental exposures. Must be able to set up and perform new human mutation assays, including HLA-A and glycophorin-A assays, identify suitable cohorts for study, and organize exposure assessment protocols. Ph.D. in environmental health/genetic toxicology equivalent required together with experience in biomonitoring and use of human bioassays for risk assessment. Experience in carrying out studies on human populations in the field, training in chemical exposure assessment and industrial hygiene experience.

• STAFF SCIENTIST II. 75% (C/6161): Conduct theoretical research in toxic risk assessment. Develop and implement mathematical models of deposition, metabolism, and toxicity for indoor organic air pollutants and environmental pollutants. Ph.D. in biology and toxicology or equivalent required together with demonstrated expertise in computer modeling of pharmacokinetics/ pharmacodynamics and risk assessment for organic pollutants. Experience with mainframe/supercomputing environments - and high level programming languages essential. Familiarity with indoor air pollution and exposure to toxic air pollutants desirable.

Both positions involve supervision of graduate students and postdoctoral fellows working on the project, preparation and publication of papers in referred archival journals, and generation of funding to establish new research projects. Ability to identify needed research, formulate research objectives, and compete and obtain funding for research projects. Strong research background record of publications in the research areas described above.

described above. Competitive salary commensurate with experience, plus comprehensive benefits. Please send résumé, including publication list, names of references (must indicate Job C/6164 or C/6161) to: Employment Office, Lawrence Berkeley Laboratory, 90-1042, #1 Cyclotron Road, Berkeley, CA 94720. M.A. Holman, telephone: 415-486-5398. An Equal Opportunity Employer.

LAWRENCE BERKELEY LABORATORY

CONFOCAL MICROSCOPIST INTEGRATED MICROSCOPY RESOURCE UNIVERSITY OF WISCONSIN-MADISON

RESEARCHER in confocal microscopy and 3-D image computing. The IMR, an NIH Biomedical Research Technology Resource, seeks a **CELL BIOLO**-**GIST**, ideally with postdoctoral experience, to image living cells in 3-D, detect ion transients (e.g., Ca + + and pH), perform experiments integrated with SEM and HVEM, and assist in testing new instruments and improve existing ones. Please send applications to: Dr. **Gerald Schatten, IMR, 1117 West Johnson Street**, **University of Wisconsin, Madison, WI 53706** preferably by 15 December 1990. **FAX:** 608-262-7319. An Affirmative Action/Equal Opportunity Employer.

SOIL ECOLOGIST

The Harvard Forest, an LTER site focusing on forest ecosystem response to disturbance is filling a senior scientist position in ecology of soils and below-ground processes. Individual would develop a research program in coordination with scientists representing historical, physiological, community, and ecosystem ecology, developmental biology, atmosphere-biosphere interactions, GIS, and remote sensing. A Ph.D., strong record of publications, and research support are requested. Send curriculum vitae, publications, and three letters of reference to: **Dr. David R. Foster, Harvard Forest, Harvard University, Petersham, MA 01366** by 15 January 1991.

Harvard University is an Equal Opportunity Employer and applications from women and minorities are strongly encouraged.

SCIENCE welcomes placement of line classified ads by FAX. Please include name and telephone number for our confirmation call when transmitting ad to: FAX NUMBER: 202-682-0816 **POSITIONS OPEN**

RESEARCH SCIENTIST POSITION. Available immediately for studying metabolism of chemical carcinogens in mammalian and fish systems. Ph.D. in biochemistry, bioorganic chemistry, toxicology, pharmacology, or related field required. Experience in isolation and structural identification of metabolites preferable. The position provides an opportunity for developing a program of candidate's interest. Please send résumé and names of three references to: Dr. H. Sikka, Director, Division of Environmental Toxicology and Chemistry, Center for Environmental Research, State University of New York College at Buffalo, 1300 Elmwood Avenue, Buffalo, NY 14222. Telephone: 716-878-5422.

SCIENTIST. Duties: do research in protein engineering. It involves analysis of optical properties of protein structure, relaxation kinetic study of protein folding, and cell membrane transport by electric stimulation. Teach biochemistry laboratory procedures and instrumentation. Minimum qualifications: M.S. physical chemistry and 2 years of research experience in relaxation kinetics and model of cell membrane and protein chemistry. Salary: \$2126 per month; 40 hours per week. Résumé to: Mr. Cheetham, 0-210, Minnesota Department of Jobs/ Training, 390 North Robert Street, St. Paul, MN 55101.

ANNOUNCEMENTS

SUMMER TEACHING/RESEARCH OPPOR-TUNITY: CONSERVATION BIOLOGY MAS-TER TEACHER PROGRAM (MTP) CALL FOR PROPOSALS. The School for Field Studies (SFS) invites course proposals from qualified faculty on major environmental conservation issues for three-or-more-year commitment. Preproposals due 15 January 1991. For application and/or more information, contact: MTP Director, SFS, 16 Broadway, Beverly, MA 01915. Telephone: 508-927-7777. FAX: 508-927-5127.

SITUATIONS WANTED

BIOCHEMIST, M.S. Five years of research experience. Protein and immunochemistry, emphasis on membrane proteins, publications, seeks R&D position in industry. **Box 132, SCIENCE.**

VISITING PROFESSOR, BIOCHEMISTRY, Ph.D. Retired industrial researcher seeks position at undergraduate or graduate level. Very recent university experience. Box 133, SCIENCE.

Ph.D. CLINICAL CHEMIST, ABCC certification effective August 1991. Seeks hospital position offering interaction with clinicians, applied research, and teaching opportunities. Box 126, SCIENCE.

PEPTIDE CHEMIST, Ph.D. (1969). U.S. and European industrial and university experience synthesizing peptides, seeks research position. Europe or United States. Patents. Raymond J. Vavrek, Biochemisty B126, University of Colorado Medical School, 4200 East 9th Avenue, Denver CO 80262.

Ph.D. PHARMACOLOGY. Postdoctoral experience, chemical carcinogenesis, DNA damage, ³²P-postlabeling, teaching, and publications. Seeks faculty/scientist position. Box 129, SCIENCE.

PHYCOLOGY/MARINE ECOLOGY, Ph.D. (1988). Postdoctoral, teaching, consulting, and overseas experience; publications. Seeks academic or consulting position. Box 131, SCIENCE.



COURSES AND TRAINING

NATIONAL SCIENCE FOUNDATION (NSF) OCEANOGRAPHY SHORT COURSE SAN DIEGO, CALIFORNIA 23 JUNE 1991 TO 13 JULY 1991

Instructors of undergraduate courses with marine science content will receive current information in ocean research, hands-on experience in sampling and data analysis, and new teaching materials. Project director is Dr. Richard Phillips of the University of San Diego, where participants will live, and earn three graduate units in marine studies. Funding covers tuition, course materials, field-trip travel, and room and board. Contact: Shannon O'Dunn, NSF Co-Director, Grossmont College, 8800 Grossmont College Drive, El Cajon, CA 92020. Telephone: 619-466-1700 ext. 690; FAX: 619-461-3197.





ro-Gln-Ile-The Gly-Gly-Gln-Arg-Pi hr-Ile-Leu-Ly eu-Leu-Asp-Thr-Gly-Ala-Asp-Asp-Th lu-Clu-Met-Ser For-Gly-Arg-Tr ys-Met-He-Gly-Gly-Ile-Gly-Gly-Ph al-Arg-Gln-Tyr-Asp-Gln-Ile-Leu-Il ys-Gly-His-Lys-Ala-Ile-Gly-Thr-Va ly-Pro-Thr-Pro-Val-Asn-Ile-Ile-Gly eu-Leu-Thr-Gln-Ile-Gly-Cys-Thr-Le

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