#### **Products & Materials**

### Software for Three-Dimensional Graphics

Graftool 2.1, the latest version of a powerful interactive scientific and engineering three-dimensional graphics program, can generate and analyze hundreds of variants of 12 widely used graphs with simple menu commands. Significant new features include multicolored curves and surfaces with a Zvalue color map which permit the use of color to indicate value ranges for greater clarity; Greek and math symbols; and threedimensional to two-dimensional projections. Graftool 2.1 runs on any IBM PC, XT, AT, or 386-compatible. It requires PCor MS-DOS 3.0 or higher, 640K random access memory, a hard disk, and graphics capability. 3-D Visions. Circle 474.

#### **Cell Processing Membranes**

The asymmetric 0.8-µm Fluoro Series membranes allow large macromolecules such as antibodies and viruses to be readily fractionated from cell broths with minimal or no diafiltration. Produced from pure polyvinylidene fluoride, the membranes do not support bacterial or fungal growth. They are highly resistant to many aliphatic and chlorinated solvents, halogens, oxidants, and strong acids. Their smooth surface minimizes fouling from cell entrapment, a primary contributor to flow-rate decay. An interstitial pore structure prevents fouling beneath the surface, where plugging can occur in conventional symmetric microporous membranes. Filtron Technology Corp. Circle 479.

## Growth Chamber Speeds Vapor Diffusion

The MVD/24 Crystal Growth Chamber is a 24-chamber vapor diffusion plate that can be totally sealed with a Mylar sheet. All chambers can be sealed simultaneously and

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.





accessed individually without disturbing the other wells. Each cup in the chamber has been designed to provide the maximum surface area for free diffusion during equilibration. The reservoir solution is held within a narrow moat surrounding the support post. Compatible with robotic crystallization systems, the design is stable and prevents splashing if the chamber is transported. Charles Supper Co. Circle 475.

### **Biological Safety Cabinet**

SterilchemGARD is an exhaust biological safety cabinet for microbiological studies, cell culture, and pharmaceutical studies. It aids in the control of airborne particulate contaminants, including microorganisms and chemicals. Both the downflow and intake air are totally exhausted from the cabinet. Because this 100% exhaust feature permits no recirculation, the cabinet may be useful for some work that generates small amounts of chemical vapors and gases, thus broadening its range of applications. SterilchemGARD exceeds the minimum standards for class II, type B2 cabinets, as defined by National Sanitation Foundation standard 49. The Baker Co. Circle 487.

### Microscope Workstation for the Apple Macintosh

The BioVision multimode microscope imaging workstation for the Apple Macintosh computer is designed for cell, developmental, and molecular biology. The system integrates in one package the optical, mechanical, and computer hardware and software components essential for doing fluorescence, dark-field, polarized light, phasecontrast, interference, and bright-field microscopy. BioVision provides total microscope automation, including computer-controlled xy stage positioning, filter wheel and shutter control for both excitation and emission optical paths, z-axis control for automatic focusing, automated filter cube, analyzer, and camera port control. Perceptics. Circle 512.

#### **Microdialysis** Probes

Microdialysis probes for stereotaxic implantation in the brain and other tissues of laboratory animals can be used for such applications as microsampling of extracellular fluids, drug delivery studies, and analysis of bioreactors. The probes have an outside diameter of 310  $\mu$ m. Available membrane lengths are 2, 3, and 4 mm. Tekmat Corp. Circle 525.

#### Literature

Radiation Detectors is a revised short-form catalog covering a full range of gas-filled radiation detectors. TGM Detectors. Circle 501.

Amersham's 1989/90 Catalog lists more than 2000 products for a variety of disciplines, including molecular biology, immunology, protein synthesis, electrophoresis, biomedical research assays, peptide and growth factor assays, and autoradiography. Amersham. Circle 502.

Methodologies for Allozyme Analysis Using Cellulose Acetate Electrophoresis is a handbook that provides practical guidelines in allozyme analysis. The handbook contains notes from researchers at the University of Windsor on their use of cellulose acetate for genetic and evolutionary studies. Also included are instructions for performing electrophoresis, stain and buffer recipes, information on enzyme systems and gel interpretation, and references. Helena Laboratories. Circle 505.

The Cell Culture User's Guide to Mycoplasma Detection and Control contains sections on mycoplasma basic technology, effects of mycoplasmas on cell cultures, testing methods, and suggestions on detection and prevention. Bionique Laboratories. Circle 506.

Eppendorf Micro Centrifuges is a brochure describing the new Model 5402, which spins heat-sensitive samples at temperatures as low as  $-9^{\circ}$ C. Also featured is Model 5415C, with a variable-speed motor and a safety lock to prevent operation when the centrifuge is open. Brinkmann Instruments. Circle 509.

The 1990 Research Instrumentation Catalog, a 360-page publication from a leading company in nuclear research instrumentation, describes an extensive line of electronic instruments. LeCroy. Circle 548.

## 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 ABBREVIA-TIONS. 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.

quired for all foreign ads. Purchase orders required for all other advertising. To ESTIMATE ad cost, structure ad copy on a 52character line; include any desired heading on 32character 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 x \$41 = approximate cost of ad, per week. (This is an approximate cost OLY. 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**

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. Temporary position, possibly renewable, beginning August 1990, for geneticist capable of teaching microbiology and introductory biology at a mid-sized Catholic liberal arts college with six biology faculty. Ph.D. required. Experience in undergraduate teaching desirable. Send résumé, complete with transcripts and three letters of reference, by 1 March 1990 to: Gerald J. Koppes, Director of Human Resources, Loras College, Dubuque, IA 52004–0170. An Affirmative Action/Equal Opportunity Employer.

#### ASSISTANT PROFESSOR OF TOXICOLOGICAL SCIENCES

The Division of Toxicological Sciences of the Depart-ment of Environmental Health Sciences, The Johns Hopkins University (JHU) School of Hygiene and Public Health, is seeking to fill tenure-track positions at the ASSISTANT PROFESSOR level in the areas of environmental biochemical/molecular toxicology, neurotoxicology, and immunotoxicology. Candidates should have a background in toxicology and/or pharmacology and at least 2 years of postdoctoral experience. The successful candidates will be expected to develop a vigorous, grantsupported research program using modern cellular, bio-chemical, and molecular approaches to studies on the mechanisms of toxicity and to participate in the teaching activities of the division. It is desirable that the research interests and activities of the candidates complement those of others within the division which include: hepatotoxicity, hepatocarcinogenesis, cancer chemopreven-tion, free radical-mediated toxicity in lung and bone marrow, mechanisms of ototoxicity, neural receptor sig-nal transduction, toxicant effects on lymphokine production, and immune function assessment. Other areas of toxicology would also be considered. Send curriculum vitae, the names of three references, and a brief summary of current research activity and future research plans to: James D. Yager, Director, Division of Toxicological Sciences, JHU School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205. The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

#### ASSISTANT PROFESSOR POSITION DIVISION OF CHILD PSYCHIATRY

The Division of Child Psychiatry and Child Development, Department of Psychiatry and Behavioral Sciences at Stanford University School of Medicine, seeks a child psychiatrist to participate in its research, clinical, and teaching programs in pervasive developmental disorders. We are especially interested in expanding our emphasis on molecular neurobiology; in particular, how genes regulate the development and function of the central nervous system (CNS). We have an active and established program in molecular neurobiology of CNS receptors and enzymes and a strong collaborative effort in molecular genetics in severe developmental disorders. We seek a child psychiatrist with experience in molecular biology to interact with existing academic programs and to develop research and clinical programs in autism and related developmental disorders. The position requires an M.D. and Board eligibility/certification in child psy-chiatry. Candidates should have an advanced or equivalent training/experience in molecular biology, molecular neurobiology, or molecular genetics, and have a demon-strated interest in and commitment to research, teaching, and clinical service in pervasive developmental disorders This is a tenure-track position at Stanford University at the assistant professor level. Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates. Applicants should forward curriculum vitae and the names of three referees within 4 weeks of the date of publication of this advertisement to: Dr. Roland Ciaranello, Chairman of the Search Committee, c/o Department of Psychiatry and Behavioral Sciences, Stanford Medical Center, Stanford, CA 94305–1028.

#### **POSITIONS OPEN**

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#### UNIVERSITY OF MANITOBA FACULTY OF DENTISTRY

#### ASSISTANT/ASSOCIATE PROFESSOR

Applications are invited for a tenure-track position at the rank of **ASSISTANT OR ASSOCIATE PRO-FESSOR** beginning 1 July 1990 in the Department of Oral Biology, Faculty of Dentistry, University of Manitoba. The department is responsible for teaching basic biological sciences, together with related areas in dentistry, to undergraduate, graduate, and dental hygiene students. Oral biology has active M.Sc. and Ph.D. programs and members of the department conduct research into connective tissues, mechanisms of cell secretion, endocrine function, salivary physiology, microbial ecology and metabolism, and cranio-facial morphometry. Applicants should be trained in biochemistry and/or cell biology. The successful applicant will be expected to teach components of integrated courses in oral biology and to pursue an active research program in her/his area of expertise. Salary and academic rank commensurate with qualifications and experience. Applicants should have a Ph.D. degree.

Both women and men are encouraged to apply. In accordance with Canadian immigration laws, priority will be given to Canadian citizens or permanent residents.

Applicants should submit their curriculum vitae and an outline of their research goals, and arrange for three letters of reference to be sent to: Dr. G. H. Bowden, Professor and Head, Department of Oral Biology, Faculty of Dentistry, University of Manitoba, 780 Bannatyne Avenue, Winnipeg, Manitoba, Canada, R3E OW2. Deadline for applications is 1 April 1990.

#### EAST TENNESSEE STATE UNIVERSITY

ASSISTANT PROFESSOR in Department of Microbiology for Ph.D. molecular biologist. Research experience and applications in regulation of gene expression required. Department strengths: cytokines, regulation of cell function, regulation of viral genes, and microbial pathogenesis. Applicants must apply molecular biology techniques to one or more of these areas, must establish/maintain independent and collaborative research programs, and teach medical and graduate students. Nontenure-track position. Competitive salary, start-up funds, location in geographically desirable area. Send curriculum vitae, statement of research interests, and three reference letters to: Dwight W. Lambe, Jr., Ph.D., Chairman, Department of Microbiology, James H. Quillen College of Medicine, East Tennessee State University (ETSU), Box 19,870A, Johnson City, TN 37614. ETSU is an Equal Opportunity/Affirmative Action Employer.

#### ASSISTANT, ASSOCIATE, OR FULL PROFESSOR PHYSICIAN-SCIENTIST IN CARDIOVASCULAR RESEARCH

Research position is open on the staff of the Department of Vascular Cell Biology and Atherosclerosis Research for an M.D. or M.D./Ph.D. interested in some aspect of lipoprotein metabolism, pathophysiology of atherosclerosis, diabetes, peripheral vascular diseases, or thrombosis/hemostasis. The successful applicant will be expected to establish an independent research program and form collaborative ties with both basic researchers in the research institute and full-time physicians in such clinical departments as endocrinology, pathology, hematology, cardiology, cardiac surgery, or vascular diseases. The extent of involvement with patient care is negotiable. The available position offers a stimulating and supportive environment for career growth, competitive salary, excellent fringe benefits, new laboratory facilities, and substantial funds for relocating or establishing a research effort.

The Cleveland Clinic Foundation employs over 700 full-time physicians with diverse expertise. The research institute consists of nine departments with more than 150 biomedical scientists including pre- and postdoctoral trainees. Applications accepted immediately. Send curriculum vitae, statement of research interests, and names of at least three references to: Paul E. DiCorleto, Ph.D., Department of Vascular Cell Biology and Atheroscherosis Research, FF4, Cleveland Clinic Research Institute, 9500 Euclid Avenue, Cleveland, OH 44195.

The Cleveland Clinic Foundation is an Equal Opportunity Employer.

ASSISTANT PROFESSOR. Candidates must have at least 2 years of postdoctoral training using neurophysiological techniques to study central monoamine systems in whole brain, slice, and cell culture preparations. Expertise in pharmacology, biophysics, and the techniques of patch clamping, electrochemical identification, and anatomical tracing desirable. The candidate would be expected to work in a collaborative setting where basic neuroscience findings are integrated with behavior, both normal and abnormal. Submit curriculum vitae, description of future research program, and three letters of reference by 15 March 1990 to: Benjamin S. Bunney, M.D., Department of Psychiatry, Yale School of Medicine, 25 Park Street, Room 619, New Haven, CT 06519. Yale University is an Equal Opportunity/Affir-mative Action Employer and applications from women and minority group members are specifically invited.

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 in-terested 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 sta-ble 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/ASSOCIATE PROFESSOR ION TRANSPORT

The Hospital for Sick Children Research Institute wishes to hire an individual with research interests in ion transport. Preference will be given to applicants with an interest in epithelial cells and/or electrophysiologic expertise. Applicants should submit curriculum vitae, a brief statement of their research interests, and names of three references to: Dr. Hugh O'Brodovich, Director, Respiratory Research, Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, Canada M5G 1X8. Deadline: 15 March 1990.

The University of Chicago, Department of Anthropology, invites applications for a potential appointment to physical anthropology. Specialty is open, though prefer-ence will be given to individuals whose research interests complement those already present within the depart-ment. Persons at an advanced ASSISTANT PROFES-SOR OR ASSOCIATE PROFESSOR level are especially encouraged to apply. Individuals with active pro-grams will be viewed most favorably. Send curriculum vitae and addresses of references by 1 June 1990 to: Chair, Department of Anthropology, University of Chicago, 1126 East 59th Street, Chicago, IL 60637. Equal Opportunity/Affirmative Action Employer

#### ASSOCIATE SCIENCE ADVISER

A Washington, D.C.-based national trade organization seeks a versatile biologist or chemist with a background in the medical sciences and at least 3 years of experience beyond the completion of a doctorate. The ideal candidate also will possess (or be willing to acquire) good skills with computers, data evaluation, information management, statistics, and verbal communication. The work presents a significant opportunity for someone who wants to obtain experience and credentials in regulatory toxicology and epidemiology, to make a transition from direction from laboratory research to analysis. The salary can be as high as the mid-\$50,000's with excellent fringe benefits. Send a brief cover letter, curriculum vitae, list of publications, and names of four references (with telephone numbers and addresses) to: Denise F. DeMan, President, Bench International Search, Inc., 116 North Robertson Boulevard, Suite 503, Los Angeles, CA 90048

#### **POSITIONS OPEN**

#### ASSISTANT PROFESSOR **BIOLOGY DEPARTMENT** WILLIAMS COLLEGE

Tenure-track position beginning July 1990 for a proadly trained **BIOLOGIST** with strong interests in both teaching and research. Development of a research program capable of obtaining extramural funding and involving undergraduate students is expected. Normally, faculty members teach one course and two laboratory sec tions each semester. Ability to teach in one or more of the following areas is desired: molecular endocrinology, com-

Parative physiology, immunology, cellular physiology. Ph.D. required, postdoctoral experience desirable. Please send curriculum vitae, statement of teaching and research interests, and three letters of reference by 15 February 1990 to: Chairman, Search Committee, De-partment of Biology, Williams College, Williamstown, MA 01267

An Equal Opportunity/Affirmative Action Employer. Williams College especially welcomes applications from women and minority candidates.

#### ASSISTANT/ASSOCIATE PROFESSOR MEDICAL MICROBIOLOGY

The St. Louis College of Pharmacy invites applications for a full-time (9-month), tenure-track position in micro-biology starting fall of 1990. Applicants should possess a Ph.D. in microbiology with special interest in medical microbiology. Responsibilities include teaching courses in microbiology and immunology for pharmacy students and a survey course for nursing students. Send curriculum vitae, graduate transcripts, and names, addresse and telephone numbers of three references by 1 March 1990 to: Dr. R. J. Cooper, Director, Division of Biological Sciences, St. Louis College of Pharmacy, 4588 Parkview Place, St. Louis, MO 63110. An Equal Opportunity Employer.

Lewis and Clark College invites applications for 1-year sabbatical replacement position for a biochemist at the level of VISITING ASSISTANT PROFESSOR to begin September 1990. A Ph.D. and commitment to teaching and undergraduate research are essential. Successful teaching and research experience are preferred. Teaching responsibilities include the two-term biochemistry sequence, including laboratories, and a science course for nonmajors. Our ACS-approved department is well equipped with modern biochemical instrumentation and a 300-MHz NMR.

All applicants should send a letter of application, curriculum vitae, (unofficial) undergraduate and graduate transcripts, and letters from three references by 1 March 1990 to: Professor James Duncan, Chair, De-partment of Chemistry, Lewis and Clark College, Portland, OR 97219. Affirmative Action/Equal Opportunity Employer.

#### CELL BIOLOGIST YALE UNIVERSITY SCHOOL OF MEDICINE

The Department of Cell Biology, Yale University School of Medicine, is accepting applications for tenure-track positions at the ASSISTANT, ASSOCIATE AND PROFESSORIAL levels with a flexible starting date. The department's new laboratory facilities will enable us to expand and complement our existing strong research base. Candidates with an interest in developmental biology; regulation of cell growth and differentiation; interactions between the extracellular matrix, membranes, and cytoskeleton; organelle biogenesis and traf-ficking; and image analysis at the light and electron microscopic levels are encouraged to apply. It is anticipated that successful candidates will establish indepenpared that successful caloldares will establish indepen-dent, externally funded research programs. The depart-ment requires teaching of cell biology and histology to medical students and supervision of our graduate stu-dents. Candidates must hold the Ph.D. or M.D. degrees and have at least 2 years of postdoctoral experience. Applicants should submit curriculum vitae, statement of research and teaching interacts and names of three

of research and teaching interests, and names of three references to:

Dr. James D. Jamieson, Chairman Department of Cell Biology Yale University School of Medicine 333 Cedar Street New Haven, CT 06510-0082

Yale University is an Equal Opportunity/Affirmative Action Employer.

#### **POSITIONS OPEN**

ASSISTANT/ASSOCIATE PROFESSOR The Department of Pathology and Laboratory Medicine at The Medical College of Pennsylvania (MCP), Philadelphia, is recruiting for three tenure-track positions to work with a multidisciplinary cancer research group. The successful candidate is expected to have or to develop an independent research program and to collaborate with other members of the group. Candidates must have an M.D. or a Ph.D. degree. Preference will be given to individuals whose research involves the molecular basis of tumor genes and gene products, growth factors and receptors, or tumor cell interactions with the host matrix. Salary and rank are competitive and commensurate with rank and experience. Candidates should submit curriculum vitae and summary of research interests to:

#### Barbara F. Atkinson, M.D. Professor and Chairman Department of Pathology and Laboratory Medicine Medical College of Pennsylvania 3300 Henry Avenue Philadelphia, PA 19129

Three letters of recommendation should be sent directly by the referees to the above address. MCP is an Affirmative Action/Equal Opportunity Employer.

AQUATIC ECOLOGIST, ASSISTANT OR AS-SOCIATE PROFESSOR. A tenure-track research po-sition (70% research, 20% teaching, 10% service) is available at the University of Oklahoma Biological Stazion, with academic appointment in the Department of Zoology. The successful candidate will be expected to establish a strong research program in residence at the biological station, to complement ongoing faculty research in biology/ecology of reservoir and/or stream organisms. Completed Ph.D. is required. Postdoctoral research experience, quality publications, strong quanti-tative and computer skills, and demonstrated ability to attract research funding are desirable. Forward curriculum vitae, reprints, description of research interests, and four letters of recommendation to: Dr. Loren G. Hill, Director, University of Oklahoma Biological Station, Kingston, OK 73439. Screening of applicants will begin 20 February 1990 and continue until the position is filled. The University of Oklahoma is an Affirmative Action/Equal Opportunity Employer. Qualified women, mi-norities, and disabled persons are encouraged to apply.

#### BIOLOGY

ASSISTANT PROFESSOR, microbiology. Applications are invited for a tenure-track position in the Department of Biology beginning in fall of 1990. The candidate should have a Ph.D. in microbiology or related area, be familiar with latest bio-instrumentation, have a strong commitment to undergraduate teaching, and have a desire to develop a research program with undergradu-ates. Teaching responsibilities include a course in microbiology and one in instrumentation, involvement in the introductory biology program, and possible involvement in human anatomy lab.

Applicants should submit a letter of application, curiculum vitae, description of research interests, tran-scripts, and three letters of reference by 30 March 1990 to: Martha A. Farver-Apgar, Director of Personnel, Elizabethtown College, One Alpha Drive, Elizabeth-town, PA 17022. Affirmative Action/Equal Opportunity Employer.

BIOLOGY TEACHING POSITION. The Biological Sciences Interdepartmental Program and the Department of Microbiology at North Carolina State Uni-versity (NCSU) invite applications for a 9-month, ten-ure-track position at the ASSISTANT PROFESSOR level. Principal duties will involve lecturing to large classes, student advising, and other assigned teaching duties in multisection introductory biology courses and microbiology classes as appropriate. Requirements in-clude a Ph.D. in microbiology, a broad background in the biological sciences, and demonstrated effectiveness in communicating with large classes. The person selected will be expected to develop a productive research pro-gram in microbiology. Send curriculum vitae, statement of research goals, statement of teaching experience and potential to work in the described program, undergradu-ate and graduate transcripts, and three letters of recom-mendation before 28 February 1990 to: Dr. Charles F. Lytle, Coordinator, Biological Sciences Interdepart-mental Program, Box 7611, NCSU, Raleigh, NC 27695–7611. NCSU is an Affirmative Action/Equal Opportunity Employer.

#### CELLULAR AND MOLECULAR PHYSIOLOGY THE UNIVERSITY OF IOWA COLLEGE OF MEDICINE

Applications are invited for openings to be filled at the ASSISTANT, ASSOCIATE, or FULL PROFES-SOR level. Applicants should have a strong record of research accomplishment utilizing molecular biology, cell biology, protein chemistry, or electrophysiology. While we are particularly interested in individuals studying mechanisms of signal transduction, structure and func-tion of membrane proteins, and regulation of gene expression, quality of research and ability to complement existing strengths in molecular endocrinology, mem-brane biology, and cellular neurophysiology are of primary importance. Substantial start-up funds for equip mary importance. Substantial start-up tunds for equip-ment, personnel support, and supplies are available. Excellent opportunities exist for participation in estab-lished thematic interdisciplinary programs. Rank and salary will be based on academic and research record. Minimum requirements include Ph.D. or M.D. degree and 2 years of relevant postdoctoral training. Applicants should send curriculum vitae, a statement of research interests and plans, representative publications, and names and addresses of at least three references. Screening will begin 1 March 1990.

Dr. Kevin Campbell Chairman, Cellular and Molecular Physiology Search Department of Physiology and Biophysics Howard Hughes Medical Institute The University of Iowa College of Medicine Iowa City, IA 52242

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

THE UNIVERSITY OF THE WEST INDIES ST. AUGUSTINE, TRINIDAD

Applications are invited for the following vacancies: **COOLOGY**: (i) **CHAIR**, all major disciplines will be considered; (ii) **SENIOR LECTURER/LECTURER**, entomologist. CHEMISTRY: SENIOR LECTURER/LECTUR-

ER in physical chemistry with expertise in spectroscopy.

Annual salary ranges: chair, TT\$91,788 to 111,372; senior lecturer, TT\$69,180 to 86,352; lecturer, TT\$54,708 to 77,604. Pensions, passages, housing al-lowances, study and travel grant, etc. Send applications naming three referees and detailing qualifications and experience as soon as possible to: Registrar, The Uni-versity of the West Indies, St. Augustine, Trinidad, West Indiae, Everyther particulars sent to all applications West Indies. Further particulars sent to all applicants.

The University of Queensland, Brisbane, Australia, invites applications for the CHAIR IN ANATOMY which will be made available by the retirement of Professor G. S. Molyneux. Applicants must have an outstanding record of research in a relevant field of anatomy such as cell biology, neurobiology, embryology and reproduc-tive anatomy, functional anatomy, and comparative anatomy. This should be supported by a distinguished record The appointee will be expected to a distinguished record to provide leadership in the scholarly activities of the department, particularly in the promotion of high stan-dards and encouragement of research and postgraduate dards and encouragement of research and postgraduate studies. The appointee will be offered the opportunity to assume headship of the department with a first term of office on commencement of duty, thereafter according to the administrative rules of the university. The department maintains a wide range of interactions with other departments in the biological and health sciences and contributes to undergraduate and postgraduate teaching in the Faculties of Science, Medicine, Dentistry, and Veterinary Science. For further information, please con-tact: Professor C. J. Hawkins, Pro-Vice-Chancellor (Biological Sciences), telephone: 07-377-2384. The salary for a professor is A\$65,837 per annum. Supersalary for a professor is A\$65,837 per annum. Super-annuation, access to special studies programs, and as-sistance with relocation costs are provided. Application forms and further details may be obtained from: Appointments (37430), Association of Common-wealth Universities, 36 Gordon Square, London WC1H OPF, England. Please forward an original plus copies of application and résumé to: The Director, Personnel Services, The University of Queensland, St. Lucia 4067, Australia, by 2 March 1990. Reference No. 58789. Equal Opportunity in Employment is univer-sity policy. sity policy.

2 FEBRUARY 1990



### NATIONAL UNIVERSITY OF SINGAPORE DEPARTMENT OF PHYSIOLOGY

Applications are invited for teaching appointments in the Department of Physiology.

Candidates should have a PhD or equivalent degree and have at least two years of postdoctoral experience in one of the following areas

(a) aspects of cellular and molecular physiology related to the regulation of cell growth and differentiation; (b) mechanism of action of hormones and hormone antagonists

The appointee will be expected to develop an independent research programme in his own area of interest and be able to teach at undergraduate and postgraduate levels.

Gross annual emoluments range as follows:

Lecturer	S\$50,390	_	64,200
Senior Lecturer	S\$58,680	-	100,310
Associate Professor	S\$88,650	-	122,870
(US\$1 00 = S\$1.94 approximately)			

The commencing salary will depend on the candidate's qualifications, experience and the level of appointment offered. In addition, appointees with a basic medical degree and an approved higher academic/ professional qualification may opt to retain consultation fees up to 60% of their annual gross salary or to receive a fixed annual allowances as follows:

Lecturer	
Senior Lecturer	
Associate Professor	

\$\$6,000/9,000 S\$15,000 S\$21,000

Leave and medical benefits will be provided. Depending on the type of contract offered, other benefits may include: provident fund benefits or an end-of-contract gratuity, a settling-in allowance of \$1,000 or \$2,000, subsidised housing at nominal rentals ranging from \$100 to \$216 p.m., education allowance for up to three children subject to a maximum of \$\$10,000 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore.

Applications forms and further information on terms and conditions of service may be obtained from:

The Director Personnel Department National University of Singapore 10 Kent Ridge Crescent Singapore 0511

The Director North America Office National University of Singapore 55 East 59th Street New York, N.Y. 10022, U.S.A. Tel: (212) 751-0331

Enquiries may also be sent through BITNET to PERSDEPT @ NUSVM, or through Telefax: (65) 7783948

## Scientist **Drug Metabolism**

SmithKline Beecham Pharmaceuticals, a worldwide leader in pharmaceutical research, is seeking a scientist to conduct basic and applied research programs directed at understanding

mechanisms of metabolism of novel therapeutic agents, in vitro
the effects of novel therapeutic agents on cytochrome P450 and other drug metabolizing enzymes.

The position offers substantial opportunity for collaboration with other scientists involved in the discovery and development of novel therapeutic agents. As part involved in the discovery and development of novel therapeutic agents. As part of multi-disciplinary project teams, the scientist will be expected to provide the drug metabolism perspective to fellow research scientists. Since the scientist will assume a high degree of project related responsibility, the position will also draw heavily upon individual scientific initiative, independence and innovation. Excellent interpersonal and communication skills are critical. Publication and presentation of research findings are strongly encouraged.

All positions require a Ph.D. in Biological or Chemical Sciences and a working knowledge of state of the approaches to in vitro drug metabolism studies. Additional experimental experience with purified isozymes of cytochrome P450 is preferred. Experience in bioanalytical methods development including HPLC and GC and in analysis of drugs and their metabolites in biologic fluids is required.

Based in a state of the art research facility in suburban Philadelphia near Valley Forge, PA, SmithKline Beecham provides a stimulating, collegial atmosphere with extensive scientific resources available to each scientist. We offer an attractive compensation/benefits/relocation package. For confidential review, please forward your CV to Liz McKendry, L-113, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.



#### DEAN OF SCHOOL OF GRADUATE STUDIES AND ASSOCIATE VICE PRESIDENT FOR RESEARCH WRIGHT STATE UNIVERSITY

As the chief executive officer of the School of Graduate Studies, the dean develops and maintains quality gradu-ate education and related outreach programs for Wright State University, a metropolitan university with over 17,000 students including more than 3,400 graduate and professional students, master's degrees in most disci-plines, and 4 doctoral degrees. The dean shares responsibility of appropriate standards for existing graduate-level programs, including new and continuing accreditation. The dean also facilitates graduate student recruitment, graduate admissions and records, and graduate fellowship programs. The dean, who reports to the vice president for academic affairs, represents the university to the Ohio Board of Regents regarding all graduate studies and research programs. As associate vice president for research, the dean represents the university to external constituencies on matters regarding research and economic development of the metropolitan area. Wright State now ranks third among state universities in Ohio with over \$12 million in external funding for research and sponsored programs. The dean initiates and reviews all policies related to the School of Graduate Studies, of the Office of Research and Sponsored Programs, and leads and works closely with Graduate and Research Councils in the area of policy development. Qualifications include an earned doctorate; teaching, research, and service accomplishments commensurate with a tenured faculty appointment at the rank of professor; a proven record of scholarly activity; extensive experience in gar-nering external research support; a commitment to research and graduate education; evidence of strong managerial skills; ability to negotiate with government agen-cies, businesses, and industry; interest in applications of research through technology transfer; and strong inter-personal skills to deal effectively with diverse groups. Screening begins on 1 March 1990, for position available 1 July 1990, and continues until position is filled. Salary negotiable. Include a statement expressing candidate's philosophy of graduate education and research, a résumé, and the names, addresses, and telephone numbers of five references. Search Committee will request letters of reference. Send nominations and applications to: Dr. James E. Brandeberry, Chair of Search Committee, College of Engineering and Computer Science, Wright State University, Dayton, OH 45435. Wright State University is an Equal Opportunity/Affirmative Action Employer.



#### WRIGHT STATE UNIVERSITY DAYTON, OHIO 45435

DEPUTY DIRECTOR OCEAN DRILLING PROGRAM TEXAS A&M UNIVERSITY

The Ocean Drilling Program at Texas A&M University invites applications for the position of deputy director. Applicants should have an earned doctorate, preferably in the field of marine geology and geophysics. In addition to distinguished research accomplishments, including seagoing experience on research vessels, the successful applicant should possess exceptional qualities of leadership and interpersonal skills, as well as extensive experience in scientific management.

The position requires interaction with senior level scientists and engineers from the world's principal earth and ocean science institutions and government agencies, embassy personnel, and U.S. funding agencies in the conduct of a major international earth science program.

The position will also present the opportunity for strong interaction at the departmental level within one of the departments (Geology, Geophysics, or Oceanography) of the College of Geosciences at Texas A&M University.

Letters of application should include a résumé with three references and be forwarded to:

Supervisor of Personnel Ocean Drilling Program Texas A&M University 1000 Discovery Drive College Station, TX 77843

Texas A&M University is an Equal Opportunity/Affirmative Action Employer.

#### **POSITIONS OPEN**

CELL CULTURE TECHNICAL CORE DIREC-TOR. Ph.D. to supervise a cell culture core facility at the University of Pennsylvania. Candidates should have at least 5 years of experience with cell culture including growth of a variety of cell lines, quality control of media and sera, and mycoplasma testing, as well as experience in directing laboratory personnel and ordering of supplies. Knowledge of computers and business administration would be advantageous. Send résumé to: Dr. Roger Kennett, University of Pennsylvania, 475 Clinical Research Building, Philadelphia, PA 19104–6145. Equal Opportunity/Affirmative Action Employer.

#### 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/PMN) 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; 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 SCIENCE.** Huxley College of Environmental Studies, Western Washington University (WWU), will fill two tenure-track positions in environmental science, with special emphasis on Pacific Northwest watershed studies. Ph.D. required; rank open. Position (i): half-time administrative duties as director, Institute of Watershed Studies; half-time teaching duties. Position (ii): full-time teaching position. Persons with specializations in terrestrial or aquatic ecological systems encouraged to apply. Seek effective teachers and scholars with interdisciplinary orientation. Applicants for director position should have record of successful administration. Send letter of application; curriculum vitae; copies of representative publications; John Miles, Dean, Huxley College, Western Washington University, Bellingham, WA 98225. Applicants should specify which position sought. Review of applications commences 2 March 1990, and will continue until positions are filled, fall of 1990. WWU, through Affirmative Action goals, seeks candidates to augment diversity of the faculty in teaching and scholarship. Women and minorities are encouraged to apply. WWU is an Affirmative Action/Equal Opportunity Employer.

#### 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. Mettlers Road, CN 2350 East Millstone, NJ 08875-2350 Equal Opportunity Employer M/F/H/V.

#### **POSITIONS OPEN**

#### JOHN BARDEEN ENDOWED CHAIR IN ELECTRICAL AND COMPUTER ENGINEERING AND PHYSICS COLLEGE OF ENGINEERING UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

The College of Engineering at the University of Illinois is seeking nominations and applications for the John Bardeen Endowed Chair in Electrical and Computer Engineering and Physics sponsored by the SONY Corporation.

The successful applicant must be a distinguished scientist who has attained international recognition and who has also demonstrated a commitment to excellence in teaching.

The funds for the endowed chair will provide funding for advanced research in the many fields of electrical and computer engineering and physics, and also cover facilities and specialized course development, experiment acquisition, and compensation for staff and assistants. The candidate selected as the holder of the chair shall

The candidate selected as the holder of the chair shall receive a joint appointment to the Department of Electrical and Computer Engineering and the Department of Physics, and will hold the chair for the length of his or her tenure at the University of Illinois. The salary is negotiable. Proposed starting date is August 1990.

Nominations or applications and requests for further information should be directed to:

Professor Jiri Jonas, Chairperson Search Committee for the Bardeen Chair University of Illinois 108 Noyes Laboratory 505 South Mathews Avenue Urbana, IL 61801 Telephone: 217-333-0710

Applicants should submit curriculum vitae, with a list of publications. Nominations and applications should be received by 15 April 1990 in order to receive full consideration.

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

#### 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. Wallack, 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.

FACULTY POSITION. Biologist, Ph.D. Teaching responsibilities include introductory biology, cell biology, and microbiology in a 4-year, Christian, liberal arts college in the Presbyterian tradition. Send curriculum vitae and statement of teaching and research interests to: Dr. Gregory D. Jordan, Acting Dean of the Faculty, King College, Bristol, TN 37620. King College is an 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 PRO-FESSOR** 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 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.

#### FACULTY POSITIONS MOLECULAR, CELLULAR AND CLINICAL PHARMACOLOGY

The Department of Pharmacology and Experimental Therapeutics and the Division of Clinical Pharmacology at the Medical University of South Carolina seek to fill up to seven positions at the assistant or associate professor level over the next two years. Applicants should have a Ph.D. and/or M.D. degree, successful postdoctoral experiences and the enthusiasm and energy to develop independent research careers in an environment where collegiality and collaboration are important traditions. We are looking for scientists and scientists/physicians who plan to apply their interests and capabilities in molecular genetics, protein chemistry, receptors, channels, signal transduction mechanisms or cell biology to problems in basic and clinical pharmacology. We offer an environment rich in senior level scientific and clinical experience, start up funds, laboratory space, a record of highly successful and continuing extramural research funding and an array of important resources which include: both inpatient and outpatient NIH supported clinical research units (1000 hypertensive patients); extensive analytical capabilities (e.g., 400 MHz NMR, triple quadrupole and new NSF-supported high mass, high performance tandem mass spectrometers); and access to hybridoma, cell culture, synthetic organic chemistry, image analysis, and peptide and DNA sequencing and synthesizing facilities. We are committed to a broad spectrum of undergraduate teaching and predoctoral and postdoctoral training, with an excellent track record in the local environment of teaching and student research awards. Send curriculum vitae, reprints, list of references and a summary of career goals to:

Harry S. Margollus, M.D., Ph.D., Chairman Department of Pharmacology and Experimental Therapeutics

> Perry V. Halushka, M.D., Ph.D., Director Division of Clinical Pharmacology Medical University of South Carolina 171 Ashley Avenue Charleston, South Carolina 29425

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#### NATIONAL INSTITUTES OF HEALTH

#### POSITIONS FOR STAFF FELLOWS (TENURE TRACK) AND POST-DOCTORAL FELLOWS

- I. TRANSGENIC MICE Studies involving the genes of HSV, HIV, EBV, receptors, and hormones; pathogenesis of viral infections and endocrine diseases.
- II. POLYREACTIVE ANTIBODIES/CD5+ B CELLS -Mechanism of polyreactivity; production and characterization of human monoclonal antibodies; biology of CD5+ B lymphocytes.
- **III. AUTOIMMUNE DISEASES -** Cloning, expression and characterization of autoantigens involved in insulindependent diabetes mellitus, lupus erythematosus, rheumatoid arthritis, and Graves' disease.

Positions available immediately. Experience in molecular biology desirable. Growing program with opportunity for Staff Fellows to have technical and/or post-doctoral support. Salary commensurate with experience (range \$25,000 to \$50,000 per year). Send Curriculum Vitae and names of references to Dr. Lois Salzman, Deputy Director, Intramural Research Program, National Institute of Dental Research, National Institutes of Health, 9000 Rockville Pike, Building 30, Room 121, Bethesda, MD 20892.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

## ASSOCIATE RESEARCH SCIENTIST

#### Cellular Biochemistry/Molecular Biology

Bristol-Myers Squibb, world headquarters for pharmaceutical research and development in Wallingford, Connecticut, is a state-of-the-art facility created for the encouragement of professional achievement and interdisciplinary cooperation.

An excellent opportunity exists for an individual with an MS/BS in biochemistry, cell biology, molecular biology or related area with 2 to 5 years experience in molecular biology, biochemical, immunological and tissue culture techniques, including some/all of the following: DNA and RNA isolation and characterization, chromatography, protein electrophoresis, fluorometry, ELISA and RIA. Position involves the study of peptide and protein growth factors, their receptors and signal transduction mechanisms in both tumor cells and lymphocytes.

Bristol-Myers Squibb offers sustained growth, highly competitive salaries, extensive benefits and career support. Our countryside location is convenient to Connecticut cultural centers, New York and New England. To apply, please send resume to: **BRISTOL-MYERS SQUIBB COMPANY, Pharmaceutical Research & Development Division, Attn: MH299, 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''

## SENIOR CHEMIST EXPOSURE ASSESSMENT

Midwest Research Institute (MRI) is a well-established contract research organization with an outstanding reputation in the field of chemistry. We are expanding our exposure assessment capability at our headquarter laboratories in Kansas City, Missouri, and are seeking a Senior Chemist with a broad technical base and a Ph.D. in Analytical or Physical Biochemistry, or equivalent. We are looking for leadership qualities coupled with solid technical expertise in exposure assessment/human monitoring.

The successful candidate will contribute to the development and direction of exposure assessment research programs. Emphasis will be on human exposure to environmentally significant contaminants, and on topics such as indoor air, consumer products, hazardous materials, and the use of experimental results to develop and validate models. Research efforts may range from the establishment of exposure/dose relationships to the development of methods for quantifying exposure by specific routes, especially dermal exposure. We are seeking an exposure assessment expert to interact with clients and a multidisciplinary staff. This position will also prepare and review reports and proposals.

MRI offers a competitive compensation, benefits, and relocation package, in addition to a convenient location in an attractive metropolitan setting. For immediate consideration, send resume to GD Ratcliff, at:



MIDWEST RESEARCH INSTITUTE 425 Volker Blvd. Kansas City, Missouri 64110 (816) 753-7600

For more information see our recruiter at the Pittsburgh Conference in New York City, March 5-8, 1990.

An Equal Opportunity Employer M/F/H/V

**BIOLOGY FACULTY.** Colby-Sawyer College, a small independent four year college located in the beautiful Dartmouth-Lake Sunapee area of New Hampshire, is seeking a faculty member whose primary responsibility will be in cell biology and genetics. Expertise in developmental biology and anatomy and physiology is desirable. Near completion of an advanced degree is required, as is the demonstrated ability to teach effectively. Position is open August of 1990. Please send a letter of application, résumé, and names of five references to: Director of Human Resources, Colby-Sawyer College, New London, NH 03257.

Equal Opportunity Employer.

#### UNIVERSITY OF BRITISH COLUMBIA DEPARTMENT OF ORAL BIOLOGY BIOMATERIALS

Applications are invited for a position at the level of either ASSISTANT OR ASSOCIATE PROFESSOR in the area of biomaterials. A tenure-track position will be available on 1 January 1991, and is subject to final budgetary approval. Salary will be commensurate with experience. Applicants must have a Ph.D. and the ability to teach courses in dental materials. The ideal individual would have an excellent research record and the ability to attract grant support. The opportunity exists for an honorary appointment in either the Faculty of Science or Engineering. Applications should be received by 31 May 1990. Applicants should send curriculum vitae, a summary of research interests, and the names and addresses of three references to: Dr. D. M. Brunette, Department of Oral Biology, Faculty of Dentistry, The University of British Columbia, 2199 Wesbrook Mall, Vancouver, BC, Canada V6T 127. In actordance with Canadian immigration requirements, preference will be given to Canadian itizens 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.

#### 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 vítae, 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.

The Department of Pathobiology, College of Veterinary Medicine, University of Tennessee, has a tenuretrack FACULTY POSITION available for an EX-PERIMENTAL PATHOLOGIST. The successful candidate will be expected to emphasize the development of a strong independent and collaborative research program in the area of cellular and molecular pathobiology and the pathogenesis of disease. Abundant collaborative research opportunities are available. The successful candidate will also be expected to assist in the department's professional and graduate teaching programs as well as graduate research training. Time commitments to residency training and departmental service responsibilities are expected to be minimal. D.V.M., Ph.D., or equivalent degrees with appropriate research training and experience are essential.

Academic rank and salary will be commensurate with background and experieince, but we particularly encourage application from junior candidates. Applications will be reviewed beginning 15 March 1990. Informal inquiries are invited. Applicants should send curriculum vitae, three or more letters of reference, and a statement of research and career goals to: Dr. Erby Wilkinson, Chairman of Search Committee, Department of Pathobiology, College of Veterinary Medicine, P.O. Box 1071, University of Tennessee, Knoxville, TN 37901-1071. Telephone: 615-546-9230. The University of Tennessee is an Equal Opportunity/Affirmative Action/ Tille IX/Section 504 Employer.

#### **POSITIONS OPEN**

FACULTY POSITION. A 12-month, tenure-track appointment requiring research and teaching expertise is open to individuals holding a Ph.D. in toxicology, pharmacology, or related discipline. Candidates with a D.V.M. degree and expertise in cellular and/or molecular level studies are desirable. Send curriculum vitae and a statement of research interests to: Dr. E. M. Bailey, Department of Veterinary Physiology and Pharmacology, Texas A&M University, College Station, TX 77843–4466. Texas A&M University is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION: TRANSPLANTATION, BIOLOGY, AND IMMUNOLOGY. Permanent track position for persons with Ph.D. and/or M.D. degrees. Involves conducting an independent research program on some aspect of transplantation, biology (such as physiology), and/or immunology with a focus toward transplantation. Candidate expected to be competent in basic immunology, to conduct an independent research program, and be willing to participate with clinicians involved in a large multi-organ transplantation program (liver, renal, pancreas, heart, lung, bone marrow). Will receive academic appointment commensurate with his/ her qualifications. Start-up funds for establishment of the laboratory are available. Send curriculum vitae, a description of research interests, and names of three references to: Dr. Keith Kelly, Chairman, Department of Surgery, Mayo Clinic, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.

#### TENURE-TRACK FACULTY POSITION ENVIRONMENTAL POLICY

The new School of Public Policy at the Georgia Institute of Technology announces an anticipated position in environmental policy, beginning September 1990. Rank is open.

The school is searching for specialists in the analysis and evaluation of environmental policies at the state, regional, national, or international levels. Specific areas of concentration may include environmental regulatory policy, contingent valuation/survey research, impact analysis, environmental decision-making, or resource analysis in a substantive policy area. We would be especially interested in applicants with expertise in multimedia effects of technological developments. Candidates with strong skills in quantitative and qualitative research methodologies will be given special attention. The Ph.D. or equivalent degree is required at the time

The Ph.D. or equivalent degree is required at the time of appointment. Send applications, curriculum vitae, and three letters of reference to: Dr. Thomas N. Debo, Chair, Environmental Policy Search Committee, City Planning Program, Georgia Institute of Technology, Atlanta, GA 3032–0155. Closing date is 15 April 1990.

Georgia Tech is a unit of the University System of Georgia and an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.

#### COLUMBIA UNIVERSITY DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOPHYSICS

The department is embarking on a program of hiring new **FACULTY MEMBERS** and intends to fill tenured and tenure-track positions.

Applications are invited from candidates with the Ph.D. degree or its equivalent and appropriate postdoctoral for positions in biochemistry and molecular biophysics. In the area of biochemistry we are seeking candidates with research interests in several disciplines including: developmental biology, neurobiology, and regulation of gene expression in both eukaryotes and prokaryotes. We are particularly interested in persons whose research in these areas focuses on nucleic acidprotein interactions. In molecular biophysics, the areas of particular interest are three-dimensional structural analysis, protein folding, and RNA conformation. Preference will be given to candidates with a strong

Preference will be given to candidates with a strong record of research accomplishments. Interested candidates should submit curriculum vitae, bibliography, reprints, and summary of current research and future research goals as well as three letters of reference. The department is especially interested in women and minority candidates. All applications should be addressed to: Chairman, Department of Biochemistry and Molecus Iar Biophysics, Columbia University, Health Sciences, 630 West 168th Street, New York, NY 10032.

Columbia University is an Equal Opportunity/Affirmative Action Employer.

#### **POSITIONS OPEN**

#### MICROBIOLOGY/IMMUNOLOGY FACULTY POSITIONS

Applications are invited for two full-time, tenure-track faculty positions at the ASSISTANT OR ASSO-CIATE PROFESSOR level in the Department of Microbiology and Immunology at the University of Colorado School of Medicine:

MOLECULAR/CELLULAR IMMUNOLOGIST: Applicants should have training, interests, and skills in the use of current molecular and cellular techniques for studying the function and/or development of the immune system.

MOLECULAR MICROBIOLOGIST: Applicants should have training, interests, and skills in molecular approaches to the study of bacterial pathogenesis.

Successful applicants will be expected to initiate and maintain an active, independent research program; participate in the teaching of microbiology or immunology to medical students; and become an active member in an established graduate training program. Laboratory space and start-up funds will be provided by the department. Candidates with a commitment to excellence in research and teaching are encouraged to send curriculum vitae, a statement of research and teaching interests, and the names of three references by 1 June 1990 to: Lewis I. Pizer, Ph.D., Professor and Chairman, Department of Microbiology/Immunology, Box B-175, University of Colorado Health Sciences Center (UCHSC), Denver, CO 80262.

UCHSC is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

FACULTY POSITION: MOLECULAR VIROL-OGY. The Division of Molecular Virology at Baylor College of Medicine invites applications for a tenure-track position at the ASSISTANT OR ASSOCIATE PROFESSOR level. An innovative scientist is sought with research interest in replication or pathogenesis of viral infections; appropriate topics include the molecular biology of replication, chronic or persistent infections, and antivirals. Applicants should have a Ph.D. or M.D./Ph.D. with at least 2 years of postdoctoral experience in molecular virology. The successful applicant is expected to establish an independent research program and to participate in graduate training. This appointment offers an excellent opportunity to join an expanding academic department with newly renovated laboratories and well-equipped support facilities. Current faculty research activities focus on the molecular basis of viral replication, viral and cellular oncogenes, viral pathogenesis, and modern approaches to viral vaccines. Send curriculum vitae, names and addresses of at least three references, a statement of current research activities, and a description of future plans by 1 April 1990, to: Dr. Janet S. Butel, Head, Division of Molecular Virology, Baylor College of Medicine, Houston, Texas 77030. An Equal Opportunity/Affirmative Action Employer.

#### PHYSICS FACULTY POSITIONS

The Smith College Physics Department invites application for two positions available in the fall 1990. The first is a tenure-track position in experimental physics at the ASSOCIATE OR ASSISTANT PROFESSOR level. The candidate should have a Ph.D., an interest in teaching, and research interests amenable to collaboration with undergraduates. Preference will be given to persons with an established experimental program. Funds are available to start or extend a research project. The second position is a 1-year appointment at the rank of entry-level ASSISTANT PROFESSOR. Qualifications are the same, except that the applicant need not be an experimentalist. Women and minorities are encouraged to apply. Located in western Massachusetts, Smith College a leader in the education of women and has an outstanding record in the number of professional women physicists who are alumnae. The Five College Consorum, comprised of Smith, Amherst, Mt. Holyoke, and Hampshire Colleges and the University of Massachu-setts, provides a rich intellectual and cultural life for faculty and students as well as additional collegial opportunities in teaching and research. Curriculum vitae, statement of teaching and research interests and experience, and three letters of reference should be sent to: Professor Bruce Hawkins, Chair, Department of Physics, Clark Science Center, Smith College, Northampton, MA 01063. Preference will be given to applications received before 15 February 1990. Smith College is an Equal Opportunity/Affirmative Action Institution.

FACULTY POSITION in the Biology Division of the California Institute of Technology (Caltech).

Caltech seeks a new faculty member in the Biology Division with research interests in biotechnology and its application to current biological problems. Research programs might include the development and applica-tion of new theoretical treatments, techniques, or instru-ments to the study of macromolecules, chromosomes, genomic structure, genetic information, or genome evo-lution. The appointment may be at the ASSISTANT, ASSOCIATE, OR FULL PROFESSOR ranks, depending on experience. The appointment will initially be for 4 years and will be either tenure track or tenured, depending on experience. Send curriculum vitae and names and addresses of three references to: Barbara Wold, Chair, Biotechnology Search Committee, Biology Divi-sion, California Institute of Technology, Pasadena, CA 91125. Caltech is an Equal Opportunity Employer and welcomes applications from minorities and women.

#### FACULTY POSITIONS MEMORIAL SLOAN-KETTERING CANCER CENTER CELL BIOLOGY AND GENETICS PROGRAM

The Memorial Sloan-Kettering Cancer Center invites applications for several tenure-track junior and senior applications for several tenure-track junior and senior faculty positions in the Cell Biology and Genetics Pro-gram. This research program is one of four in the institute, and is expanding in the areas of cell cycle control, differentiation, cell structure, intercellular recognition, and morphogenesis. The Cell Biology and Genet-ics Program is located in a new research building which also houses advanced facilities for protein and nucleic acid microchemistry, transgenic mice, and automated acid microchemistry, transgenic mice, and automated mammalian cell micromanipulation. The members of the Cell Biology and Genetics Program faculty are affiliated with the Cell Biology Graduate Program at Cornell University Medical College. The positions offered are highly competitive with regard to start-up funds, labora-tory space, salary, and housing. Eligible candidates should have a doctoral degree,

Eligible candidates should have a doctoral degree, postdoctoral experience, and demonstrate potential and ability to develop an independent, imaginative research program. Formal applications are invited from junior as well as established investigators. Applications should include curriculum vitae, a list of publications, a summa-ry of research activities and research plan, and three latters of recommendation. Applications should be ad letters of recommendation. Applications should be ad-dressed to: Dr. Joan Massague, c/o Christine Brohme, Box #135, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.

Equal Opportunity/Affirmative Action Employer.

## UNIVERSITY OF MINNESOTA COLLEGE OF PHARMACY FACULTY POSITION IN PHARMACEUTICS

Applications are invited from persons holding a Ph.D. in pharmaceutics/biopharmaceutics or other relevant disciplines, or M.D. with research experience, for a 12month, tenure-track position at the ASSISTANT PRO-**FESSOR** level. A professional degree in pharmacy is not a specific requirement. Preference will be given to individuals with research interests broadly in the area of drug delivery systems. The individual selected will be expected to develop an active independent research program which attracts extramural funding, and to supervise the research activities and contribute to the instruction of students in the graduate and undergraduate programs of the college. Postdoctoral experience is desirable. The position is available 1 July 1990. Applicants should send, by 30 April 1990, curriculum vitae, a statement of research interests, and the names and

addresses of three persons who can provide letters of reference to:

> David J. W. Grant, D.Phil. Department of Pharmaceutics College of Pharmacy University of Minnesota 308 Harvard Street, S.E., 9-105 HSUF Minneapolis, MN 55455 Telephone: 612-624-3956

Applicants with less than 5 years of experience since the award of the doctoral degree are required to submit transcripts of collegiate academic record.

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

#### 2 FEBRUARY 1990

## **Postdoctoral Researchers**

Genentech, Inc., a leader in the field of biotechnology, has several Postdoctoral opportunities for research and training available in the areas of:

Cell Genetics

•

- Developmental Biology • Cardiovascular Biology
- Molecular Biology **Protein Chemistry**
- Immunobiology

We expect Genentech postdoctoral fellows to conduct independent research in the areas of our scientific interests, publish in the leading scientific journals. attend and present their work at scientific conferences and maintain close ties with the academic community.

Genentech, Inc. offers an attractive salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For consideration, please send your resume to: Genentech, Inc., Attn: Yvonne Davino, Dept. PD, 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.



## Join A Well Respected Industry Leader.

The Medical Research Division of American Cyanamid Company is recognized internationally as a leader in the research and development of therapeutic compounds. The Molecular Neurobiology Group of the CNS Research Department has research projects focusing on the areas of CNS Degenerative Diseases, and Voltage and Ligand Gated Ion Channels. Our current expansion re-quires three Research Scientists (with at least two years' postdoctoral work) and three Postdoctoral Scientists with the following qualifications:

**RESEARCH SCIENTIST** having strong molecular and cellular biology backgrounds to work with a team applying molecular techniques to the study of Alzheimer's Disease and other dementias. *Respond to department MV.* 

RESEARCH SCIENTIST with a strong background in at least two areas including molecular biology, biochemistry or electrophysiological techniques to clone, express and study various K+ channels. *Respond to department RZ*.

RESEARCH SCIENTIST with a strong background in molecular biology, biochemical pharmacology and/or electrophysiology to work with a team on our ongoing efforts to clone, express and study various subtypes of the Gaba<sub>A</sub> receptor/benzodiazepine/ Cl- channel complex. Respond to department MA.

POSTDOCTORAL SCIENTISTS (3) with strong background in molecular genetics/biology and biochemistry to work in our Alzheimer's Disease program. Part of this program focuses on transcrip-tional regulation and post-translational processing of the amyloid gene [see e.g., PNAS 86:7606 (1989)]. Respond to department SJ.

Lederle is located in Rockland County on a 580 acre campus-like setting only 25 miles north of New York City. Starting salaries are very competitive and include comprehensive benefits. For consideration, send resume/c.v. with appropriate department code and the names and telephone numbers of 3 references, to: Professional Employment Representative, Medical Research Division, Lederle Laboratories, Pearl River, NY 10965. An Equal Opportunity Employer M/F.



#### FACULTY POSITIONS LABORATORY OF TOXICOLOGY HARVARD SCHOOL OF PUBLIC HEALTH

The Laboratory of Toxicology is searching for junior faculty members at either the ASSISTANT PROFES-SOR OR ASSOCIATE PROFESSOR rank. Successful candidates will be expected to establish outstanding independent research programs and to participate in graduate student teaching and the training of postdoctoral fellows. Candidates should have research interests in the molecular, genetic, or cellular mechanisms of toxicity, and complement the existing faculty whose activities focus on the molecular mechanisms of mutagenesis, DNA repair genes, receptor-mediated toxicity, chemical carcinogenesis and tumor promotion, cell cycle regulation, and physiological and genetic responses to oxidative stress and other DNA-damaging agents. Excellent startup and support funds are available from the Laboratory of Toxicology.

Send curriculum vitae, a statement of research interests and future plans, up to four representative reprints, and the names of three evaluators to:

#### Associate Professor Leona Samson Laboratory of Toxicology Harvard School of Public Health 665 Huntington Avenue Boston, MA 02115

Harvard University is committed to increasing representation of women and minority members among its faculty and particularly encourages applications from such candidates.

The Duke University School of Forestry and Environmental Studies invites applications for the following Everglades research management positions:

#### FIELD SITE MANAGER

This full-time research management position begins 1 March 1990. Candidates should have an M.S. or Ph.D. with experience preferred in directing wetlands research. Person will work from West Palm Beach, Florida, laboratory. Manager will be responsible for day-to-day project oversight and monitoring of water quality, soils, and hydrology research. Opportunities exist for individual research.

#### ASSISTANT FIELD MANAGER

This full-time position begins 1 March 1990. Candidates should have a B.S. or M.S. in ecology or related field. Person will work from West Palm Beach, Florida, laboratory. Assistant will be responsible for day-to-day monitoring of water quality, soils, and hydrology research.

#### PREDOCTORAL FELLOWSHIPS

These are two fully funded positions, one available immediately and one in June 1990, in wetlands ecology. Candidates should have an M.S. in ecology or related field. The students will participate in Everglades research specifically nitrogen and phosphorus cycling and cattail competition.

Duke University offers highly competitive salaries and benefits. Please send curriculum vitae and at least three letters of recommendation to: Dr. Curtis J. Richardson, Director, Wetland Center, School of Forestry and Environmental Studies, Duke University, Durham, NC 27706. Applications from minorities and women are encouraged.

Duke University is an Equal Opportunity/Affirmative Action Employer.

#### GEOTECHNICAL ENGINEER

Manage hazardous waste projects which typically include preparation of work plan, quality assurance project plan, sampling and analysis plan, remedial investigation, and feasibility study. Assist other projects in such areas as landfill design and construction and geotechnical aspects of hazardous waste projects. Use computer programs and existing software and computer techniques such as Finite Element and other numerical analysis methods in solving geotechnical engineering and groundwater problems. As needed, work on hazardous waste sites including Level B sites using self-contained breathing apparatus. Requires an M.S. in civil engineering with a major in geotechnical engineering and 2½ years of direct experience in the job being offered and as described. Salary offered: \$38,000 per year; 40 hours per week, 8 a.m. to 5 p.m., Monday to Friday. Send résumé to: Illinois Department of Employment Security, 401 South State Street, 3 South, Chicago, IL 60605, Attention: Connie M. Evans, Ref. **#V-IL-9868-E**. An employer-paid ad.

#### **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.

IMMUNOLOGIST, FACULTY POSITION. A full-time, tenure-track position in the Pathology Department at the rank of ASSISTANT OR ASSOCIATE PROFESSOR. M.D. or Ph.D. with demonstrated leadership in teaching and research. Position includes participation in educational programs in department and hospital service responsibility in immunopathology laboratory. Successful candidate should be able to transfer research activities and funding to Medical College of Georgia. Send curriculum vitae and references to: C. Robert Baisden, Chief, Section of Clinical Pathology, Medical College of Georgia, Augusta, GA 30912. Equal Opportunity Employer, M/F. Females and minorities are encouraged to apply.

#### IMMUNOLOGISTS

The Veterinary Infectious Disease Organization (VIDO) at the University of Saskatchewan is expanding its immunology group and therefore has a number of positions vacant. These positions will be filled at various levels ranging from postdoctoral fellow to research scientists commensurate with qualifications and experience. The selected applicant should be able to demonstrate a strong background in areas such as molecular immunology, cellular immunology, vaccine development, or cellular biology as they relate to the study of immune mechanisms of protection and pathogenesis of respiratory and enteric diseases and mastitis.

The applicants will be part of a team of immunologists, molecular biologists, and veterinarians investigating mechanisms of pathogenesis of viruses and bacteria as well as enhancing immunity and resistance to infections. Applicants should have a degree in microbiology, veterinary medicine, or immunology, together with a Ph.D. in immunology. A strong interest in the application of modern immunological and molecular biological techniques to the solutions of problems related to elucidation and control of infectious diseases of animals is essential. Inquiries and applications should be directed to:

Dr. L. A. Babiuk, Associate Director (Research) or

Dr. Manuel Campos, Program Manager (Immunology) VIDO

124 Veterinary Road

Saskatoon, Saskatchewan, Canada S7N 0W0

#### 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 seven-channel magnetometer in a magnetically shielded room for human studies and a four-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. Applicant 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.

#### **POSITIONS OPEN**

#### HUMAN ENVIRONMENTAL PHYSIOLOGIST

A faculty position is open at the ASSISTANT OR ASSOCIATE PROFESSOR level for candidates with a solid publication record and experience working with human subjects. Opportunities are available to develop a strong research program in environmental physiology in collaboration with the Divisions of Pulmonary Medicine, Occupational Health, and Physiology. Please send curriculum vitae and statement of present and future research plans to: Dr. Wayne Mitzner, Division of Physiology, Department of Environmental Health Sciences, The Johns Hopkins University School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205. Telephone: 301-955-3612. FAX: 301-955-0299. The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer.

#### MICROBIOLOGIST/VIROLOGIST AND MICROBIAL PHYSIOLOGIST

The Department of Biological Sciences of State University of New York (SUNY) Plattsburgh invites applications for two tenure-track ASSISTANT PROFESSOR positions beginning fall of 1990. MICROBIOLO-GIST/VIROLOGIST (Box A): Ph.D. with broad background in microbiology, expertise in virology, molecular biology, medical microbiology. MICROBIAL PHYSI-OLOGIST (Box B): Ph.D. with broad background in microbiology, expertise in microbial ecology, toxicology, and/or plant microbe interactions. Underrepresented minority scientists are highly encouraged to apply. SUNY Plattsburgh is located on Lake Champlain with easy access to Montreal and Burlington, Vermont. Closing dates for applications is 1 March 1990 or until positions are filled. Applicants should send résumé to appropriate box number noted above, three letters of recommendation, and summary of proposed research to: Chair, Search Committee, c/o Office of Personnel/Affirmative Action, SUNY Plattsburgh, Box 1649–246, Plattsburgh, NY 12901. SUNY Plattsburgh is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGY OF HEMATOPOI-ETIC CELL DIFFERENTIATION. POSTDOC-TORAL research on the isolation and characterization of genes expressed during the differentiation and loss of tumorigenicity of leukemic cells. Experience in cDNA cloning/subtractive screening/sequencing useful. Start within 9 months. Please send curriculum vitae to: Dr. Ruth Craig, Department of Physiology, Johns Hopkins University School of Medicine, Baltimore, MD 21205.

MOLECULAR BIOLOGIST AND BIOTECH-NOLOGIST. The National Research Council (NRC) is seeking a SENIOR STAFF OFFICER for its Board on Biology. Will develop and manage projects in basic and applied biology and science policy. Requires a Ph.D. or equivalent in molecular biology, biological sciences, biotechnology or a related field and at least 4 years of government, industrial, or academic research and/or administrative experience. Science policy experience and working knowledge of federal government highly desirable. Demonstrated effective communication skills, report preparation skills, project and budget management, and committee interactions required. We offer a salary commensurate with experience and an exceptional benefits package. Please send résumé in confidence to: NRC/Board on Biology, HA 258 (OZ), 2101 Constitution Avenue, N.W., Washington, DC 20418. Equal Opportunity Employer.

#### MOLECULAR IMMUNOLOGY

Applications are sought for a tenure-track appointment as **ASSISTANT PROFESSOR** in the Division of Transplantation, Department of Surgery, at The Ohio State University. Applicants should have intensive postdoctoral experience in a wide range of molecular biology techniques. They should expect to work with interdisciplinary research team to apply these molecular biology techniques to current problems in experimental and clinical transplantation. Prior experience in transplantation or immunology not necessary. Salary negotiable depending on experience. Send curriculum vitae and statement of research and career goals by 1 March 1990 to: Charles G. Orosz, Ph.D., The Ohio State University College of Medicine, Room 265, Means Hall, 1655 Upham Drive, Columbus, OH 43210.

MOLECULAR/CELL BIOLOGIST. Birmingham-Southern College seeks to fill a 1-year sabbatical replacement position beginning 25 August 1990. Birmingham-Southern College is a small, private liberal arts college with a student enrollment of 1935. Teaching responsibilities will include genetics, cell biology, introductory biology for nonmajors, and a course in the applicant's field or related area. Ph.D. preferred. Individuals who will complete their Ph.D. by 1 September 1990 will be considered. Send curriculum vitae, transcripts of undergraduate and graduate education, and three letters of recommendation to: Dr. Irvin Penfield, Box A-1, Birmingham-Southern College, Birmingham, AL 35254. Applications accepted through 1 April 1990. Equal Opportunity Employer.

PESTICIDE OR ENVIRONMENTAL BIO-CHEMIST/ENTOMOLOGIST. The Department of Entomology, Washington State University (WSU), invites applications and nominations for a research, tenuretrack, assistant/associate entomologist position located at Puyallup, Washington. Conduct research on the behavior of insecticides and other pesticides in agroecosystems of western Washington (additional information available upon request). Ph.D. required in a biological science. Candidates should have experience or an active interest in practical entomology and systems ecology. Applications accepted through 31 March 1990. Send two copies of your entire application including: letter of application, statement of professional goals and research plan, curriculum vitae including reprints of five relevant publications, descriptions of research experience, and a list including phone numbers of five referees to: John J. Brown, Chair, Search Committee, Department of Entomology, Washington State University, Pullman, WA 99164–6432. WSU is an Equal Opportunity/Affirmative Action Employer. Protected group members are encouraged to apply.

PROFESSOR OF MEDICINAL/BIOLOGICAL CHEMISTRY AND CHAIRMAN OF PHARMA-CEUTICS (DRUG DELIVERY). An individual with major prior academic or equivalent experience commensurate with appointment at the professor level in the Department of Medicinal and Biological Chemistry is sought by the University of Toledo, College of Pharmaçy. An individual with interests in drug design and in the chemistry of novel, preferably modern, biotechnologically derived drug-delivery systems is desired. Some additional leadership skills are preferred, as there is an opportunity to help lead the activities of the newly established Center for Drug Design and Development and, secondly, to establish a new department, under which additional growth is expected. Examination of applicants began 1 February 1990, but applications will be accepted after that date and the position will remain open until it is filled by a successful applicant. Send letter of interest, curriculum vitae, and names of three references to: Dr. Richard A. Hudson, Chairman, Department of Medicinal an Biological Chemistry, The University of Toledo, College of Pharmacy, Toledo, OH 43606. The University of Toledo is an Affirmative Action/Equal Opportunity Employer.

## SOMATOGEN

Somatogen is a rapidly growing biotechnology company involved in the development of recombinant hemoglobin-based blood substitute products. We are located close to both the University of Colorado–Boulder and the University of Colorado Health Sciences Center in Denver.

**PROTEIN CHEMIST.** This position requires a Ph.D. and at least 2 years of postdoctoral experience. Preference will be given to candidates who have a strong background in organic chemistry as well as in protein structure and function.

**MOLECULAR BIOLOGIST.** This position requires a Ph.D. and at least 2 years of postdoctoral experience in the field of yeast molecular biology or genetics. Preference will be given to candidates with experience in the expression of heterologous proteins in yeast.

Please send curriculum vitae, and the names of three references by 15 March 1990 to:

Personnel Director, Department S Somatogen, Inc. 350 Interlocken Parkway, Suite 100 Broomfield, CO 80021

2 FEBRUARY 1990

#### **POSITIONS OPEN**

#### NEUROPATHOLOGIST

ASSISTANT PROFESSOR, tenure-track position available 1 July 1991. Board certification or eligibility in anatomic pathology and neuropathology is required. The position includes diagnostic, teaching, and research responsibilities. Send curriculum vitae and names of three references to: Pierluigi Gambetti, M.D., Division of Neuropathology, Institute of Pathology, Case Western Reserve University, 2085 Adelbert Road, Cleveland, OH 44106.

PLANT COMMUNITY ECOLOGIST

The Department of Botany, University of Georgia, invites applications and nominations for a tenure-track position beginning as early as September 1990. The appointment will probably be made at the ASSISTANT **PROFESSOR** level, but appropriately qualified applicants can be considered at the **ASSOCIATE PROFES-SOR** level. Candidates are expected to conduct independent research in community ecology and to teach appropriate courses in ecology. Applicants should submit curriculum vitae, statements of research and teaching interests, and reprints, and arrange for four letters of reference to be sent directly to: **Dr. Robert Wyatt**, **Department of Botany, University of Georgia, Athens, GA 30602** by 15 March 1990.

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION. Molecular mechanisms of membrane fusion: liposomes, viruses, intra- and intercellular. Experience in physical biochemistry and cell biology preferred. Send curriculum vitae, relevant reprints, and three letters of recommendation to: Dr. Joe Bentz, Department of Bioscience, Drexel University, 32nd and Chestnut Streets, Philadelphia, PA 19104. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION. Available to study enzyme regulation and amino acid metabolism. Experience in protein purification/characterization, HPLC, protein phosphorylation, and/or post-translational protein modification desirable. Send curriculum vitae, statement of research interest, and three letters of recommendation to: Dr. Ralph Paxton, Department of Physiology and Pharmacology, College of Veterinary Medicine, Auburn University, AL 36849. Auburn University is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.

POSTDOCTORAL POSITIONS. Two positions available: (i) effects of ACTH and other factors on human adrenal steroidogenesis and LDL processing; (ii) human liver lipoprotein production. Research experience with some of the following required: RIA, cell culture, Western/Northern blot, and chromatography. Ph.D. or equivalent. Send curriculum vitae, research interests, and names of three references to: C. Richard Parker, Jr., Ph.D., Department of Obstetrics and Gynecology, University of Alabama at Birmingham (UAB), UAB Station, Birmingham, AL 35294. UAB is an Equal Opportunity Employer.

**POSTDOCTORAL POSITIONS.** Available to conduct research on RFLP analysis of cereal crops. Applicants should have experience with standard molecular biology techniques including cloning and DNA sequencing. Candidates with a Ph.D. in molecular biology, genetics, or plant breeding are encouraged to apply. Please send résumé to: Sybil Paul, Department of Crop and Soil Environmental Sciences, Virginia Polytechnic Institute and State University (VPI&SU), Blacksburg, VA 24061. Telephone: 703-231-6300. VPI&SU is an Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL OPPORTUNITIES.** In the Los Angeles Area to join a multidisciplinary research team in the development of a liposome-encapsulated hemoglobin (LEH) product to be used as a blood replacement fluid. One position, available immediately at \$28,000 per year is for a Ph.D. with a background in **LIPID BIOCHEMISTRY** who will be involved with the formulation and testing of the LEH product. A second postdoctoral slot will be for a Ph.D. in **SYN-THETIC MEDICINAL CHEMISTRY** to be involved in analog development of pharmaceutical agents capable of modulating the oxygen binding properties of hemoglobin. Send curriculum vitae and three names or letters of references to: **Dr. Thomas G. Burke, City of Hope National Medical Center, Duarte, CA 91010. Telephone: 818-359-8111, ext. 4501.** *City of Hope is an Equal Opportunity/Affirmative Action Employer.* 

## POSTDOCTORAL POSITION

Applications are invited for a postdoctoral position in the Department of Immunology to study mechanisms of antigen processing and presentation. This position will provide an excellent opportunity for interdisciplinary research involving the departments of molecular cell biology and biophysics. A suitable candidate should have a strong background in immunology and/or biochemistry, cell biology, molecular biology. The postdoctoral appointment will be for two years. Candidates may have one or two years previous postdoctoral experience.

Merck Sharp & Dohme Research Laboratories is located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Interested individuals should send their resume and the names of three references to **Ms. Susan F. Glinka, P.O. Box 2000, Merck & Co., Rahway, NJ 07065.** An equal opportunity employer m/f/v/h.



### **RESEARCH ASSOCIATE**

The Mineral Metabolism Section, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, seeks an outstanding candidate (M.D. and/or Ph.D.) with at least 4 years post-doctoral experience to participate in studies on cell biology of signal transduction by v-ERB-A related receptors. This is a position in an innovative group with interests in basic and clinical research. Applicant should have broad familiarity with normal and abnormal human medical physiology. Preference will be given to a candidate with hands-on experience with eukaryotic tissue culture, radioligand assays of steroids and cyclic nucleotides, immunocytology, video microscopy, computerized image-processing (preferably UNIX-based systems), HPLC separation, and molecular biology. Should be experienced with use of microcomputer and mainframe computer system, including applications for statistics and graphics. The candidate should have experience in directing other post-doctoral scientists and in formulating and carrying out original research, proven by a substantial record of original publications in critically reviewed journals. Starting salary is \$41,500 or may be negotiable commensurate with qualifications and background. Interested persons should send their curriculum vitae, several reprints, statement of goals, and names of three references to:

Dr. Stephen Marx Bidg. 10, Room 9C101 National Institutes of Health 9000 Rockville Pike Bethesda, MD 20892



For further information telephone Dr. Marx at (301) 496-5052.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

#### POSTDOCTORAL ASSOCIATE

A challenging postdoctoral position is available to study the molecular biology and regulation of gene expression in yeast [*Progr. Nucleic Acid Res. Mol. Biol.* 37, 284 (1989)]. We seek a motivated individual who can work independently. Experience with cloning, sequencing, DNA footprinting, mutagenesis, PCR, and protein chemistry is desirable. Ph.D. in biochemistry or molecular biology required. The position is available immediately and salary is determined by NIH guidelines. Send curriculum vitae, a statement of research experience, a bibliography, and names, addresses, and telephone numbers of three references to: Dr. Julius Marmur or Dr. Paul Sollitti, Albert Einstein College of Medicine, Department of Biochemistry, 1300 Morris Park Avenue, Bronx, NY 10461. Telephone: 212-430-3024 or 212-430-2080. Afjirmative Action/Equal Opportunity Employer.

> MOLECULAR BIOLOGIST/ PROTEIN CHEMIST CALIFORNIA INSTITUTE OF TECHNOLOGY

POSTDOCTORAL POSITION in protein engineering/protein chemistry. Design of novel protein catalysts. Experience in protein characterization and Ph.D. in chemistry or biochemistry preferred. Send curriculum vitae and names of three references to: Dr. F. Arnold, Chemistry and Chemical Engineering, 210-41, California Institute of Technology, Pasadena, CA 91125. Caltech ia an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITIONS IN CELLU-LAR AND MOLECULAR NUTRITION. Two positions are available to study the regulation of folate and one carbon metabolism. Projects include cloning, expression, and site-directed mutagenesis of genes for folatedependent enzymes; studies on the mechanism of catalysis and substrate binding of folate enzymes; and studies on the regulation of folate and antifolate metabolism in cultured mammalian cells. Ph.D. degree or equivalent in biochemistry, nutrition, or related field, and experience in recombinant DNA, protein chemistry, enzymology, and/or tissue culture techniques advantageous.

Send curriculum vitae and names and addresses of three references to: Dr. Barry Shane, Department of Nutritional Sciences, University of California, 329 Morgan Hall, Berkeley, CA 94720. Telephone: 415-642-0750. An Affirmative Action/Equal Opportunity Employer.

University of California, Irvine (UCI), POSTDOC-TORAL POSITIONS are available immediately to study the molecular biology of the epidermal growth factor receptor in pancreatic cancer and signal transduction mechanisms triggered by cytokines. Candidates must have recently obtained a Ph.D. or equivalent, and should have a strong background in molecular biology, gene cloning, and/or signal transduction. Please send curriculum vitae and names and addresses of three references to: Dr. Murray Korc, Departments of Medicine and Biochemistry, C-240, Med Sci I, University of California, Irvine, CA 92717. UCI is an Equal Opportunity/Affimative Action Employer.

#### NEUROBEHAVIORAL POSTDOCTORAL POSITIONS

The positions are available for an interdisciplinary neuropsychobiological research training program. The program objectives are to facilitate the development of investigators who are familiar with the integrated concepts of neuropsychobiology as well as their individual anatomical, biochemical, physiological, or clinical research specialties. Rapidly developing technological areas that relate to the nervous system are periodically incorporated into the program; for example, molecular genetics, neuropsychoimmunology, CNS virology (including AIDS), and in vivo metabolic imaging. In addition to the intensive research experience in one or more laboratory disciplines, the conceptual basis of neurosciences as it relates to an understanding of the normal and maladaptive development of human neurobiology and behavior is emphasized in seminars.

For a catalog of opportunities and application forms, contact: Dr. Everett H. Ellinwood, Duke University Medical Center, Box 3870, Durham, NC 27710. Duke University is an Equal Opportunity/Affirmative Action Employer.

#### **POSITIONS OPEN**

**POSTDOCTORAL POSITIONS.** One to study cellular/molecular biology of nerve regeneration and one to study mechanisms of synaptic plasticities (presynaptic inhibition, long-term potentiation) via intracellular penetrations of identified nerve terminals. Send curriculum vitae and three letters of reference to: Dr. George D. Bittner, Professor of Zoology, The University of Texas, Austin, TX 78712. Telephone: 512-471-5454. FAX: 512-471-9651. An Equal Opportunity/Affirmative Action Employer.

#### POSTDOCTORAL POSITIONS

One position will be in the area of bacterial chemotaxis and motility. Another position will be in the area of regulation of expression of flagella and chemotaxis genes. Experience in biochemistry and/or molecular genetics is desirable. One position is available in spring 1990 and the second position will be available in fall 1990. Send curriculum vitae and names of three references to: Dr. Philip Matsumura, Laboratory of Molecular Biology, University of Illinois at Chicago, P.O. Box 4348, m/c-067, Chicago IL 60680. An Equal Opportunity Employer.

**POSTDOCTORAL**. A position is available to work on the pathogenesis of human papillomaviruses (HPV) in cervical cancer; in particular, to investigate the role of HPV genes in the immortalization and inhibition of differentiation of human epithelial cells. Skills in tissue culture, DNA cloning, site-directed mutagenesis, or RNA analysis would be an advantage. Please send curriculum vitae and names of three references to: Dr. Dennis J. McCance, Department of Microbiology and Immunology, University of Rochester, 601 Elmwood Avenue, Box 672, Rochester, NY 14642. The University of Rochester is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION. To study the molecular biology of plant mitochondria substrate transporters. Experience in the determination or modeling of protein structures, membrane biochemistry, and/or molecular biology desired. Available for 3 years with a salary to \$25,000 per year plus benefits. Send curriculum vitae and three references to: Dr. David J. Oliver, Department of Biochemistry, University of Idaho, Moscow, ID 83843.

**POSTDOCTORAL POSITION, PHYCOLOGY.** Available 1 July 1990, for 1 year, renewable for a second year. Applicants should have a strong background in phycology with emphasis in aquatic ecology/water quality or cell biology/physiology. Experience in laboratory culture of micro- and macroalgae desired. Review of applications will begin 1 March 1990 and continue at 7day intervals until appointment is made. Send curriculum vitae, statement of research interests, and three references to: **Milton R. Sommerfeld, Department of Botany, Arizona State University, Tempe, AZ 85287–1601**. *Equal Opportunity/Affirmative Action Employer.* 

#### POSTDOCTORAL POSITION

Available July 1990 for an NIH-funded study on gene regulation during sea urchin development. Applicants with Ph.D. should have experience in molecular biology and preferably in embryology as well. Salary is commensurate with experience. Send curriculum vitae and names of three references to: Dr. Francesco Ramirez, Box 1128A, Department of Molecular Biology, The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029–6574. An 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.

#### **POSITIONS OPEN**

#### POSTDOCTORAL POSITION MOLECULAR EVOLUTIONARY GENETICS

Available to examine aspects of gene and genome evolution in microorganisms and eukaryotes. Please send curriculum vitae to: Howard Ochman, Department of Genetics, Box 8232, Washington University School of Medicine, St. Louis, MO 63110. Telephone: 314-362-2728. Equal Opportunity/Affirmative Action Employer, M/F/H/V.

POSTDOCTORAL POSITION. Wanted: one recent Ph.D. with research experience in molecular phylogenetic techniques, and one with experience in teratology or exercise physiology. Funded for 2 years. Begin May 1990. For details, write: Postdoc, Department of Zoology, Brigham Young University, Provo, UT 84602.

#### SYLVESTER COMPREHENSIVE CANCER CENTER UNIVERSITY OF MIAMI SCHOOL OF MEDICINE POSTDOCTORAL ASSOCIATE

Position available for a postdoctoral associate with a Ph.D. degree in biochemistry or biochemical pharmacology. Individual should have experience in enzyme assays, tissue culture, nucleosides, biochemistry, HPLC, and other bioanalytical techniques. Send curriculum vitae with names of three references to: Susan Martin, Assistant Director for Administration, Sylvester Comprehensive Cancer Center, University of Miami, P.O. Box (016960) (R-71), Miami, FL 33101. Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL POSITION**. We have a position open in the Division of Urology, University of Pennsylvania School of Medicine. The successful candidate will study the molecular properties and pharmacology of potassium and calcium channel modulators in vascular and non-vascular smooth muscles. Experience with tracer flux measurement techniques is required. Although this is an academic position within the University of Pennsylvania, the research will be conducted in the laboratory of a nearby pharmaceutical company. The salary range for this unique academic-pharmaceutical postdoctoral position is \$25,000 to \$34,000. Funds are available for relocation. All interested individuals should send their résumé and the names and addresses of three references to: Dr. Robert M. Levin, Director of Basic Research, Division of Urology, University of Pennsylvania Hospital, 3006 Ravdin Courtyard, 3400 Spruce Street, Philadelphia, PA 19104.

POSTDOCTORAL POSITION in plant physiology to study the joint effects of air pollutants and climatic stresses on photosynthesis and other physiological processes. Qualifications include Ph.D. in plant physiology or related field and experience relevant to the research topic. Position is available now for a minimum of 2 years. Salary negotiable, commensurate with experience. Send curriculum vitae and names of three references to Dr. D. C. MacLean, Boyce Thompson Institute, Tower Road, Ithaca, NY 14853. Boyce Thompson Institute is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION. Available immediately, to study molecular regulation of liver collagen and cytokine gene expression utilizing in vivo models and liver cell isolation and culture techniques. Experience in cell and/or molecular biology desirable. Send curriculum vitae and names of three references to: Dr. Bernard H. Davis, Department of Medicine, Box 400, University of Chicago Medical Center, 5841 South Maryland Avenue, Chicago, IL 60637. Telephone: 312-702-1467.

POSTDOCTORAL POSITION IN MOLECU-LAR BIOLOGY. Available immediately to study the expression of genes controlling mevalonate metabolism in rat liver. Experience in standard molecular biology techniques required. Send curriculum vitae and names of three references by 1 March 1990 to: Dr. R. Kennedy Keller, University of South Florida College of Medicine, Department of Biochemistry and Molecular Biology, 12901 Bruce B. Downs Boulevard, MDC Box 7, Tampa, FL 33612–4799. The University of South Florida is an Afirmative Action/Equal Opportunity Employer.

#### **FACULTY POSITION ASSOCIATE DEAN** FOR STUDENTS AND INSTRUCTION

The University of Florida, College of Veterinary Medicine invites applica-tions and nominations for a tenure/tenure track position with full-time administrative activity as an Associate Dean. Letters of application should include a curriculum vitae outlining academic training, teaching and administrative experience and present professional activities. Also requested is a list of publications, a statement of professional goals and the names of three or more persons who can provide letters of reference. Salary will be commensurate with training, experience and academic rank of the successful applicant.

rank of the successful applicant. The mission of the College is to provide excellent teaching, research, service and extension programs based on current and future strengths of its faculty and staff. The College has identified a series of areas, including creation of a more flexible curriculum, through a strategic planning process, that it intends to spend considerable time implement-ing in the immediate future. The successful applicant will be expected to play a key role in catalyzing those efforts. In addition to addressing potential changes in the professional curriculum, the College will also emphasize expansion of graduate and post-professional programs. As one of six colleges in the University's Health Sciences Center, for collaborative programs in many aspects of biomedical research. The College's affiliation with the University's Institute for Food and Agricultur-al Sciences also places it in a strong position for the full development of food animal, wildlife, equine, zoological, aquatic animal and related programs. The College's semi tropical location also provides unique opportunities for it to develop strong programs in tropical medicine. Qualifications for the position include a DVM degree with advanced

Qualifications for the position include a DVM degree with advanced degrees (MS and/or Ph.D) or a Ph.D in higher education administration or similar field. Candidates with either terminal degree must have had educational and managerial experience in a veterinary college or other health related professional colleges

Other qualifications include demonstrated administrative skills, a com-Other qualifications include demonstrated administrative skills, a com-mitment to excellence in professional education and a teaching meth-ods. Applicatnts or nominees should be eligible for appointment to the rank of Associate Professor or Full Professor. A detailed position description is available upon request. Application deadline is March 15, 1990. Position VM-8908. Dr. Ronald Gronwall, Search Committee, Chairperson, College of Veterinary Medicine, University of Florida, Box J-125, JHMHSC, Gainesville, FL 32610-0125. The University of Florida is an Equal Opportunity/Affirmative Action Employer.

## **RESEARCH SCIENTIST** MAMMALIAN **EXPRESSION SYSTEMS**

Amgen is a recognized leader in the discovery and development of human pharmaceutical and diagnostic products through applied biotechnology. Our continued growth has created an immediate need for a Research Scientist in our diagnostics group in Boulder, Colorado.

Candidates for this position must have a Ph.D. in an appropriate discipline and greater than 2 years' experience in cloning and expression of proteins in mammalian expression systems, development of mammalian expression vectors, and host cell culturing and development. A strong background in cell biology is highly desirable.

Amgen offers an excellent compensation and benefits package as well as the unique opportunity to contribute to significant research programs on the leading edge of biotechnology. 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 C.V., in confidence, to:

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

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## PEPTIDE CHEMIST



offmann-La Roche, one of the world's foremost pharmaceutical companies, is seeking a Senior Scientist-Peptide Chemist to contribute to our efforts to ensure a healthier tomorrow.

You will be responsible for peptide synthesis using classical and solid phase technologies; and purification including HPLC and characterization of biologically relevant peptides. Qualifications include a PhD in Organic, Bioorganic or Medicinal Chemistry (or a related field); 1-2 years of postdoctoral experience preferred. A thorough knowledge of both solution and solid phase synthesis of peptides, and experience in the purification and characterization of peptides are essential. Experience with structure-activity relationships and a working knowledge of conformational aspects of peptides are required to assist in the design of biologically active peptides. Knowledge of peptide mimetics is highly desirable.

We offer a comprehensive compensation package including an extremely generous benefits program. For consideration, please send your resume with present salary (those without this information wil not be acknowledged), to: Mrs. Eleanor M. Malone, Senior Professional Staffing Specialist, Department AF, Hoffmann-La Roche Inc., Nutley, New Jersey 07110. We are an equal opportunity employer.



Working Today For A Healthier Tomorrow

Advanced POSTDOCTORAL POSITION for an individual with interests in integrating contemporary biophysics with current techniques in molecular biology protein expression for the microbial polymerization of biologically relevant repeating peptide sequences. Recombinant DNA techniques have been utilized to construct a synthetic elastin polypentamer gene suitable for expression in prokaryotic systems designed for high for expression in prokaryotic systems designed for high yield production. Please have résumé and references sent to: Dr. Dan W. Urry, Director, Laboratory of Molec-ular Biophysics, The University of Alabama at Bir-mingham, P.O. Box 300/University Station, Bir-mingham, AL 35294. Telephone: 205-934-4177 or -4178. An Equal Opportunity/Affirmative Action Employer.



## CENTER FOR INSECT SCIENCE THE UNIVERSITY OF ARIZONA POSTDOCTORAL AND GRADUATE STUDENT POSITIONS

The Center for Insect Science is a multi-campus interdisciplinary research program funded by the National Science Foundation (Biological Centers Award), the MacArthur Foundation (Vector Biology) and the Du-Pont and Monsanto Corporations. Participants include over 50 research laboratories in the Departments of Biochemistry, Ecology and Evolutionary Biology, Ento-mology, Molecular and Cellular Biology, Neurobiology, Pharmaceutical Sciences, and Veterinary Sciences at the University of Arizona in Tucson, the Carl Hayden Bee Research Center in Tucson, and the Zoology Department at Arizona State University in Tempe. In addition to a stipend, postdoctoral and graudate

students receive funds to support research and are expect-ed to develop independent, collaborative projects. We are especially interested in projects involving molecular and physiological studies of insect vectors of parasites. Potential applicants should contact: Dr. Henry Hagedorn, Director, Center for Insect Science, 430 Forbes Building, University of Arizona, Tucson, AZ 85721. The deadline for applications is 1 March 1990. Applica-tions from women and minority groups are encouraged. The University of Arizona is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION. Available July of 1990 to study (i) in vivo, pulmonary deposition/clear-ance of inhaled particles and (ii) in vitro particle dissolution in lung lavage cells. Candidates should have experi-ence in at least two of the following areas: the produc-tion/characterization of aerosols, in vitro techniques for determinig solubility of particles in cells, and in vivo particle inhalatio techniques to measure deposition/clearparticle inhalatio techniques to measure deposition/clear-ance of aerosols. Experience in use of radioisotopes desired. Doctoral or equivalent degree in any associated field will be considered. To apply, send curriculum vitae and three references by 1 April 1990 to: Dr. William D. Bennett, Center for Environmental Medicine and Lung Biology, CB #7310, Medical Research Build-ing C. University of North Caroline Cheard Hill NC ing Č, University of North Carolina, Chapter 27599. Affirmative Action/Equal Opportunity Employer University of North Carolina, Chapel Hill, NC

POSTDOCTORAL RESEARCH ASSOCIATE. A position is available immediately to study the regulation of phospholipid metabolism and its relationship to signal transduction and the cell cycle. Candidates with a Ph.D. degree should submit their curriculum vitae, re-Prints, and names of three references to: Dr. Charles O. Rock, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. An Equal Opportunity/Affirmative Action Employer.

**RESEARCH ASSOCIATE OR ASSISTANT RE-SEARCH ASSOCIATE ON ASSISTANT RE-SEARCH SCIENTIST** to aid in landscape level spatial simulation modeling of coastal systems. Skills and experi-ence in ecological modeling, remote sensing, and GIS are desired along with the ability to work in an interdisci-plinary group. Minimum requirement is a Ph.D. Salary is commensurate with qualifications. Send a résumé and names of three references by 28 Echnary 1990 to Dr names of three references by 28 February 1990 to: Dr. Robert Costanza, Chesapeake Biological Laboratory, University of Maryland (UM), Solomons, MD 20688–0038. Telephone: 301-326-4281. UM is an Afirmative Action/Equal Opportunity Employer.

#### **POSITIONS OPEN**

POSTDOCTORAL POSITION. A position is available for a recent Ph.D. or M.D. to investigate the role of retinoids in the immune response to bacterial antigens. In vivo and in vitro systems will be used to investigate regulation of antibody production and natu-ral killer cell function. Experience in basic or clinical immunology, cellular and molecular biology, or nutri-tional biochemistry is required. Salary begins at \$22,000 per year, depending on experience. Please send curriculum vitae, a letter describing experience and professional goals, and names of three referees to: Dr. A. Catharine Ross, Professor of Biochemistry, Department of Physiology and Biochemistry, Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, PA 19129. An Equal Opportunity Employer.

CARNEGIE MELLON. POSTDOCTORAL RE-SEARCH appointment to work on chemical engineer-ing issues related to chemical weapon conventions. Should have a solid base in chemistry and understanding in the design of chemical plants. Involves strong interac-tions with the chemical industry and the negotiation process towards a chemical weapon convention. Send résumé to: Benoit Morel, Engineering and Public Policy, Carnegie Mellon University, Pittsburgh, PA 15213

#### UNIVERSITY OF PENNSYLVANIA POSTDOCTORAL POSITION/ **RESEARCH SCIENTIST**

The Department of Dermatology is offering an outstanding opportunity to investigate the immunomodulatory effects of novel antineoplastic therapies. The University of Pennsylvania is a leading center in the use of new immunotherapies in the treatment of autoimmune dis-ease and cancer. Collaboration with other major university centers is currently ongoing. Studies would focus on the correction of abnormal immunoregulation and the induction of heightened antitumor immunity produced by these therapies. Previous experience in cellular immu-nology, immunochemistry, and Northern blotting neces-sary. Substantial interaction with senior scientists in molecular biology, immunodermatology, and photobiology possible. Salary negotiable and duration of appointment flexi-

ble. Reply to:

Alain H. Rook, M.D. Department of Dermatology Hospital of the University of Pennsylvania 2 Maloney Building 36th and Spruce Streets Philadelphía, PA 19104

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

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

POSTDOCTORAL RESEARCH ASSOCIATE position is available immediately to study the mecha-nisms and regulation of nitrogen transport and metabolism in developing maize kernels. Approaches include enzymology, immunology, <sup>14</sup>C and <sup>15</sup>N (liquid and solid NMR) incorporation, and in vitro kernel and endosperm tissue culture. Candidates must have received a Ph.D. within the past 3 years in plant physiology/biochemistry or related areas. Starting salary is \$29,891 (GS-11) per year and 3 years of funding is available. Send a résumé, marked 9N034, and the names of three references to: Michael J. Muhitch, Seed Biosynthesis Research Unit, USDA/ARS, Northern Regional Research Cen-ter 1815 North University Strett Resein U. 61604 ter, 1815 North University Street, Peoria, IL 61604. Telephone: 309-685-4011 (ext. 368). The Agricultural Research Service is an Affirmative Action/Equal Opportunity Employer.

## POSTDOCTORAL RESEARCH ASSOCIATE GENE EXPRESSION

Position available to study the elements controlling globin gene activity at the molecular level using expres giobin gene activity at the inforcular level using expres-sion vectors. Candidates must have Ph.D. with experi-ence in recombinant DNA technology. Salary to \$30,000. Send résumé to: Dr. R. F. Rieder, Depart-ment of Medicine, State University of New York Health Science Center At Brooklyn, 450 Clarkson Avenue, Box #20, Brooklyn, NY 11203. Equal Oppor-tunity/Affirmative Action Employer. DMC #CR0284.

#### **POSITIONS OPEN**

#### POSTDOCTORAL/RESEARCH ASSOCIATE IN GENE EXPRESSION

The named position is available immediately or by the fall to study muscle gene expression in Drosophila. We are studying promoter and splicing function of contractile protein genes in transgenic flies and protein binding studies in in vitro cell-free systems. Applicants must have a Ph.D. and experience in recombinant DNA methods is desirable. Starting salary is competitive. Send curriculum vitae and names of three references to: Dr. Robert V. Storti, Department of Biochemistry, University of Illinois College of Medicine, 1853 West Polk Street, Chicago, IL 60612. The University of Illinos is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL AND GRADUATE RE-SEARCH POSITIONS IN THEORETICAL BIOL-**OGY**. To work on problems in population genetics involving the evolution of cooperation, recombination, and mating systems, available 1 May 1990 or after. Postdoctoral salary range: \$17,000 to \$25,000, depend-ing on experience, plus fringe benefit package. Graduate student salary range (half-time, fiscal year): \$9,923 to \$11,071 Send curriculum vites externant of research \$11,071. Send curriculum vitae, statement of research to: Dr. Richard Michod, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ 85721.

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

#### POSTDOCTORAL/RESEARCH ASSOCIATE

Position available immediately in retroviral research group (multiyear NIH funded). Training in molecular biology desired. Candidate will participate in ongoing studies aimed at the detection and characterization of known and unknown retroviruses. Faculty position pos-sible. Salary commensurate with level of experience. Forward letters of interest including complete curricu-lum vitae to: Bernard J. Poiesz, M.D., Head, Division of Hematology/Oncology, Department of Medicine, 750 East Adams Street, Syracuse, NY 13210. An Affirmative Action/Equal Opportunity Employer. Applica-tions will be accepted until the position is filled.

RESEARCH ASSOCIATE POSITION, PENN-SYLVANIA STATE UNIVERSITY: Position available to study pituitary cell structure and function; prolactin and estrogen involvement in immune modulation. Candidate must have experience in ELISA, intracellular and cell surface immunofluorescence, bioassays, lymphokine receptor assays, and gel electrophorosis. Ph.D. in kine receptor assays, and gel electrophorosis. Ph.D. in immunology and knowledge of endocrinology required. A minimum of 1 year of postdoctoral experience re-quired. Salary range: \$22,000 to \$26,000 per year. Standard university benefits package. To apply, send curriculum vitae and names of three references by 9 March 1990 to: Dr. W. C. Hymer, 401 Althouse, Molecular and Cell Biology, The Pennsylvania State University, University Park, PA 16802. An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to amply. are encouraged to apply.

PHARMACOLOGY RESEARCH ASSOCIATE. Conduct research to identify and characterize the neuronal binding sites for potent toxins, such as botulinum toxin and tetanus toxin. Ph.D. in pharmacology or M.D. plus 5 years of experience in receptor pharmacology of the Experience/research in: molecular pharmacology of biological chemistry; handling toxins, isotopes, cells in culture and microorganisms; radiolabelling toxins and binding experiments; receptor isolation and characterization. History of scholarly publications. \$32,000 per year; 40 hours per week. Apply to: Dr. Lance Simpson, Thomas Jefferson University (JAH), 1020 Locust Street, Philadelphia, PA 19107.

#### RESEARCH SCIENTIST/GENETIC ENGINEERING OF FLOWER COLOR

DNA Plant Technologies, Inc., is the world's largest independent agribiotech company. Position is available for a Ph.D. molecular biologist in our floriculture research program.

The objective of this exciting program includes the manipulation of flower colors and other traits of importance to the flower industry. Please send résumé with three references to: DNA Plant Technologies, Inc., Richard Jorgensen, Ph.D., Director of Floriculture Research, 6701 San Pablo Avenue, Oakland, CA 94608–1239. An Equal Opportunity Employer.

### DEAN

College of Computer, Mathematical, and Physical Sciences

#### UNIVERSITY OF MARYLAND, COLLEGE PARK

Applications and nominations are invited for the position of Dean of the College of Computer, Mathematical, and Physical Sciences at the University of Maryland, College Park campus. The Dean provides both academic and administrative leadership for the College and reports directly to the Vice Chancellor for Academic Affairs and Provost.

The College consists of the departments of Computer Science, Geology, Mathematics, Meteorology, and Physics and Astronomy, as well as the Applied Mathematics Program, the Center for Automation Research, the Chemical Physics Program, the Institute for Physical Science and Technology, the Institute for Advanced Computer Studies, and the Laboratory for Plasma Research. The College employs 472 faculty members and approximately 800 support personnel. Presently about 2300 undergraduate students and 800 graduate students are enrolled in degree programs within the College. In 1988-89, researchers in the College were awarded approximately \$34 million in external grants and contracts. The state-supported budget was about \$28 million.

A candidate should have an earned doctorate, be eligible for appointment in a department of the College at the rank of Professor with tenure, have successful experience as a teacher and a distinguished record of scholarly research, and have demonstrated leadership ability and management skills.

Applications should include a curriculum vitae and the names and addresses of at least four references. For best consideration, all applications should be submitted before March 1, 1990 to:

Patrick F. Cunniff Office of Graduate Studies & Research 2125 Lee Building University of Maryland College Park, Maryland 20742

The University of Maryland is an equal opportunity, affirmative action employer. Women and minority candidates are encouraged to apply.



DNX is an advanced biotechnology company whose main focus is the use of transgenics to develop enhanced biological systems for drug discovery, safety testing, and livestock improvement. DNX has attained a position of leadership in the transgenics industry, enjoying close ties to academic and government laboratories as well as business partnerships with world leaders in the pharmaceutical and livestock industries.

#### **MOLECULAR BIOLOGY — PRINCETON, NEW JERSEY**

An opening is available in our new Molecular Biology Center in Princeton, New Jersey for an expert in the physiological and genetic aspects of spermatogenesis. Applicants for this position should hold the Ph.D. degree and have a record of relevant independent research. Experience in molecular genetics and gene expression would be beneficial. In addition, positions are available for MS/BS level scientists with experience in recombinant DNA technology and molecular genetics. Applicants should send a *curriculum vitae*, description of research accomplishments and the names, addresses and telephone numbers of three references to: J. Eugene LeClerc, Ph.D., DNX, 303B College Road East, Princeton, NJ 08540.

#### ANIMAL BIOLOGY - ATHENS, OHIO

In our Animal Biology Research Center in Athens, Ohio, there are openings for BS/MS level scientists experienced in mammalian gene transfer and microinjection technology. Please send a *curriculum vitae* and the names, addresses and telephone numbers of three references to: Carl Pinkert, Ph.D., DNX, One President Street, Athens, OH 45701.

## 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 Pharmcological 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.



#### FACULTY POSITIONS IN MUSCULOSKELETAL DISEASES RESEARCH MAYO CLINIC SCOTTSDALE MAYO FOUNDATION

Faculty positions are open for career investigators (M.D., Ph.D., or comparable degree) in musculoskeletal diseases research at Mayo Clinic Scottsdale. Candidates must be U.S. citizens or permanent residents, and should have advanced training and experience in basic sciences related to biology of bone, cartilage, muscle, or connective tissues. Pertinent research areas might include membrane function, G-proteins, protein kinases and phosphorylation, peptide control of gene expression, or control of cellular differentiation.

Laboratories are under construction at Mayo Clinic Scottsdale, and a long-term program of planned research development is underway. Available in support of the research effort will be ample modern research space and equipment, start-up and continuing support, and the entire research, educational, and clinical resources of the Mayo Clinic, Mayo Medical School, Mayo Graduate School, and the Graduate School of Medicine.

Qualified candidates should submit detailed curriculum vitae, bibliographies, and names of three references to:

Hunter Heath III, M.D. Director for Research Mayo Clinic Scottsdale 13400 E. Shea Blvd. Scottsdale, AZ 85259 (Telephone 602-391-8004 or 507-285-6515)



An Equal Opportunity Affirmative Action Employer.

#### **RESEARCH ASSOCIATE**

The Department of Biochemistry announces the availability of a research associate position in the area of metalloprotein structure and function. Previous experience in one of the following areas is desirable: purification and/or characterization of membrane-bound enzymes, mitochondrial electron transport proteins, biophysical techniques (especially epr). Interested individuals should send a complete résumé, together with the names of three people who are willing to provide references for the applicant.

All information should be sent immediately to: G. Palmer, Biochemistry Department, Rice University, P.O. Box 1892, Houston, TX 77251. Rice University is an Equal Opportunity Employer.

RESEARCH ASSOCIATE. Position available for studies in developmental neuroendocrinology. Ph.D. in physiology, pharmacology, molecular biology, or related discipline required. Experience including cell culture and radioimmunoassay preferred. Competitive salary. Please send résumé and names of references to: Research Associate Position, c/o Dr. L. Cuttler, Rainbow Babies and Childrens Hospital, Room 790, Case Western Reserve University, 2101 Adelbert Road, Cleveland, OH 44106.

**RESEARCH ASSOCIATE**, 40 hours per week, 8 a.m. to 5 p.m., \$36,000 per year. Must have a Ph.D. in physics. Will perform research on the development of optical monitoring schemes in fabrication of submicrometer holographic structures for use in integrated circuits. Will perform research on the characterization of metal films deposited on integrated circuits. Also will perform research on the development of a new alignment scheme based on the technique of multiple-holographic exposure. Must have 2 years of experience in the job offered. Submit résumés to: New Mexico Department of Labor, 501 Mountain Road, N.E., Albuquerque, NM 87102. CC#1001. Job Order #276215.

RESEARCH ASSOCIATE IN POLYMER RHE-OLOGY. Responsible for: (i) examining structural property relationships in thermoplastic elastomers (TPE) and liquid crystalline polymers (LCP); (ii) evaluating the processing window of TPEs and LCPs; (iii) designing new molecular structure of TPEs; and (iv) testing mechanical properties of TPEs and LCPs. Requirements: Ph.D. in polymer science or chemical engineering and 2 years of experience in job offered or as a research associate or assistant in polymer science. Must have demonstrated knowledge in chemical structure and rheology and mechanical properties of TPEs and LCPs; demonstrated ability in designing new molecular structure of TPEs; demonstrated expertise in polymer processing; demonstrated expertise in operating infrared spectrometer, gel permeation chromatograph, tensile machine and rheometer, and differential scanning calorimeter. Monday to Friday, 9 a.m. to 5 p.m.; \$25,000 per year. Send two résumés to: MASS DET, Special Programs Unit, CF Hurley Building, 19 Staniford Street, Boston, MA 02114, Attention: Job Order #00199.

**RESEARCH ASSOCIATE IN POLYMER SCI-ENCE.** Responsible for: (i) investing and developing thermoplastic elastomers (TPEs) as binders for ammunition and propellants; (ii) designing new molecular structure of TPEs; (iii) synthesis of TPEs and liquid crystalline polymers (LCPs); (iv) testing liquid crystal properties of LCPs; and (v) examining structural-property relationship in TPEs and LCPs. Requirements: B.Sc. in polymer science or chemical engineering and 6 years of experience in job offered or 6 years of experience as a researcher or professor of polymer science. Must have: demonstrated knowledge in organic synthesis, polymerization, and copolymerization; demonstrated knowledge in chemical structure and property of TPEs and LCPs; demonstrated expertise inorganic synthesis and polymerization; demonstrate expertise in separation and purification of monomers and polymers; demonstrate ability in operating infrared spectrometer, thin-layer chromatograph, nuclear megnatic resonance, gel permeation chromatograph, vavoup pressure osmometer, differential scanning calorimeter, and thermogravimetric analyzer; demonstrated expertise in polymer science as evidenced by published research. Forty hours per week, 9 a.m. to 5 p.m. \$25,000 per year. Send two résumés only to: MASS DET, Special Programs Unit, CF Hurley Building, 19 Staniford Street, Boston, MA 02114, Attention: Job Order #00213. **RESEARCH SCIENTIST**. To perform scientific research, design, implement, oversee, and direct experiments to develop high-performance liquid chromatography (HPLC), enzyme-linked enzyme immunoassays (EIAs), or radioimmunoassay (RIA) as suitable alternatives to replace bioassay procedures used for stability indicating potency predication of salmon calcitonin-formulated products. Ph.D. in chemistry plus 1 year as associate research chemist required. Previous experience must include 1 year of hands-on experience performing chemical research utilizing HPLC (reverse phase, size-exclusion, ion exchange affinity column), immunoassays (antibody production, purification, analyte modification and conjugation, development of rapid flow injection immunoassays), ion-selective electrodes, and development of flow-through polymeric membrane ion selective electrodes. Forty hours per week, 8:00 a.m. to 4:30 p.m., Monday to Friday; \$35,700 per year. Please send résumés to: L. Stewart, Manager of Personnel, Department 90R-JLIN, Rorer Central Research, 640 Allendale Drive, King of Prussia, PA 19406. Equal Opportunity Employer.

#### VASCULAR RESEARCH

Akron City Hospital is recruiting an independent investigator with expertise in the cell and molecular biology of vascular cells. Successful applicants would be expected to establish an independent research program in their field of specific interest as well as collaborative ties with existing laboratories involved in diverse aspects of vascular research. Candidates should have a Ph.D. or M.D. with appropriate postdoctoral experience. Physician-scientists are encouraged to apply.

M.D. with appropriate posteocont experiment 2.3/2 cian-scientists are encouraged to apply. Akron City Hospital is a major teaching hospital for the Northeastern Ohio Universities College of Medicine (NEOUCOM) with a strong commitment to clinical and applied biomedical research. A competitive salary and fringe benefit package is available. Academic appointments may be available through NEOUCOM, the University of Akron, and/or Kent State University. Send curriculum vitae, statement of research interests, salary/ equipment/space requirements, and the names of at least three references to: Steven P. Schmidt, Ph.D., Vascular Research Laboratory, Akron City Hospital, 525 East Market Street, Akron, OH 44309.

Akron City Hospital is an Affirmative Action/Equal Opportunity Employer.

SILVICULTURE POSITION: Department of Forestry and Natural Resources, Purdue University. AS-SISTANT PROFESSOR, tenure-track. Twelve-month appointment divided between research (70%) and teaching (30%). Research activities directed toward quantitative analysis of natural and human-induced environmental, particularly climatic change on forest productivity and biodiversity. Teaching activities include teaching and undergraduate silviculture course and developing and teaching a graduate silviculture course. Applicant must have a Ph.D. degree in forestry, forest ecology, silviculture, or a closely related field and have extensive graduate training in silviculture. Applications accepted through 30 April 1990 or until a satisfactory candidate is identified. For further information contact: Dr. Phillip E. Pope, Chair, Search Committee, Department of Forestry and Natural Resources, Purdue University, West Lafayette, IN 47907. Telephone: 317-494-3590. Purdue University is an Equal Opportunity/Affirmative Action Employer.

SUPERVISORY METEOROLOGIST OR SU-PERVISORY PHYSICAL SCIENTIST, GM-14. Salary: \$50,342. Department of Commerce, Air Resources Laboratory, Atmospheric Sciences Modeling Division, Research Triangle Park, North Carolina. Objective is to initiate, supervise, and conduct research in air quality modeling to attain and define a detailed understanding of the atmospheric and chemical processes affecting the structure of the planetary boundary layer and the dispersion of air pollutants on all spatial and temporal scales. Represents the government at scientific meetings and seminars as an expert in the field of air pollution modeling. A college degree in meteorology or physical science is required plus three years of professional experience of which 1 year is equivalent to the GS-13 level in federal service. Related semester hours and professional experience may be subsituted for full college degree. U.S. citizenship is required. For information, call: Ms. Beedie, telephone: 804-414-6548. The Department of Commerce is an Equal Opportunity Employer.

#### **POSITIONS OPEN**

RESEARCH ASSISTANT, full-time, to operate and maintain an Applied Biosystem 475 Protein Sequencer, 431 Peptide Synthesizer, and Beckman System Gold Amino Acid Analyzer. B.S./M.S. required with experience in protein sequencing, peptide synthesis, and/or amino acid analysis preferred. Send letter of interest, curriculum vitae, and three letters of references to: Dr. Russel Meints, Center for Gene Research and Biotechnology, Oregon State University (OSU), Corvallis, OR 97331–2906. Telephone: 503-737-3413. Application closing date is 1 March 1990. Starting date is 1 April 1990. OSU is an Afirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973. OSU has a policy of being responsive to the needs of dual-career couples.

SENIOR PRINCIPAL BIOMEDICAL ENGI-NER. Coordinate renal therapy research focusing on the conception, construction, and clinical testing of working prototypes which demonstrate the feasibility of monitoring blood pressure and blood volume during hemodialysis procedure in order to prevent symptomatic hypotension; assume responsibility for on-line monitoring and signal processing of mammalian cardiovascular responses including blood pressure, blood velocity, and blood density; direct, design, and fabrication of electrical circuits and prototypes; prepare reports on cardiovascular monitoring, control, and expert systems. Eight years of college, Ph.D. in electrical engineering; must have M.S. degree in biomedical engineering; graduate level coursework must include at least one course in each of the following areas: artificial intelligence and robotics; fuzzy sets/expert systems; adaptive and nonlinear control; human physiological systems. Graduate level research work must include research in area of cardiovascular monitoring, control, and expert systems. Forty hours per week; 9:00 a.m. to 5:00 p.m.; \$47,500 per year.

search work must include research in area of cardiovascular monitoring, control, and expert systems. Forty hours per week; 9:00 a.m. to 5:00 p.m.; \$47,500 per year. Send résumés to: Illinois Job Service, 401 South State Street, 3 South, Chicago, IL 60605. Attention: Mary Millea. Reference #9981-M. An employer-paid ad.

#### **FELLOWSHIPS**

**POSTDOCTORAL FELLOWSHIPS** for M.D.'s or Ph.D.'s to study the molecular genetics and pathogenesis of neurodegenerative disorders, especially Alzheimer's disease. Preference given to individuals with background in molecular biology or protein chemistry. U.S. citizenship not required. Reply with curriculum vitae and names of references to: Drs. E. A. Schon or J. Herbert, Department of Neurology, College of Physicians of Columbia University, 630 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity Employer.

#### STAFF FELLOW POSTDOCTORAL POSITIONS AVAILABLE IN BEHAVIORAL PHARMACOLOGY

The NIDA Addiction Research Center is the intramural research program of the National Institute on Drug Abuse. Staff fellowship positions are available in the Preclinical Pharmacology Branch that involve research in the behavioral pharmacology of drugs of abuse. Current research projects are directed at, but are not limited to, stimulants, opioids, and benzodiazepines. Duties include conducting experiments, supervising technical staff, and writing manuscripts and reports. A Ph.D. is required, preferably in pharmacology of the experimental analysis of behavior. Candidates should be able to contribute intellectually to a broad-based program of research in the behavioral pharmacology of drugs of abuse. Experience with intravenous drug self-administration and/or drug discrimination procedures, computers, and primates is desirable but not essential. Salary ranges from \$24,000 to \$43,345 depending on experience. The NIDA Addiction Research Center is an Equal Opportunity Employer and specifically invites and encourages applications from women, minorities, and the handicapped.

If interested, please send a copy of your curriculum vitae to either:

Jonathan L. Katz, Ph.D. or Steven R. Goldberg, Ph.D. NIDA Addiction Research Center Preclinical Pharmacology Branch P.O. Box 5180 Baltimore, MD 21224

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#### **FELLOWSHIPS**

#### POSTDOCTORAL FELLOWSHIPS IN THE DEPARTMENT OF ANATOMY AND NEUROBIOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

Several positions for research in individual laboratories in the department are available for candidates who have demonstrated research promise at the predoctoral or postdoctoral level. The emphasis of research in the department is in the neurosciences with special expertise in neuromorphology, sensory physiology, and molecular neurobiology. The faculty of the department and their research interests are:

Dr. Robert Blanks: Eye movement control, physiology of upper airway. Dr. James Fallon: Chemical neuroanatomy, transmit-

ters, and growth factors

Dr. Christine Gall: Limbic/olfactory anatomy, neuro peptides, neurochemical plasticity. Dr. Roland Giolli: Visuomotor system.

Dr. Stewart Hendry: Primate visual system.

Dr. Paul Isackson: Molecular neurobiology.

Dr. Edward Iones: Sensory-motor anatomy and physiolog

Dr. Glenn Kageyama: Oxidative metabolic development and plastic Dr. Leonard Kitzes: Auditory system anatomy and

physiology.

Dr. Sandra Loughlin: Monamines, peptides, and growth factors and their receptors. Dr. Diane O'Dowd: Function and regulation of ion

channels in Drosophil Dr. Charles Ribak: Epilepsy, neurotransmitters, and

circuits Dr. Richard Robertson: Thalamocortical develop-

ment. Dr. Malcolm Semple: Auditory processing. Dr. Martin Smith: Cellular and molecular aspects of

synaptogenesis. Dr. John Swett: Spinal cord and peripheral nervous

system Dr. Yasuhiro Torigoe: Peripheral nervous system and

oculomotor control.

Applications or inquiries for additional information should be sent to:

Dr. Edward Jones, Professor and Chairman Department of Anatomy and Neurobiology University of California, Irvine Med Surge II, Room 364 Irvine, CA 92717

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**RESEARCH STAFF FELLOW** or **SENIOR STAFF FELLOW**. Position available now to investi-gate genetic variation and molecular mechanisms controlling expression of genes involved in serotoninergic neurotransmission. Salary range: \$24,000 to \$52,825, depending upon qualifications and experience. Appli-cants should have a Ph.D. or M.D. and training in molecular biology, recombinant DNA technology, or neurobiology. Send curriculum vitae and three references or letters of reference to: Dr. David Goldman, Section on Genetic Studies, Laboratory on Clinical Studies, National Institute on Alcohol Abuse and Alcoholism (NIAAA), Building 10, Room 3C103, 9000 Rock-ville Pike, Bethesda, MD 20892.

#### NIAAA is an Equal Opportunity Employer. POSTDOCTORAL FELLOWSHIP

RENAL CELL PHYSIOLOGY/BIOCHEMISTRY

Several postdoctoral positions are available in a multidisciplinary hypertension program project, "Vasoactive Hormones: Receptor and Signaling Mechanisms," which includes the Departments of Medicine, Physiology and Biophysics, Pharmacology, Genetics, and Environmental Health Sciences. Primary focus is on cell culture of primary and transformed renal epithelial cells, regula-tion of transport in cell monolayers, and biochemistry of intracellular signaling pathways. The positions provide training opportunities in cell culture, transformation of cells, epithelial electrolyte transport, biochemistry of P-450 enzymes, molecular biology, and video- and com-uter enhanced light microcover. Interested persone puter-enhanced light microscopy. Interested persons should send curriculum vitae and two letters of recommendation to: Ulrich Hopfer, M.D., Ph.D., Departmenuauon to: Uirich Hopter, M.D., Ph.D., Depart-ment of Physiology and Biophysics, Case Western Reserve University (CWRU) School of Medicine, 2119 Abington Road, Cleveland, OH 44106. Tele-phone: 216-368-2878. CWRU is an Equal Opportunity Employer.

2 FEBRUARY 1990

#### **FELLOWSHIPS**

**POSTDOCTORAL FELLOW**. Position available for an NIH-funded project to elucidate functions of the steroid hormone 1,25-dihydroxyvitamin D in new targets. Tissues/cells emphasized are heart, testis, and lung. Prior experience in biochemical endocrinology, tissue culture, and/or intracellular calcium homeostasis would be helpful. Send curriculum vitae and three letters of recommendation to: Marian R. Walters, Ph.D., Department of Physiology, Tulane Medical School, New Orleans, LA 70112.

POSTDOCTORAL FELLOW. Research regulation of gene expression, specific focus on mammalian ribosomal DNA genes; sequencing, subcloning, muta-genesis, and in vitro transcription. Ph.D. (or completion of all requirements for Ph.D. except defense of thesis) in molecular biology or biochemistry. Six months of research experience in sequencing, subcloning, mutagene-sis, and in vitro transcription; 8:30 a.m. to 5:30 p.m.; \$22,000 per year. Job Order Number: 4244902. Send résumés to: Job Center, 941 West Arch Street, P.O. Box 548, Shamokin, PA 17872–0548.

## 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 analgesic, and and interface or ugs. 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 applica-tion 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

#### **FELLOWSHIPS**

#### RESEARCH FELLOW

A research fellow position starting June 1990 is available for 1 to 2 years in the field of vascular physiology and applied laser technology. Supervised independent laboratory research available for M.D. or Ph.D. level experience. Salary range: \$27,934 to \$41,912. Applica-tions must be received no later than 30 April 1990.

Please forward résumé, cover letter, and references to: Associate Director, Human Resources Charlotte Memorial Hospital Medical Center P.O. Box 32861 Charlotte, NC 28232

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POSTDOCTORAL FELLOWSHIPS

The Science Alliance Center of Excellence invites applications for two postdoctoral positions available in the following areas: Chronic Virus Infection of the the following areas: Chronic Virus Intection of the Gastroenteric Tract—D. A. Brian, coronavirus; L. N. D. Potgieter, flavivirus; N. K. Clapp, marmoset research; Molecular Biology of Pathogenic Fungi—J. M. Becker, pheromones and transport; W. S. Riggsby, dimorphism and epidemiology; R. N. Moore, immunobiology; Molecular Evolutionary Genetics-G. F. McCracken, DNA variation in natural populations; potential collaboration with C. R. B. Boake, A. C. Echternacht, D. A. Etnier, J. Gittleman, S. E. Riechert; Phytoplankton Ecology W. O. Smith; Immunobiology of Viral Infections—B. T. Rouse, herpesvirus; S. Kennel, antiviral immunity; Pro-tein Engineering—D. M. Roberts, calcium regulatory proteins; E. Howell, dihydrofolate reductase; Metal Bio-chamiert, J. O. Lochi, foreiting, J. C. Cherchielt and chemistry—J. G. Joshi, ferritin; J. C. Churchich, pyri-doxal phosphate kinase; S. Georghiou, stopped-flow fluorometry; W. R. Farkas, metal toxicity; K. B. Jacobson, metal toxicity. Interested individuals should write for an application packet by 15 March 1990. Positions are available immediately at a starting salary of \$25,000 per annum with the possibility of renewal. Write to: Science Alliance Postdoctoral Fellowship, Biology Consortium, M303 Walters Life Science Building, The University of Tennessee, Knoxville, TN 37996. The University of Tennessee is an Equal Opportunity/Af-firmative Action/Title IX/Section 504 Employer.

## POSTDOCTORAL FELLOWSHIPS IN PRE-CLINICAL ANTI-CANCER RESEARCH

#### Department of Molecular and Cellular Biology

The Department of Molecular and Cellular Biology of Bristol-Myers Squibb Pharmaceutical Research and Development Division, currently has positions available for postdoctoral fellows to study the regulatory elements for growth factor gene expression or the mechanisms and regulation of DNA replication. Qualified candidates will join an interdisciplinary group working on growth factor gene regulation, autocrine growth factor production and the mechanisms of gene amplification and drug resistance in human colon carcinoma cell lines.

A Ph.D. in a relevant biological discipline and a strong background in cellular and molecular biology or protein chemistry are required. Candidates should demonstrate independent research skills and creativity as well as the ability to work well in a collaborative environment. The appointments are for one year with an option for renewal at a highly competitive salary. The department maintains numerous academic collaborations in our efforts toward basic anti-cancer research and novel drug discovery; publication in peer reviewed scientific journals is strongly encouraged.

Please send resume to: BRISTOL-MYERS SQUIBB COMPANY, Pharmaceutical Research and Development Division, Attn: MH177, P.O. Box 5101, 5 Research Parkway, Wallingford, CT 06492-7661. An Equal Opportunity Employer M/F/H/V.

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#### INTERNATIONAL MEETING

#### **BIOINFORMATICS. INTEGRATION OF ORGANISMIC AND MOLECULAR** DATA BASES. AND USE OF EXPERT SYSTEMS IN BIOLOGY

July 9-11, 1990

GEORGE MASON UNIVERSITY. FAIRFAX, VIRGINIA, USA

(Located 15 miles from Washington, DC)

The meeting will consist of invited papers, poster sessions, and workshops to advance understanding, foster communication, and explore the organization of a society dealing with those fields of research that have come to be summarized in the term BIOMATRIX. Some travel support will be available for presenters.

For information write to:

**Professor Harold Morowitz** 207 East Building **George Mason University** Fairfax, VA 22030, USA

hmorowitz@gmuvax.bitnet. (NW4679)M

## **ELEANOR ROOSEVELT**

#### **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 laboracourse provides a combined somatic cell ton 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 and dures for scientists who need to exploit these techniques for their continuing research pro-grams. The content of this workshop also programs. The content of this workshop also pro-vides the basic techniques needed for research-ers interested in initiating genome mapping stud-ies. Included in the curriculum are: somatic cell hybridization and mutant isolation, yeast molec-ular 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. Princi-pal investigators whose research interests focus on malignancy are particularly invited to apply. 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 Workshop, 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.

#### **FELLOWSHIPS**

### ONCOLOGY RESEARCH FELLOWSHIP MEDICAL AND RADIATION ONCOLOGY RESEARCH STARTING 1 JULY 1990

CLINICAL AND LABORATORY RESEARCH 'FELLOWS required to work in a multidisciplinary cancer center. Potential areas for clinical study include pain and symptom control, clinical pharmacology, clinical trials in breast cancer, molecular monitoring of lymphomas, immunotherapy, gynecologic malignancies, and other aspects of clinical epidemiology related to cancer. Laboratory research in the areas of immunology, radiobiology, or molecular biology can be undertaken. A 2-year commitment would be preferred, particularly in the laboratory area, but 1-year posts will be considered. Please apply with curriculum vitae and three letters of reference to:

> Dr. Kathleen I. Pritchard Head, Division of Medical Oncology or

Dr. Alon J. Dembo Head, Division of Radiation Oncology Toronto-Bayview Regional Cancer Centre 2075 Bayview Avenue Toronto, Ontario, Canada M4N 3M5

#### SITUATIONS WANTED

CHEMIST, Ph.D. Solid credentials, 19 years. Seeks moonlighting job in New York City/southern Connecti-cut area. Salary requirements very reasonable. Tele-phone: 919-929-3229.

GEOLOGIST, Ph.D. Six years of experience, radioactive waste; training in mechanics of detachment faults. Seeks entry-level hydrogeologist or mid-level geologist position. Box 6, SCIENCE.

INFORMATION SCIENCE. Ph.D., medicinal chemistry. Background in spectroscopy, chromatogra-phy, synthesis, biochemistry. Library and teaching expe-rience. Familiar with on-line services. Carl P. Bergstrom, P.O. Box 417365, Chicago, IL 60641-7365.

NEUROSCIENTIST seeks career change. Ph.D., M.S.; neurophysiology, 19 years. Skillful writer, teacher, speaker to technical, legal, lay audiences. Interpersonal adroitness. Box 3, SCIENCE.

SEMI-RETIRED CHEMICAL ENGINEER. Seeks teaching post, or responsible charge of statistical QC, model simulation, productivity enhancement, prof-itability analysis. P.O. Box 16925, San Diego, CA 92116

#### **COURSES AND TRAINING**

The Basic Science Departments (Cell Biology and Neuroanatomy, Biochemistry, Microbiology, Pathology, Pharmacology, Physiology), Medical School, University of Minnesota, periodically have openings for **POST-DOCTORAL TRAINING**.

For information about possible openings in these programs, write, specifying department of interest, to:

University of Minnesota Medical School Box 293 UMHC 420 Delaware Street, S.E Minneapolis, MN 55455 Attention: James C. Nelson

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

Ph.D. TRAINING PROGRAM IN MOLECU-LAR AND CELLULAR PHARMACOLOGY. Areas of research training include: Structure and function of membrane receptor and transporter proteins; platelet and vascular thromboxane and prostaglandin receptors; the tissue kallikrein-kinin system; hormonal and tissue con-trol of gene expression; mechanisms of arterial pressure control; vascular endothelium; molecular toxicology; drug metabolism and pharmacokinetica. Graduate stu-dent stipends/fellowships up to \$15,000 per year. Con-tact: Dr. George E. Lindenmayer, Department of Pharmacology and Experimental Therapeutics, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425. An Equal Opportunity/Affirmative Action Employer.

#### **COURSES AND TRAINING**

MEDICAL UNIVERSITY OF SOUTH CARO-LINA (MUSC) offers programs leading to Ph.D. and M.D./Ph.D. degrees in each of the basic biomedical sciences (anatomy, biochemistry, microbiology/immunology, pathology, pharmacology, physiology), biometry, pharmaceutical sciences, and molecular and cellular biol-ogy/medicine; \$9000 assistantships available to qualified students. Contact: College of Graduate Studies, MUSC, 171 Ashley Avenue, Charleston, SC 29425.

#### CÁREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain the Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: Dr. D. Chauncey, Program Director, Accelerated Program, The New England College of Optometry, Room S, 424 Beacon Street, Boston, MA 02115.

**RESEARCH PROGRAMS FOR POSTGRADU-**ATES, FACULTY, AND STUDENTS AT DE-PARTMENT OF HEALTH AND HUMAN SER-VICES laboratories including the Agency for Toxic Substances and Disease Registry (Atlanta), Center for Devices and Radiological Health (Rockville, Maryland), and National Center for Toxicological Research (near Little Rock). U.S. citizenship or PRA status required. For information (please indicate postgraduate, faculty, and/ or student program), contact: Research Participation Programs/DHHS, Attention: M. Mayton, Science/ Engineering Education Division, Oak Ridge Associ-ated Universities, Box 117, Oak Ridge, TN 37831– 0117. Telephone: 615-576-3190.

#### TRAINING PROGRAM IN CANCER BIOLOGY AT WASHINGTON UNIVERSITY SCHOOL OF MEDICINE ST. LOUIS, MISSOURI

Postdoctoral positions are available in a training program covering diverse cellular and molecular aspects of

gram covering diverse cellular and molecular aspects of cell biology. The program is eclectic and geared to those with an M.D. or Ph.D. in biological sciences. Trainees are expected to spend 2 to 3 years in the laboratory. The different laboratories are conducting research in oncogenes, cellular immunology, growth factors, cyto-kines, molecular biology, T cell differentiation, gene regulation, antigen processing and presentation, kinases and proceptotes and their role in cell center and and phosphatases and their role in cell growth, and receptor-mediated endocytosis.

The training faculty includes: Dr. Paul M. Allen, Dr. Jacques Baenziger, Dr. Thomas Braciale, Dr. Thomas Deuel, Dr. Stanley Korsmeyer, Dr. Dennis Loh, Dr. Jeffrey Milbrandt, Dr. Robert Schreiber, Dr. Philip Stahl, Dr. Matthew Thomas, and Dr. Emil R. Unanue.

For information, please directly contact any member of the training faculty or Mrs. Charlotte Hanson, Washington University School of Medicine, Department of Pathology, St. Louis, MO 63110. Telephone: 314-362-7440. Washington University is an Equal Oppor-tunity Employer. We are particularly interested in minority applicants





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