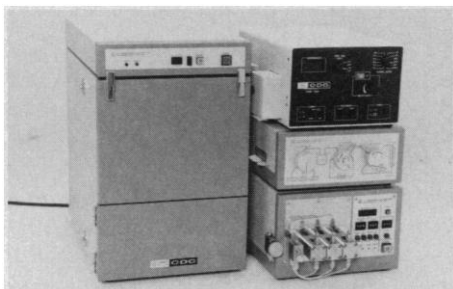


Products & Materials

The 41st Pittsburgh Conference and Exposition on Analytical Chemistry and Applied Spectroscopy will be held from 5 to 8 March at the Jacob K. Javits Convention Center in New York City. These are some of the new products that will be introduced there.

Centrifugal-Partition Chromatography

The Preparative/Analytical High-Performance Centrifugal-Partition Chromatography (HPCPC) System, model LLN-9, features a new liquid chromatographic technique that makes use of liquid-liquid, counter-current distribution to fractionate complex mixtures of chemical substances. HPCPC can be used to separate and purify a



broad range of chemicals and offers advantages for the isolation of polar substances and biological materials. With HPCPC, stationary-phase solvents are retained in the column by centrifugal force. Consequently, high mobile-phase flow rates can be used without appreciable loss of resolution. Denaturation and decomposition of sample components, often encountered with conventional packed columns, are virtually nonexistent in the mild operating environment. Sanki Laboratories. Circle 562.
Booth 3110

Automated DNA Sequencer

The Automated Laser Fluorescent (A.L.F.) DNA Sequencer is designed for fast, easy, and reliable sequencing and evaluation of up to 8 kilobases per day. With just

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.

one fluorescently labeled primer, samples are easily prepared by classical Sanger methods with a convenient sequencing kit. In less than an hour, samples can be loaded onto the electrophoresis gel without extra quantitation or precipitation steps. The system has no moving parts. Sample bands are detected with a fixed laser beam that penetrates the entire width of the gel. Pharmacia LKB Biotechnology. Circle 565.
Booth 1303

Cell Adhesion Protein

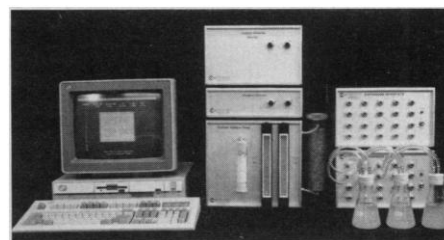
AdheraCell is a recombinant bioadhesive protein that maintains the solid surface support necessary for optimal growth of anchorage-dependent cells. The protein binds quickly and strongly both to plastic surfaces and to anchorage-dependent cells, providing immediate, ideal growth conditions for cell culture. It can be used to culture many types of cells or to fix cells onto slides. Genex. Circle 569.
Booth 4964

Variable-Intensity Transilluminators

The Spectroline variable-intensity ultraviolet (UV) transilluminators are designed to solve the problems of photonicking, photobleaching, and photodimerization that plague DNA researchers. The Spectroline TV-Series features intensity control that enables the operator to prevent sample damage from prolonged exposure to strong UV light during its preparation. The UV intensity can be lowered to 20%, to allow preparation time of up to 30 min with little or no detectable damage, then raised to the level desired for sensitive analysis. The unit's specular aluminum reflectors and high-intensity tubes allow it to detect trace amounts of DNA, as little as 1 to 2 ng. Spectronics Corp. Circle 567.
Booth 5031

Bacteria and Fungus Detector

The 20-channel O₂/CO₂ Bio-Respirometer detects bacterial or fungal growth by measuring oxygen consumption and carbon dioxide production resulting from biological activity. Its sensitivity is 0.2 µl of oxygen per hour. Its operating principle is similar to the Warburg apparatus, but the precision of the gas sensors and computer automation mean measurements are much easier to perform and are about ten times as accurate. Up



to 20 chambers, which can vary from 50 ml to 20 liters, can be monitored at the same time with periodic printouts and disk storage on an IBM PC/AT-compatible computer. Columbus Instruments. Circle 568.
Booth 5568

Capillary Electrophoresis Systems

Two new capillary electrophoresis (CE) systems feature femtomole detection sensitivity, multiple sample injection modes, and a choice of automated or manual operation. Both units are suitable for conventional free-zone high-performance CE of peptides, proteins, polynucleotides, and other samples, as well as for surface-modified capillaries and micellar and electrofocusing techniques. The automated system includes a 40-position autosampler; computer-based control over all separation parameters including buffer switching, temperature, and voltage; and complete data management. The manual system includes a syringe-loading injector. Isco. Circle 570.

Booths SR600, 4153-4154

Single-Button ICP-MS Control

The SCIEX Elan 5000 Inductively Coupled Plasma Mass Spectrometer (ICP-MS) features single-button control of the vacuum system and new software for a wide range of analytical applications. The Elan 5000 has a built-in radio frequency generator incorporating a free-running 40-MHz design specially engineered for ICP-MS. Perkin-Elmer. Circle 571.

Booths SR320, SR310, 3068

DISCUS Cell for IR/FTIR Gas Analysis

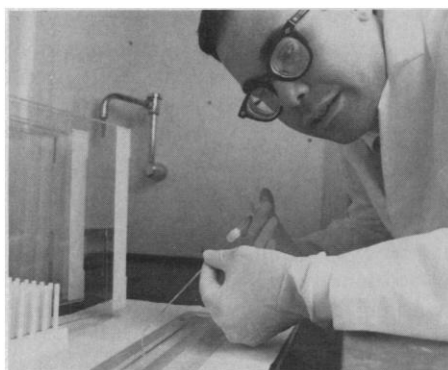
The Decentered Infrared Sensor Circlet for Uniform Sampling (DISCUS) Cell is a long-path sample cell for qualitative and quantitative infrared/Fourier transform infrared spectroscopy analysis of gases and vapors. The compact toroid (6-inch diameter) uses refractive optical decentering and

comprises a multipass folded beam with pathlengths of up to 9.6 m. The straight-through optical design requires no external transfer optics. The cell is suitable for on-line and laboratory study of the work space environment, ambient air, fixed gases, chemical process streams, and stack gases. Minarad Scientific. Circle 563.

Booth 2257

Dedicated 2-D Electrophoresis System

The Investigator 2-D (two-dimensional) Electrophoresis system is a high-resolution protein separation system with large-format gels. The larger gel format allows for increased dispersion of proteins, giving researchers up to four times as much information to analyze as standard gels. The system



offers a programmable power supply that allows the researcher to program and retain all pertinent parameters in memory. The system's patented threaded-tube gel one-dimensional casting system provides consistent gel lengths and eliminates the stretching that can cause inconsistencies from gel to gel. Millipore. Circle 564.

Booth 5432

HPLC Pump

Model HPXL is a fully programmable high-performance liquid chromatography (HPLC) pump capable of gradient operation without external controllers. It can be used as an isocratic pump or as a master or slave pump in an automated HPLC system. Interchangeable analytical and preparative pump heads maintain performance over designated flow and pressure ranges up to 200 ml/min. Titanium pump heads with a special piston-washing chamber provide an iron-free, biocompatible solvent delivery path for protein separations. Rainin Instrument Co. Circle 437.

Booths 3335, 3336

Scientific Graphing Software

SigmaPlot 4.0 is a new version of a popular graphing product for IBM-compatible personal computers designed to create publication-quality graphs for scientific and engineering research. An earlier version is



currently in use by more than 15,000 scientists around the world and has been used to produce graphs and plots published in more than 400 journals. The program offers major new additions including a pull-down menu interface, more graph types, improved page layout, greater worksheet capabilities, full nonlinear curve fitting, equation plotting, and improved output device support. Jandel Scientific. Circle 434.

Booth 2344

HPLC System

The AC/LC Semi-Prep/Prep Biocompatible HPLC (high-performance liquid chromatography) system is designed for a wide range of applications. Biocompatible components include titanium pump heads, and graphite-impregnated Teflon gradient formers, injection valves, and seals; no stainless steel is included. The unit provides accurate flow rates from 3 to 1000 ml at pressures up to 3000 psi with powerful interactive process control capability. It can accommodate columns from 10 to 100 mm in diameter and provides preprogrammed control for all functions. IBF Biotechnics. Circle 435.

Booths 2273, 2274

Preparative Column Packer

Chromatographers can pack their own preparative columns on site in 15 min using the new Mini N-Pack column packer. The Mini N-Pack accepts columns of 25 to 75 mm diameter and packs bed heights to 300 mm. The system packs to 2000 psi. Dual

axial compression technology packs normal-phase silica with reproducibility and high efficiency. The packer also performs multiple column packing for laboratories with several chromatographs. The system is hydraulic and does not require electrical service. Amicon Division, W.R. Grace & Co. Circle 572.

Booth 6043

Automated Liquid Transfers

The Microlab AT Plus performs rapid, reliable liquid transfers in a wide variety of common test formats. A high-speed robotic arm features up to 12 positive-displacement, liquid level-detecting, disposable tips. The instrument can transfer more than 1200 samples per hour from tubes to a user-defined format, including 12 by 75 mm test tubes, bead plates, microtubes, and microwell plates. Hamilton. Circle 573.

Booth 1535

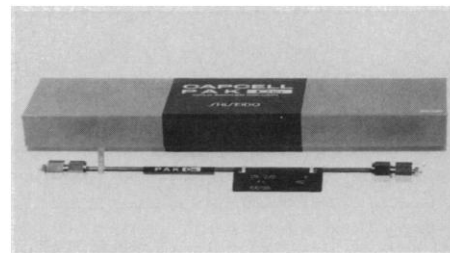
Molecular Microanalysis System

The IR μ s Molecular Microanalysis system, a new microbeam instrument that integrates visible microscopy with infrared spectroscopy, allows scientists to obtain a molecular and chemical profile of selected biological tissues. IR μ s is controlled by a mouse-driven software package that can perform quantitative microanalysis and advanced mapping applications. Spectra-Tech. Circle 566.

Booth SR590

Alkaline-Resistant HPLC Columns

CAPCELL PAK, a new series of silica-based reversed-phase high-performance liquid chromatography (HPLC) columns, are alkaline-resistant, with an operating pH range of 2 to 10. They are available in



bonded phases of C1, C8, C18, cyano, and phenyl. They come in particle sizes of 3 μ m and 5 μ m with porosities of 120 Å and 300 Å. Dychrom. Circle 574.

Booth 3681

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** reserves 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 ABBREVIATIONS. Any deadline for applications stated in ad must be at least 2 weeks after date of issue in which ad appears.

CLASSIFICATION: **SCIENCE** publishes line classified ads under the following headings: **Positions Open, Employment Agencies, Fellowships, Situations Wanted, Courses and Training, Meetings, Announcements, and Marketplace.** Advertisers should specify classification desired; however, **SCIENCE** reserves the right to decline classification requests which it believes may be misleading 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. No cash discount. Prepayment required for all foreign ads. Purchase orders required for all other advertising.

To **ESTIMATE** ad cost, structure ad copy on a 52-character line; include any desired heading 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 \times \$41 = approximate cost of ad, per week. (This is an approximate cost ONLY. Allow for variation between 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.)

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 additional lines will be added to cost of ad to allow for top and bottom box rules. Logos are billed according to number of lines needed to accommodate logo.

SITUATIONS WANTED ADS: As a service to AAAS members in good standing, **SCIENCE** offers free placement 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 calendar year. Please enclose **SCIENCE** mailing label including 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

MARKETPLACE AND DISPLAY PERSONNEL ADVERTISEMENTS

For rates, deadlines, and other 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 applicants for positions to investigate employment laws, nondiscrimination 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

ACADEMIC HEMATOLOGY/ONCOLOGY—The University of Vermont. Full-time faculty position in the Department of Medicine (UVM) in conjunction with the Vermont Specialized Center of Research in Thrombosis. Candidates should have documented research performance in hemostasis and thrombosis or in hematopoietic growth factors or receptors. Candidates should be Board-eligible or -certified in hematology and/or oncology. The application must provide evidence of a productive research program and the potential for independent support. Some teaching and clinical responsibilities. Academic rank and salary will be consistent with the applicant's qualifications. Please direct inquiries with curriculum vitae and names and addresses of three references to: **Richard Branda, M.D., Director, Hematology/Oncology, The University of Vermont, 32 North Prospect Street, Burlington, VT 05401.** UVM is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply. Applications will be accepted until the position is filled.

ANATOMIST. Faculty position available to teach clinically oriented gross anatomy and histology or neuroanatomy. Primary responsibilities: not more than 25% of time teaching the above disciplines to medical students and at least 75% of time for research. Salary and academic rank open and commensurate with training, teaching experience, and grant track record. Please send curriculum vitae and publications list, detailing teaching experience, research interests, grant support information, and names of three references to: **Dr. Arnold L. Nagler, Associate Dean, Basic Sciences, New York College of Osteopathic Medicine, Old Westbury, NY 11568.** Affirmative Action/Equal Opportunity Employer.

ANATOMY AND NEUROSCIENCES

Department of Anatomy-Neurosciences at University of Texas Medical Branch at Galveston, Texas (UTMB), has a tenure-track position for an **INVESTIGATOR** with minimum 2 years of postdoctoral experience and teaching experience in gross anatomy. Applicant should have an active and ongoing research program in modern medical sciences. Will be expected to teach gross anatomy. Please submit curriculum vitae and personal statement detailing research interests and teaching experience, including the names of three referees to: **Gwen V. Childs, Ph.D., Chairperson-Search Committee, UTMB-Department of Anatomy-Neurosciences, Sealy-Smith Building, 200 University Boulevard, Room 724, Route H-43, Galveston, TX 77550.** Application deadline: 1 April 1990; position filled by: 1 August 1990. UTMB is an Equal Opportunity M/F/V/H Affirmative Action Employer. UTMB hires only individuals authorized to work in the United States.

ANIMAL BEHAVIOR

The Department of Zoology, University of New Hampshire (UNH), invites applications for **ASSISTANT PROFESSOR**, tenure-track position to begin 1 September 1990. Applicants should be interested in modern aspects of behavioral biology of higher vertebrates (birds or mammals), should work at the organismic level, and should be well equipped with experimental/quantitative skills. Applicants must hold a Ph.D. and will be expected to develop a vigorous research program in behavioral biology. The principal teaching responsibility will be an upper-division course in animal behavior. Other responsibilities will include a course in the biology of mammals and possible participation in introductory biology courses. Women and minorities are encouraged to apply. Send curriculum vitae, including telephone numbers, a statement of goals in teaching and research, and three letters of reference by 9 March 1990 to: **Dr. Hunt Howell, Search Committee Chair, Department of Zoology, University of New Hampshire, Durham, NH 03824.** Telephone: 603-862-2100. UNH is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR. The Department of Biology, Illinois Benedictine College (IBC), has a tenure-track position for fall of 1990; position pending budgetary approval. Ph.D. required. Deadline: 15 April 1990. Duties include teaching cell biology, introductory biology (team taught), and molecular biology/biotechnology as well as directing some undergraduate research. Send curriculum vitae and three letters of recommendation to: **Dr. Al Martin, Chairman, Search Committee, Illinois Benedictine College, 5700 College Road, Lisle, IL 60532.** IBC is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

UNIVERSITY OF SOUTH CAROLINA USC COASTAL CAROLINA COLLEGE ANATOMY/PHYSIOLOGY INSTRUCTOR

The School of Natural and Applied Sciences, USC Coastal Carolina College, is seeking applicants for a laboratory instructor in anatomy/physiology. Full-time, nontenure-track position. Master's degree required. Teaching experience preferred. Responsibilities include coordinating and teaching laboratory sections of human anatomy. Position available 16 August 1990. USC Coastal Carolina College, the fastest growing 4-year campus of the University of South Carolina System, is located 9 miles west of Myrtle Beach. Each applicant should submit a letter of application, curriculum vitae, and names and phone numbers of three references, by 26 February 1990, to: **Dr. Janis W. Chesson, Assistant Chancellor for Human Resources and Affirmative Action, USC Coastal Carolina College, P.O. Box 1954, Conway, SC 29526.** USC Coastal Carolina College is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT CURATOR OF INVERTEBRATE ZOOLOGY

The California Academy of Sciences seeks applications for the position of assistant curator in systematics and evolutionary biology of noninsect, recent invertebrates. The position is available 1 June 1990. The successful applicant is expected to undertake original systematic and evolutionary biological research in one or more taxonomic groups of invertebrates, curate and expand holdings of the museum, and participate in educational and exhibit activities of the academy.

Requirements for the position include a Ph.D. in a relevant discipline, demonstrated excellence in research in the systematics of one or more invertebrate groups, and experience in the curation of museum collections. Candidates who have demonstrated an ability to attract funds for research and collection support will be given strong preference.

Applicants should send curriculum vitae and the names and telephone numbers of five references to: **Dr. Terrence M. Gosliner, Director of Research, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118,** to be received by 31 March 1990.

The academy is an Equal Opportunity Employer.

Applications are invited for a tenure-track position in cell biology at the **ASSISTANT PROFESSOR** level in the Department of Zoology, University of British Columbia. Starting date will be 1 July 1990. Salary will be commensurate with education and experience. Appointment is subject to final budgetary approval.

The Department of Zoology currently comprises 42 faculty members, approximately 40 postdoctoral fellows and research associates, and 140 graduate students. Preference will be given to candidates with at least 2 years of postdoctoral experience and with demonstrated excellence in research in cell biology that complements the present strengths in the department. Appointee will be expected to develop a strong research program and teach in upper level undergraduate courses in cell biology.

Curriculum vitae, the names of three referees, and a brief research outline should be submitted to: **Dr. G. G. E. Scudder, Head, Department of Zoology, University of British Columbia, 2354-6270 University Boulevard, Vancouver, BC V6T 2A9, Canada.** Closing date for application is 30 April 1990.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of British Columbia is committed to the federal government's Employment Equity program and encourages applications from all qualified individuals.

ASSISTANT/ASSOCIATE PROFESSOR OF MICROBIOLOGY. Tenure track. Ph.D. required. Preference to individual broadly trained in molecular biology/virology/immunology. Commitment to undergraduate education. Responsibilities: teaching, academic advising, university service, and professional development. Send résumé, all college transcripts, and the names, addresses, and telephone numbers of three references to: **Dr. M. A. Levin, Search Chair, Department of Biology, Eastern Connecticut State University, Willimantic, CT 06226.** Screening of applicants will continue until a suitable candidate is found. Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

The Department of Biochemistry, Duke University Medical Center, invites applications for the position of **ASSISTANT PROFESSOR** (tenure track). The person will be expected to establish a strong independent research program and to teach both medical and graduate students. The field of interest is open. Send résumé, summary of research interest, and three letters of reference to: **Dr. Robert L. Hill, Duke University Medical Center, Durham, NC 27710.** *Duke University is an Equal Opportunity/Affirmative Action Employer.* The closing date for receipt of applications is 15 April 1990.

ASSISTANT PROFESSOR/DIRECTOR OF HERBARIUM. A 12-month, tenure-track position in plant systematics. Successful candidate will direct the herbarium, develop a research program in plant systematics, and teach a graduate course in plant systematics and an undergraduate course. Examples of possible research specialties include evolutionary systematics, developmental or population genetics, and conservation biology. Ph.D. degree and postdoctoral or on-job experience required; herbarium experience preferred. Applicants should submit curriculum vitae; complete list of publications; samples of refereed publications; transcripts of all academic records; a statement of interest in research, teaching, and herbarium management; and three letters of recommendation to: **Chairperson, Plant Systematics Search Committee, Department of Botany and Plant Pathology, Oregon State University (OSU), Cordley Hall 2082, Corvallis, OR 97331-2902.** Closing date: 2 April 1990. Position available: 1 January 1991. *OSU is an Equal Opportunity/Affirmative Action Employer and has a policy of being responsive to the needs of dual-career couples.*

FORESTRY ASSISTANT PROFESSOR. A tenure-track research position in the loblolly pine tissue culture program, within the Department of Forestry at North Carolina State University, will be available summer of 1990. Individual selected will coordinate ongoing university-industry studies of vegetative propagation (rooting in juvenile southern pines), interact on routine basis with tissue culture scientists, and develop own areas of interest related to rooting of pines. A Ph.D. in a plant science and strong interests in vegetative propagation of woody plants is required. Preference given to individuals with a strong biochemistry-physiology background. Salary competitive. Candidates should reply with letter of application, résumé, all transcripts, a statement of research interests, and three letters of recommendation to: **Dr. H. V. Amerson, Department of Botany, Box 7612, North Carolina State University, Raleigh, NC 27695-7612,** by 31 March 1990.

ASSISTANT PROFESSOR MOLECULAR BIOLOGY/VIROLOGY

Applications are invited for an assistant professor at the Veterinary Molecular Biology Laboratory for appointment in 1990. This is a tenure-track, 80% research (20% service and teaching) faculty position (12 months) supported by a full-time technician and seed money. Salary range will be \$37,000 to \$41,000 per year based on experience and qualifications.

Required qualifications: Ph.D. or Ph.D./D.V.M., research interests in a modern area of molecular biology and/or molecular virology. Applicants must have postdoctoral experience, a record indicating the ability to perform independent research, and potential to establish a competitive, extramurally funded research program. A willingness to collaborate with other faculty and to participate in an active graduate program is essential. Interested applicants should include in their application a statement of research goals and curriculum vitae, and arrange for three letters of reference to: **Chair, Search Committee, Veterinary Molecular Biology Laboratory, Montana State University (MSU), Bozeman, MT 59717.** Screening of applicants will begin 1 March 1990 and continue until a suitable applicant is found. *MSU provides preference in employment to eligible veterans.* For information, contact: **HR/AA, 120-C, MH, MSU.** *MSU is an Equal Opportunity/Affirmative Action Employer.*

WESTMINSTER COLLEGE OF SALT LAKE CITY

Ph.D. generalist to teach undergraduate courses in biology, genetics, anatomy, and physiology. Send letter and curriculum vitae and arrange to have at least three reference letters and transcripts sent to: **Dean Ray Ownbey, Westminster College of Salt Lake City, 1840 South 1300 East, Salt Lake City, UT 84105.** *Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR BIOCHEMISTRY

Applications and nominations are invited for the position of assistant professor (tenure track) in the Department of Chemistry at the University of Toledo. A Ph.D. in chemistry or biochemistry is required, and recent productive postdoctoral experience is preferred. The successful candidate will be expected to establish an independent, externally supported research program in biological chemistry. Applicants must also demonstrate a commitment to excellence in teaching chemistry and biochemistry at the undergraduate and graduate levels. An application consisting of curriculum vitae, a publications list, and a brief statement of research interests should be sent to: **Professor Max O. Funk, Department of Chemistry, University of Toledo, 2801 West Bancroft Street, Toledo, OH 43606.** Applicants should also arrange for three letters of recommendation to be sent. Applications will be accepted until 1 March 1990 or until a qualified candidate has been identified. *The University of Toledo is committed to Equal Opportunity in Employment through Affirmative Action.*

YALE UNIVERSITY/PETROLOGY. The Department of Geology and Geophysics invites applications for an **ASSISTANT PROFESSOR** position in the area of metamorphic/igneous petrology. We are particularly interested in field-based studies of regional-scale processes. Research areas may include, but are not restricted to, the evolution of orogenic belts, fluid and heat flow during orogenesis, physico-chemical and kinetic constraints on the history and evolution of metamorphic and igneous rocks, and the chronology of orogenic events. The appointment will complement existing programs in stable isotopic geochemistry, kinetics of geochemical reactions, tectonics of convergent margins, and processes of granitic magmatism.

Applicants should submit a letter of application, curriculum vitae, publications, and the names and addresses of at least three references to: **Dr. Barry Saltzman, Chairman, Department of Geology and Geophysics, Yale University, P.O. Box 6666, New Haven, CT 06520.** Completed applications must be received by 1 April 1990.

Yale University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR THERAPEUTIC RADIOLOGY RADIATION ONCOLOGY

Requirements: M.D. and Board-certified or eligible for Board certification in therapeutic radiology/radiation oncology by having 3 years of training in radiation oncology. In addition, if not presently certified, must be Board-certified in internal medicine and/or medical oncology. Post residency, academic experience, and experience and training in interstitial radiation therapy. Must be interested and experienced in academic research and writing. Salary open to negotiation depending on experience. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.* Before 1 March 1990, apply to: **Search Committee, Department of Therapeutic Radiology/Radiation Oncology, Box 494 UMHC, University of Minnesota Hospitals, Harvard Street at East River Road, Minneapolis, MN 55455.**

QUEENS COLLEGE OF CITY UNIVERSITY OF NEW YORK (CUNY) DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

Invites applications for a tenure-track position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level in the area of biochemistry or molecular biology, beginning fall of 1990. Salary range: \$30,000 to \$58,000. Candidates with outstanding research potential and/or research record and a commitment to excellence in teaching (undergraduate, M.A., Ph.D.) are sought. Candidates should submit curriculum vitae and a plan of research to: **Chairman/Professor George Axelrad, Department of Chemistry and Biochemistry, Queens College of CUNY, Flushing, NY 11367.** Applications received by 31 March 1990 are assured of full consideration. Applicants should also arrange for three letters of reference to be sent directly to Professor George Axelrad. *Queens College is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR/INSTRUCTOR OF BIOLOGY. Position available August of 1990 with an initial term contract leading to the possibility of tenure-track appointment. Doctorate expected. A.B.D., teaching, and/or research experience required. Major responsibilities will include teaching science methods and participation in a team-taught introductory interdisciplinary course that emphasizes the history and philosophy of science. Some background in earth science and/or botany is also desirable. Send letter of application, curriculum vitae/résumé, transcripts, and three letters of recommendation to: **Dr. Darold M. Wolff, Chair, Department of Biology, Wartburg College, P.O. Box 1003, Waverly, IA 50677.** Review of applications will begin 15 March 1990. *An Equal Opportunity/Affirmative Action Employer, M/F.*

Possible Position: **ASSISTANT PROFESSOR**, tenure track, to begin September of 1990. Ph.D., postdoctoral experience, and record of publications indicating ability to establish an active, independent research program are required. Research should focus on developmental molecular genetics in plants, *Drosophila*, or yeast, and complement interests of molecular biologists currently on faculty. Plant virologists experienced in use of plant viruses or T1 plasmids as vectors for study of gene expression in plants are particularly encouraged to apply. Teaching assignments in graduate biotechnical/biomedical program and undergraduate curriculum. Send curriculum vitae, description of research, and three references by 2 March 1990 to: **Professor Richard H. White, Search Committee Chair, Biology Department, College of Arts and Sciences, University of Massachusetts, Boston, Harbor Campus, Boston, MA 02125-3393.** *An Affirmative Action/Equal Opportunity/Title IX Employer.*

UNIVERSITY OF ARIZONA. The Department of Exercise and Sport Sciences invites applications for two tenure-track **ASSISTANT PROFESSORSHIPS** in environmental physiology-temperature regulation and in metabolism-endocrinology. Qualifications: Ph.D. or D.Sc. in exercise science, kinesiology, physiology, physical education, or related area. Specialization in exercise physiology and postdoctoral training and research experiences are required. Evidence of success in pursuit of external funding and in teaching are strong prerequisites. Candidates must be mechanistically oriented and possess leadership potential to implement and direct graduate level courses in their areas of expertise, and to assist in team teaching of elementary and graduate level physiology and exercise physiology courses. Application deadline: 25 February 1990, or until filled, for each position. Start date for both positions: 16 August 1990. Submit letter of application, curriculum vitae, three reprints, and have three letters of recommendation sent to: **Fred R. Roby, Ph.D., Department of Exercise and Sport Sciences, University of Arizona, Tucson, AZ 85721.** Telephone: 602-621-2795. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer. Women and minorities are urged to apply.*

BIOCHEMIST. Faculty position available to teach medical biochemistry and work independently and/or collaboratively with other research/teaching faculty. Primary responsibilities: not more than 25% of time teaching medical students and at least 75% of time for research. Salary and academic rank open and commensurate with training, teaching experience, and grant track record. Please send curriculum vitae detailing teaching experience, research interests, and grant support information and the names of three references to: **Dr. Arnold L. Nagler, Associate Dean, Basic Sciences, New York College of Osteopathic Medicine, Old Westbury, NY 11568.** *Affirmative Action/Equal Opportunity Employer.*

BIOLOGIST

Tenure-track position beginning August of 1990. Teach general biology plus upper-division courses in the areas of ecology/environmental biology and animal behavior. Founded in 1829, Illinois College is a private, Phi Beta Kappa, liberal arts college located in west central Illinois. Ph.D. and commitment to undergraduate teaching required. Teaching experience preferred. Rank and salary dependent upon qualifications. Application deadline: 5 March 1990. Send application letter, résumé, transcript, and names of three references to: **Dr. Bennett Moulder, Chairman, Biology Department, Illinois College, Jacksonville, IL 62650.** *An Affirmative Action/Equal Opportunity Employer.*



ICRISAT

**The International Crops Research Institute
for the Semi-Arid Tropics
(ICRISAT)**

needs a

Pearl Millet Breeder at ICRISAT Center, India

The appointee will provide leadership in millet breeding at ICRISAT Center, will be responsible for breeding improved pearl millet lines for the semi-arid tropics, and for developing improved breeding methods. Emphasis will be on breeding for cultivars that combine high yield with resistance to drought and disease. The Pearl Millet Breeding Unit includes several breeders and an effective research support staff; it cooperates with physiologists, pathologists, entomologists and cell biologists in the Cereals Program, and with scientists in other ICRISAT programs, and in related national agricultural research systems.

Essential qualifications: Doctorate degree in plant breeding, plant genetics or quantitative genetics with significant teaching or research experience. Ability to identify problems and formulate effective ways to solve them in a research team environment. Excellent command of English; and working knowledge of French.

Experience in private sector research desirable.

The position is at principal staff level. Employment is for two years, with possibility of extension. Salary and related benefits are free of local tax for expatriates, and commensurate with comparable international positions. ICRISAT has links with some 50 developing countries with semi-arid climate. ICRISAT is located at Patancheru 30 km from Hyderabad, the sixth largest city in India with airline connections, good medical facilities, and an international primary school.

Send resume and the names of three referees within 1 month to:

Director General, ICRISAT
P.O. Patancheru
Andhra Pradesh 502 324
India

Molecular Biology at Pfizer

The Department of Molecular Genetics Research at Pfizer has expanded in recent years to play a vital role in drug discovery research. As a result, molecular biologists at Pfizer are an integral part of an innovative research department, and are closely associated with most of the areas of disease research being pursued by the company.

There currently is an opportunity for a skilled molecular biologist to join the Molecular Genetics Department. You should have at least two years post-doctoral experience and a strong publication record in the area of recombinant DNA biology, with particular emphasis on the cloning and expression of cDNA sequences.

In addition to a stimulating research environment and an excellent opportunity for professional recognition and advancement, we offer 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 Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



**THE UNIVERSITY OF
PAPUA NEW GUINEA**

PROFESSOR OF BASIC MEDICAL SCIENCES

—M821001

Department of Basic Medical Sciences

Applications are invited from distinguished academics with M.D. and or Ph.D. or its equivalent in anatomy, physiology, biochemistry or pharmacology. A basic medical qualification as well as experience in teaching medical students in developing countries would be an advantage. The appointee will provide academic leadership, participate in undergraduate and postgraduate teaching in the above mentioned disciplines, stimulate research, and may be elected to undertake additional administrative responsibilities.

SALARIES

Lecturer I	— K20,795 p a plus 24% gratuity
Lecturer II	— K22,645 p a plus 24% gratuity
Senior Lecturer	— K24,495 p a plus 24% gratuity
Professor	— K29,575 p a plus 24% gratuity

Teaching by extension and during Lahara (summer session) is an important part of the University's activities. The successful appointees should be prepared to take part in these out reach activities.

Applications will be treated as strictly confidential and should include a full Curriculum Vitae, the names and addresses of three referees and date of availability. In order to expedite the appointment procedure, applicants are advised to contact their referees to send confidential reports directly to the University without waiting to be contacted.

Applications should be forwarded to the Deputy Registrar (Staffing) P.O. Box 320, University Post Office, Papua New Guinea.

Applications close 23rd February 1990.

**T.I. TIOTI (MR)
REGISTRAR.**

POSITIONS OPEN

A professionally rewarding SENIOR STAFF position exists for an established, **BASIC BIOMEDICAL SCIENTIST** studying mammalian systems using modern cellular and molecular techniques, in the expanding Medical Research Institute of the Mary Imogene Bassett Hospital, a Columbia University affiliate. Ample laboratory space, generous start-up funds, and excellent salary and benefits are offered. Academic appointment to an appropriate department at Columbia University is encouraged. The institute provides a supportive, congenial environment in which the successful candidate will interact with colleagues investigating significant biomedical problems relating to human disease. A starting date during the summer 1990 is anticipated. Located on a lake in the scenic foothills of the Catskill Mountains in upstate New York, Cooperstown and the surrounding area offer affordable housing, good schools, and a range of cultural and outdoor activities. Applicants should submit curriculum vitae and the names of three references by 2 April 1990 to: **Dr. Estelle M. Goodell, Medical Research Institute, The Mary Imogene Bassett Hospital, One Atwell Road, Cooperstown, NY 13326-1394.**

BIOLOGIST. Applications are invited for a 1-year sabbatical replacement position in the Biology Department of Whitman College starting August of 1990. Ph.D. required. Duties include directing undergraduate research and teaching three courses. Two courses will be electives for biology majors, chosen from symbiosis, aquatic ecology, vertebrate biology, invertebrate biology, and/or botany. One course will be for nonmajors, chosen from evolution, field biology, or ethnobotany. Whitman is a liberal arts college of 1200 students with a strong commitment to undergraduate teaching and research. Review of applications begins 8 March 1990. Send curriculum vitae, three letters of recommendation, transcripts, and statement of teaching and research philosophy and interests to: **Dr. P. H. Yancey, Biology Department, Whitman College, Walla Walla, WA 99362. Telephone: 509-527-5498. Affirmative Action/Equal Opportunity Employer.**

BIOLOGY, ASSISTANT PROFESSOR (tenure-track) at Augusta College, a 5300-student, senior unit of the University System of Georgia. Major responsibility: human anatomy and physiology and introductory biology; teaching load: 15 credit hours per quarter. Ph.D. required. Send curriculum vitae plus names, addresses, and phone numbers of three references to: **Dr. John B. Black, Department of Biology, Augusta College, Augusta, GA 30910.** Applications received by 2 April 1990 will receive full consideration. Employment will begin 1 September 1990. *Augusta College is an Affirmative Action/Equal Opportunity Employer.*

BIOLOGY CHAIR. To begin August of 1990. Seeking highly qualified individual with demonstrated administrative skills, strong research record, commitment to academic excellence, and ability to facilitate interaction among biologists with diverse interests. Candidate should be eligible for tenured PROFESSOR rank. The department offers B.S. and M.S. degrees and has 13 faculty members. Application deadline is 8 March 1990. Screening of applications will begin 10 March 1990. Submit curriculum vitae and names of five references to: **Chair, Biology Search Committee, Arts and Sciences Dean's Office, The University of West Florida (UWF), Pensacola, FL 32514.** UWF is an Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF SOUTH CAROLINA USC COASTAL CAROLINA COLLEGE BIOLOGY LABORATORY INSTRUCTOR

The School of Natural and Applied Sciences, USC Coastal Carolina College, is seeking applicants for a biology laboratory instructor. Full-time, nontenure-track position. Master's degree required. Teaching experience preferred. Responsibilities include coordinating and teaching laboratory sections of general biology. Position available 16 August 1990. USC Coastal Carolina College, the fastest growing 4-year campus of the University of South Carolina System, is located 9 miles west of Myrtle Beach. Each applicant should submit a letter of application, curriculum vitae, and names and phone numbers of three references, by 26 February 1990, to: **Dr. Janis W. Chesson, Assistant Chancellor for Human Resources and Affirmative Action, USC Coastal Carolina College, P.O. Box 1954, Conway, SC 29526.** USC Coastal Carolina College is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

CANCER BIOLOGY, TENURE-TRACK ASSISTANT PROFESSOR. We are actively seeking applicants with strong research backgrounds in cell culture and cancer biology in areas related to radiation biology, drug resistance, mutagenesis, or experimental therapeutics. Please send curriculum vitae with a description of research interests and addresses of three references to: **Dr. John E. Moulder, Radiation Oncology, Medical College of Wisconsin, Milwaukee, WI 53226.** *The Medical College of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

CELL BIOLOGIST, ASSISTANT PROFESSOR OF BIOLOGY. The Biology Department at Moorhead State University invites applications for a tenure-track position in cell biology beginning September of 1990. Teaching responsibilities may include undergraduate courses in cell biology, introductory biology, and other areas appropriate to the needs of the department. The successful candidate will be required to maintain a research program which encourages participation by undergraduate students. Candidates must be broadly trained in cell biology. A Ph.D. is required. Salary is dependent on qualifications and experience. Contact: **Dr. R. H. Pemble, Department of Biology, Moorhead State University, Moorhead, MN 56563. Telephone: 218-236-2330,** for application materials and additional information. Screening of completed applications will begin 25 March 1990 and continue until the position is filled. *Moorhead State University is an Equal Opportunity Educator and Employer.*

CELL BIOLOGY/CELLULAR BIOPHYSICS WASHINGTON UNIVERSITY SCHOOL OF MEDICINE ST. LOUIS, MISSOURI

The Department of Cell Biology and Physiology, Washington University School of Medicine, St. Louis, Missouri, is expanding its commitment to research in the following areas: (i) intercellular signaling through receptors, second messengers, and ion channels; (ii) transport of ions and solutes across cell membranes; (iii) assembly, function, and movement of intracellular organelles; (iv) cell motility and contractility; and (v) cell-cell and cell-matrix interactions. Individuals who employ novel biophysical and biochemical methodologies are especially encouraged to apply. Tenure-track positions are available for successful candidates at any level who will be expected to develop an independent research program and to participate in the training of medical and graduate students.

Please submit curriculum vitae and the names of three references to: **Dr. Philip Stahl, Department of Cell Biology and Physiology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110.** *An Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE DEAN FOR RESEARCH COLLEGE OF FOREST RESOURCES NORTH CAROLINA STATE UNIVERSITY

Administrative tenure position. Responsible for fostering a favorable research climate throughout the college and in supporting faculty efforts to obtain research funding. Serves as assistant director of the Agricultural Research Service. Coordinates the planning, submission, and management of college research budgets with department heads and the dean. A doctorate and demonstrated experience in university research and research administration are required. Closing date is 31 March 1990 or until a suitable candidate is identified. Candidate should submit a letter of interest, curriculum vitae, and the names, addresses, and telephone numbers of three references to **Larry W. Tombaugh, Dean, College of Forest Resources, North Carolina State University, Box 8001, Raleigh, NC 27695.**

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

MAJOR NATIONAL PATENT LAW FIRM located in New York City seeks highly qualified scientists interested in second career opportunities in intellectual property law. Demonstrated technical writing skills essential. Competitive salaries and benefits and opportunities for challenging assignments. Send résumé to:

Box 8
SCIENCE Classified Advertising
1333 H Street, N.W., Room 940
Washington, DC 20005

POSITIONS OPEN

CHAIRPERSON, DEPARTMENT OF PHARMACOLOGY AND THERAPEUTICS

The University of South Florida College of Medicine invites applications and nominations for the position of chairperson, Department of Pharmacology and Therapeutics. The department is responsible for teaching pharmacology to medical students, residents, and fellows and for maintaining a graduate program in pharmacology. The chairperson must have a Ph.D. and/or M.D. degree, a distinguished record of scholarly academic and research achievements, a clear capacity for leadership, experience in administration, and demonstrated dedication to teaching. Applicants should send a letter summarizing their experience and research interests together with curriculum vitae and the names and addresses of three or more references before 30 April 1990 to: **Anthony Reading, M.D., Chairman, Search Committee, Department of Psychiatry, University of South Florida College of Medicine, 12901 Bruce B. Downs Boulevard, Box 14, Tampa, FL 33612.**

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

COLORADO STATE UNIVERSITY CHAIRPERSON ANATOMY AND NEUROBIOLOGY

Applications are invited from individuals with outstanding achievements in research, demonstrated leadership ability, and a commitment to excellence in education. The department represents a full range of anatomical expertise, from gross anatomy through cell ultrastructure, with research focused at the cell and molecular level. The primary role of the new chair will be to join and lead an established community of scholars. Applicants must have a Ph.D., D.V.M., M.D., or equivalent degree with recognized accomplishments in research and teaching. *Women and minority candidates are encouraged to apply.* Salary is negotiable. A letter of application, curriculum vitae, and letters from three references should be sent to: **Dr. Carol D. Blair, Search Committee Chair, Department of Microbiology, Colorado State University, Fort Collins, CO 80523. Telephone: 303-491-6136.** Review of applications will begin 1 March 1990. *Colorado State University is an Equal Opportunity/Affirmative Action Employer.*

SOLOVY-ARTHRITIS RESEARCH SOCIETY CHAIR NORTHWESTERN UNIVERSITY CHICAGO, ILLINOIS

The Section of Arthritis-Connective Tissue Diseases is seeking to fill a research scientist position with an accomplished investigator. We are seeking a Ph.D. or M.D. with interests in cellular and molecular immunology. The individual should qualify at least at the rank of senior ASSISTANT PROFESSOR (tenure track), or above. This position is supported by the resources of the Solovy-Arthritis Research Society chair. For appropriate candidate, secondary appointment in microbiology/immunology may be available. If interested, please send curriculum vitae, a statement of research interests, and the names of three references to: **Richard M. Pope, M.D., Department of Medicine, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.** *Northwestern University is an Affirmative Action/Equal Opportunity Employer. Hiring is contingent upon eligibility to work in the United States.* Applications should be received by 30 April 1990.

SCIENCE DIRECTOR

The American Type Culture Collection (ATCC) is seeking an associate director for science to promote and coordinate efforts for departments of Applied Sciences and Workshops, Bacteriology, Bioinformatics, Cell Culture, Molecular and Plasmid Biology, Mycology and Botany, and Protistology and Virology. A key leadership job for enhancement of the research potential of ATCC while keeping in balance traditional service role of institution.

Applicants must have a Ph.D. or equivalent in relevant discipline, an outstanding record of grant or contract support, and demonstrated program management experience plus research and scholarly achievement. Successful candidate must work effectively in a multidisciplinary environment. Submit résumé, salary expectations, and three references to: **Personnel Office, ATCC, 12301 Parklawn Drive, Rockville, MD 20852.** *Equal Opportunity Employer.*

Schering

Research Scientists

*If spearheading new pharmaceutical breakthroughs
is what you have in mind,
come to Schering-Plough Research.*

Our dedication to discovery has led to breakthroughs that have won Schering-Plough top recognition as a leader in the healthcare industry. As a rapidly expanding \$3-billion pharmaceutical innovator, we have exceptional opportunities for accomplished professionals at our R&D facility in Bloomfield, NJ.

Biotechnology/Biochemistry

Assistant/Associate Scientists

Requires a BS/MS degree in Biochemistry or related discipline and 0-4 years' experience. A background in protein characterization/purification is desirable.

Assistant Scientist

BS/MS degree in Protein Chemistry and/or Analytical Chemistry, and 0-2 years' experience in HPLC.

Allergy

Assistant Scientist

Position requires a BS/MS in Molecular Biology or Biochemistry with 0-4 years' experience in DNA/RNA technology and/or protein purification.

Assistant Scientist

BS in Biological Sciences is required along with 4 years' experience, or MS in biochemistry and 2 years' experience in basic protein purification and tissue culture.

Microbial Products

Assistant Scientist

Requires an MS/BS in Biochemistry and experience in enzymology, binding assays, protein purification or equivalent. Computer knowledge helpful.

Assistant Scientist

MS in Medicinal Chemistry and 0-2 years' experience.

HPLC and spectroscopy experience is required.

Tumor Biology

Assistant/Associate Scientists

Ideal candidate will possess a BS/MS in Biological Sciences, Molecular Biology or Biochemistry and 0-4 years' experience. Knowledge of protein preparation and enzyme assays essential.

Pathology

Assistant Scientist

Requires a BS in Biological Sciences and experience in animal prosection and/or histology procedures.

Toxicology

Assistant Scientist

Must have a BS in Biological Sciences and experience in drug development toxicology. Ability to work with rodents, dogs and monkeys. No allergies to animal, drugs or chemicals. AALAS certification preferred.

Chemical Research

Assistant Scientist

BS in Chemistry and 0-2 years' experience or MS in Chemistry and 0-2 years' experience in organic synthesis and knowledge of chromatography and spectroscopy.

We offer highly competitive salaries and an excellent benefits package. For immediate attention, forward your resume indicating salary history and position desired to: Ms. P. Valendo, Schering-Plough Research, 60 Orange Street, Bloomfield, NJ 07033. We are an equal opportunity employer.

What you have in mind, we put in action.



Schering-Plough

Director Marine Resources Research Institute

The Marine Resources Research Institute conducts applied research within the Division of Marine Resources of the South Carolina Wildlife and Marine Resources Department. The state supported Institute also provides research support for other state agencies with marine-related regulatory responsibilities. The three major areas of research concentration are in fisheries, environmental studies, and aquaculture.

The Institute, with a staff of 10 Ph.D. scientists, 24 senior M.S. level biologists and 33 associated technical and support staff, operates on state-appropriated (\$1,645,000) and grant-supported extramural funds (\$1,831,000). The selected candidate will supervise the daily operation of the Institute, develop and implement its annual budget, and initiate research programs.

In addition to overseeing a diverse multidisciplinary research effort, the candidate must demonstrate a commitment to education in the marine sciences and be able to attain faculty standing within the State's university and college community.

We seek an experienced Ph.D. researcher with ten or more years of experience and demonstrable communication and leadership skills, as well as a record of increasing responsibility as a research manager.

Salary and benefits are competitive and based on experience. For an application package, please contact Ms. Anita Mitchum, Personnel Officer, Division of Marine Resources, P.O. Box 12559, Charleston, S.C. 29412 or call (803) 762-5035. Deadline for receipt of completed applications is March 1, 1990.

Minority applicants are encouraged to apply as we are an equal opportunity employer.



FACULTY POSITION

The Department of Comparative Medicine at Tufts University School of Veterinary Medicine invites applications for a non-tenured position at the **Associate Professor or Professor** level to start on 1 July 1990 at the Central New England campus in North Grafton, Massachusetts. The successful candidate will have an independent research program that involves the neural and biochemical regulation of maternal behavior and that is supported by external funds.

Candidates should have a D.V.M. and/or Ph.D. degree; are expected to value excellence in teaching and contribute in the area of animal behavior; and to participate in the research training of veterinary and graduate students.

The initial appointment will be for 3 years and is subject to renewal. Salary will be commensurate with qualifications and experience.

Applications are due by **28 February 1990** and must include a letter of application describing career objectives and research plans, a curriculum vitae, five most significant reprints, and five letters of recommendation addressing research and teaching abilities.

Submit application materials to:

Dr. A. W. Gustafson
Acting Chairman
Department of Comparative Medicine
Tufts University School of Veterinary Medicine
203 Harrison Avenue
Boston, Massachusetts 02111



Tufts University is an Equal Opportunity/Affirmative Action Employer.

Formulation Chemist



Sphinx Biotechnologies Corporation, a rapidly growing pharmaceutical drug discovery and development company, is searching for a research scientist experienced in drug formulation. The successful candidate should have

an M.S. or Ph.D. degree in chemistry (organic, medicinal, pharmaceutical) or biochemistry and 5-7 years' experience (M.S.) or 3-5 years' experience (Ph.D.) in the pharmaceutical industry. The candidate should have "Hands-on" experience in the formulation of lipophilic drugs for both preclinical and clinical evaluation. Experience in either the formulation of peptides or the development of formulations for topical delivery of drugs is desirable. The candidate will be expected to work as part of a multidisciplinary team with scientists in both our discovery research/medicinal chemistry and pharmacology/safety evaluation groups to develop formulations which can be used for both preclinical efficacy/ safety studies and clinical evaluations. The candidate should be experienced in assessing drug formulations for their effects on both drug potency and stability.

Interested candidates should send their complete C.V. and bibliography with the names of three references to: Sphinx Biotechnologies Corporation, Position 114, P.O. Box 52330, Durham, NC 27717. We are an Equal Opportunity Employer.

**Sphinx Biotechnologies
Corporation**

CHIEF, VIROLOGY BRANCH

The Division of Microbiology and Infectious Diseases (DMID) of the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), is currently recruiting for the Chief of the Virology Branch.

In the scientific fields of virology and viral diseases research, the incumbent plans and conducts research grant, program project grant, contract, training grant, fellowship, and career award programs; coordinates the various support programs of grants and contracts and develops funding priorities within this scientific program area; recommends the development of selected research centers in high priority areas; reviews and presents to the National Advisory Allergy and Infectious Diseases Council applications in this program area; and, develops and maintains liaison with appropriate organizations and scientists.

Applicants for this position should possess a Ph.D. or equivalent doctoral degree as well as research and grant experience and should have a track record demonstrating the ability to obtain research support.

Applicants for the Branch Chief position must qualify for a GS-14/15 rating with salary commensurate with experience or an appointment in the USPHS Commissioned Corps; salary to be consistent with appropriate rank.

For further information, please contact:

Dr. John R. La Montagne
Director, Division of Microbiology and Infectious Diseases
National Institute of Allergy and Infectious Diseases
National Institutes of Health
Building 31, Room 7A52
9000 Rockville Pike
Bethesda, MD 20892
(301) 496-1884



"Minorities who meet the eligibility requirements are encouraged to apply."

U.S. Citizenship Required.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

DIRECTOR

Centre océanographique de Rimouski

Plans for the Centre océanographique de Rimouski, a marine sciences research centre, are currently being developed under the joint auspices of the Institut national de la recherche scientifique (INRS) and the Université du Québec à Rimouski (UQAR). Research areas to be developed within the Centre include:

- study of the coastal, estuarine and oceanic environments;
- study of the interactions among the physical, chemical, biological and sedimentological components of marine systems.

Initially the Centre will be staffed by researchers from existing institutions, the INRS-Océanologie research Centre and the Department of Oceanography at UQAR. Some twenty professor-researchers will be grouped in multidisciplinary teams composed of oceanographers, physicists, geologists, chemists and biologists. The students presently enrolled in the M. Sc. and Ph. D. programs in oceanography at UQAR will also be transferred to the new Centre.

The Director of the Centre (who will hold a cross-appointment, INRS-UQAR) will be responsible for the development and coordination of the Centre's research programs. He will also be responsible for allocating and managing the resources available within the Centre for carrying out these activities. The management of the Laboratoire océanographique de Rimouski will also fall under his purview.

Potential candidates for this position must hold a doctorate in a relevant field. Professional experience as a leader of a research group and working knowledge of french language are also essential.

Applications, including a detailed curriculum vitae, should be sent before February 23, 1990 to the following address:

Jacques L'Ecuyer
Vice-président à l'enseignement et à la recherche
Université du Québec
2875, boulevard Laurier
Sainte-Foy, Québec (Canada)
G1V 2M3



Université du Québec
Institut national de la recherche scientifique



Université du Québec à Rimouski

The Health Effects Institute Request for Applications for Research Funds

The Health Effects Institute announces its first set of Requests for Applications (RFAs) of 1990. Another set of RFAs will be issued in the summer.

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, such as aldehydes, carbon monoxide, diesel exhaust, methanol, nitrogen dioxide, and ozone.

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

RFA 90-1: Health Effects of Chronic Ozone Inhalation: Collaborative National Toxicology Program—Health Effects Institute Studies

- Part A: Respiratory function studies using rats exposed to ozone for two years by the National Toxicology Program (NTP).

(Part B: Biochemical, morphological and other studies of the NTP animals; RFA to be issued in the summer of 1990.)

RFA 90-2: Clinical Studies of Sensitivity to Ozone

- Range of responses to ambient levels of ozone in the general population as determined by pulmonary function measurements; further characterization of strong and weak responders by other measurements.
- Characterization of potentially sensitive subpopulations.

Preliminary applications are also being solicited for other research designed to assess or develop new methods for the assessment of health effects of automotive emissions.

Materials describing the Health Effects Institute, the preparation 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
215 First Street
Cambridge, MA 02142
Telephone: (617) 491-2926

Letters of intent for both RFA 90-1 Part A and RFA 90-2 should be submitted no later than April 2, 1990; applications will be accepted until May 1, 1990. Preliminary applications will be accepted at any time.

The Health Effects Institute

POSITIONS OPEN

CENTERS FOR DISEASE CONTROL (CDC)

The Division of Laboratory Systems, Public Health Practice Program Office, has positions available for two branch chiefs. Must be innovative individuals with strong administrative skills, ability to supervise and coordinate staff activities. Incumbents will have a formative role in policy-making, program development, and management.

CHIEF, LABORATORY PRACTICE BRANCH (Announcement #DH-90-2). Directs the development of laboratory performance evaluation programs and develops intervention strategies for assessing and improving the quality of laboratory testing as it relates to disease prevention programs. Develops and implements methodologically sound evaluation research which contributes to the national laboratory and public health communities' understanding of the role of laboratory services in accomplishing public health objectives. Salary range: \$59,216 to \$76,982.

CHIEF, LABORATORY TRAINING BRANCH (Announcement #DH-90-3). Directs the development, delivery, and assessment of laboratory training. Responsibilities include assisting CDC components and other clients in designing, developing, delivering, and evaluating the effectiveness of training. This includes the design and development of training products, the delivery of model training on new technology, molecular diagnostics, and other high-priority laboratory needs. Directs CDC's role in the conduct of the National Laboratory Training Network (a cooperative effort between CDC and the Association of State and Territorial Public Health Laboratory Directors) to improve the practice of public health at the local, state, and national level. Salary range: \$59,216 to \$76,982.

For an application package and the announcement, contact:

Centers for Disease Control
Recruitment Branch
1600 Clifton Road, N.E.
Atlanta, GA 30333
Telephone: 404-639-3616

Application must be postmarked no later than 28 February 1990. CDC is an Equal Opportunity Employer and provides a smoke-free work environment.

VICE CHANCELLOR FOR RESEARCH AND GRADUATE STUDIES (VCRGS)

The University of Kentucky (UK) invites nominations and applications for the vice chancellor for research and graduate studies. Responsibilities are primarily in the Medical Center and include: facilitation of research, sponsored program development, and graduate education; administration of research support programs; and oversight of multidisciplinary centers and the Division of Laboratory Animal Resources. The vice chancellor works under the auspices of the vice president for research and graduate studies and the Medical Center chancellor.

The successful candidate will have an outstanding record of research and external funding, successful administrative experience, and ability to deal innovatively with governmental agencies and industries.

UK is a land-grant institution and the state's principal research and doctoral institution. About 23,000 students (4,300 graduate students) are enrolled in 20 colleges/schools on campus in Lexington. The Medical Center has five colleges enrolling 2,200 students, a university hospital, several research centers, and a Veterans Administration hospital. Application review begins 15 March 1990. Send applications/nominations to: **Chair, VCRGS Search Committee, 207 Administration Building, University of Kentucky, Lexington, KY 40506-0032.** The University of Kentucky is an Affirmative Action/Equal Opportunity Employer.

ASSOCIATE DIRECTOR, ENVIRONMENTAL HEALTH. Washington, D.C., area firm seeks French-Spanish- or Arabic-speaking epidemiologist with expertise in water- and sanitation-related diseases, especially diarrhea, for management position with multidisciplinary project providing technical assistance to U.S. Agency for International Development priority country water supply and sanitation projects. Required: graduate degree (M.P.H., M.D., or Ph.D.); minimum of 3 to 5 years of field and research experience. Send letter and résumé to: **Dr. J. Newman, University Research Corporation, 7200 Wisconsin Avenue, Bethesda, MD 20814.** Equal Opportunity Employer.

POSITIONS OPEN

MEDICAL UNIVERSITY OF SOUTH CAROLINA CHARLESTON, SOUTH CAROLINA VICE PRESIDENT FOR MEDICAL AFFAIRS AND DEAN OF THE COLLEGE OF MEDICINE

The Medical University of South Carolina is seeking applications and nominations for the newly established position of vice president for medical affairs and dean of the college of medicine. As vice president for medical affairs the individual will be responsible for the clinical practice of physicians, the physicians' practice plan, and the ambulatory care center, and shall report directly to the president for those activities. As dean the individual will be chief administrative officer of the College of Medicine and shall report to the vice president for academic affairs and through him to the president for these activities. Candidates must be doctors of medicine and have documented scholarly activities of excellence in their field and have significant successful administrative experience.

Please send nominations or letters of application with résumé to:

James F. Spann, M.D.
Chairman, Search Committee
for Vice President for Medical Affairs
and Dean of the College of Medicine
Medical University of South Carolina
171 Ashley Avenue
Charleston, SC 29425

Applications and nominations can be reviewed beginning immediately and the search will continue until a suitable candidate is selected.

The Medical University of South Carolina is an Equal Opportunity Employer.

DIRECTOR OF THE ROCKEFELLER UNIVERSITY PROTEIN SEQUENCING FACILITY AND HOWARD HUGHES MEDICAL INSTITUTE BIOPOLYMER FACILITY

The Rockefeller University invites applications from qualified individuals for the position of director of the Biotechnology Center. This facility is a nationally recognized instrumentation facility which services the Rockefeller University campus, including the Howard Hughes Medical Institute. The facility supports research programs in biochemistry, molecular biology, protein chemistry, and biotechnology. Major instruments of the Center include two ABI gas-phase protein sequencers, one ABI pulsed liquid sequencer, a Waters Pico Tag system, one ABI peptide synthesizer, two ABI oligonucleotide synthesizers, and related high-performance liquid chromatographs. The responsibility of the director will be the supervision of six full-time research assistants and one secretary, quality control of the services provided, and interaction with the faculty. The development of new procedures for microsequencing and micropurification of peptides is encouraged. Applicants should possess a Ph.D., or equivalent experience in protein chemistry or biochemistry, and have experience in the operation and management of instruments of the type currently in the center. Interested applicants should submit curriculum vitae, a description of experience in instrumentation and management as well as research interests, and provide the names and addresses of three references to: **Vincent A. Fischetti, Ph.D., The Rockefeller University, 1230 York Avenue, New York, NY 10021.** The Rockefeller University is an Equal Opportunity/Affirmative Action Employer.

Expanding nonprofit organization seeks **ASSOCIATE DIRECTOR OF CLINICAL TRIALS** to manage contraceptive development programs; medical and scientific review and consultation; participation in developing and managing new contracts with government, nonprofit, and commercial organizations. Ph.D. or equivalent in reproductive biology, pharmacology, or related field with minimum of 2 years of postdoctoral experience in clinically related research. Experience or training in design, implementation, and management of clinical trials; preparation and review of scientific publications and regulatory documents. Excellent benefits. Superior location for good living and intellectual stimulation. Send résumé, salary requirements, and three references to: **Personnel, Family Health International, P.O. Box 13950, Research Triangle Park, NC 27709.** Affirmative Action/Equal Opportunity Employer, M/F/H.

POSITIONS OPEN

DIRECTOR CANCER RESEARCH LABORATORY

Mount Sinai Medical Center, Miami Beach, Florida, Department of Surgery, is seeking a Ph.D. level immunologist with a strong background in tumor immunology to direct the cancer research laboratory. Responsibilities include monitoring reactivity to biologic response modifiers as well as developing murine tumor models for these modifiers. Candidates should have a Ph.D. in immunology with at least 4 years of experience. Salary is negotiable. Curriculum vitae and three letters of reference should be submitted to: **Marc K. Wallace, M.D., Chairman, Department of General Surgery, Mount Sinai Medical Center, 4300 Alton Road, Miami Beach, FL 33140.** An Equal Employment Opportunity/Affirmative Action Employer.



Stratacyte, a subsidiary of Stratagene, has developed a breakthrough technology that allows the screening of millions of monoclonal antibody-producing *E. coli* clones in several days. Stratacyte intends to offer contract research services and enter into joint ventures to develop antibodies having therapeutic, industrial, or diagnostic value.

DIRECTOR OF THERAPEUTIC ANTIBODY DEVELOPMENT

The individual will have a doctorate degree in biology, biochemistry, immunology, or molecular biology and at least 5 years of postdoctorate laboratory experience. At least 3 years of postdoctorate experience should be in affiliation with a company developing therapeutic antibodies. The individual should have a thorough knowledge of the therapeutic antibody field, as well as an in-depth knowledge of basic immunology. Recombinant DNA experience would also be desirable.

The individual will be asked to organize scientific groups performing contract research services to develop recombinant therapeutic antibodies. In addition, the individual will supervise in-house efforts to develop recombinant therapeutic antibodies.

DIRECTOR OF INDUSTRIAL AND RESEARCH ANTIBODY DEVELOPMENT

The individual will have a doctorate degree in biology, biochemistry, immunology, or molecular biology and at least 5 years of postdoctorate laboratory experience. At least 3 years of postdoctorate experience should be in affiliation with a company developing antibodies for industrial applications and/or antibodies for the research market. The individual should have a thorough knowledge of the industrial and/or research antibody field, as well as an in-depth knowledge of basic immunology. Recombinant DNA experience would also be desirable. The individual will be asked to organize scientific groups to develop industrial and/or research antibodies. Please contact:

Seth Wolf
Stratacyte
Suite 400
11099 North Torrey Pines Road
La Jolla, CA 92037

PROGRAM DIRECTOR IN BIOLOGY

The Department of Biology at Emory University seeks a person to head a program of new undergraduate initiatives funded by the Howard Hughes Medical Institute, to begin on or before 1 September 1990. The initiatives include faculty and curriculum development, a summer program for entering minority students interested in biology, and new advanced laboratory courses. The candidate should have a Ph.D., a strong background in biology, knowledge of current research and practice in undergraduate science education, and experience in instruction and faculty development. The position is a 12-month appointment for a period of at least 5 years; salary is commensurate with qualifications and experience. Send curriculum vitae, a statement of your interests and experience in teaching and science education, and have three letters of recommendation sent to: **Dr. Gray F. Crouse, Chairman, Department of Biology, Emory University, Atlanta, GA 30322.** Review of applications will begin immediately, and the position will remain open until filled. Emory is an Equal Opportunity/Affirmative Action Employer.

Paravax, Inc.

Paravax, Inc., an innovative company focusing on the development of vaccines against parasitic diseases, has several challenging positions open at this time.

Parasitologist: Ph.D. and 2-5 years experience working with parasitic helminths or protozoa preferably in a company setting. Experience in preservation and/or lyophilization of higher organisms or in vitro culture of parasites is desirable.

Invertebrate Cell Culture Scientist: Ph.D. and 1-3 years experience in establishing or maintaining invertebrate cell lines in culture.

Protein Chemist: Ph.D. and 1-3 years experience in characterizing and purifying recombinant proteins expressed in prokaryotic or eukaryotic systems. Experience in vaccine development is desirable.

Research Associates: BS/MS and 1-3 years experience in cDNA cloning and sequencing, invertebrate cell culture, or recombinant viral vector expression.

For consideration, please send resume and names of references to:

Human Resources
Paravax, Inc.
2462 Wyandotte Street
Mountain View, CA 94043-2313

Immunologist Experimental Pathology

SmithKline Beecham Pharmaceuticals, a world-wide leader in pharmaceutical research, has a challenging opportunity for an Immunologist to join the Immunopathology Laboratory in the Department of Experimental Pathology.

We are seeking a Scientist to conduct research in immunotoxicology to support our drug development activities. The focus of the work will be to evaluate the effect of pharmaceuticals, especially products derived from recombinant DNA technology and synthetic peptides, on lymphocyte and macrophage function in vitro and ex vivo. An interest in immune function in non-rodent species is highly desirable. The position is highly interactive, both inter and intradepartmentally, and offers an opportunity for involvement in all phases of drug development.

The successful candidate will have a Ph.D. in Immunology or related field and experience using techniques of cellular immunology, e.g., cytotoxicity assays, Mixed Lymphocyte Reactions, Blastogenesis assays.

Based in a state-of-the-art research facility in suburban Philadelphia, near Valley Forge, PA, SmithKline Beecham provides a stimulating collegial atmosphere and an attractive compensation/benefits/relocation package. For confidential review, please forward your C.V. to Liz McKendry, L114, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.



SmithKline Beecham
Pharmaceuticals

NATIONAL CANCER INSTITUTE OF CANADA EXECUTIVE DIRECTOR

The Institute, for over 40 years the major funder of peer-reviewed cancer research in Canada, seeks an Executive Director to provide leadership in continuing the development of quality cancer research and cancer control programmes in this country. Following a strategic planning process which broadened its mission to include a wider definition of cancer control activities, the Institute requires a leader who can effectively administer current programmes with annual expenditures approaching \$40 million, promote the interests of the Institute with governments and other institutions, contribute to an ongoing process of strategic planning, and foster the vital partnership with its affiliate the Canadian Cancer Society.

The successful applicant will have completed a doctoral degree in either the life sciences and/or medicine and have 5 to 10 years of solid management experience in a related field. S/he will possess strong leadership, networking and communication skills, a familiarity with the organization and administration of academic institutions in Canada as well as tact and diplomacy to represent the Institute internally and externally with a wide range of personnel.

The position offers a competitive salary, excellent benefits and a congenial working environment.

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

Interested persons should submit a written application in confidence before April 1, 1990 to:

The Chairman, Selection Committee
National Cancer Institute of Canada
77 Bloor St. West, Suite 1702
Toronto, Ontario
M5S 3A1

Psychophysiologicalist

The Addiction Research Foundation's Neurology Program has a challenging opportunity available for a qualified Scientist. Specifically, the position will require the successful candidate to carry independent and collaborative research in the area of psychophysiological effects of abused psychoactive drugs on human subjects, with particular emphasis on the use of cognitive evoked potentials and computerized EEG.

Please Note:

This is a full-time (100%) one year term position with the possibility of renewal.

Qualifications:

Applicants must have a Ph.D. in Psychophysiology or Psychology with at least two years' related experience. Well developed conceptual and analytical abilities, verbal and written communication skills and interpersonal skills are essential. Applicants must be legally entitled to work in Canada.

Please forward your resume, quoting File No. **89-122**, to: Personnel Department, Addiction Research Foundation, 33 Russell Street, Toronto, Ontario, M5S 2S1



Addiction
Research
Foundation

Fondation
de la recherche
sur la toxicomanie

Seton Hall University ASSISTANT PROFESSOR BIOLOGY

Seton Hall University, located in South Orange, New Jersey, seeks an Assistant Professor of Biology. Anatomists, physiologists or pharmacologists will be considered. Preference will be given to applicants who can teach anatomy and physiology, comparative anatomy, general biology and/or pharmacology courses. Applicants are expected to maintain an active, independent research program.

Please send curriculum vitae, description of research interest and three references on or before March 9, 1990 to: **Chair, Search Committee, Department of Biology, Seton Hall University, 400 South Orange Avenue, South Orange, New Jersey 07079.** Equal opportunity/Affirmative action employer.



**Seton Hall
University**

Patent Examiners



You could play a vital role in the advancement of microbiology as a Patent Examiner at the U.S. Patent and Trademark Office. You'll continue a 200-year old tradition of fostering American innovation by evaluating patent applications involving recombinant DNA, molecular and cellular immunology, molecular genetics, microorganisms, cell biology, cell culture, fermentation, enzymology and clinical chemistry.

This challenge requires a minimum of a four-year degree in Molecular Biology, Biochemistry, Immunology, Enzymology, Embryology, Protein Chemistry, Microbiology or Cell Biology.

A PhD or MS degree with relevant research experience preferred. A BS degree with significant research experience will be considered. These research areas would be beneficial: DNA cloning, protein chemis-

try, gene expression, sequencing techniques, muteins, hybridoma technologies, monoclonal antibody applications, mammalian or plant cell lines, cell culture, immunossays, hybridization techniques, fermentation, enzymatic reaction, diagnostics, and automation of clinical analysis.

We offer a salary commensurate with experience, complete benefits and an excellent location in Arlington, VA. Contact the Patent & Trademark Office, Office of Personnel, One Crystal Park, Suite 700, Washington, D.C. 20231. Or call toll-free: 800-368-3064 or (703) 557-3631 in the Washington, D.C. area. An equal opportunity employer.



Research Scientist Immunologist

BIOSPAN CORPORATION, a rapidly growing biotechnology firm developing novel means for therapeutic intervention in immune disorders, is looking for a scientist who is interested in working in a small, high energy company.

Candidate will be responsible for a project to develop new methods of treatment for autoimmune diseases. PhD in immunology or cellular immunology required with experience in animal models of autoimmune diseases, especially rheumatoid arthritis. Additional training in human T cell biology, cloning and flow cytometry will be helpful. Candidates should have postdoctoral experience, be goal oriented and willing to work as a member of a team.

Biospan offers an attractive compensation and benefit package including equity participation and excellent opportunities for personal and professional growth. For consideration, please send letter of interest and C.V. to: **Joan Shields,**

**BIOSPAN
CORPORATION**

**440 Chesapeake Drive
Redwood City, CA 94063**
An equal opportunity employer

Computers, Chemistry & You

Molecular Design Limited is the world's leading software firm providing integrated systems for the storage, retrieval, and communication of chemical information and associated data. We offer unique opportunities to combine your knowledge of chemistry and computer systems into a satisfying and rewarding career.

Our continued success and expansion have created new opportunities in San Leandro, California; Lisle, Illinois; and Parsippany, New Jersey; depending upon your expertise and experience. If you share our vision and commitment to excellence, why not expand your career horizons by exploring the following positions:

- Scientific Programmer
- Software Engineer
- Applications Scientist
- Technical Sales Support
- Software Test Engineer
- Applications Consultant
- Technical Writer
- Customer Support

We offer an exceptional compensation package in a very progressive environment. For immediate consideration, please send your resume and salary history to: **Human Resources, Dept G-10, 2132 Farallon Dr., San Leandro, CA 94577.** Equal Opportunity Employer.



**Molecular
Design Ltd**



ICRISAT

The International Crops Research Institute
for the Semi-Arid Tropics
(ICRISAT)

needs a

Pearl Millet Agronomist at ICRISAT Sahelian Center, Niger

The appointee will work in a research team consisting of breeders, a pathologist and an entomologist. Research will focus on seedling survival, plant adaption and yield under conditions of nutrient and drought stress, identification of tolerances to these stresses and their utilization in the breeding program. The agronomist will cooperate closely with scientists in the cereals program at ICRISAT Center, and those in the resource management program at ICRISAT Sahelian Center. In addition, the agronomist will interact closely with scientists of the national programs in the region in planning and conduct of research in this area.

Essential qualifications: Doctorate degree in plant physiology. Significant independent research experience. Ability to identify problems and formulate ways to solve them efficiently. Excellent command of English. Fluency in French desirable.

The position is at principal staff level. Employment is for two years, with possibility of extension. Salary and related benefits are free of local tax for expatriates and commensurate with comparable international positions.

ICRISAT has links with some 50 developing countries with semi-arid climate. ICRISAT Sahelian Center (ISC) is located at Niamey, Niger, the regional headquarters of ICRISAT's research and training effort in the Sahelian-Saharan zones of West Africa. Although the location of the post is in a dry (500-600 mm annual rainfall) zone the agronomist will be expected to spend some part of field research time in the wetter zones (600-900 mm annual rainfall) in West Africa. The ISC is the base for pearl millet, millet based farming systems, and groundnut research. International airline connections and living conditions are good. Educational facilities in French and English are available.

Send resume and the names of three referees within one month to:

Director General, ICRISAT
P.O. Patancheru
Andhra Pradesh 502 324
India

Teratologist/ Reproductive Toxicologist

The Drug Safety Department of Pfizer Central Research Laboratories is seeking a Research Scientist to direct a Teratology/Reproductive Toxicology unit. Candidates should possess a Doctorate or equivalent degree in Pharmacology, Toxicology, or Reproductive Biology. Experience in analyzing effects of drugs or other chemicals on reproductive performance is also required. Excellent oral and written communication skills and supervisory experience are essential.

Responsibilities include study design, supervision of performance, data analysis, and interpretation and preparation of reports for submission to international regulatory agencies.

We offer a competitive salary and benefits, including a generous relocation package. Our expanding state-of-the-art facilities, located on the beautiful Connecticut shore, offer a collegial, team-oriented work environment. Qualified applicants may send resume to: David G. Burnett, PhD, Assistant Director, Employee Resources, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



IMMUNOLOGY AND INFLAMMATION

American Cyanamid Company has a longstanding and highly successful commitment to the discovery and development of new products through research. Recent expansion of our research facility in Princeton, NJ has created positions within the Immunology Group for a Senior Research Immunologist and a Project Leader. We are seeking creative and highly motivated individuals to establish and build basic research programs in their respective fields, as well as integrate with established programs. The individuals will join a productive group utilizing modern techniques in immunology to elucidate the host's response to pathogens, and manipulation of the host's neuroendocrine system. Current research efforts utilize a wide variety of techniques in immunology including: flow cytometry, B & T Cell hybridomas, molecular biology and protein/peptide biochemistry. An interest in integrating their research projects with established programs in recombinant cytokines and novel immunomodulators is also desired.

PROJECT LEADER

Phagocytic Cell Function

The successful candidate will establish an independent research program in the general field of phagocytic cell biology and inflammation. Should have expertise in phagocytic cell function and modulation. You will supervise the efforts of an established group of scientists focusing on aspects of acute and chronic inflammation associated with disease processes. A PhD in Cell Biology, Pathology or Immunology with 2-4 years' post doctoral experience, familiarity with molecular techniques,

a good and continuing publication record, and a documented ability to manage scientifically creative and productive programs is required.

SENIOR RESEARCH IMMUNOLOGIST

T Cell Epitopes & Antigen Presentation

The successful candidate will establish an independent directed basic research program in T Cell epitopes; and/or antigen presentation and processing. A PhD in Immunology, Molecular Immunology or Protein Biochemistry with 2 years' post-doctoral experience, familiarity with T Cell hybridomas, antigen presentation, protein chemistry and molecular immunology, publications, and an ability to establish and implement independent scientific programs is required.

Individuals with appropriate experience and a desire to broaden their career opportunities, as well as to be recognized for a diversity of scientific achievements, are encouraged to apply to: **Personnel Department, American Cyanamid Company, Immunology Group, Dr. Michael Daley, P.O. Box 400, Princeton, NJ 08543-0400. An Equal Opportunity Employer.**



THE COMMITMENT GROWS EVERY DAY.

POSITIONS OPEN

AMERICAN CANCER SOCIETY BASIC CANCER RESEARCH EMINENT SCHOLAR CHAIR UNIVERSITY OF FLORIDA (EDWARD R. KOGER PROFESSORSHIP)

Applications are invited for candidates to fill a faculty professorship in basic cancer research, funded through an eminent scholar chair sponsored by the American Cancer Society. The candidate should have demonstrated a strong commitment to academic medicine. Candidates must hold a Ph.D., M.D., or both, and have an accomplished research record in the investigation of fundamental processes of neoplasia. A highly interactive individual would be desirable to take advantage of the research collegiality available at the University of Florida. The scholar could be appointed in a basic science department or jointly with a clinical department. Salary is negotiable and will be based on credentials. Deadline for receipt of applications is 1 March 1990.

Candidates for this position should be nominated or they should submit a letter of application stating teaching and research goals, and include a curriculum vitae and at least three names of references to: **Edward M. Copeland, III, M.D., Chairman of Professorship Search Committee, Department of Surgery, Box J-286, JHMHC, Gainesville, FL 32610.**

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

DEAN OF THE COLLEGE OF AGRICULTURE MONTANA STATE UNIVERSITY (MSU) BOZEMAN, MONTANA

Start date: 1 July 1990 (at the earliest). Salary: negotiable; dependent upon experience and qualifications.

The dean provides the overall administrative leadership and planning for the College of Agriculture, the Experiment Station, and the Extension Service.

Required qualifications:

Earned doctorate and a successful record of professional accomplishments in an agricultural or related discipline.

A record of excellence in research, teaching, and/or service sufficient to qualify for a senior level faculty appointment in the College of Agriculture.

An appropriate combination of administrative or professional experiences in policy formulation, personnel management, public relations, and fiscal management.

Demonstrated commitment to the mission and function of the College of Agriculture and its teaching, research, and outreach functions in a land grant university.

For an information packet and complete list of required/preferred qualifications, contact:

**Dr. John O'Connell, Chairman
Dean, College of Agriculture Search Committee
120 Strand Union Building
Montana State University
Bozeman, MT 59717
Telephone: 406-994-2828**

Screening of applications will begin 19 February 1990, and will continue until a suitable candidate is hired.

MSU provides preference in employment to eligible veterans. For information, contact HR/AA, 210-C MH, MSU, Bozeman, MT 59717. MSU is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS CELL AND MOLECULAR BIOLOGISTS

The Department of Surgery at the University of Connecticut Health Center is seeking applications for two **RESEARCH** or tenure-track **ASSISTANT PROFESSOR** positions. One will be filled by a cell biologist with cell culture experience and an interest in cell-cell communication and membrane-cytoskeleton interaction. The second position is for a molecular biologist with interest in gene expression, molecular biology of signal transduction, and transfection techniques. Positions include laboratory space and start-up funds for initial years of program. Successful candidates will be expected to establish independent, externally funded research programs. Curriculum vitae and three letters of recommendation should be sent to: **Tracy K. McIntosh, Ph.D., Department of Surgery, University of Connecticut Health Center, Farmington, CT 06032.** *The University of Connecticut is an Affirmative Action/Equal Opportunity Employer, M/W/H.*

POSITIONS OPEN

DIRECTORATE FOR COMPUTER AND INFORMATION SCIENCE AND ENGINEERING (CISE) NATIONAL SCIENCE FOUNDATION (NSF) WASHINGTON, DC 20550

NSF's CISE directorate seeks qualified applicants for the following positions:

- **DEPUTY DIRECTOR**, Division of Microelectronic Processing Systems (EP 90-2);
- **DEPUTY DIRECTOR**, Networking and Communications Research and Infrastructure (EP 90-3); and
- **DEPUTY DIRECTOR**, Division of Information, Robotics and Intelligent Systems (EP 90-4).

Appointments to these senior executive service positions will be on a career basis, with a salary range of \$71,200 to \$79,200. Applicants must have supervisory and managerial experience and strong relevant technical experience.

Applicants should contact: **Barbara Coleman, telephone: 202-357-7601** (hearing impaired individuals may call TDD 202-357-7492) to request vacancy announcements (EP 90-2, EP 90-3, or EP 90-4) for complete qualification requirements and application procedures. Applications must be received by 9 March 1990.

Equal Opportunity Employer.

COASTAL ZONE SPECIALIST

Preference given to applicants who possess a master's degree in coastal zone management and 2 years of related experience. Must have ability to evaluate data, write plans and ordinances, and review and coordinate programs such as beach renourishment, dune restoration and revegetation, sea turtle protection, and artificial reefs. Starting salary: \$26,851 per year. Available 1 April 1990.

ENVIRONMENTAL SPECIALIST II PART TIME

In addition to an appropriate degree, this position requires at least 2 years of professional experience in resource conservation or ecology. Some experience in marine zoology preferred. \$12.29 per hour, 20 hours per week.

Send letter of application and résumé to: **Collier County Government, Human Resources Department, 3301 East Tamiami Trail, Naples, FL 33962.** *Equal Opportunity Employer. Veterans and their spouses may receive preference in employment and are encouraged to apply.*

COORDINATOR OF PROTEIN AND DNA CHEMISTRY FACILITY. The Pennsylvania State University Biotechnology Institute seeks a research associate to manage its Protein and DNA Chemistry Facility. The facility is equipped for the automated hydrolysis, derivatization, sequencing and on-line analysis of peptides and proteins, and automated oligonucleotide synthesis and purification. Applicants should hold a Ph.D. or have extensive experience in peptide and protein sequencing and purification. The successful applicant will be expected to oversee the operation and maintenance of the facility and to provide instruction to students and faculty on applicable methods. Send curriculum vitae and three letters of recommendation to: **Dr. Michael Parker, Assistant Director, Biotechnology Institute, 519 Wartik Laboratory, The Pennsylvania State University, University Park, PA 16802.** This position is funded for 1 year past date of appointment. Very good possibility of re-funding. Review of applications will begin 21 February 1990 and continue until the position is filled. *An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

ANATOMY FACULTY POSITION

The University of Osteopathic Medicine and Health Sciences invites applications to fill a tenure-track position at the level of **ASSISTANT/ASSOCIATE PROFESSOR**. Position requires an earned doctorate, teaching experience in anatomical sciences, and evidence of productive research experience with funding potential. Teaching responsibilities include gross anatomy and histology.

Send curriculum vitae and references to: **Dr. M. A. Khan, Ph.D., University of Osteopathic Medicine and Health Sciences, 3200 Grand Avenue, Des Moines, IA 50312.**

The university is an Equal Opportunity Employer.

POSITIONS OPEN

ECOTOXICOLOGIST

Exxon Biomedical Sciences, Inc., has an immediate opening for a qualified individual specializing in ecotoxicology and environmental hazard assessment. The successful candidate will have a Ph.D. in ecotoxicology or in an environmentally related field with 0 to 2 years of postdoctoral experience. Experience in or a knowledge of the application of both effects and fate data to real world concerns as well as knowledge of regulatory requirements (TSCA/PMS) would be desired.

Exxon Biomedical Sciences, Inc., performs both consulting and laboratory toxicology for affiliates around the world. Its resources include state-of-the-art aquatic toxicology, environmental chemistry, and mammalian toxicology laboratories. The candidate will perform as a study monitor and internal consulting toxicologist. Client interactions are an important aspect of our work, and, thus, we are also seeking an individual who has excellent communication skills. Please forward résumé to:

**Christine Ramos, Human Resources
Exxon Biomedical Sciences, Inc.
CN 2350, Mettlers Road
East Millstone, NJ 08875-2350
Equal Opportunity Employer, M/F/H/V.**

ENVIRONMENTAL CHEMIST

Exxon Biomedical Sciences, Inc., has an immediate opening for a qualified individual specializing in environmental chemistry. The successful candidate will have a Ph.D. in environmental chemistry or a related field, and 1 to 3 years of practical experience in analytical method and protocol development for analysis of environmental samples in water, soil/sediment, and fish tissues. In addition, the applicant should have a knowledge of EPA methodologies for conducting effluent toxicity identification and reduction evaluations and standard methods for contaminant analysis.

The successful candidate will act as a consultant to our ecotoxicologists and to our affiliates on matters pertaining to the assessment of environmental hazards associated with products, effluents, hazardous wastes, etc. by providing analytical expertise to the design and interpretation of these programs. Client interactions are an important aspect of our work, and, thus, we are seeking an individual who has excellent communication skills. Please forward résumé to:

**Christine Ramos, Human Resources
Exxon Biomedical Sciences, Inc.
CN 2350, Mettlers Road
East Millstone, NJ 08875-2350
Equal Opportunity Employer M/F/H/V.**

FACULTY POSITION: The department is continuing its search for tenure-track, state-funded positions. Candidates should have at least 2 years of postdoctoral experience and proven research potential in cell biology or neurobiology. Excellent facilities are available, including start-up funds and intramural grants. Submit curriculum vitae, brief statement of research, and references to: **Dr. Leonard Seelig, Department of Cellular Biology and Anatomy, Louisiana State University Medical Center, P.O. Box 33932, Shreveport, LA 71130-3932.** *An Affirmative Action Agency.*

BIOCHEMISTRY/MOLECULAR BIOLOGY MEHARRY MEDICAL COLLEGE

FACULTY POSITIONS are available in 1990 in the Department of Biochemistry at the level of assistant or associate professor for well-trained or experienced candidates in the following areas: (i) molecular biology of eukaryotic systems, (ii) membrane biochemistry or molecular biology of signal transduction, and (iii) regulatory aspects of cellular and/or metabolic biochemistry. Successful applicants will be expected to develop and/or maintain a funded research program of high quality, to participate in the graduate and professional (medical, dental, and allied health) school teaching programs of the Department, and to interact with institutional programs in neuroscience and cell/molecular biology. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of potential research projects to: **Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208.** *Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.*

DEAN COLLEGE OF GRADUATE STUDIES

The Medical University of South Carolina, an expanding health science campus, invites applications and nominations for the position of Dean of the College of Graduate Studies.

The Dean will report to the Vice President for Academic Affairs and will be responsible for the quality and development of all aspects of graduate degree programs involving research training. Responsibilities include:

Developing creative recruitment programs for augmenting the quality and number of graduate students.

Participating in the university-wide recruitment of 70 new investigators.

Providing leadership for the development of new research training programs.

Coordinating graduate research training programs with the activities and goals of the five other colleges and centers at the Medical University.

Maximizing financial resources for predoctoral and postdoctoral training and providing leadership in the use of these resources for the advancement of academic excellence on campus.

Candidates for the position must have a Ph.D. or equivalent doctoral degree, a strong background in research and graduate education, and a commitment to academic excellence.

Nominations and applications, including a curriculum vitae, should be sent by March 15, 1990 to:

Jim D. Karam, Ph.D., Chairman
Search Committee for Dean of the
College of Graduate Studies
Department of Biochemistry and Molecular Biology
Medical University of South Carolina
171 Ashley Avenue
Charleston, South Carolina 29425

The Medical University of South Carolina is an equal opportunity, affirmative action employer.

Chief, Water Quality and Aquatic Systems

(\$59,664 - \$75,086 per annum)

PSC-CFP

**Environment Canada, National Hydrology
Research Centre, Saskatoon, Saskatchewan**

Your Choice

The individual is accountable for managing a national multi-disciplinary programme of scientific research and development and transfer of technology. Advance the understanding of water quality, lake and river ecology and ground water quality particularly in Western and Northern Canada. Assess and evaluate the impacts of human activities on water systems and on the environment and assessing the impacts of climatic variability and change.

Your Contribution

Candidates must be a university graduate at the Doctorate level in limnological science or related field with relevant experience in limnologic research. A knowledge of the English language is essential.

To ensure that all candidates have every chance on an equal basis we encourage equitable participation by women, aboriginal peoples, members of visible minority groups and persons with disabilities.

Send your application by March 9, 1990, quoting reference number S-89-52-0176-0680 to: **Doug Kenney, Public Service Commission, 1010-1867 Hamilton Street, Regina, Saskatchewan, Canada, S4P 2C2. Phone: (306)780-7027.**

Personal information is protected under the Privacy Act. It will be held in Personal Information Bank PSC/P-PU-040.

Canada



Public Service Commission
of Canada

Commission de la fonction
publique du Canada

Program Officer

The Division of Allergy, Immunology and Transplantation (DAIT) of the National Institute of Allergy and Infectious Diseases, NIH, is currently recruiting for one Program Officer.

The Program is divided into four Branches: Asthma and Allergy; Basic Immunology; Clinical Immunology; and Genetics and Transplantation. We are currently seeking one Program Officer for the Basic Immunology Branch. The Program Officer assists the Branch Chief in the duties of the Branch, which include: contract functions, conference activities, special reports, budget and publication materials, and surveys and analyses of scientific and administrative matters.

Applicants for this position should possess the Ph.D. or M.D. degree and should have research and grant experience. The successful candidate should have a track record in sustained research and demonstrated ability to obtain research support.

Applicants for the Program Officer position must qualify for a GS-13/14 rating with salary range of \$42,601 to \$70,420; salary to be consistent with appropriate rank. Physician's Comparability Pay up to \$20,000 may be payable also.

For further information about this position, please write directly to:

Robert A. Goldstein, M.D., Ph.D.
Director, DAIT, NIAID
National Institutes of Health
Building 31, Room 7A-52
9000 Rockville Pike
Bethesda, MD 20892
(301) 496-1886



U.S. Citizenship Required
NIH is an Equal Opportunity Employer

President

University of
Maryland at
Baltimore

The Regents of the University of Maryland System invite applications and nominations for the position of President of the University of Maryland at Baltimore.

The University of Maryland at Baltimore, established in 1807, is the "founding institution" and principal professional center of the University of Maryland System. The campus is located on 34 acres near Baltimore's Inner Harbor and includes presently six professional schools—medicine, dentistry, law, nursing, pharmacy, and social work and community planning—an interdisciplinary graduate school and a major medical center which includes the R A Cowley Shock Trauma Center.

The University, with an enrollment of 4,683 and a full-time faculty of 1,049, offers programs at the bachelor's, master's, specialist, and doctoral levels. Current research grants and contracts total annually approximately \$67.5 million, and the institution's budget is \$277 million. The affiliated medical system has an additional budget of more than \$233 million.

The President is the chief executive officer of the institution and is responsible for the direction of all operations. The President also serves as a senior administrator in the University of Maryland System and reports to the Chancellor and the Regents of the 11-institution System. Candidates should have earned a doctoral or equivalent professional degree from an accredited institution; be able to demonstrate outstanding accomplishments in their managerial and scholarly endeavors; have a strong history of leadership and possess a sound philosophy in educational policy.

The compensation package is highly competitive and commensurate with experience and qualifications.

For best consideration, applications/nominations should be submitted by March 9, 1990. If possible, applications/nominations should include the current resume of the applicant/nominee, the names of three references, and any other supporting material, and should be sent to: Charles W. Tandy, c/o The Presidential Search Committee, Office of the Vice President, University of Maryland at Baltimore, 520 West Lombard St., Baltimore, MD 21201-1691.

The University of Maryland at Baltimore is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR CARDIOVASCULAR/ PULMONARY RESEARCH INSTITUTE

Deborah Research Institute has a position available for Ph.D. with broad research experience to serve as Scientific Director of our cardiovascular and pulmonary institute. The successful candidate should have experience with myocardial protection, new perfusion methods, left-ventricular assist devices, laser surgery, heart transplantation research or valve & blood vessel transplantation research.

In addition, the candidate will be able to bring about a balance between basic and clinical research, as well as direct efforts in extramural grant writing, grant distribution and the direction & planning of the scientific activities of our Institute.

We adjoin Deborah Heart & Lung Hospital. For confidential consideration, please forward your resume to:

Chairman of the Board



**DEBORAH
RESEARCH
INSTITUTE**

Trenton Road • Browns Mills, NJ 08015

Equal Opportunity Employer



HARVARD UNIVERSITY—MASSACHUSETTS INSTITUTE OF TECHNOLOGY DIVISION OF HEALTH SCIENCES AND TECHNOLOGY

MIT FACULTY POSITION

Massachusetts Institute of Technology seeks a junior faculty member in the broad area of biomedical engineering or biomedical physics. The appointee will have major responsibilities in the education of scientists, engineers and physicians who expect to work at the interface of technology and medicine. The individual's research area is flexible and could range, for example, from molecular biophysics to quantitative systems physiology to innovative diagnostic or therapeutic devices. The individual should possess a doctoral degree in the physical sciences or engineering. A strong background in biological/medical sciences is required. The appointment will be made jointly between the Harvard-MIT Division of Health Sciences and Technology (HST) and an MIT Department in the individual's discipline.

Qualified applicants should send a letter including a two-page statement of current or proposed research, a curriculum vitae, and three letters of reference by April 1, 1990 to:

Prof. Roger G. Mark
Co-director, HST Division
Room E25-519
Massachusetts Institute of Technology
Cambridge, MA 02139

The letters of reference may be sent separately, but the names and addresses of referees must be included in the application.

MIT is an affirmative action/equal opportunity employer.

SENIOR PHYSICIAN-SCIENTIST Molecular/Cellular Aspects of Lung Disease

The Department of Medicine, University of Toronto and the Mount Sinai Hospital Research Institute offer an exciting opportunity for an individual to develop a **program** in molecular/cellular aspects of lung disease. The candidate should have an M.D. or M.D./Ph.D and have the qualifications to be appointed at the **ASSOCIATE** or **FULL PROFESSOR** level. The program will be based in the Mount Sinai Research Institute which has major programs in molecular and developmental biology, cancer biology, immunology, and neurobiology. Appropriate start-up funds and space are available.

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

Please submit curriculum vitae to:

Dr. Arthur Slutsky
Division Director, Respiratory Medicine
University of Toronto
600 University Avenue #656
Toronto, Ontario
CANADA M5G 1X5

The Clare Boothe Luce Professorship St. John's University

The Clare Boothe Luce Fund is establishing two faculty positions at St. John's University beginning in September 1990 for a woman in the Biological Sciences. Specialty in cellular molecular or development in biology is preferred. The Clare Boothe Luce Fund, a bequest of the late Clare Boothe Luce, provides professorships, fellowships, and scholarships to women scientists in higher education.

The successful candidate will be expected to establish a major research program and to participate fully in the teaching mission of the department to which she is appointed.

Applicants should send a curriculum vitae, statement of current research interests and future research plans, and the names of three scientists willing to write letters of reference. Address applications or nominations to: **Dr. R.A. Lockshin, Ph.D., Professor and Chairman, Dept. of Biological Sciences, St. John's University, Grand Central and Utopia Pkwy., Jamaica NY 11439.**

Post Doctoral Research at The Wistar Institute

Post doctoral positions are available at The Wistar Institute for candidates with a strong background in molecular and cell biology, virology, immunology, genetics or protein chemistry. Specific areas of research include: human retroviruses; DNA/RNA tumor viruses; growth factors; oncogenes; pattern formation in embryos; molecular mechanisms involved in the immune response; x-ray crystallography of virus receptor interaction; and aging in tissue culture. The Wistar Institute is an independent institution, located on the campus of the University of Pennsylvania and is equipped with the latest biotechnology facilities.

Starting salary at \$20,000 a year. Interested applicants are requested to send a curriculum vitae and the names of 3 references to: **Coordinator of Research Training, THE WISTAR INSTITUTE, 36th and Spruce Streets, Philadelphia, PA 19104.** Equal opportunity employer, M/F.

THE
WISTAR
INSTITUTE



POSITIONS OPEN

UNIVERSITY OF CALIFORNIA RIVERSIDE DEPARTMENT OF BIOCHEMISTRY FACULTY POSITION IN PLANT BIOCHEMISTRY

The Department of Biochemistry of the College of Natural and Agricultural Sciences and the Agricultural Experiment Station of the University of California, Riverside, are seeking a new faculty member in the area of plant biochemistry. The position is to be filled at the **ASSISTANT** (tenure-track), **ASSOCIATE OR FULL PROFESSOR** level. The new faculty member will hold 11-month appointments jointly in the College of Natural and Agricultural Sciences and the Agricultural Experiment Station. Requirements for this position include a demonstrated record of productivity in the general area of plant biochemistry. The specific area of research is open. Both the strength of the existing research record and the potential for developing a strong, innovative research program and teaching at the undergraduate and graduate level will be considered for each candidate. Candidates should send a summary of research interests and detailed curriculum vitae, and arrange to have at least three letters of recommendation sent to: **Dr. Richard J. Debus, Plant Biochemistry Search Committee, Department of Biochemistry, University of California, Riverside, CA 92521-0129.** Deadline for applications is 30 March 1990. *The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified candidates, including minorities and women, are encouraged to apply.*

POSITIONS IN NEUROSCIENCE AT THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN (UIUC)

The College of Liberal Arts and Sciences in cooperation with the Beckman Institute at the UIUC is committed to a major expansion of its programs in the neurosciences. Initial priorities are in the areas of molecular neurobiology and computationally oriented integrative and cognitive neuroscience. Two positions (rank open and salary negotiable) are available in each of the two areas for the 1990-91 academic year. Applicants should have demonstrated exceptional promise in interdisciplinary research on the molecular basis of neurobiological phenomena (for molecular neurobiologists) or on mechanisms of sensorimotor coordination and perception, modeling of neural networks and/or cognitive neuroscience (for integrative/cognitive neuroscientists). In the area of integrative/cognitive neuroscience, preference will be given to candidates who employ a computational approach. Successful candidates in molecular neurobiology will be offered a primary appointment in the Department of Biochemistry or the Department of Cell and Structural Biology; those in integrative and cognitive neuroscience will have primary appointments in the Department of Physiology and Biophysics or in the Department of Psychology. Candidates also have opportunities for joint appointments with other units and participation in an excellent campus-wide neuroscience program.

The UIUC offers exceptional opportunities for the development of an academic research and teaching career. Graduate programs in life and chemical sciences, psychology, engineering, and computer science have long traditions of strength. The UIUC has excellent research facilities for these areas of research and is home to numerous national centers for research, as well as the Beckman Institute for Advanced Science and Technology, where research is focused on interdisciplinary studies in physical and biological sciences. Successful candidates can expect to receive substantial start-up funds and laboratory facilities. The proposed starting date is 21 August 1990. Applicants are requested to submit curriculum vitae, reprints, and a summary of current and future research plans, and to arrange for three letters of reference to be sent to: (i) **Dr. Robert Switzer, Molecular Neurobiology Search Committee, Department of Biochemistry, 1209 West California, Urbana, IL 61801, telephone: 217-333-3945,** or (ii) **Dr. Joseph Malpeli, Integrative/Cognitive Neuroscience Search Committee, Department of Psychology, 603 East Daniel, Champaign, IL 61820, telephone: 217-333-6605** by 1 March 1990. Applicants may be interviewed prior to 1 March 1990, but all applications received by that date will receive full consideration.

The UIUC is an Affirmative Action/Equal Opportunity Employer. Applications from minority and female candidates are strongly encouraged.

9 FEBRUARY 1990

RESEARCH ASSOCIATE OPPORTUNITIES

Amgen has emerged as an innovative leader in the discovery and development of human therapeutics through applied biotechnology. We recognize that our future success depends upon continued commitment to scientific excellence. As a result of this commitment and our rapid growth we have several opportunities for B.S. and M.S. level scientists who wish to share **Amgen's** commitment to scientific excellence. Those opportunities currently being recruited for are listed below.

EXPERIMENTAL HEMATOLOGY

Dept. #506

Responsibilities include mouse and human bone marrow cell culture, tissue culture of a variety of mammalian cell lines and performing a number of factor dependent bio-assays in our Experimental Hematology Group. Qualified candidates must have a B.S. or M.S. in Cell Biology or a related discipline and a minimum of one year's experience in mammalian cell culture. Previous experience in bone marrow culture, cellular bio-assays and handling of small animals is highly desirable.

BIOCHEMISTRY

Dept. #507

Contributions will be made to on-going research efforts in the identification of novel hematopoietic growth factors as well as comparing and characterizing recombinant and natural proteins. Candidates must have a B.S. or M.S. in Cell Biology, Biochemistry or a related discipline and a minimum of two years' experience in mammalian cell culture and general biochemical techniques. Familiarity with immunological and biological assays for the quantification of biological activity is essential.

ANALYTICAL PROTEIN CHEMISTRY

Dept. #508

Qualified candidates will participate in the development of analytical methods for the analysis of recombinant proteins. A B.S. or M.S. in Biochemistry or a related discipline and a minimum of two years' experience applying a variety of methodologies from HPLC to protein analysis are required. Demonstrated ability to work independently is essential. Previous industrial experience is highly desirable but not essential.

MOLECULAR BIOLOGY

Dept. #509

Our Molecular Biology and Immunology Groups have several opportunities available with responsibilities including assay development, cDNA cloning, and general molecular biology as they relate to a number of on-going research projects. A B.S. or M.S. in Molecular Biology, Biochemistry or a related discipline and a minimum of two years' experience in molecular and cellular biology are required. Experience in basic gene cloning and mammalian tissue culture is essential. Familiarity with a variety of bio-assays, cDNA cloning and gene expression in prokaryotic and/or eukaryotic systems is highly desirable.

Amgen offers a stimulating and challenging research environment on the leading edge of biotechnology as well as an excellent compensation and benefits package. If you have the necessary skills and qualifications and would like to be a part of a company that places a high priority on its human resources, please send a resume or CV, specifying the appropriate Dept. #, in confidence, to:

AMGEN, INC.
Recruitment, Dept. # (please specify)
Amgen Center
Thousand Oaks
CA 91320-1789

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RESEARCH SCIENTISTS

Molecular, Cellular and Physiological Neurobiologists

Gliatech, Inc., a newly formed neuroscience-based medical technology company, has openings for group leaders, staff scientists, and post doctoral fellows in the divisions of Cellular and Physiological Neurobiology and Molecular Neurobiology.

Positions in Cellular and Physiological Neurobiology require expertise in one or more of the following areas:

- Cell culture
- Cell biology
- Neuroanatomy/Neuropathology
- Neurochemistry
- Animal models

Positions in Molecular Neurobiology require expertise in one or more of the following areas:

- Protein chemistry
- Neurochemistry
- Molecular biology
- Carbohydrate chemistry
- Polymer chemistry

For permanent senior scientist positions, a PhD is required and at least two years post doctoral experience is preferred. Masters and Bachelors level scientists will be considered for technical associate positions.

Gliatech has defined a unique niche in the burgeoning new field of medical neuroscience and is well positioned to become a leader in this challenging endeavor. It will focus on the properties of neuroglia to accomplish its goal to discover, develop and commercialize unique products to promote the healing and repair of disease and injury to the central and peripheral nervous systems. **Gliatech's** new laboratories are located in Beachwood, Ohio in proximity to Case Western Reserve University and the Cleveland Clinic. The Company's collaborative projects with outstanding scientists and clinicians at these institutions and close interaction with an exceptional group of scientific and clinical advisors from other renowned institutions throughout the country provides an exceptional intellectual environment.

This location also provides access to a variety of highly attractive and affordable housing as well as an exceptional array of cultural and sports activities of high quality and accessibility.

Gliatech offers excellent compensation and benefits packages including stock options. For consideration, please send your resume, in confidence, to:

Human Resources Manager
Gliatech, Inc.
23420 Commerce Park Road
Beachwood, Ohio 44122

Research Microbiologist

Kelco Division of Merck & Co., Inc., a world leader in hydrocolloid technology, currently has an opening for a Senior Research Microbiologist.

Applicants should have a Ph.D. in Microbiology or equivalent, a strong research background in bacterial genetics and demonstrated ability to conduct high quality laboratory research. The candidate will be expected to conduct independent research and contribute significantly to strain improvement programs for polysaccharide bacteria. Excellent oral and written skills are essential.

We offer an outstanding salary, benefits package, and **relocation assistance**. Interested candidates should submit their curriculum vitae with the names of three references and salary requirements to: **Ruth Algeo, Manager, Human Resources, Kelco Division of Merck & Co., Inc., P.O. Box 23576, San Diego, CA 92123-1718**. An equal opportunity employer m/f/h/v.

Kelco

DIVISION OF MERCK & CO. INC.
Join America's Most Admired Corporation

Viral Vaccine Research Scientists

Commit To Your Future By Joining Lederle Today.

Lederle Laboratories, a division of American Cyanamid Company, is recognized internationally as a leader in the research, development and manufacture of vaccines for the prevention of viral and bacterial diseases. We're a company committed to our future, having recently launched our three-phase, \$260-million building program which will feature state-of-the-art research and manufacturing facilities. Currently, we are seeking two Ph.D. Scientists to join the Viral Vaccine Research and Development group of our Biologicals Department.

Recombinant Enteroviral Vaccines

A postdoctoral position is available for a highly motivated individual to work on the development of recombinant enteroviral vaccines. To qualify, you must be a recent graduate with a Ph.D. in molecular biology, virology or microbiology, have hands-on experience in molecular biology and be familiar with tissue culture techniques.

Development Virology

We seek a development virologist with a Ph.D. degree in virology and 1-3 years' industrial or postdoctoral experience. Individuals with cell culture, molecular biology and microbiology backgrounds are encouraged to apply.

We offer a state-of-the-art facility, competitive salary and excellent benefits. For consideration, please forward your resume with salary requirements and position of interest to: Daniel Nemecek, Professional Employment Representative, Lederle Laboratories, American Cyanamid Company, Pearl River, NY 10965. An equal opportunity employer m/f.



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RESEARCH SCIENTIST IN BIOCHEMISTRY

A dynamic southern California-based pharmaceutical company has a position for a Research Scientist in Biochemistry. Applicant should enjoy working as part of an interdisciplinary team. This team will be comprised of molecular biologists, medicinal chemists, biochemists, biologists, pharmacologists, computational chemists, and x-ray crystallographers. The research will focus upon receptor-based drug design. The successful candidate will have: Ph.D. in Biochemistry, Biology, or Chemistry; Experience in enzyme purification and characterization; Experience in the development of specific enzyme assays; Experience in the kinetic analysis of enzyme reactions.

We offer competitive salaries and benefits in a superb location. Please send your curriculum vitae and the names of three references in confidence to:

Human Resources Reference PW



Agouron
Pharmaceuticals, Inc.

11025 North Torrey Pines Road
La Jolla, California 92037

Research Support Grants

Immunex Corporation, a leading biotechnology company, is pleased to announce the continuation of its Research Support Grant Program for studies in immunology and related fields.

We are interested in supporting research in the area of signal transduction involving cytokines and cytokine receptors. Of particular interest are:

- Second messenger systems
- Identification of receptor-associated regulatory molecules
- Enzymatic activity of receptors
- Induction of nucleic acid binding proteins by cytokine-receptor interactions.

Please send a brief (1-2 page) description of your on-going research activities, a description of similar length on the work you propose and a copy of your curriculum vitae to: **Outreach Program, Immunex Corporation, 51 University Street, Seattle, WA 98101.** All proposals must be received by March 19, 1990

IMMUNEX

SENIOR RESEARCH SCIENTIST MOLECULAR BIOLOGY/ LIPID BIOCHEMISTRY

Specialty Laboratories, Inc., a nationally recognized research-driven, state-of-the-art clinical laboratory specializing in esoteric testing, announces an opening for a Senior Research Scientist.

Qualifications for this position include a strong background in molecular biology and lipid biochemistry.

Experience in working successfully with a multi-discipline team capable of receiving research grants.

Research focus is study of atherosclerosis using newest techniques of biophysics, biochemistry, immunology and molecular biology.

Co-Director of this research is a leading scientist in the field of lipid-protein interaction.

Publication in peer-reviewed journals is encouraged.

We offer an exciting scientific environment for intellectual growth and development.

Interested candidates should send their curriculum vitae, list of publications and addresses/telephone numbers of three (3) references to:



James B. Peter, M.D., Ph.D.
President
2211 Michigan Avenue
Santa Monica, CA 90404-3900
EOE

POST-DOCTORAL SCIENTIST MOLECULAR BIOLOGY

Amgen is a leader in the discovery and development of innovative human therapeutic and diagnostic products through applied biotechnology. Our continued growth has offered us the opportunity to establish a post-doctoral position in the human diagnostics group in Boulder, Colorado for cDNA cloning and expression of human cell surface receptors.

Qualified applicants must have a Ph.D. in a relevant discipline and be experienced in cDNA cloning.

Amgen offers the unique opportunity to participate in challenging research programs using state-of-the-art technology in an environment that fosters scientific creativity and collaboration. If you have the necessary skills and qualifications and would like to experience research in a supportive company environment, please send a resume or C.V., in confidence, to:

AMGEN BOULDER, INC.
Personnel Dept.
2045 32nd Street
Boulder
CO 80301

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Drug Metabolism Research ASSISTANT/ASSOCIATE SCIENTIST

Our Metabolism and Pharmacokinetics Department currently has a career opportunity available for a qualified individual to join a group which participates directly in drug discovery by providing early metabolic and pharmacokinetic information on pre-IND drug candidates. Requirements include a B.S. or M.S. degree in a related field and up to 3 years of relevant experience in drug metabolism. Knowledge of analytical techniques applicable to drug assays (HPLC, GC) as well as experience in the use of laboratory animals in metabolism and pharmacokinetics research is desirable. Responsibilities will include development of assay methodologies for drugs and their metabolites in biological fluids as well as performing a variety of drug disposition studies in animals. Computer skills as related to laboratory data handling, would be helpful.

Bristol-Myers Squibb offers an excellent salary plus a comprehensive benefits package. For confidential consideration, forward your resume, including salary history to: **BRISTOL-MYERS SQUIBB COMPANY, Pharmaceutical Research & Development Division, ATT: MH246, P.O. Box 5101, 5 Research Parkway, Wallingford, CT 06492-7661.** An Equal Opportunity Employer M/F/H/V.



Bristol-Myers Squibb Company

"Stronger Than Ever In Global Health Care"

POSITIONS OPEN

UNIVERSITY OF READING SCHOOL OF ANIMAL AND MICROBIAL SCIENCES LECTURESHIP IN BIOCHEMISTRY AND PHYSIOLOGY

Applications are invited for the above post which has been created to coincide with the head of school's term as dean of science. The appointment will be for 3 years in the first instance on the Lectureship Scale A or B (£10,458 to £20,469 per annum) plus U.S.S. benefits. The candidate would be expected to develop his/her own research interests within the department, but experience in molecular endocrinology/biology, protein chemistry, or immunology and a collaborative/interdisciplinary approach would be advantageous. The department has excellent modern accommodations and first-class research facilities and attracts substantial research funding. Informal inquiries can be made to: **Professor P. J. Lowry, telephone: (0734) 318010**. Further particulars and application forms (two copies) are available from: **Personnel Officer, University of Reading, Whiteknights, P.O. Box 217, Reading, RG6 2AH, England, telephone: (0734) 318751**. Please quote **Reference AC 9005**. Closing date: 12 March 1990.

FACULTY POSITION IN RADIATION BIOLOGY AT STANFORD UNIVERSITY

The Division of Radiation Biology of the Department of Radiation Oncology is seeking an **ASSOCIATE PROFESSOR (RESEARCH)** or **PROFESSOR (RESEARCH)** to complement existing programs in hypoxic cytotoxins and radiation sensitizers, hyperthermia, cell cycle and tumor biology, DNA repair and mutagenesis, and leukemogenesis. The division is looking for basic science applicants who are applying molecular approaches either to hyperthermia or to cytogenetics, particularly as these fields relate to cancer treatment or predictive assays. *Stanford University is committed to increasing representation of women and members of minority groups on the faculty and particularly encourages applications from such candidates.* Applicants should submit curriculum vitae and names of three references to: **Dr. J. Martin Brown, Director, Division of Radiation Biology, Department of Radiation Oncology, Stanford University School of Medicine, Stanford, CA 94305-5468**.

FACULTY OPENING IN PHYSICS (NUCLEAR PHYSICS) UNIVERSITY OF CALIFORNIA AT BERKELEY

The Department of Physics at the University of California, Berkeley, and the Lawrence Berkeley Laboratory (LBL), expect to make a joint appointment in nuclear physics at the **ASSISTANT**, the tenured **ASSOCIATE**, or the **FULL PROFESSOR** level, effective 1 July 1990, candidates in either theoretical or experimental nuclear physics are encouraged to apply. The appointee will teach in the Physics Department and have research facilities in the Nuclear Science Division at LBL. Summer research salary will be provided by LBL.

Applicants should send curriculum vitae, bibliography, statement of research interests, and list of references to: **Professor P. Buford Price, Chairman, Department of Physics, University of California, Berkeley, CA 94720**, before 10 March 1990. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF SOUTH CAROLINA USC COASTAL CAROLINA COLLEGE AQUATIC MICROBIOLOGIST

The School of Natural and Applied Sciences, USC Coastal Carolina College, is seeking applicants for an **ASSISTANT PROFESSOR**, aquatic microbiologist. Full-time, tenure-track position. Ph.D. required. Responsibilities include teaching introductory biology, microbiology for biology majors and pre-health professionals, and the possibility of an upper level course, as appropriate. The successful candidate is expected to develop a research program which includes undergraduate majors. Position available 16 August 1990. USC Coastal Carolina College, the fastest growing 4-year campus of the University of South Carolina System, is located 9 miles west of Myrtle Beach. Each applicant should submit a letter of application, curriculum vitae, and names and phone numbers of three references, by 26 February 1990, to: **Dr. Janis W. Chesson, Assistant Chancellor for Human Resources and Affirmative Action, USC Coastal Carolina College, P.O. Box 1954, Conway, SC 29526**. *USC Coastal Carolina College is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITION IN VERTEBRATE ZOOLOGY

The Department of Biology at Corpus Christi State University (a campus of The Texas A&M University System) invites applications for a tenure-track faculty position at the **ASSISTANT/ASSOCIATE PROFESSOR** level. A Ph.D. and a minimum of 2 years of university teaching experience is required. Successful applicant will teach core courses in vertebrate natural history, introductory ecology, and others in specialty area; direct M.S. theses; and seek research funding. Prefer strong field experience with interest in coastal environments. Starting date: 27 August 1990. Send curriculum vitae and three letters of reference by 15 March 1990 to: **Dr. John W. Tunnell, Chairperson, Search Committee, Corpus Christi State University, 6300 Ocean Drive, Corpus Christi, TX 78412**. *Equal Opportunity Employer.*

The Section of Oral Biology at the University of California, Los Angeles (UCLA), School of Dentistry invites applications for a tenure-track position available 1 July 1990. D.D.S./Ph.D. or Ph.D. degree in neuroscience/neurobiology or an associated field is required. Applications are invited from qualified individuals with strong research credentials in electrophysiology and expertise in recording from neurons in tissue slice preparations in the mammalian CNS. The candidate will join an active group of neuroscientists investigating neural circuitry underlying oral motor behavior. Teaching responsibilities will include undergraduate and graduate courses with primary emphasis on the cell biology of neuronal and salivary tissues. Salary and rank commensurate with qualifications and experience. Applicants for assistant professorship should have the ability to establish an independent and funded research program. Applicants for more senior levels should have ongoing and funded programs. The UCLA School of Dentistry offers an excellent research environment and competitive salaries and start-up funds. Send curriculum vitae, list of publications, representative reprints, a brief statement of future research directions, and the names and addresses of three references to: **Dr. Louis J. Goldberg, UCLA School of Dentistry, Section of Oral Biology, 63-050 CHS, Los Angeles, CA 90024-1668**. *UCLA is an Equal Opportunity/Affirmative Action Employer, and women and minority candidates are encouraged to apply.*

TENURE-TRACK FACULTY POSITION UCR/UCLA PROGRAM IN BIOMEDICAL SCIENCES HUMAN GROSS ANATOMY

The UCR/UCLA Program in Biomedical Sciences, which offers an accelerated M.D. curriculum jointly with the University of California, Riverside (UCR) and the University of California, Los Angeles (UCLA), School of Medicine, has reopened the search for a tenure-track faculty position in the Division of Biomedical Sciences at UCR. Primary teaching responsibilities will be in a 10-week lecture and laboratory course in human gross anatomy for 24 first-year medical students. Prior gross anatomy teaching experience is considered essential. The successful candidate is also expected to actively participate in graduate student training.

The committee welcomes applications from those working in any modern area of biological research, but applicants with interests in cell, molecular, or developmental biology or neurosciences are encouraged to apply. The prospective level of appointment for candidates, who must possess the Ph.D. and/or M.D. degree, may be at the **ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** level. Junior applicants must have postdoctoral research experience and the potential to develop a strong, extramurally funded research program. Senior applicants should have a clearly demonstrable record of research productivity, success in obtaining extramural funding, and demonstrated teaching effectiveness. *The University of California is an Affirmative Action/Equal Opportunity Employer.* The deadline for application is 15 April 1990. Applicants should send curriculum vitae, representative reprints, a statement of present and future research goals, and summary of teaching experience, and arrange to have three letters of recommendation sent to:

**Dr. Kenneth Dorshkind
Anatomy Search Committee
Division of Biomedical Sciences
University of California
Riverside, CA 92521-0121**

POSITIONS OPEN

FACULTY OPENING IN EXPERIMENTAL SPACE PHYSICS UNIVERSITY OF CALIFORNIA AT BERKELEY

The Physics Department of the University of California at Berkeley expects to make an appointment at the **ASSISTANT**, the tenured **ASSOCIATE**, or the **FULL PROFESSOR** level, effective 1 July 1991. If it is desirable for the successful appointee to begin research at Berkeley prior to the appointment date, means to arrange an interim research appointment at the Space Sciences Laboratory will be explored.

Please send curriculum vitae, bibliography, statement of research interests, and list of references to: **Professor P. Buford Price, Chairman, Physics Department, University of California, Berkeley, CA 94720**, before 10 March 1990. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

MAGNETOENCEPHALOGRAPHY (MEG) NEUROSCIENTIST

Albuquerque Veterans Affairs Medical Center (VAMC), University of New Mexico School of Medicine (UNM), and Los Alamos National Laboratories (LANL) are seeking a neuroscientist to become a research scientist for the VAMC/LANL/UNM Center for Magnetoencephalography. The facility at VAMC includes a 7-channel magnetometer in a magnetically shielded room for human studies and a 4-channel high-resolution microSQUID system for animal studies. Applicant must have a Ph.D. or M.D. with expertise in some area of neuroscience, including clinical neurophysiology. Applicants must be willing to work with a team to explore clinical and scientific applications of MEG. Salary dependent upon applicant's experience. University of New Mexico academic title possible. Send résumé and names of three references to: **Douglas Rose, M.D., Medical Director, MEG Center, or Yoshio Okada, Ph.D., Scientific Director, MEG Center, Albuquerque VA Medical Center, 2100 Ridgecrest Drive, S.E., Albuquerque, NM 87108**. *An Affirmative Action/Equal Opportunity Employer.*

MICROBIOLOGIST. Faculty position available for microbiologist to teach medical microbiology and work independently and/or collaboratively with other research/teaching faculty. Primary responsibilities: not more than 25% of time teaching medical students and at least 75% of time for research. Salary and academic rank commensurate with training, teaching experience, and grant track record. Please send curriculum vitae detailing teaching experience, research interests, and grant support information and the names of three references to: **Dr. Arnold L. Nagler, Associate Dean, Basic Sciences, New York College of Osteopathic Medicine, Old Westbury, NY 11568**. *Affirmative Action/Equal Opportunity Employer.*

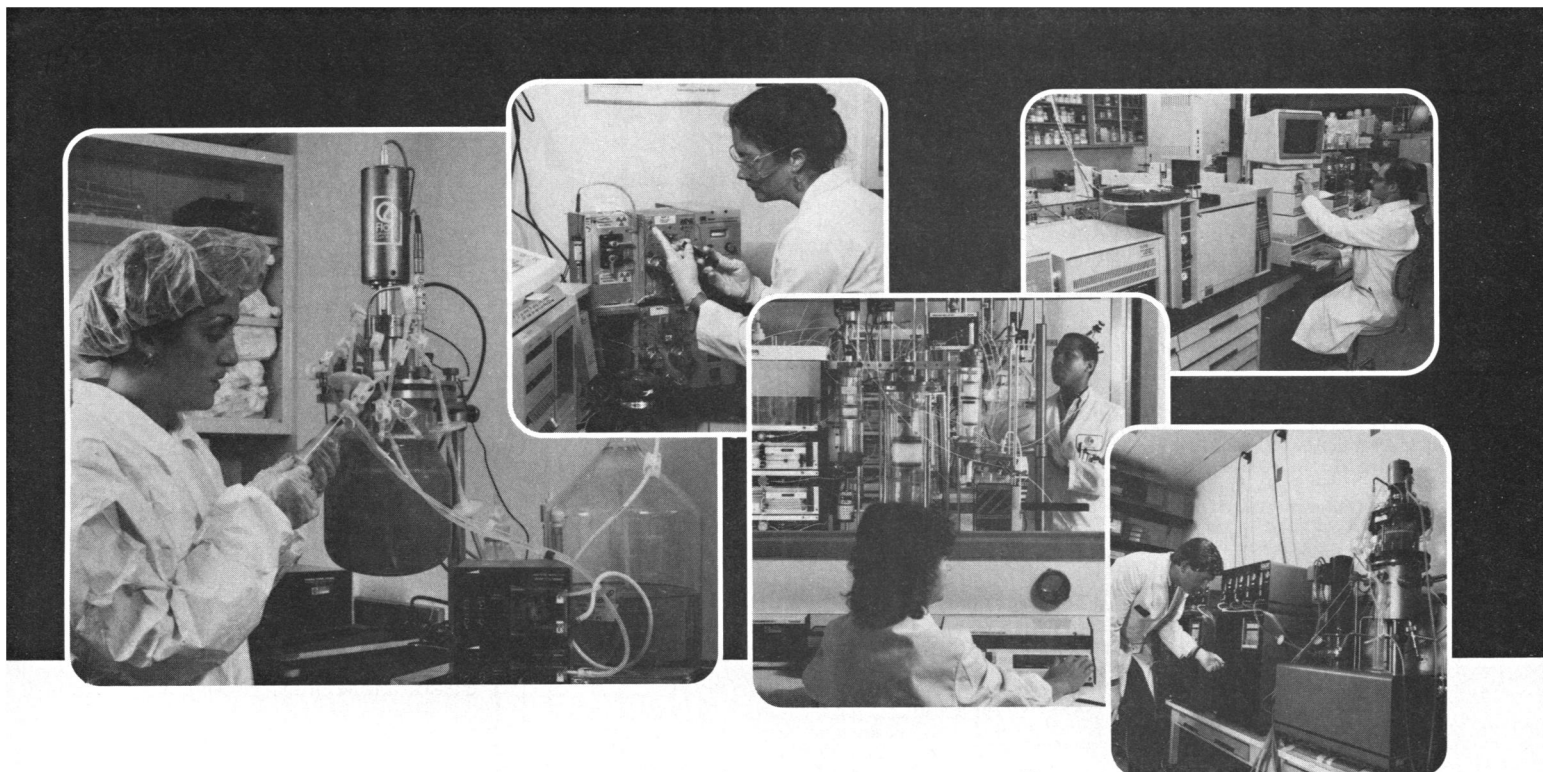
AUBURN UNIVERSITY POSITION IN MOLECULAR GENETICS

The Department of Botany and Microbiology of Auburn University invites application for a tenure-track position in molecular genetics at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. The department has recently hired three plant molecular geneticists, and now desires to hire a candidate with a strong background and interests in microbial genetics. The successful candidate must have strong research credentials, including postdoctoral experience. We are interested in applicants with research interests in nucleic acid chemistry, although other specialties will be considered. The successful candidate will interact with other members of the department, including those working in molecular genetics, cell culture, and plant-microbial interactions.

Responsibilities include development of a creative and vigorous research program and participation in undergraduate and graduate level instruction. Please submit curriculum vitae, transcripts, reprints of recent publications, a statement of professional goals and research interests, and three references to:

**Dr. Joe H. Cherry
Department of Botany and Microbiology
Auburn University, AL 36849-5407
Telephone: 205-844-4830**

The position is available immediately; applications will be accepted until 1 April 1990 or until a suitable candidate is found. *Auburn University is an Equal Opportunity Educational Institution and encourages applications from minorities and women.*



Postdoctoral Research Program

Molecular Biology

Research in immunoglobulin gene expression and regulation. Engineering of antibodies to produce useful therapeutic products is a major focus. Experience in recombinant DNA techniques essential.

Immunobiology

Study of receptor/ligand interactions and development of human hybridomas for therapeutic applications. Projects are focused on the use of antibodies and peptides for the treatment of cardiovascular and autoimmune diseases.

Cell Culture Technology

Research in large scale production of hybridoma cells involving both cell biology and bioengineering techniques. Emphasis is on determination of the limiting steps in antibody biosynthesis and scale-up of mammalian cell culture.

Cancer Therapeutics

Opportunities in the cloning and characterization of cancer-associated antigens. Development of monoclonal antibodies and heterofunctional antibodies for cancer therapy.

Pharmacology

Basic studies in pharmacodynamics and molecular pharmacology involving antibody-based therapeutics. Particular focus is on experimental models of thrombosis, atherosclerosis, myocardial infarction, autoimmunity and rejection, and septic shock.

Centocor, a recognized leader in the biopharmaceutical industry specializing in monoclonal antibody medicine, is now undertaking a major new effort in support of Exploratory Research. We are seeking outstanding PhD scientists to participate in a newly created postdoctoral research program designed to give individuals in-depth research training under the direction of senior scientists within the Research and Development organization. Postdoctoral investigators will participate fully in a wide variety of scientific disciplines, attend and present their work at scientific conferences, and maintain close ties with the academic community.

Centocor offers an excellent salary, relocation and benefits package, as well as the opportunity to join a unique research environment that will provide comprehensive research training in a well-defined field. The company's headquarters, located 20 miles west of Philadelphia, provides modern, state-of-the-art R&D facilities. Centocor employs over 500 employees in the U.S., The Netherlands and Japan. Applicants from abroad welcome. An Equal Opportunity/Affirmative Action Employer.

Reply in confidence indicating the specific research program of interest: Harvey J. Berger, MD, President, Research & Development Division, Centocor, Inc., 244 Great Valley Parkway, Malvern, PA 19355.

 **Centocor**
Specializing in MAb Medicine

POSITIONS OPEN

EMORY UNIVERSITY SCHOOL OF MEDICINE FACULTY POSITIONS IN BIOCHEMISTRY

The Department of Biochemistry invites applications for two tenure-track positions beginning September of 1990. The appointments will be made at the **ASSISTANT PROFESSOR** level; however, exceptional senior scientists will be considered for one of the positions. Outstanding candidates in any field of biochemistry/molecular biology will be considered, but an applicant having research interests in the area of structure-function relationships of biological macromolecules is preferred for one of the positions. Candidates at the junior level must have a doctoral degree and postdoctoral training. Candidates considered for a senior position must have a nationally recognized research program and current external funding. Successful candidates will be expected to establish and maintain outstanding, externally supported research programs and to participate in medical/graduate student teaching. Competitive salary and start-up funds are available.

Applicants should send detailed curriculum vitae, relevant reprints, a statement of research plans, and the names of three references to: **Dr. Dale E. Edmondson, Chairman, Search Committee, Department of Biochemistry, Emory University School of Medicine, Atlanta, GA 30322.** Applications will be reviewed beginning 1 April 1990. *Emory is an Equal Opportunity/Affirmative Action Educator and Employer and specifically invites and encourages applications from qualified women and minorities.*

MUHLENBERG COLLEGE THE ERLING N. JENSEN PROFESSOR IN THE NATURAL SCIENCES

Muhlenberg College invites nominations and applications for a tenure-track position as a professor of biology and head of the department, effective 1990-91. Rank and salary will be commensurate with the qualifications and experience of the candidate. We require the Ph.D. in biology, a distinguished record of scholarship, and a demonstrated commitment to excellence in teaching consistent with the tradition of a liberal arts education. Desirable qualifications include demonstrated leadership in curricular development in the biological sciences, the ability to nurture faculty development and research programs, and administrative abilities.

Muhlenberg College, related to the Evangelical Lutheran Church in America, has a full-time enrollment of 1630 students. The College offers 35 major programs, including those in biology and the related health professions. The college's location in eastern Pennsylvania offers ready access to New York and Philadelphia.

Each applicant is asked to present a complete and current curriculum vitae together with the names, addresses, and telephone numbers of at least three references. The review of applications and nominations will begin on 12 March 1990 and will continue until the position has been filled. Address correspondence to: **Chairman, Biology Search Committee, Muhlenberg College, Allentown, PA 18104-5586, c/o Barbara Spangler.** *Equal Opportunity Employer.*

UNIVERSITY OF SOUTH CAROLINA USC COASTAL CAROLINA COLLEGE MARINE BIOLOGIST

The School of Natural and Applied Sciences, Department of Marine Science, at USC Coastal Carolina College, is seeking applicants for a marine biologist. **ASSISTANT PROFESSOR.** Full-time, tenure-track position. Ph.D. required. Expertise in coastal and estuarine plankton ecology preferred. Responsibilities include teaching introductory marine science, marine biology, and specialty courses. The successful candidate will be expected to develop a research program which involves undergraduate majors. For additional information concerning this position, contact: **Dr. Richard F. Dame, Chair, Marine Science Department.** Position available 16 August 1990. USC Coastal Carolina College, the fastest growing 4-year campus of the University of South Carolina System, is located 9 miles west of Myrtle Beach. Each applicant should submit a letter of application, curriculum vitae, and names and phone numbers of three references, by 26 February 1990, to: **Dr. Janis W. Chesson, Assistant Chancellor for Human Resources and Affirmative Action, USC Coastal Carolina College, P.O. Box 1954, Conway, SC 29526.** *USC Coastal Carolina College is an Equal Opportunity/Affirmative Action Employer.*

ILLINOIS MATHEMATICS AND SCIENCE ACADEMY

"A Pioneering Educational Community"

The Illinois Mathematics and Science Academy seeks applications for faculty and staff positions for the 1990-91 school year. Applicants must have a proven record of exemplary performance.

The Illinois Mathematics and Science Academy was created in 1986 as a three-year public, residential school for Illinois students gifted in mathematics and science. The 1990-91 student population will total nearly 600. First year students must have completed the equivalent of ninth grade and enter the Academy to engage in a comprehensive, integrative program that is unique, challenging and rigorous.

The Academy provides an environment in which faculty, administrators, and staff are enabled to become academic entrepreneurs and students are nurtured and challenged as they fulfill roles as apprentice investigators. Teachers are expected to be exemplary in their discipline and teaching skills, committed to interdisciplinary approaches, and innovative. A minimum of a **Master's Degree** is required for faculty and administration. Anticipated position opening:

Chemistry

Applicants must be able to teach college level and advanced placement chemistry. Course emphasis is on student centered activities including experimentation, demonstrations, and problem solving.

Physics

A non-calculus based physics course using extensive laboratory opportunities for conceptual development; electronics course emphasizing laboratory experiences with op amps, transistors, and IC's.

Applications will be reviewed in the Spring with interviewing and hiring anticipated in June and July.

Applications available from:

**Connie Jo Hatcher
Assistant to the Director
Illinois Mathematics and Science Academy
1500 West Sullivan Road
Aurora, Illinois 60506**

"An Equal Opportunity Employer"



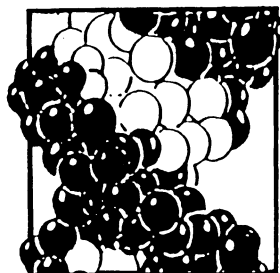
Ph.D. Wanted To Conduct Research in the Molecular Biology of Bacterial Cell Walls

Ph.D. in Biochemistry, Molecular Biology, or Microbiology, interested in working on challenging problems in the Molecular Biology of Bacterial Cell Walls in a young, expanding, Boston biotechnology company.

Please send resume to:

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211 Corporation Way
Medford, MA 02155



Research & Results

Senior Scientist Molecular Cytogenetics

In 1984, Integrated Genetics initiated a major research program devoted to the study of genetic disease.

In 1986, IG became the first commercial laboratory licensed to perform DNA-based testing for inherited disease.

In 1989, IG became the first fully integrated prenatal genetic testing laboratory by adding cytogenetic and biochemical testing to its extensive menu of DNA-based tests.

Research and results from IG - the comprehensive approach to prenatal genetic testing.

In this capacity, you will manage a research group devoted to the development of *in situ* hybridization-based diagnostics to detect chromosomal abnormalities. Your primary responsibility will be to ensure that clinical products are developed according to plan. You will be supported by a group with strong molecular biology and cytogenetic skills, although you will also interact with a more basic science research group utilizing the same technology. Candidates must possess 5-7 years of post-doctorate experience with areas of expertise encompassing nucleic acid biochemistry, fluorescent probes, and product development. Strong managerial skills a necessity; ability to interface with hardware developers desirable.

Integrated Genetics offers an excellent compensation and benefits package, including equity participation, a 401(k) Plan with a company match, tuition assistance and medical, dental, life and vision care insurance. For immediate consideration, please call us at 1-800-255-7357 and speak with Steve Grossman. Alternatively, please send your resume to: Director, Human Resources, Dept. 529, Integrated Genetics, One Mountain Road, Framingham, MA 01701.

An equal opportunity employer



Renovascular Pharmacology Research

Syntex, an international leader in the pharmaceutical and health care industry, has an immediate opening for a Renal Pharmacologist at our corporate headquarters located on the San Francisco Peninsula.

The individual we seek will be responsible for the day-to-day running of the Renovascular Department with responsibility for basic and applied research on the kidney and its role in cardiovascular homeostasis. The position also involves supervising a group of biologists investigating mechanisms of renal pathophysiology, both in-vitro and in-vivo.

The individual must have a PhD in Pharmacology or related field, with at least 2 years of post-doctoral

experience, as well as possessing the scientific expertise and techniques for evaluating the role of the kidney in the cardiovascular system, particularly from the standpoint of receptor-based pharmacological analyses. Considerable leadership ability in both basic research and drug discovery; and experience in assays investigating receptor mediated renal mechanisms is required.

Syntex offers a competitive salary, benefits and relocation package in campus-like surroundings. For immediate consideration, please send your resume to: Syntex, Professional Staffing, Dept. KH/PAC, 3401 Hillview Ave., Palo Alto, CA 94304. An equal opportunity employer.



Toxicologists

The Procter & Gamble Company has several entry-level staff toxicology openings to be filled before September, 1990. One of these is in Shelton, Connecticut at our Richardson-Vicks Division, and the others are in Cincinnati, Ohio. These positions require a Ph.D. degree, preferably in toxicology, with pharmacology, physiology, nutritional toxicology, or other life sciences being acceptable if the training or experience meets the needs of the openings.

These positions are in applied toxicology and involve the design, implementation, and interpretation of a breadth of toxicology studies culminating in risk assessments for new drug and non-drug products, chemicals, and product ingredients. These toxicologists will work with multi-disciplinary teams and interact with contract facilities, scientists outside the Company, and regulatory agencies at both state and federal levels.

Procter & Gamble is a world leader in the research, development, and manufacture of a wide variety of consumer products including those in the health, personal care, beauty care, and pharmaceutical areas. Sales last year were \$21.4 billion and the R&D budget was \$628 million.

We offer competitive salaries, a fringe benefits package in the top 5% of U.S. firms, and excellent opportunities for personal and professional growth.

Applicants must be presently authorized to work in the U.S. on a full-time basis and should send their resumes and publication lists to:

Dr. T. J. Logan
Toxicology Positions
THE PROCTER & GAMBLE COMPANY
P.O. Box 398707
Cincinnati, Ohio 45239-8707

Procter & Gamble is an EQUAL OPPORTUNITY employer.

Procter & Gamble

POSITIONS OPEN

GENETICIST. Tenure-track position available for individual to teach genetics and evolution. Competency in microbiology, molecular biology, or immunology desirable. Participate in biology course for nonmajors. Capable of directing student research. Send résumé, three references, and transcripts to: **Dr. C. H. Brueske, Department of Biology, Mount Union College, Alliance, OH 44601.** Review of applications will begin on 23 February 1990.

MEDICAL ONCOLOGIST THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER HOUSTON, TEXAS

Full-time position, **ASSISTANT/ASSOCIATE/PROFESSOR** level; Section of Gastrointestinal Oncology and Digestive Diseases. Board-certified or Board-eligible medical oncologist with interest in biological response modifiers and/or drug resistance for multidisciplinary section composed of gastroenterologists, medical oncologists, and basic scientists. Prefer individual with interest in laboratory research program. Competitive salary, excellent benefits. Send curriculum vitae to: **Bernard Levin, M.D., University of Texas M. D. Anderson Cancer Center, Box 78, 1515 Holcombe Boulevard, Houston, TX 77030.**

An Equal Opportunity/Affirmative Action Employer.

A pharmaceutical research company is recruiting a **MEDICAL RESEARCH TECHNICIAN** with at least 2 years of experience in tissue culture of vertebrate neuronal cells and expertise in enzymatic assays of neuronal toxicity. Applicants should be experienced in culturing cells from several different CNS regions. Bachelor's degree in biology required. Forty hours per week, Monday through Friday, 9:00 a.m. to 5:00 p.m.; 1 week of paid vacation per year. Salary: \$25,000 per year. Please contact: **Utah Job Service, 1234 South Main, Salt Lake City, UT 84101.** Telephone: 801-533-2208. Job Order #3953309.

MEDICAL/VETERINARY ENTOMOLOGIST

The Department of Entomology, Michigan State University, invites applications for an **ASSISTANT PROFESSOR**, 9-month, tenure-track position in medical/veterinary entomology, becoming available 1 May 1990. Responsibilities include conducting research and developing extension programs on the biology and management of arthropods of medical/veterinary importance. Experience dealing with mosquitoes and mosquito-borne diseases of humans and animals desirable, but not required. Teaching includes courses in medical/veterinary entomology and related areas. Requirements include a Ph.D. in entomology or related field with experience in medical and/or veterinary entomology. Person will be expected to interact with state, county, and local organizations in developing coordinated arthropod control programs. Send résumé, representative reprints, and statement of interests and career goals, with names of three references to:

**Dr. Richard W. Merritt
Chair, Search Committee
Department of Entomology
Michigan State University
East Lansing, MI 48824**

Target date for applications is 15 March 1990. *Michigan State University is an Equal Opportunity/Affirmative Action Employer.*

The Minneapolis University of Minnesota, Department of Psychiatry, seeks a **PSYCHIATRIST** to fill a faculty position as **ASSOCIATE PROFESSOR**. The position entails commitment to research and teaching. The successful applicant will share with other faculty members responsibility for one of several teams which treat hospitalized and nonhospitalized general psychiatric patients. Each team, in addition to treating patients, has the responsibility of training residents, medical students, and psychology interns. The teams may develop specialized treatment and research programs for particular psychiatric disorders. Applicants should have demonstrated interest and accomplishments in psychiatric research worthy of the associate professor level. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages women and minority applicants.* Send résumé to: **Elke Eckert, M.D., UMHCB Box 393, University of Minnesota Hospitals, Minneapolis, MN 55455** by 15 April 1990.

POSITIONS OPEN

MEDICAL RESEARCHER, CYTOPATHOLOGY. For northeastern Ohio Medical Research Center. Evaluates bowel pathology of children with inflammatory bowel disease (including immunochemical assay analyses). Correlates pediatric gastritis pathology with clinical features. Compares varied diagnostic techniques for *Campylobacter pylori* detection. Evaluates causal role of *C. pylori* in gastritis. Compares fine-needle aspiration and microcapillary suction cytology, and evaluates use of microcapillary suction for evaluation of hormone receptors in breast carcinomas. Establishes in situ hybridization immunochemical methods for study of cervical dysplasias and carcinomas. Must have M.D. degree; 2 years of experience in job described or 2 years of experience as fellow in cytology. Required experience must have included 6 months in fine-needle aspiration and microcapillary aspiration cytology, 6 months of clinical research, and 6 months of immunochemical and in situ hybridization techniques. Must have had papers published in scientific journals. Forty hours per week, 9 a.m. to 5 p.m.; \$23,940 per year. *Must have proof of legal authority to work permanently in the United States.* Send résumé in duplicate (no calls) to: **G. Maugans, JO# 1084504, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

MOLECULAR GENETICS

The Department of Molecular Biology and Genetics at the Johns Hopkins University School of Medicine has a position available at the **ASSISTANT PROFESSOR** level. Candidates of exceptional promise in the general research area of eukaryotic molecular biology and teaching are invited to apply by submitting their curriculum vitae, a brief statement of future research plans, and the names of three references to: **Dr. Thomas J. Kelly, Department of Molecular Biology and Genetics, The Johns Hopkins University School of Medicine, Baltimore, MD 21205.** *The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.*

PHYSIOLOGICAL PSYCHOLOGY/BEHAVIORAL NEUROBIOLOGY. The Department of Psychology at Georgia State University anticipates a tenure-track **ASSISTANT PROFESSORSHIP**, beginning 1 September 1990, with a joint appointment in the Department of Biology. Ph.D. in a relevant area and evidence of a strong independent research program required. Research area is open, but should broaden an emerging program in behavioral and neurobiology which has existing strengths in the neural/hormonal basis of mammalian regulatory behaviors. Teaching in relevant areas of psychology and physiology required. Send curriculum vitae, summary of research and teaching experience, and three letters of recommendation by 15 April 1990 to: **Behavioral and Neurobiology Search Committee, Attention: Dr. Walter Daves, Interim Chair, Department of Psychology, Georgia State University, University Plaza, Atlanta, GA 30303.** *Georgia State University, a unit of the University System of Georgia, is an Equal Educational Opportunity Institution and is an Equal Opportunity/Affirmative Action Employer (04522).*

PLANT TISSUE CULTURE RESEARCH

Twyford International, Inc., world-leader in development and commercialization of plant tissue culture systems, announces two immediately available positions in its expanding Contract Research Division. Those with industry experience are encouraged to apply. Excellent organizational and communication skills required.

RESEARCH SCIENTIST. Ph.D. in plant sciences and demonstrated experience in development of micro-propagation systems and in application of additional techniques such as embryo or anther culture. Successful applicant to assist in preparation of research proposals. Experience or training in agricultural engineering a plus.

RESEARCH ASSOCIATE. B.S. with experience, or M.S. in plant sciences. Experience with micropropagation system development and greenhouse production required.

Applicants should send curriculum vitae and names of three references to:

**Dr. Sharon L. Kurtz
Director, Contract Research
and New Business Development
Twyford International, Inc.
15245 Telegraph Road
Santa Paula, CA 93060**

POSITIONS OPEN

MOLECULAR NEUROPHARMACOLOGIST

Applications are being accepted for a molecular neuropharmacologist with an M.D. degree, 8 years of postdoctoral experience in neuropharmacology, and 5 of the 8 years working with molecular neurobiological approaches. Expertise in constructing and screening cDNA and genomic library, transfection of mammalian cells, primary culture of neuronal cells, and single channel current recording is required. Salary and academic appointment in the Department of Pharmacology are commensurate with qualifications. The position is located at the Fidia-Georgetown Institute for the Neurosciences (FGIN), Georgetown University Medical School, Washington, D.C. Send résumé to: **Director, FGIN, 3900 Reservoir Road, Washington, DC 20007.**

PHYSIOLOGIST. Faculty position available for general physiologist to teach medical physiology and work independently and/or collaboratively with other research/teaching faculty. Primary responsibilities: not more than 25% of time teaching medical students and at least 75% of time for research. Salary and academic rank open and commensurate with training, teaching experience, and grant track record. Please send curriculum vitae detailing teaching experience, research interests, and grant support information and the names of three references to: **Dr. Arnold L. Nagler, Associate Dean, Basic Sciences, New York College of Osteopathic Medicine, Old Westbury, NY 11568.** *Affirmative Action/Equal Opportunity Employer.*

PHYSIOLOGIST/PHARMACOLOGIST

Applications invited for tenure-track position at **ASSISTANT PROFESSOR** level; 11-month appointment. Good background in general physiology and pharmacology required for teaching in the professional program. Significant teaching experience desirable and demonstrated ability to conduct independent research required. Send curriculum vitae and names of three references by 30 March 1990 to: **Associate Dean Robert B. Supernaw, School of Pharmacy, University of the Pacific, Stockton, CA 95211.**

Equal Opportunity/Affirmative Action Employer.

PRODUCT MANAGER

A leading diagnostics company located in the Northeast needs an experienced product manager in its marketing department to manage an expanding line of infectious disease tests. The ideal candidate will have a degree in science, as well as sales and product management experience. Position offers attractive starting salary combined with AAA company-paid benefits. Please send résumé and salary requirement to: **Olympus Corporation, 4 Nevada Drive, Lake Success, NY 11042.** Attention: David Gibbons, Clinical Instrument Division.

PUBLIC INFORMATION COORDINATOR.

For scientific society in Philadelphia. Challenging position in public affairs and education for professional with excellent writing and communications skills. Responsibilities include liaison with scientists, government officials, lay persons, scientists, and the media. Some relevant experience preferred. Knowledge of biomedical science, media operations, congressional activities, or public relations helpful. Send résumé, writing sample, and desired salary range to: **P.O. Box 27097, Philadelphia, PA 19118.**

POSTDOCTORAL POSITION DEPARTMENT OF MEDICINE HARVARD MEDICAL SCHOOL

A postdoctoral position is available for a recent Ph.D. to join a multidisciplinary laboratory studying the control of blood cell differentiation, including the molecular biology and biochemistry of hematopoietic growth factors and their mechanism of action. Experience with molecular biological and/or protein biochemical techniques is required. Send curriculum vitae, statement of research interests, and names of three references to:

**Arthur J. Sytkowski, M.D.
Laboratory for Cell and Molecular Biology
New England Deaconess Hospital
Harvard Medical School
185 Pilgrim Road
BURL Building, 5th Floor
Boston, MA 02215**

THERE IS NOTHING SO STRONG AS THE RELATIONSHIPS THAT SUSTAIN LIFE.



Nourishment, protection, procreation. For the inhabitants of a Pacific Northwest Coast tide pool, these vital activities are rooted in a unique set of interdependent relationships. Relationships that allow each member to benefit from the strengths and resources of every other member in this delicate ecosystem.

Today, this same philosophy is bringing five Johnson & Johnson companies together to form a dynamic new research and development organization—the R.W. Johnson Pharmaceutical Research Institute (PRI).

The reason behind this initiative is simple. For Johnson & Johnson to continue as the world's health care products leader, we must make a firm and focused investment in the areas of drug discovery and development. And we're doing this by pooling the minds and resources of Ortho Pharmaceutical Corporation R&D, Cilag International Research Center, McNeil Pharmaceutical R&D, Ortho Biotech R&D and Johnson & Johnson Biotechnology Center.

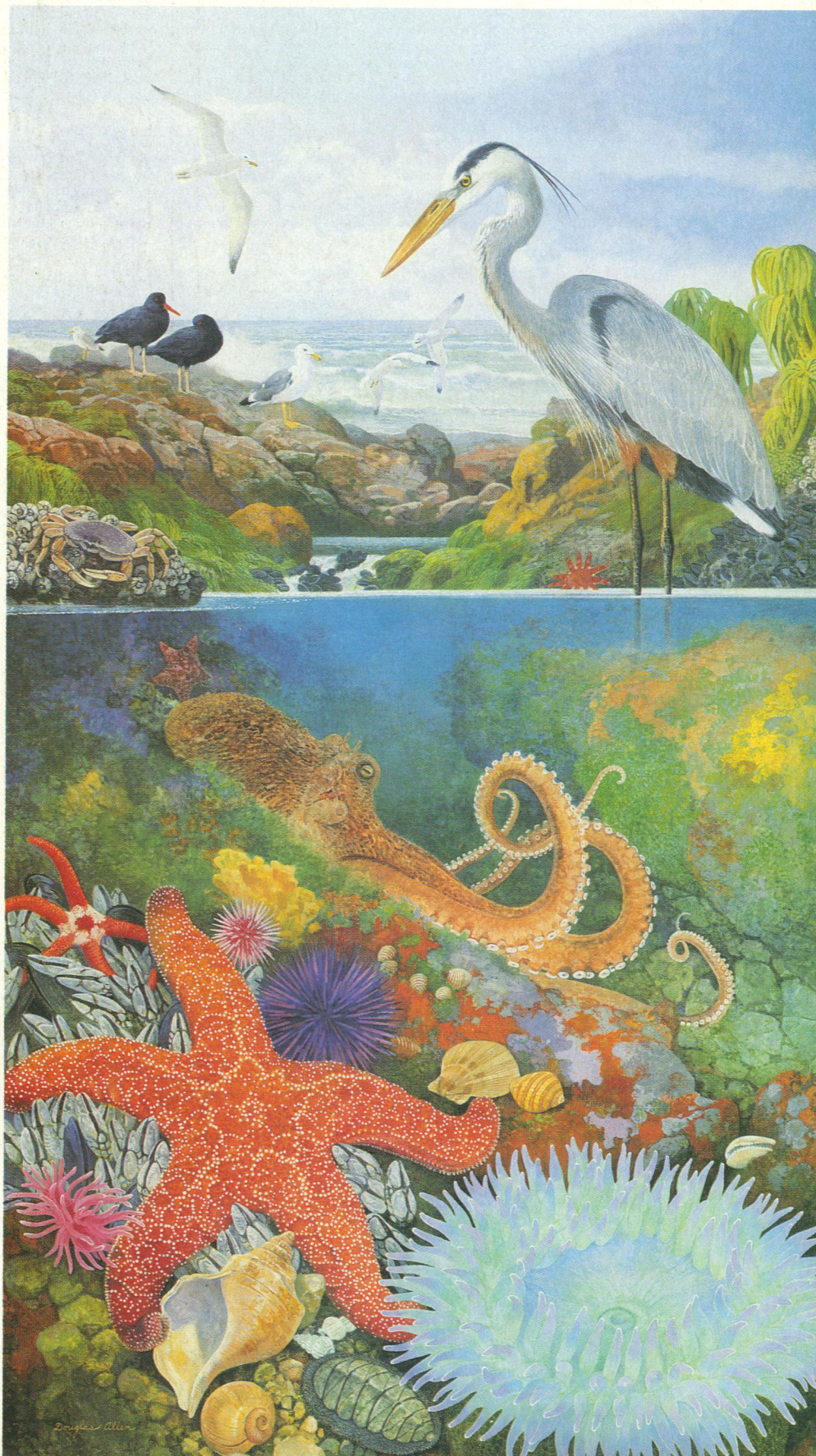
Together, we have the strength and mass to meet the challenges of today's competitive research environment. And by meeting these formidable challenges, we will establish PRI as one of the world's leading pharmaceutical R&D companies. To do this, we're continually seeking entry through senior level candidates to join us at one of our several sites in the following fields: pharmacy, biology, biochemistry, toxicology, immunology, chemistry, microbiology, biochemical engineering, pharmacology, pathology, statistics, nursing and medicine. Send your resume to: Selection Dept. SC-209, R.W. Johnson Pharmaceutical Research Institute, P.O. Box 300, Raritan, NJ 08869-0602.

An Equal Opportunity Employer M/F



R.W. JOHNSON
PHARMACEUTICAL
RESEARCH
INSTITUTE

La Jolla Zurich
Spring House Raritan Toronto



POSITIONS OPEN

A POSTDOCTORAL POSITION is available immediately to carry out research in the area of cytokines and tumor biology. Specific studies include elucidating the mechanisms involved in cytokine-tumor interactions and the use of cytokines to enhance chemotherapeutic efficacy. Excellent opportunity for growth and independent development in the active research group. Send curriculum vitae, research interests, and names of three references to: **Dr. Candace S. Johnson, Department of Otolaryngology, Division of Oncology and Immunology, University of Pittsburgh School of Medicine, 203 Lothrop Street, Pittsburgh, PA 15213.**

POSTDOCTORAL MOLECULAR BIOLOGY/VIROLOGY POSITION. Available to study cellular receptors for the coxsackie viruses. Experience in recombinant DNA techniques required. Experience in virology not essential. Competitive salary. Applicants should send letter of interest, curriculum vitae, list of publications, and the names and phone numbers of three references to: **Richard L. Crowell, Ph.D., Department of Microbiology and Immunology, MS 410, Hahnemann University School of Medicine, Broad and Vine, Philadelphia, PA 19102-1192.** Hahnemann University is an Affirmative Action Employer.

POSTDOCTORAL POSITION. At Long Island Jewish Medical Center, available now to study molecular and cellular mechanisms underlying the regulation of brain opioid systems after exogenous drug administration in the developing central nervous system. Experience with molecular biological techniques desirable, but willing to train. Salary commensurate with NIH pay scale and experience. Send curriculum vitae, names of three references, and a description of experience and career goals to: **Dr. Ann Tempel, Department of Psychiatry, Hillside Hospital, Division of Long Island Jewish Medical Center, 266th Street and 76th Avenue, Glen Oaks, NY 11004.** The Long Island Jewish Medical Center is the Long Island Campus for the Albert Einstein College of Medicine. *Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Position available for an individual with a Ph.D. and experience in molecular biology. The successful applicant will be engaged in research on the biochemical and molecular mechanisms by which angiotensin peptides and other hormonal and pharmacological stimuli mediate cardiac muscle cell growth. There will also be the opportunity to engage in research defining the role of a localized intracardiac renin-angiotensin system in mediating cardiac muscle cell growth, with an emphasis on the regulation of the precursor genes for this system. Competitive salary and fringe benefits are available. Please send curriculum vitae and three names or letters of reference to: **Dr. Kenneth M. Baker, Weis Center for Research, Geisinger Clinic, Danville, PA 17822.** *Equal Opportunity Employer.*

RESEARCH CHEMIST. A position is available in the Radiation Biochemistry Department at the Armed Forces Radiobiology Research Institute (AFRRI), Bethesda, Maryland. The field of research is chemical radioprotection and Ph.D. level applicants with the following experience/knowledge are preferred: radiobiology, radioprotection, animal models, endogenous protective systems, pharmacology/toxicology. Qualified candidates should send curriculum vitae or SF-171 to: **AFRRI, CPO, Attention: MSVA 002-89, Bethesda, MD 20814-5145.** For information, call: **Dr. Joseph Weiss, telephone: 301-295-1428.** *U.S. citizenship is required. AFRRI is an Equal Opportunity Employer.*

RESEARCH POSTDOCTORAL POSITIONS to study molecular mechanisms of autoimmune kidney disease. Applications are invited for postdoctoral research positions beginning in July of 1990 to study: (i) analysis of nephritogenic anti-DNA antibodies; (ii) the development of autoimmune B cell repertoires; (iii) usage of variable-region genes and autoantibodies; and (iv) interactional control of autoactive T cells repertoires and MRL/lpr mice. Experience in eukaryotic molecular biology and/or biochemistry is desirable. Send letter of application, curriculum vitae, and letters of reference to: **Dr. Michael Madaio, Associate Professor of Medicine, 700 Clinical Research Building, University of Pennsylvania, 422 Curie Boulevard, Philadelphia, PA 19104.** The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION: MOLECULAR BIOLOGY OF ONCOGENES. To study the role of proto-oncogenes in hematopoietic differentiation and the interrelationships of different oncogenes in cellular transformation. Prior training in molecular biology essential. Salary will be commensurate with experience and in accordance with NIH guidelines. Send curriculum vitae and names of three references to: **Edward V. Prochownik, M.D., Ph.D., Section of Hematology/Oncology, Department of Pediatrics, Room A514, Box 0624 MSRB, The University of Michigan School of Medicine, Ann Arbor, MI 48109.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION

This position requires a strong background in molecular technology with an interest in growth factor biology and/or gene regulation. A practical working experience in promoter function (transcription), mRNA stability, and translation initiation (post-transcription regulatory events), including the application of transgenic animal model systems to these studies, is necessary for consideration. Other areas of specialty should include protein localization, bFGF "secretory" release, and intracellular compartmentalization.

Interested candidates should send detailed curriculum vitae with a list of publications and have three letters of reference sent to:

**Robert Z. Florkiewicz, Ph.D.
Whittier Institute for Diabetes and Endocrinology
Department of Molecular
and Cellular Growth Biology
9894 Genesee Avenue
La Jolla, CA 92037**

POSTDOCTORAL RESEARCH POSITION. California Marine Mammal Center (CMMC). Rescue, rehabilitation, and research on marine pinnipeds. Begins September of 1990. Research on infectious diseases, diagnostic methods, and immune competence of marine mammals. Requires doctorate compatible with above research and supervisory and management skills. Send résumé, two references, and salary requirement by 30 March 1990 to: **Director, CMMC, Marin Headlands, Golden Gate National Recreation Area, Sausalito, CA 94965.** No phone calls. *Equal Opportunity Employer.*

RESEARCH ASSOCIATE. A position is available for an electrophysiologist to participate in a study of mechanisms of free radical damage in the hippocampal slice preparation. Prior experience with intracellular recording from mammalian neurons is desirable. Applicants should have a Ph.D. Send curriculum vitae and SF-171 to: **Dr. Terry Pellmar, Head, Neurophysiology Project, Physiology Department, Armed Forces Radiobiology Research Institute, Bethesda, MD 20814-5145.** Telephone: 301-295-1346. Please reference announcement number **AFRRI #5/89.** *U.S. citizenship is required. An Equal Opportunity Employer.*

RESEARCH ASSOCIATE. A position is available for a cell physiologist/biochemist to participate in a research project investigating the effects of cytokines, radiation-induced injury, and wound-healing on phagocytic leukocytes and/or endothelial cells. Techniques currently being used in this project include patch clamping and videoimaging techniques. Applicants should have a Ph.D. and postdoctoral experience. Send curriculum vitae and SF 171 to: **Dr. Elaine Gallin, Head, Cell Physiology Project, Physiology Department, Armed Forces Radiobiology Research Institute, Bethesda, MD 20814-5145.** Telephone: 301-295-0378. Please reference announcement number **AFRRI-007/89.** *U.S. citizenship is required. An Equal Opportunity Employer.*

RESEARCH SCIENTISTS ENVIROGEN, INC.

We have openings for B.S., M.S., and Ph.D. level scientists at a growing environmental biotechnology company in the Princeton area. Envirogen is developing advanced biotechnology-based processes for the control of hazardous waste problems. An educational background and experience in the environmental sciences, molecular biology, biochemistry, microbiology, or analytical chemistry is desired. *Envirogen is an Equal Opportunity Employer.* Send résumés to: **Department 1B, 3371 Route 1, Suite 203, Lawrenceville, NJ 08648.**

POSITIONS OPEN

Two **POSTDOCTORAL POSITIONS.** To begin in early summer of 1990, in a Harvard-affiliated center for reproductive medicine. One position will focus on NIH-funded studies of HIV expression in reproductive tract tissues and the other on developmental and genetic analyses of gametes and early cleaving embryos. Send brief statement of research goals, résumé, and names and addresses of two references to: **Dr. A. Kiessling, Faulkner Centre for Reproductive Medicine, 1153 Centre Street, Boston, MA 02130.**

REGULATORY AND CLINICAL AFFAIRS

Shiley, Inc., a subsidiary of Pfizer, is an international manufacturer of medical devices for the cardiovascular, cardiopulmonary, and critical care markets. We are presently seeking a clinical scientist and a regulatory affairs coordinator.

CLINICAL SCIENTIST. As part of the product development team, the selected candidate will be responsible for designing, coordinating, monitoring, and evaluating the results of clinical studies. To qualify you must possess a B.S. degree in biomedical sciences with 5 years of experience in clinical research for the medical device or pharmaceutical industry, or an M.S. degree with 3 to 5 years of related work experience, or a Ph.D. with 1 to 3 years of relevant work experience. Knowledge of FDA regulations pertaining to the use of investigational medical devices or drugs, experience in experimental design, and basic statistics are required. Knowledge of personal computers is a plus. Excellent verbal and written communication skills are essential. A willingness to travel is necessary.

REGULATORY AFFAIRS COORDINATOR. As a regulatory affairs coordinator you will act as a liaison between Shiley and government agencies to insure compliance with all applicable federal and state requirements pertaining to the submission of PMA's, IDE's and 510K notifications. Position requires a B.S. or higher degree in life or biomedical science. Minimum of 3 years experience in regulatory affairs, preferably with experience in related areas such as clinical affairs, labeling, and compliance. Other skills required include solid technical writing ability, strong oral communication skills, familiarity with basic statistical analysis, and computer knowledge.

At Shiley, Inc., you will enjoy an excellent salary and benefits package, a stimulating work environment, and opportunities for professional advancement. Please submit your résumé and salary history to: **Shiley, Inc., Department JF-R, 17600 Gillette Avenue, Irvine, CA 92714.** *We are an Equal Opportunity Employer.*

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE (USDA/ARS)

RESEARCH CHEMIST, GS-13/14/15, Dairy Management Unit, Logan, Utah. ARS is seeking a dairy colloidal chemist to: (i) examine milk composition and factors that may affect the stability of emulsions and milk protein; (ii) study the conformation of proteins on the surfaces of emulsions; (iii) examine effects of homogenization on protein structure, especially casein micelles; and (iv) study the behavior of proteins in heated casein micelles. *Candidates must be U.S. citizens and have a Ph.D. or equivalent doctoral degree in physical chemistry, food chemistry, or closely related fields plus:* (i) knowledge of mechanisms of reaction and behavior of emulsions and casein micelles during milk processing; (ii) knowledge of dairy food processing on milk protein structure; (iii) knowledge of surfactants and/or colloidal chemistry; (iv) knowledge of Ca ion concentration effects on emulsions and milk casein structure and function; (v) skill in HPLC/EPLC and amino acid analysis; and (vi) skill in light scattering devices (UV-VIS, fluorescence and infrared). Salary is commensurate with experience (\$55,381 to \$63,164). For information on the research program and/or position, contact: **Dr. David H. Clark, telephone: 801-750-3297.** For information on application procedures/forms, contact: **Ms. Julia Murchinson, telephone: 301-344-3138.** Applications must be received by 30 March 1990. Applications in response to this advertisement should be marked **RB-9W-072-0W-002** and addressed to:

**USDA, Agricultural Research Service
Personnel Operations Branch
Western Section, W09, Room 318
6305 Ivy Lane
Greenbelt, MD 20770-1435
An Equal Opportunity Employer**

**POSTDOCTORAL RESEARCH TRAINING
PROGRAM IN MOLECULAR GENETICS**

**UNIVERSITY OF PENNSYLVANIA
SCHOOL OF MEDICINE**

We are actively seeking applicants for a new postdoctoral program in molecular genetics designed to prepare physicians for careers in basic research. The program provides three uninterrupted years of research training in modern molecular genetics including regulation of gene expression, medical and population genetics, growth factor and receptor biology, molecular cytogenetics, developmental genetics and oncogenes. Fellows also participate in courses and seminars in the Molecular Biology Graduate Group. Primary consideration is given to M.D. applicants but qualified applicants with the Ph.D. or D.V.M. degree will be seriously considered. Applicants must be U.S. citizens or have permanent residency status as foreign nationals at the time of application. Individuals on temporary or student visas are not eligible.

For information, write to: Director, Postdoctoral Training Program, Department of Human Genetics, University of Pennsylvania, Room 475 Clinical Research Bldg., 422 Curie Blvd., Philadelphia, PA 19104-6145.

Applications should include an up-to-date curriculum vitae, a one page personal statement outlining research and career goals, and two letters of recommendation.

The University of Pennsylvania is an equal opportunity/affirmative action employer. Women and minorities are encouraged to apply.

Research Facility Manager

The University of Alabama is seeking a Research Facility Manager for the Tom Beville Research Building. This 145,000 square foot facility will house the research activities of geology, mineral engineering, and material science. With an emphasis on interdisciplinary research, the building includes an 8,000 square foot central analytical facility with state-of-the-art equipment. Additional features of the building are two clean rooms, a mine ventilation laboratory, and modular construction for flexibility.

The Research Facility Manager will manage budgets for the building and equipment, administer building policies, assist with securing external funds for building operations and functions, supervise technical staff, monitor operations of analytical equipment and building systems, schedule use of analytical equipment and building space, and coordinate building operations.

A Bachelor's degree in science or engineering is required and an advanced degree in one of these fields is preferred. Must have demonstrated experience in supervising the physical operations of a research facility and in managing personnel, including a scientific technical staff. Salary will be commensurate with experience. This position is a regular, 12-month appointment.

Applications must be received by April 1, 1990 with an anticipated appointment by May 1, 1990. Send a letter of application, vitae, and the names of three references to Dr. Pete Morley, Chairman, Department of Mineral Engineering, Box 870207, University of Alabama, Tuscaloosa, Alabama 35487.

The University of Alabama is an equal opportunity/affirmative action employer.

**ELEANOR ROOSEVELT
Institute**

**1990 SOMATIC CELL AND
MOLECULAR GENETICS
LABORATORY WORKSHOP**

The Eleanor Roosevelt Institute will again offer a Somatic Cell and Molecular Genetics Workshop, July 15-30, 1990. This NCI sponsored laboratory course provides a combined somatic cell and molecular biology workshop experience. The course has been designed to provide a "hands-on" introduction to the methodology and concepts of current molecular biology procedures for scientists who need to exploit these techniques for their continuing research programs. The content of this workshop also provides the basic techniques needed for researchers interested in initiating genome mapping studies. Included in the curriculum are: somatic cell hybridization and mutant isolation, yeast molecular biology, isolation and analysis of DNA and RNA, preparation and *in vitro* translation of polyadenylated mRNA, DNA-mediated gene transfer, PCR, pulse-field gel electrophoresis, DNA sequencing, Western, Northern, and Southern analyses, one and two-dimensional gel electrophoresis, and the preparation and screening of cDNA and genomic libraries. Principal investigators whose research interests focus on malignancy are particularly invited to apply. No registration fees are charged and a per diem stipend is provided. Interested individuals should request an application form by postcard from:

**Lawrence A. Beck, Ph.D., Program Director,
Somatic Cell and Molecular Genetics Work-
shop, Eleanor Roosevelt Institute, 1899 Gay-
lord Street, Denver, CO 80206.**

Completed applications must be received by
April 1, 1990. U.S. citizens or
Green Card holders only.

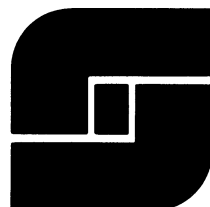
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RESEARCH SCIENTIST

Novel Drug Delivery Formulations

Position available for a scientist with a Ph.D. in pharmacology, biochemistry, biophysics, or polymer chemistry; familiarity with physical chemistry or immunology desirable. Research programs include development of controlled-release microcapsule formulations for the delivery of chemical and biological drugs and the formulation of topical, oral, and injectable doses. This position provides opportunity to collaborate with scientists in academic and industrial groups on conception, development, and execution of new research projects.

Located on a 20-acre complex and with a staff of over 600, Southern Research Institute is a diversified contract research organization in its fifth decade of operation. The Birmingham area, with a population of one million, offers a mild four-season climate, lower-than-average cost of living, diverse recreational and cultural opportunities and a variety of convenient housing alternatives. Send resume to **Tracy E. Higgins, Human Resources, Dept. 383, Southern Research Institute, P.O. Box 55305, Birmingham, AL 35255-5305.**

An Affirmative Action/Equal Opportunity Employer



NMR Applications Electrical Engineer

CIBA-GEIGY Pharmaceuticals Division is world renowned for its research and development of health protecting and life enhancing products. Much of this research is performed at our 100-acre headquarters complex in Summit, NJ. The Electrical Engineer we seek will support our scientific research team by maintaining and modifying high-field Nuclear Magnetic Resonance spectrometers and related equipment.

Responsibilities include designing specialized probes for in vivo NMR experiments, troubleshooting and improving high resolution and in vivo NMR systems, non-routine instrument modification and instrument maintenance. Candidate must have a BS/MS in Electrical Engineering. 3-5 years experience with RF systems and digital electronics is preferred. Experience in the field of NMR/MRI would be a distinct advantage. Candidate should possess an interest in the application of NMR spectroscopy to the discovery and evaluation of new therapeutic agents and a willingness to participate in a multi-disciplinary team environment.

CIBA-GEIGY offers competitive salaries, excellent benefits and opportunities for advancement. Please send resume and salary requirements to: **Al Aronson, Staffing Center, CIBA-GEIGY Corporation, Pharmaceuticals Division, Dept 352, 556 Morris Avenue, Summit, New Jersey 07901.** We Are An Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

CIBA-GEIGY

CLINICAL RESEARCH PHARMACOKINETICIST

Genentech, Inc., a leader in the field of biotechnology, has an immediate opening for a scientist in the Pharmacokinetic Section of our Safety Evaluation Division. This individual will interact with scientific personnel from all departments of the Company and will participate in the development of clinical pharmacokinetic strategies and clinical study activities.

We require a Ph.D. in Pharmaceutics, Pharmacokinetics or Pharmacological Sciences with 2-4 years' preclinical and clinical ADME industrial experience or a Pharm.D. with 3-5 years of clinical pharmacokinetic experience and publications. Clinical pharmacokinetic fellowship and macromolecule ADME experience preferred.

Genentech, Inc. offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For consideration, please send your C.V. to Human Resources Department JM, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. We actively support and promote affirmative action and equal employment opportunity. Women and minorities are encouraged to apply.

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New SUMMER INSTITUTE in JAPAN for U.S. Graduate Students in SCIENCE and ENGINEERING



The National Science Foundation (NSF) announces an opportunity for 25 select U.S. graduate students in science and engineering to spend the summer at Japanese government research laboratories.

The goals of the new Summer Institute in Japan program are to increase Americans' acquaintance with Japanese research institutions and to build relations between the U.S. and Japanese research communities. Those eligible are graduate students (U.S. citizens or nationals) who are enrolled at a U.S. institution in either a Ph.D. program (persons in M.D. programs are not eligible) or an engineering graduate program of which they have completed a year or more.

The 25 graduate students selected for this internship will spend the summer participating in on-going research projects at Japanese government laboratories in Tsukuba Science City, about 60 km northeast of Tokyo. The interns will also receive intensive Japanese language training and, through lectures, discussions, and occasional field trips, compare U.S. and Japanese culture, science policy, and the current status of selected fields of science and engineering. Graduate students travelling to Japan as interns in the

Summer Institute program will be in Japan for eight weeks from June 18 through August 8.

In all, 36 Japanese government research institutions are potential hosts for the Summer in Japan interns. They include such well known laboratories as the Electrotechnical Laboratory, National Institute for Environmental Studies, Mechanical Engineering Laboratory, National Institute of Agrobiological Resources, University of Tsukuba, the National Laboratory of High-Energy Physics (KEK), the National Institute for Research in Inorganic Materials, and the Tsukuba Life Science Center of the Institute of Physical and Chemical Research (RIKEN).

All application materials for the Summer Institute in Japan must be received in the Foundation by March 1, 1990. NSF welcomes applications from all qualified science and engineering graduate students, and strongly encourages women, minorities, and persons with disabilities to apply. Application materials may be obtained from the Dean of the Graduate School on many campuses or from NSF's Japan Programs Office, by calling (202) 357-9558, or through electronic mail to:

NSFJinfo@NSF (BitNet) or
NSFJinfo@note.nsf.gov (InterNet)

At Genetics Institute, you will be contributing to a company with the capabilities to research, develop and manufacture diverse pharmaceutical products. A high degree of innovation and an internal reputation for excellence have brought Genetics Institute to the forefront of biopharmaceutical research and development. We are seeking scientists with expertise in protein purification, and macromolecular structure to undertake projects involving the study of blood cell differentiation factors, thrombolytic agents and coagulation factors.

Protein Purification Group Leader

Suitable applicants will have a Ph.D. degree, a strong background in protein biochemistry and extensive experience and interest in protein purification. The position carries direct responsibility for developing procedures for purification of both bacterial and mammalian expressed proteins, up to the point at which clinical production commences. Beyond this point there will be ongoing responsibility for biochemical aspects of the large scale production process. It will be essential that applicants for this key position have an understanding of purification scale up and the ability to interact with personnel in other disciplines, especially engineering and production. There will also be considerable opportunity to interact with peptide and carbohydrate chemists, as well as cell biologists in exploring structure/function relationships of proteins of interest.

Carbohydrate Chemistry

We are currently seeking two Ph.D.'s and one Research Associate interested in pursuing structure/function studies of glycans in recombinant glycoproteins. The responsibilities of these positions include the isolation and structural characterization (primary through tertiary) of glycoconjugates and the assessment of the impact of glycosylation on the pharmacological and biological properties of recombinant proteins. The ideal candidates should have experience with NMR spectroscopy of biological macromolecules and/or mass spectrometry of glycoconjugates, although exceptional candidates with a strong background in chemistry, biochemistry, or analytical chemistry are encouraged to apply. Experience with HPLC or computer programming would be useful. All candidates should possess excellent written and oral communication skills and at least 1-2 years of laboratory experience.

Macromolecular Structure/Function

Scientist (Ph.D.) with experience in macromolecular structural analysis to undertake projects involving protein structure/function studies. The responsibilities of this position include the structural analysis of recombinant therapeutic proteins under development and the assessment of functionally important domains. The ideal candidate should have expertise in protein structural analysis using classical protein chemistry or spectroscopic techniques and an interest in pursuing protein structure/function studies. Candidates with backgrounds in chemistry, biochemistry, structural biology or receptor biology are encouraged to apply. This position offers the opportunity for extensive interaction with scientists from other disciplines (e.g., carbohydrate chemistry, purification, cell biology). Applicants must have excellent communication skills, a record of scientific leadership and accomplishment and appropriate Postdoctoral or industrial experience in macromolecular structural analysis or macromolecular structure/function.

Protein Stability/ Pharmaceutical Development


Genetics Institute's Pharmaceutical Development Department is undergoing expansion that includes the formation of a new Stability Group. This group will be responsible for designing, performing, and maintaining bulk and final product stability protocols in support of preformulation research, formulation development, INDs, PLAs, and marketed products. To develop the core of this new and vital group, we need to fill the following positions:

ANALYSTS – BS/MS in Analytical Biochemistry, Analytical Chemistry, Physical Biochemistry, Biochemistry, Chemistry or Pharmacy + 2-4 years. These individuals will be responsible for generating extremely reliable analyses of new protein pharmaceuticals being assessed for stability. They must be very good bench scientists who understand the significance or insignificance of variations in the analytical methods they will perform for proteins such as electrophoresis, chromatography, enzyme assays, and spectroscopy. They will also be responsible for instrument upkeep. Being familiar with how the nature of stability protocols change as product moves through the development pathway toward the marketplace is beneficial.

We offer a stimulating scientific environment in addition to a competitive salary and comprehensive benefits package including equity participation. Qualified applicants should forward a resume to Peter Lasky, Genetics Institute, One Burt Road, Andover, MA 01810-5901.

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Genetics Institute



We're putting a lot of thought into development.

The quest for memory-improving drugs is one of the most critical areas of medical research today. And Parke-Davis is once again in the forefront. At our pharmaceutical research laboratories in Ann Arbor, Michigan and Morris Plains, New Jersey, we're spending millions of dollars on research to help conquer today's fourth leading killer, Alzheimer's Disease.

But that's not all we're doing. Our \$200 million annual commitment to large-scale drug discovery is stronger than ever and spans 11 major therapeutic areas that include: anticancer agents, cardiovascular and respiratory diseases, and disorders of the central nervous system.

As dynamic world leaders in preclinical and clinical R&D, we're concentrating on speeding up the drug delivery process by applying the most sophisticated computerized technology and working hard to advance the state-of-the-art in CADD. Within our ultra-modern research environment, we encourage independent research, stimulate self-development and reward responsible risk-taking. Parke-Davis is where you can put your best ideas to work and make memorable contributions to the art of research.

Clinical Scientist

contributes to protocol design, budget negotiation and the identification of potential field investigators as well as in the monitoring of ongoing trials within the region for investigational drugs in all therapeutic categories. Successful candidates should possess the equivalent of graduate-level training (MS, PhD, Pharm D, etc.) in life sciences with a sound understanding of several therapeutic areas. Prior pharmaceutical industry experience, particularly in clinical research is highly desirable. Outstanding oral and written communication skills are essential.

Neuroscientist

the successful applicant will join an experienced multidisciplinary team of dedicated scientists working on novel treatments for human neurodegenerative diseases including Alzheimer's Disease. Candidates will possess a PhD in a neuroscience related field. Experience in assessment of the biological and molecular changes accompanying neuronal death and degeneration, excellent written and oral communication skills, and ability to work as part of a team are required. Preference will be given to candidates experienced with aberrant processing of neuronal proteins in the central nervous system.

Associate Scientist

responsible for the development and characterization of "in vivo" animal models of arthritis. The position requires a BS/MS degree with five years of post-college laboratory experience in the areas of bone/cartilage/connective tissue. Experience with histopathological and radiological techniques for the assessment of joint damage is essential. Surgical skills and experience working with small animals are desirable.

Biostatistician

involves working with physicians, designing experiments, analyzing data from clinical trials and preparing comprehensive statistical reports of the results. Candidates will possess a recent PhD or equivalent in statistics. Strong consulting and communication skills, and good working knowledge of a scientific computer language and/or the statistical package SAS are required.

To explore these opportunities, send your resume or curriculum vitae, in confidence, to: Mr. Robert Gaskin, Parke-Davis, 2800 Plymouth Road, Ann Arbor, MI 48105.

Senior Scientists

Atherosclerosis Pharmacologist

you will establish "in vivo" systems to test the efficacy of pharmacologic agents which interfere with lipid peroxidation. Successful candidate must have a PhD and 3-5 years' experience in the vascular response to oxidized lipoproteins. Must also possess an in-depth understanding and skills in "in vivo" methods for the physiological and/or biochemical assessment of oxidant injury. This includes various aspects of the immune response, production of free radicals, oxidant metabolism and protection from the untoward effects of lipid peroxidation in whole animals, with particular reference to vascular tissue and endothelium. Knowledge of lipid and lipoprotein metabolism is an added benefit.

Vascular Cell Physiologist

you will establish "in vitro" assays for the assessment of pharmacologic agents on SMC and endothelial cell function as it relates to the atherosclerotic process. Successful candidate must have a PhD and proficiency in the following areas:

culturing of SMC and endothelial cells; coculture systems; isolation and quantification of matrix components; characterization of SMC phenotype using biochemical, immunochemical, ultrastructural and potentially molecular biological techniques. Must also have expertise in tissue culture and an understanding of the role of smooth muscle cells and endothelial cells in the atherosclerotic process.

Interested candidates should forward a curriculum vitae to: Mr. Bill Burmeister, Human Resources, Parke-Davis Pharmaceutical Research, 2800 Plymouth Road, Ann Arbor, MI 48105.

Clinical Applications Programming Supervisors

direct the development of computer systems and procedures for processing and reporting clinical research data. Additional responsibilities include assuring systems validation and documentation, and developing/providing user training.

A BA/BS or MS in a scientific, mathematical, or computer-related discipline with a minimum of 5 years' experience in SAS programming and clinical trials research are required. You must also have IBM mainframe experience using MVS/TSO, OS-JCL, ISPF, LIBRARIAN, etc. Knowledge of relational database technology, especially ORACLE, is highly desired. Experience developing menu driven and other user-friendly systems interfaces would be considered helpful.

For consideration, please send your resume and salary requirements, in confidence, to: Ms. Remy Montalbo Young, Recruiting Specialist, Parke-Davis, 2800 Plymouth Road, Ann Arbor, MI 48105. We are an equal opportunity employer.

PARKE-DAVIS
Pharmaceutical Research Division Warner-Lambert Company

**WARNER
LAMBERT**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Vanderbilt University School of Medicine. Immediate position open for candidates with experience in protein engineering and a general knowledge of molecular biology. The efforts of the laboratory are directed at using molecular genetic approaches to study the properties and function of the 170,000-dalton, membrane-bound precursor to mature EGF. Project will involve the use of the baculovirus expression system for large-scale production of biologically active preproEGF and the various EGF-like domains encoded within the precursor. Interested applicants should send curriculum vitae and the names and addresses of three references to: **Dr. Barbara Mroczkowski, Vanderbilt University School of Medicine, Department of Biochemistry, 613 Light Hall, Nashville, TN 37232-1046. Telephone: 615-322-6346. FAX: 615-322-4349. An Equal Opportunity/Affirmative Action Employer.**

RESEARCHER. Research/analyze partial HD and EHD lubrication including calculation of Rough Surface temperature increase; research/develop ceramic components in automobiles, including constructing and improving test rigs; measuring wear rate/friction; calculate lubrication performance/contact stresses; measure surface topography; explore wear mechanisms of ceramics; observe motion of ceramic elements with high-speed photography. Ph.D. in tribology plus 2 years in job or 2 years as research assistant involving EHD lubrication required. Forty hours per week, 9 a.m. to 5 p.m.; \$26,049 per year. This is a university position. Send résumés to: **Illinois Department of Employment Security, 401 South State Street, 3 South, Chicago, IL 60605, Attention: Joan Sykstus, Reference #9919-S. An employer-paid ad.**

RESEARCH ASSOCIATE I. For Physiological Chemistry Department of central Ohio medical school. Conduct medical heart research by performing the following duties: (i) Isolate and stimulate single human heart muscle cells obtained from transplanted human hearts to measure changes in the free calcium present in the single cells during electrical stimulation using an IBM PC-AT; "Deltogo" software program; the Photon Technology International Deltascan Fluorescence system consisting of a Zeiss IM Fluorescence microscope, monochrometers, beam choppers, an FD 223 Electrometer, a Nicolet oscilloscope, and a Grass S-48 Stimulator; and a fura-2 fluorescence indicator. (ii) Calibrate the Photon Technology International Deltascan Fluorescence System using the most reliable method available for measuring free calcium within single human heart muscle cells. (iii) Construct and use double-barreled microelectrodes to measure changes in positive sodium ions during contractions of single heart muscle cells. (iv) Install and use video system to detect the edges of human heart muscle cells and to measure their contraction and relaxation under electrical stimulation. (v) Write and present technical papers based on research results. (vi) Remain on call 24 hours daily to accommodate the unpredictable supply of transplanted human hearts available for research. No experience required. Requirements: Ph.D. in biophysics, biochemistry, or physiology. Degree must include 2 years of graduate-level research experience in cardiac electrophysiology and cardiac muscle mechanics. Must have published at least three scholarly articles in professional medical, bio-medical, or biophysical journals with the subject of such articles being heart research. Forty hours per week, 8 a.m. to 5 p.m., Monday to Friday; \$22,630 per year. *Must have proof of legal authority to work permanently in United States.* Send résumé in duplicate (no calls) to: **S. Holton, JO# 1213908, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

VERTEBRATE PHYSIOLOGY/ANATOMY. An entry-level, tenure-track position at the ASSISTANT PROFESSOR level to begin August of 1990. Ph.D. or M.D. is required. Teaching responsibilities will include both undergraduate anatomy and physiology plus upper-level courses in related areas. The development of an active research program and the direction of graduate students is required. Application review will begin on 15 March 1990 and continue until the position is filled. Submit curriculum vitae, transcripts, and three letters of recommendation to: **Dr. Robert Daniel, Chairman, Search Committee, Department of Biological Sciences, Murray State University (MSU), Murray, KY 42071. MSU is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE, IMMUNOHEMATOLOGY. Position available for a research associate in immunohematology, encompassing the following duties: Assesses morphology and surface characteristics of red blood cells, role of sex hormones, and related autoimmune diseases in relation to therapy, and delineates mechanisms of action and prognostic value. Monitors red blood cell membrane resistance to lysis and osmotic fragility by laboratory techniques. Performs nuclear labeling and Fc receptor-mediated immune clearance using autologous red blood cells coated with anti-D and labeled with technetium. Minimum education requirements: B.S. in natural sciences (such as biology, physics, medical sciences, etc.). Minimum experience: 1 year in job offered or related occupation. Salary: \$21,348 per year, for 5-day, 40-hour work week. Résumés only to: **Job Service of Florida, 701 S.W. 27th Avenue, Room 15, Miami, FL 33135. Ref. Job Order #FL 0217139.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP IN DIVISION OF HEMATOLOGY. Project involves the molecular biology of duplicated globin gene expression in a mouse model, including cloning and sequencing, gene expression in transgenic mice, and transient expression assays. M.D. or Ph.D. required; molecular biology experience preferred. Send curriculum vitae and references to: **Blanche P. Alter, M.D., Division of Hematology, Box 1079, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIP IN INVERTEBRATE ZOOLOGY

The California Academy of Sciences seeks applications for a postdoctoral fellowship in systematics and evolutionary biology of noninsect, recent invertebrates. The position is available 1 June 1990 and continues through 31 December 1991. Applicants must have received a Ph.D. in an appropriate discipline and have demonstrated expertise in the systematics of one or more taxonomic groups of invertebrates and the curation of museum collections.

The successful applicant is primarily responsible for conducting original research in an appropriate specialty and is expected to assist in the curation of the collection and in a variety of educational activities of the institution.

Applicants should send curriculum vitae, research proposal, and the names and telephone numbers of three references to: **Dr. Terrence M. Gosliner, Director of Research, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118, to be received by 31 March 1990.**

The academy is an Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP

The Cutaneous Lymphoma Group of the Department of Dermatology of the University of Pennsylvania is offering a postdoctorate fellowship in molecular biology.

Research will focus on the study of T-cell receptor and proto-oncogene expression in cutaneous T-cell lymphomas with the emphasis in the development of molecular diagnostic techniques for clinical application. Other areas of ongoing research include the development of in vitro systems, the study of cytokine expression, and multiple drug resistance in cutaneous T-cell lymphomas.

Our laboratory has experience in DNA and RNA isolation, nucleic acid hybridization, molecular cloning, DNA sequencing, gene mapping, cell culture, polymerase chain reaction technology, and in situ hybridization.

The Cutaneous Lymphoma Group interacts with the Department of Pathology, the University Cancer Center, and the Wistar Institute and provides a unique and dynamic environment for scientific growth and development. Persons with experience in molecular biology and/or immunology are preferred.

Send curriculum vitae to:

**Stuart R. Lessin, M.D.
Cutaneous Lymphoma Group
Department of Dermatology
University of Pennsylvania
2 Maloney Building
36th and Spruce Streets
Philadelphia, PA 19104
FAX: 215-243-5715**

The Department of Dermatology of the University of Pennsylvania is an Equal Opportunity Employer.

FELLOWSHIPS

POSTDOCTORAL FELLOW

Position available 1 March 1990 to carry out research on regulation of cellular defense mechanisms, including glutathione enzymes, catalase, GSH-peroxidase, and GSH-S-Transferases. Salary depends on experience. Send letter and curriculum vitae to: **Mahin D. Maines, Ph.D., Dean's Professor of Toxicology in Biophysics, University of Rochester School of Medicine, Box BPHYS, 601 Elmwood Avenue, Rochester, NY 14642.** The University of Rochester is an Equal Opportunity Employer.

RESEARCH FELLOWSHIPS IN ENDOCRINOLOGY

The Endocrine Research Unit, Mayo Clinic, has openings in an NIH-funded postgraduate training program for qualified M.D. and Ph.D. candidates. Eight NIH-supported faculty and six adjunct faculty are involved in studies of diabetes, lipid and intermediary metabolism, bone/calcium metabolism, and thyroid. The programs provide excellent training experiences in state-of-the-art laboratories investigating molecular, cellular, and organ-level endocrinology. NIH stipends are supplemented according to standard Mayo policy, and the training period can last up to 3 years. Interested individuals should contact:

Norman L. Eberhardt, Ph.D.
4-407 Alfred
Mayo Clinic
Rochester, MN 55905
Telephone: 507-285-6554

Mayo is an Equal Opportunity Employer. Candidates must be U.S. citizens or permanent residents.

INTERNATIONAL CANCER RESEARCH FELLOWSHIP

The Hayashibara Foundation, a nonprofit organization within the Hayashibara Group, announces a fellowship program. Fellowships will be taken up at the Fujisaki Cell Center, which is devoted to basic and applied research related to the problems in human cancer. The fellowship is normally made for 1 year and is renewable for up to 5 years. The fellowship will be expected to commence within 6 months of the announcement of the awards. No fixed deadline for application is set throughout the year. The awards are for high-quality research work in one of the three categories described below:

- Fundamental leukemia-lymphoma research
- Cytokine-lymphokine research
- Hematopoietic cell lines

Qualified persons who hold a Ph.D., M.D., or equivalent qualifications should request additional information and application forms from: **Jun Minowada, M.D., Director, Fujisaki Cell Center, 675-1, Fujisaki, Okayama 702, Japan.**

COURSES AND TRAINING

REPRODUCTIVE BIOLOGY TRAINING PROGRAM. Pre- and postdoctoral positions are available at the Oregon Health Sciences University (OHSU) and at the Oregon Regional Primate Research Center (ORPRC) that are supported by an NICHD training grant beginning 1 July 1990. Students may enroll in the graduate program through the Departments of Physiology or Cell Biology and Anatomy, OHSU, and may participate in interdisciplinary graduate programs in neurobiology or cell and molecular biology. Eighteen faculty members offer multidisciplinary training in neuroendocrinology, biology of the gonads and reproductive tract, gamete biology and fertilization, pregnancy and fetal development, cellular mechanisms of hormone action, sexual behavior, and reproductive toxicology. Applicants must meet *NRSA, U.S. citizenship, and residency requirements*. Predoctoral candidates can receive information on the graduate programs from the address below. Postdoctoral candidates should send a letter of interest, curriculum vitae, and names of three references to: **John A. Resko, Ph.D., Chairman, Department of Physiology, Oregon Health Sciences University, Portland, OR 97201-3098.** Minorities and women are encouraged to apply. OHSU and ORPRC are Equal Opportunity/Affirmative Action Employers.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP VIROLOGY/IMMUNOLOGY OF AIDS

The Department of Microbiology and Immunology, the Department of Internal Medicine, and the Arizona Cancer Center are seeking a postdoctoral fellow to participate in their laboratory research program on AIDS. The major thrust of the program is to characterize the human immune response to HIV through the development of human anti-HIV monoclonal antibodies. Our laboratory has developed human neutralizing and enhancing monoclonals. Approaches will include neutralization and enhancement assays, epitope identification, use of the SCID mouse model, development of immunotoxins, and study of mechanism at the molecules level. Candidate should have a Ph.D. in microbiology and/or immunology. Training and experience in virology is preferred. Interested candidates should apply and include their curriculum vitae and bibliography and three letters of reference to:

Evan M. Hersh, M.D.
Arizona Cancer Center
1501 North Campbell Avenue
Tucson, AZ 85724
Telephone: 602-626-2250

The review of applications will continue until the position is filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

IMMUNODERMATOLOGY POSTDOCTORAL FELLOWSHIP position in the Department of Pathology, University of Michigan, immediately available to study the role of adhesion molecules (LFA-1 and ICAM-1), chemotactic factors (IL-8, MCAF, IL-1), and their modulatory cytokines (IFN-, TNF-) in lymphocyte-keratinocyte and monocyte-keratinocyte interactions. Studies will be conducted both in vitro and in vivo with the primary disease focus being psoriasis.

Send curriculum vitae to: **Dr. Brian J. Nickoloff, Departments of Pathology and Dermatology, University of Michigan, M4232 Medical Science I, 1301 Catherine Road, Ann Arbor, MI 48109-0602.**

ARNOLD RESEARCH FELLOWSHIPS

The Arnold Arboretum of Harvard University announces the availability of fellowship appointments (Putnam or Mercer Fellowships or Arnold Arboretum Associate positions) of variable, renewable duration for specific research projects utilizing the landscapes (335 acres) or the library (250,000 volumes), herbarium (2,600,000 specimens), and living (5,000 taxa) collections of the Arnold Arboretum. The number of awards each year will depend upon the availability of funds. Applications should include a letter of introduction briefly describing the proposed project and prior contacts with Harvard staff or faculty, and a résumé listing three references. Send to: **Dr. Robert E. Cook, Director, Arnold Arboretum, 125 Arborway, Jamaica Plain, MA 02130.**

POSTDOCTORAL FELLOW. A position is available immediately to study the structure and hormonal control of eukaryotic genes. The NIH-funded projects involve in vivo and in vitro experiments to delineate mechanisms by which androgenic steroids regulate expression of specific genes in the target tissues. Applicants must have a Ph.D. or an M.D. degree and experience with recombinant DNA and protein purification techniques. Send curriculum vitae and names and addresses of three references to: **Dr. Olli A. Janne, Associate Division Director, Center for Biomedical Research, The Population Council, 1230 York Avenue, New York, NY 10021.**

U.S. DEPARTMENT OF AGRICULTURE (USDA) NATIONAL NEEDS PREDOCTORAL FELLOWSHIPS in the area of food science (chemistry, engineering, microbiology, processing, toxicology) or nutritional sciences (biochemical nutrition, clinical nutrition, nutritional toxicology). Stipend: \$15,000 per year for 3 years. Candidates who are U.S. citizens with B.S. or M.S. degree, outstanding academic record, and excellent GRE scores will be considered. Send curriculum vitae, transcripts, and three letters of recommendation to: **Dr. Cheng-i Wei, Food Science and Human Nutrition Department, University of Florida, Gainesville, FL 32611-0163.** Deadline: 30 May 1990.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS IN NEW DRUG DEVELOPMENT

Pfizer Pharmaceuticals is offering fellowships in the areas of microbiology, infectious diseases, pharmacology, pharmacokinetics, and toxicology, to provide training and management experience in the clinical and nonclinical development of anti-allergic, cardiovascular, CNS/analgesic, and anti-infective drugs. Two awards will be given annually. Applicants must have a Ph.D., M.D., or Pharm.D., and no more than 1 year of non-industry postdoctoral experience as of 1 July 1990. The application deadline is 1 May 1990. For further information and application materials contact:

**Fellowship Program in New Drug Development
Department of Clinical and Scientific Affairs
Pfizer Pharmaceuticals
235 East 42nd Street
New York, NY 10017
Attention: Evan A. Stringer, Ph.D.
Telephone: 212-573-7984**

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Opening Lecture: F. Fonnum (Kjeller, Norway)

TUESDAY, MAY 22

Main Lecture: P. Andersen (Oslo, Norway)

"Electrophysiology of EAA Receptors": D. Lodge (London, U.K.); M.V.L. Bennet (New York, NY); G.L. Collingridge (Bristol, U.K.); J.A. Kemp (Harlow, U.K.); M.L. Mayer (Bethesda, MD); J. Dudel (München, F.R.G.)

"Anatomy of the EAA Mediated Neurotransmission": J. Storm-Mathisen (Oslo, Norway); A.B. Young (Ann Arbor, MI); F. Conti (Ancona, Italy); D.T. Monaghan (Omaha, NE); P. Streit (Zurich, Switzerland)

"Medicinal Chemistry": P. Krogsgaard-Larsen (Copenhagen, Denmark); R. Pelliclari (Perugia, Italy); P. Anderson (West Point, PA); P.L. Ornstein (Indianapolis, IN); A.P. Kozikowski (Pittsburgh, PA)

WEDNESDAY, MAY 23

Main Lecture: T. Curran (Nutley, NJ)

"Endogenous Ligands and Modulators": J.T. Coyle (Baltimore, MD); F. Moroni (Florence, Italy); M.P. Hayes (Bethesda, MD); R. Schwarcz (Baltimore, MD); T. Stone (Glasgow, U.K.); A. Plaitakis (New York, NY)

"Molecular Biology of EAA Receptors": E. Barnard (Cambridge, U.K.); S. Zukin (Bronx, NY); S.F. Heinemann (San Diego, CA); V.I. Teichberg (Rehovot, Israel); R.J. Wenthold (Bethesda, MD)

"Isosteric and Allosteric Modulators": S. Vicini (Washington, DC); P.L. Wood (St. Louis, MO); R. Dingledine (Chapel Hill, NC); R.J. Miller (Chicago, IL); K. Reymann (Magdeburg, D.D.R.)

FRIDAY, MAY 25

Main Lecture: P.N.R. Usherwood (Nottingham, U.K.)

"Excitotoxicity": D.W. Choi (Stanford, CA); A. Guidotti (Washington, DC); M. Schramm (Washington, DC); A. Schousboe (Copenhagen, Denmark); A. Lehmann (Göteborg, Sweden)

"Signal Transduction": J. Bockaert (Montpellier, France); J.T. Wroblewski (Washington, DC); V. Gallo (Rome, Italy); J. Garthwaite (London, U.K.); H. Sugiyama (Okazaki, Japan)

"EAA and Drug Action": T. Honoré (Soeborg, Denmark); J.H. Woods (Ann Arbor, MI); G. Fagg (Basel, Switzerland); I. Hanbauer (Bethesda, MD); J. Moerschbacher (New Orleans, LA)

SATURDAY, MAY 26

Main Lecture: B.S. Meldrum (London, U.K.)

"Ischemia and Trauma": N.H. Diemer (Copenhagen, Denmark); R.P. Simon (San Francisco, CA); R.N. Auer (Calgary, Canada); A. Baethmann (München, F.R.G.); A. Hamberger (Göteborg, Sweden); A. Leon (Abano Terme, Italy)

"EAA Memory and Learning": B.J. McCabe (Cambridge, U.K.); R.G.M. Morris (Edinburgh, Scotland); M.F. Bear (Providence, RI); T.V.P. Bliss (London, U.K.)

"EAA and Epilepsy": A. Chapman (London, U.K.); U. Heinemann (Köln, F.R.G.); K.Q. Do (Zurich, Switzerland); R. McDonald (Ann Arbor, MI); J.W. Geddes (Irvine, CA)

For further information contact:

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