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SYMPOSIUM ANNOUNCEMENT

"Receptor-Mediated Stimulation of Phosphoinositide Metabolism and Protein Kinase C"

August 12-15, 1990

Introduction: M. Hokin-Neaverson, M. Berridge, Y. Nishizuka

Phospholipid signal transduction pathways: L.E. Hokin, S. Rhee, J.N. Fain, J.W. Putney, J. Axelrod, J.H. Exton, D.M. Raben, G. Carpenter

Spatiotemporal aspects of cell signalling: R.Y. Tsien, A.P. Thomas, J. Connor, C.W. Taylor, T.R. Cheek

Phospholipid metabolism in cell growth and development: R.H. Michell, L.T. Williams, S.A. Aaronson, M. Whitman

Biochemical aspects of PKC: K.-P. Huang, M.P. Walsh, P. Parker, B.E. Kemp

Cell biology of PKC: S. Jaken, P.J. Blackshear, A. Hall

PKC and gene regulation: M. Montminy, M. Karin, S.B. Mizel, K.L. Leach, C. Borner

CONTACT: Organizing Committee, W. Alton Jones Cell Science Center, Inc., 10 Old Barn Road, Lake Placid, NY, 12946, Tel. (518)523-1252, FAX (518)523-1849

Announcing a new quarterly journal

Discovery and Innovation

Published by the African Academy of Sciences and the Third World Academy of Sciences, *Discovery and Innovation* aims to provide a coherent forum for research and development efforts throughout the continent. The journal covers all branches of science and engineering, including the social sciences. Particular issues of concern to Africa addressed in the journal are: endemic and tropical diseases; drought; agricultural development; natural resources; energy; training and education.

The first issue appeared in March 1989. The subscription rates for 1989, including air mail postage, are:

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Africa	U.S. \$48	U.S. \$38
Outside Africa	U.S. \$60	U.S. \$48

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P.O. Box 14798
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PENNSTATE



NINTH SUMMER SYMPOSIUM IN MOLECULAR BIOLOGY

The Pennsylvania State University
July 25 - July 27, 1990

MOLECULAR PATHWAYS OF CELL GROWTH CONTROL

The IBM Keynote Address: J. Michael Bishop

Growth Factors and Receptors
D. Wojchowski, C. Sherr, M. Howard, R. Derynck

Intracellular Signaling: From Cytoplasm to Nucleus
B. Sefton, U. Rapp, F. McCormick, E. Rozengurt
J. Brugge, G. Crabtree, G. Vande Woude, K. Yamamoto

Cell Cycle Control
J. Thorner, J. Maller, J. Wang, R. Baserga

Co-Chaired by A. Mastro, D. Shalloway, D. Wojchowski.
Program Director, Richard J. Frisque. This symposium is supported by Penn State, IBM, and grants from industry.

For registration information, please contact:

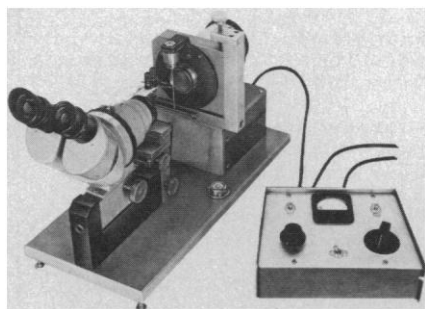
Symposium Program Coordinator
Ninth Summer Symposium in Molecular Biology
208 South Frear Laboratory
The Pennsylvania State University
University Park, PA 16802
Telephone: (814) 863-3696

U.Ed.#Sci-90-023

Products & Materials

Microforges for Microtool Fabrication

Stoelting microforges can be used to fabricate glass microtools for precise manipulations of objects under a microscope. Microforges can be used to fabricate hooks,



curves, blades, bulbs, flame-polished tips of a specific size, and other microtools. Stoelting microforges can be supplied with stereo-zoom microscopes from any manufacturer or with mounting hardware for a user's microscope. Stoelting. Circle 523.

Capillary Electrophoresis Package

The CE-1A component package for capillary electrophoresis includes the AD-200 variable wavelength absorbance detector, the DA-30 high-voltage power supply, and the DS-4 sample delivery system. The component package incorporates continuous fault-sensing circuitry and safety interlocks and provides everything needed for basic capillary electrophoresis for under \$10,000. SpectroVision. Circle 520.

High-Performance UV-VIS Spectrometer

The new generation of Cary ultraviolet-visible light spectrophotometers incorporates a design that integrates Cary's optics with unique, configurable software and ap-

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.

plication-specific accessories. The new software integrates data collection, data analysis, and system control. The spectrophotometer is equipped with dual holographic gratings for stray light rejection. Double-beam optics with automatic dark current correction provide stability. A photomultiplier detector improves signal-to-noise ratio and light throughput. Varian Associates. Circle 519.

Monoclonal Antibodies

HMB45 is a monoclonal antibody that recognizes cytoplasmic melanoma antigens. HHF35 is a monoclonal antibody that recognizes actin isotypes of skeletal, cardiac, and smooth muscle cells. BioGenex Laboratories. Circle 528.

The VERITYPE range of monoclonal antibodies to human leukocyte antigens offers a panel of reagents suited to leukemia immunophenotyping. Sera-lab. Circle 529.

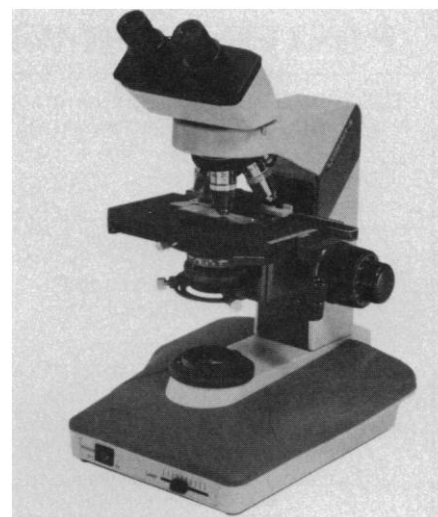
Clone IU-4 is a high-affinity monoclonal antibody that recognizes both bromodeoxyuridine (BrdU) and iododeoxyuridine (IdU) incorporated into DNA, nucleotides, and nucleosides. Clone BR-3 is a monoclonal antibody that shows selective halogen binding to BrdU and that can be used with IU-4 in multiparameter applications for the measurement of DNA substituted with both IdU and BrdU. Caltag Laboratories. Circle 530.

Spectral Array Detector

The Dionex spectral array detector is a state-of-the-art ultraviolet-visible light multiple wavelength absorbance detector. The detector can monitor absorbance across a broad spectral region and display the data in three-dimensional format as multiple chromatograms. It offers sensitivity equivalent to the best conventional absorbance detectors and provides analytical capability and versatility seen in diode array detectors. Deuterium and tungsten light sources provide high sensitivity operation from 190 to 800 nm. Dionex Corp. Circle 533.

Top Research-Level Microscope

The Optiphot-2 is a top-of-the-line, bench-type research microscope that offers optical performance and user comfort, convenience, and productivity. The Optiphot-2 allows users to resolve images lower than the theoretical limit of microscopy. This super-resolution is made possible by diffraction-limited, aberration-free optics and the elimi-



nation of relay lenses within the microscope. The instrument is useful for those who work with low-contrast specimens or who use epifluorescence, ultralow-power objectives, multi- and dual-viewing systems, photomicrography, or video microscopy as part of their research. Nikon. Circle 537.

Literature

Standard Products Catalog (L-12B) is a 44-page listing of thermistor products. Fenwal Electronics. Circle 547.

Products for Environmental Analysis describes a complete line of reagents, high-purity solvents, and chromatography products for environmental testing labs and others involved in the analysis of organic and inorganic pollutants. EM Science. Circle 550.

Bioreactor and Bioseparation Products is a 64-page catalog on an assortment of biotechnology products, with sections on chromatography, electrophoresis, filtration, and cell culture and fermentation. Kontes Biotechnology. Circle 551.

Virology and Immunology is a catalog of materials and services for vaccine, diagnostic, and immunopharmacologic manufacture and for research in cell physiology, virology, oncology, and immunology. Lee Biomolecular Research Laboratories. Circle 552.

PolyScience has released a 16-page catalog of constant temperature baths, circulators, refrigerated chillers, and recirculating heaters. PolyScience. Circle 553.

Enhance Your Laboratory Productivity is a 19-page brochure of data system and workstation information for the laboratory chromatographer. The brochure includes descriptions of a wide range of products and capabilities to accommodate any laboratory type, size, and budget. Waters Chromatography Division of Millipore. Circle 559.

Personnel Placement

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

LINE CLASSIFIED ADVERTISEMENTS

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

POLICIES: All classified ads will be edited and typeset according to **SCIENCE** style guidelines. NO ABBREVIATIONS. Any deadline for applications stated in ad must be at least 2 weeks after date of issue in which ad appears.

CLASSIFICATION: **SCIENCE** publishes line classified ads under the following headings: **Positions Open, Employment Agencies, Fellowships, Situations Wanted, Courses and Training, Meetings, Announcements, and Marketplace.** Advertisers should specify classification desired; however, **SCIENCE** reserves the right to decline classification requests which it believes may be misleading to readers.

RATE: \$41 per line, \$410 minimum, per week. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces per line. No charge for use of blind box number. No agency commission for ads less than 40 lines. No cash discount. Prepayment required for all foreign ads. Purchase orders required for all other advertising.

To **ESTIMATE** ad cost, structure ad copy on a 52-character line; include any desired heading on 32-character lines. Each line of heading, one line of white space between heading and body of ad, and all partial lines (including centered reply information, if desired) are counted as full lines. Multiply total number of lines \times \$41 = approximate cost of ad, per week. (This is an approximate cost ONLY. Allow for variation between estimated lines and actual typeset lines and resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment. **SCIENCE** cannot provide proofs of typeset ads.)

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

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

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

Address ad copy or requests for information to:

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

MARKETPLACE AND DISPLAY PERSONNEL ADVERTISEMENTS

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

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

RESPONSES TO EMPLOYMENT ADS

Applicants should read Positions Open ads carefully in order to submit all required material when responding, and should especially check for any stated deadline for receipt of applications.

SCIENCE encourages applicants for positions to investigate employment laws, nondiscrimination policies, visa requirements, and cultural differences in the country advertising for employees.

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

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

POSITIONS OPEN

ANATOMY AND PHYSIOLOGY LABORATORY INSTRUCTOR

One full-time laboratory instructor with responsibilities for laboratory instruction in the above areas. Requirements: Master's/Ph.D. and demonstrated teaching ability. Send detailed curriculum vitae, transcripts, and three letters of recommendation by 21 March 1990 to: **Sister John Karen Frei, Associate Vice President, Academic Health Science Center, Barry University, Miami Shores, FL 33161.**

SENIOR LEVEL ARCHAEOLOGIST. An immediate opening is available for an archaeologist/principal investigator. Expertise in eastern/midwest historic or prehistoric archaeology, both desirable. Candidates must have a master's degree, 2 years of CRM experience, and be able to meet National Park Service or SOPA requirements. The selected candidate will also have marketing responsibilities. Send letters of interest and résumés to: **Douglas L. Smith, WAPORA, Inc., 2110 Anderson Ferry Road, Cincinnati, OH 45238.**

The Department of Biology, Grand Valley State University, has an **ASSISTANT PROFESSOR**, tenure-track position, fall of 1990, to teach systematic botany, plant morphology, and introductory biology courses. Ph.D. required. Deadline date: 2 April 1990. Submit application, curriculum vitae, summary of course work, and names and telephone numbers of three references to: **Fred Bevis, Chair, Biology, Grand Valley State University, Allendale, MI 49401.** *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR, EVOLUTIONARY BIOLOGY/SYSTEMATICS OF INSECTS. A tenure-track faculty position in a Japanese national university for a Ph.D. in entomology or related field. *Japanese citizenship required.* Expertise in molecular biology preferred. Appointee expected to join/establish a research program and to participate in teaching. Submit curriculum vitae, academic transcripts, and three letters of reference by 31 March 1990 to: **Dr. N. Shinkaji, Faculty of Horticulture, Chiba University, Matsudo, Chiba 271, Japan.**

ASSISTANT PROFESSOR BIOLOGY

Assistant professor biology position at Indiana University-Purdue University at Indianapolis (IUPUI) is available in Purdue School of Science at IUPUI Columbus campus. Ph.D., a record of scholarly activity, evidence of an active program of current research, and 3 years of university teaching experience are required. Special consideration will be given to candidates whose research would benefit from access to newly created two-dimensional protein electrophoretic facilities. Salary commensurate with experience. Review of completed files will begin 16 March 1990. Send résumé and names and addresses of three references to: **Dr. Paul Bippin, IUPUI Columbus, 4601 Central Avenue, Columbus, IN 47203.** *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR. Tenure-track position for fall of 1990. Candidates with Ph.D. specializing in vertebrate or wildlife biology considered. Emphasis on excellence in undergraduate instruction, with research involving undergraduates strongly encouraged. Must have strong commitment to academic advisement. For the appropriate candidate this position may also include opportunities for off-campus outreach or program administration. Send résumé and three letters of recommendation by 1 April 1990 to: **Dr. Ronald K. Roubal, Division of Sciences and Mathematics, University of Wisconsin-Superior, Superior, WI 54880.** *Affirmative Action/Equal Opportunity Employer. UW-Superior is committed to providing opportunities for women and minorities and actively seeks these candidates.*

The Department of Biology and the Water Resources Institute, Grand Valley State University, has an **ASSISTANT/ASSOCIATE PROFESSOR**, tenure-track position, fall of 1990. Teach an introductory aquatic resources course, develop science education curriculum, and conduct workshops for K-12 teachers. Ph.D. required. Deadline: 2 April 1990. Submit application, curriculum vitae, summary of course work, and names and telephone numbers of three references to: **Fred Bevis, Chair, Biology, Grand Valley State University, Allendale, MI 49401.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR DEPARTMENT OF BIOCHEMISTRY SCHOOL OF MEDICINE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

The Department of Biochemistry invites applications for a tenure-track position at the level of **ASSISTANT PROFESSOR**. Qualified applicants are expected to develop an independent research program and participate in graduate teaching. The department is interested in candidates who have demonstrated expertise in combining genetic methods with molecular and biophysical techniques. Preference will be given to individuals with expertise in the area of intracellular signaling and signal transduction. Applicants should submit curriculum vitae, list of publications including representative reprints, the names and addresses of at least three references, and a summary of research plans before 1 May 1990 to: **Dr. Michael Caplow, Search Committee Chairperson, Department of Biochemistry, School of Medicine, University of North Carolina, Chapel Hill, NC 27599-7260.** *Minority and female scientists are encouraged to apply. Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF WILDLIFE ECOLOGY

The Department of Wildlife and Range Sciences, University of Florida, invites applications for a 12-month, tenure-track, research/teaching (70%/30%) position. Teaching includes undergraduate/graduate courses in conservation biology and student advisement. Applicant must have a Ph.D. in wildlife ecology or closely related field, an active research interest in biological conservation in semi-tropical and tropical areas, and a strong background in vertebrate ecology. Experience in Latin America preferred. Salary commensurate with qualifications and experience. Applicants should submit a letter of application, curriculum vitae, transcripts of college work, and three letters of recommendation by 30 March 1990 to: **Dr. Mel Sunquist, Department of Wildlife and Range Sciences, 118 Newins-Ziegler Hall, University of Florida, Gainesville, FL 32611.** Refer to: **Position Announcement #911000.**

ASSISTANT RESEARCH PROFESSOR. Available immediately to teach and conduct research in molecular virology and immunology. Candidates must have a Ph.D. degree in science, with major in immunology and at least 3 years of training in idiotype regulation of immune responses against pathogens. Teach at medical school and also conduct research in developing idiotype vaccine. Salary commensurate with training and experience. Send curriculum vitae and names of three references immediately to: **Dr. C. Bona, Microbiology, Box 1124, Mount Sinai School of Medicine, One Gustave Levy Place, New York, NY 10029.**

ST. LOUIS UNIVERSITY SCHOOL OF MEDICINE TENURE-TRACK APPOINTMENT IN PHARMACOLOGY

The Department of Pharmacology at St. Louis University School of Medicine is seeking qualified applicants for a tenure-track appointment in pharmacology at the **ASSISTANT PROFESSOR OR ASSOCIATE PROFESSOR** level available 1 July 1990. On the assistant professor level, the candidate should have a period of productive postdoctoral training; will be expected to develop a strong, independent fundable research program and participate in medical and graduate student teaching. On the associate professor level, the candidate should have a record of peer-reviewed grants, research publications, and participation in teaching. Preference will be given to individuals with demonstrated experience in the application of molecular biology to research in neuropharmacology, cardiovascular pharmacology, or endocrine pharmacology. Interested persons should send curriculum vitae, record of grant support and bibliography, three letters of recommendation, and a brief description of future research plans to:

Dr. Thomas C. Westfall
Professor and Chairman
Department of Pharmacology
St. Louis University School of Medicine
1402 South Grand Boulevard
St. Louis, MO 63104

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

POSITIONS OPEN

ASSISTANT PROFESSOR ELECTROPHYSIOLOGY OF ION CHANNELS

A position is available in the Cardiology Research Program State University of New York Health Science Center (SUNY/HSC)/Veterans Administration Medical Center at Brooklyn, in basic cardiac electrophysiology. Academic title at the assistant professor level in the Department of Physiology or Anatomy and Cellular Biology is available for qualified applicants. The individual must have a Ph.D. degree and at least 2 years of postdoctoral experience in patch clamp techniques. There is ample opportunity for interaction with existing faculty and postdoctoral research associates in an established program. Salary will range between \$35,000 and \$45,000 with a generous fringe benefits package. Send curriculum vitae, selected papers, and addresses for three referees to: **Dr. Nabil El-Sherif, Professor of Medicine and Physiology, SUNY/HSC, 450 Clarkson Avenue, Box 1199, Brooklyn, NY 11203. Equal Opportunity/Affirmative Action Institutions.**

ASSOCIATE/FULL PROFESSORS. Several openings in marine-related fields in energy resources, physics, geology, natural products, or biotechnology. Qualifications: Ph.D. and fluent in Mandarin Chinese. Duties: teaching undergraduates and research. Applicants are invited to send curriculum vitae and list of three referees to: **Dr. Y. L. Lee, Chairman, Department of Marine Resources, National Sun Yat-sen University, Kaohsiung, Taiwan, Republic of China 80424.**

INSTRUCTOR

Edinboro University of Pennsylvania invites application for three tenure-track **ASSISTANT PROFESSORS** available fall semester of 1990. The university, a member of the State System of Higher Education, is located 15 miles south of Erie, Pennsylvania. Enrollment consists of approximately 6800 undergraduate and 800 graduate students. Our 585-acre campus is located in scenic northwestern Pennsylvania, approximately 100 miles from the educational and cultural centers of Cleveland, Ohio; Buffalo, New York; and Pittsburgh, Pennsylvania.

• **POSITION #020-0113** is responsible for teaching nonmajors courses and coordinating human biology laboratories. A doctorate degree is required (significant course work in biology is desirable).

• **POSITION #020-0114** is responsible for teaching introductory level majors and/or nonmajors courses. A doctorate degree in genetics is required.

• **POSITION #020-0139** is responsible for teaching introductory level majors and/or nonmajors courses. A doctorate degree in ichthyology/herpetology is required.

Salaries will be in accordance with an approved pay plan and will be commensurate with the candidate's qualifications and the university's needs. (Assistant professor: \$25,531 to \$34,215.) The terms and conditions of this employment may change as a result of ongoing negotiations between the State System of Higher Education and the Association of Pennsylvania State College and University Faculties.

Application letters should specify the position title and code number and include a detailed résumé, copies of transcripts, and the names, addresses, and telephone numbers of three references. Address to: **Dr. Robert A. Cornesky, Dean, Science, Management, and Technologies, Edinboro University of Pennsylvania, Edinboro, PA 16444.** Only applications postmarked by 5 April 1990 will be assured of consideration.

Edinboro University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer and strongly encourages applications from the handicapped, females, and minorities.

BIOLOGIST, ASSISTANT PROFESSOR. Tenure-track position, September 1990. *Funded by a cultural diversity initiative to implement and support cultural diversity including the hiring of minority faculty.* Ph.D. in a biological science required, postdoctoral experience preferred. Teaching duties may include human biology courses for nonmajors, general biology, cell biology, and advanced courses. Development of a research program involving students is expected. Send curriculum vitae and names of three referees by 2 April 1990 to: **Search Committee, Department of Biological Sciences, St. Cloud State University, St. Cloud, MN 56301. Telephone: 612-255-2039. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

Search Reopened. A tenure-track appointment at the **ASSISTANT PROFESSOR** level is available as of September 1990. Qualifications include a Ph.D. and postdoctoral experience. The successful candidate will be expected to teach undergraduate courses in cell biology, developmental biology or genetics, and general biology, and graduate courses in his/her area of expertise and participate in our genetic engineering option. Training of graduate students at the M.S. level and the ability to develop a fundable research program are expected. Please send your curriculum vitae, reprints, statement of career goals and research plans, and the names and addresses of three references to: **Southern Illinois University at Edwardsville (SIUE), Biology Department, Box 1651, Edwardsville, IL 62026-1651, Attention: Search Committee.** Search will continue until position is filled. *SIUE is an Affirmative Action Employer.*

BIOCHEMIST. Clone, Inc., seeks a Ph.D. to develop assays to monitor purification of recombinant proteins. Experience in protein isolation, cell culturing, and DNA cloning is needed. Applicant should have a Ph.D. in biochemistry or related field. Clone, Inc., offers a competitive salary and benefits package. Please send a résumé, salary history, references, and a statement of scientific interest to: **Clone, Inc., Personnel Department (#BC309), 1729 Marion Street, Denver, CO 80218.**

BIOLOGICAL OCEANOGRAPHER

The Department of Biology invites applications for a biological oceanographer at the **ASSISTANT OR ASSOCIATE PROFESSOR** level with research interests in estuarine/coastal environments. This is a tenure-track appointment with a starting date of 15 August 1990. Applicants should possess a Ph.D. in an area of oceanography, have a strong background in biology, postdoctoral training, and sea experience. The candidate will be expected to teach biological and physical oceanography to undergraduate and graduate students, be able to participate in the undergraduate introductory biology program, and to develop an externally funded independent research program which actively involves undergraduate and graduate students.

The College of Charleston is primarily an undergraduate teaching institution with a master's program in marine biology. The college operates the Grice Marine Biological Laboratory on Charleston Harbor.

Applicants are requested to submit curriculum vitae, statement of teaching and research interests, reprints, and names and addresses of three references who may be contacted to: **James W. Smiley, Chairman, Department of Biology, College of Charleston, Charleston, SC 29424.** Application deadline: 19 March 1990.

The College of Charleston is an Equal Opportunity/Affirmative Action Employer.

CHAIR, DEPARTMENT OF PSYCHIATRY AND HEALTH BEHAVIOR. The School of Medicine, Medical College of Georgia, is seeking a chair for the Department of Psychiatry and Health Behavior. The department has a research orientation with 64 faculty and seven affiliated facilities. The department is currently undergoing expansion, and recruitment of new faculty will be a major function of the new chair. Candidates must possess demonstrated skills in research teaching, patient care, and administration. Please send nominations and inquiries by 30 April 1990 to: **Don W. King, M.D., Department of Neurology, Medical College of Georgia, Augusta, GA 30912. Equal Opportunity/Affirmative Action Employer.**

CHIEF, INFECTIOUS DISEASES SECTION. Department of Medicine, University of Pennsylvania. Applications are invited for the position of chief of infectious diseases (ID). Individual should have a record of achievement as a medical investigator and educator and qualify to lead research, educational, and service programs of a major section of the Department of Medicine. The individual should qualify for appointment as a tenured member of the faculty of the University of Pennsylvania. *The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer, and applications from women and minorities are welcomed.* Please submit recommendations or applications, along with résumé and other information to: **Stanley Goldfarb, M.D., Chairman, ID Search Committee, Associate Chief, Renal Section, Suite 700/CRB, 422 Curie Boulevard, University of Pennsylvania, Philadelphia, PA 19104.**

POSITIONS OPEN

BIOPHYSICS POSITION SYNCHROTRON RADIATION STUDIES CORNELL UNIVERSITY

CHESS is a National Synchrotron Radiation Laboratory at the forefront of the new and evolving field of synchrotron radiation research. We have just completed a major expansion of the laboratory that has nearly doubled the research capability. A significant component of the expansion involves beamline developments for the protein crystallographic and the biophysics communities. The new protein crystallographic station is about to be commissioned and will have a strong doubly focused monochromatic beam supplied from a 24-pole wiggler. The station is built into a biological safety containment room at the BL3 level which makes it unique in its ability to accommodate hazardous viruses and other sensitive materials and will provide flux unprecedented in any laboratory in the world. The staff position will be integral to the research and operation of the biotechnology efforts of CHESS.

We seek a competent research scientist to perform research in biophysics using synchrotron radiation. We expect the candidate to contribute to the development and utilization of synchrotron radiation for protein crystallography including working with user groups that visit CHESS. There will be some administrative and supervisory aspects of the position.

Minimum requirements are a Ph.D. in physics, biology, or a related field with thesis work using conventional x-ray or synchrotron radiation. Strong instrumentation skills are required. Salary is negotiable and will be commensurate with qualifications and experience.

Résumés should be sent to:

**Professor Boris B. Batterman
Director, CHESS
Wilson Laboratory, Cornell University
Ithaca, NY 14853**

Cornell University is an Equal Opportunity Employer.

The Department of Neurology, University of California, Irvine (UCI), seeks a physician for the Shepard Endowed **CHAIR** in Neurological Studies. Candidates should have internationally recognized research in epilepsy and must be eligible for a tenured faculty appointment. The chairholder will be expected to conduct research in the area of epilepsy and to participate in the development of an Epilepsy Research Program dedicated to bridging the clinical and basic neurosciences. Send curriculum vitae and names of three referees to: **Dr. Ira T. Lott, Chair, Shepard Endowed Chair Search, UCI Medical Center, Building 27, 101 City Drive South, Orange, CA 92668.** To insure consideration, apply before 15 April 1990. Late applications will be considered. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

CHIEF MICROBIOLOGIST. Management position with direct supervision over all Health Department microbiology programs. Requires M.S. in medical microbiology and 5 years of experience in a hospital or public health laboratory, three of those years in supervision, or equivalent; \$44,000 to \$61,000 with excellent benefits. For application materials and further information, call: 414-278-3360, or write: **City of Milwaukee, Box CMB, Room 706, City Hall, 200 East Wells Street, Milwaukee, WI 53202-3554. An Affirmative Action Employer.**

ASSOCIATE DIRECTOR VIROLOGY LABORATORY

The Department of Laboratory Medicine of the Yale University School of Medicine is seeking an associate director for the Virology Reference Laboratory at the West Haven Veterans Administration (VA) Medical Center. Academic appointment will be at the rank of **ASSISTANT OR ASSOCIATE PROFESSOR.** The appointee must have an M.D. and/or Ph.D. degree and appropriate training and/or experience in diagnostic virology and molecular biology. The appointee will be expected to oversee a clinical virology reference laboratory, which includes both retrovirus and general virology sections, and establish an independent research program. The anticipated starting date is 1 July 1990. Applications should be received by 1 April 1990. Applicants should send curriculum vitae with references to: **Marie Landry, M.D., Virology Laboratory/151B, VA Medical Center, West Haven, CT 06516. Yale University is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

ALBANY MEDICAL COLLEGE CHAIRMAN DEPARTMENT OF BIOCHEMISTRY

Albany Medical College and the Graduate School of Health Sciences of the Albany Medical Center invite applications and nominations for the position of chairman of the Department of Biochemistry. Candidates should be well-established and funded investigators with a strong commitment to teaching medical and graduate students; candidates should also have demonstrated ability in academic administration. The new chairman is expected to guide the department through an extensive rebuilding of its faculty and resources with particular emphasis on development of a focus in molecular biology. The position offers an excellent opportunity to develop an outstanding department in the supportive environment of an expanding tertiary care medical center. Interactions with many other academic institutions in the Albany area are encouraged. Applicants should send curriculum vitae, names and addresses of three references, and a statement of professional goals, interests, and experience to:

Dr. Stanley D. Glick
Department of Pharmacology and Toxicology, A-136
Albany Medical College
New Scotland Avenue
Albany, NY 12208

Albany Medical College is an Equal Opportunity/Affirmative Action Employer.

CHEMISTRY DEPARTMENT CHAIR WICHITA STATE UNIVERSITY (WSU)

Applications and nominations are invited for the position of Chemistry Department chair at Wichita State University (WSU). The department of 14 faculty members offers undergraduate and graduate programs leading to the Ph.D. degree. The successful candidate will have an active research program, an excellent record in teaching at a Ph.D. granting department, administrative experience, and demonstrated leadership ability. The chair will participate in and provide effective leadership toward obtaining grant support, teaching excellence, and continued new program development. Submit curriculum vitae; statements of research interests, administrative goals, and educational philosophy; and provide names and addresses of three references to: **Dr. Melvin Zandler, Search Committee Chair, Department of Chemistry, Wichita State University, Wichita, KS 67208.** Application deadline is 15 March 1990 and the 15th of each succeeding month until the position is filled. *WSU is an Equal Opportunity Employer and specifically invites applications from women and minorities.*

Applications and nominations are invited for the position of **HEAD OF THE DEPARTMENT OF BOTANY** at the University of British Columbia (UBC). Candidates should have a record of excellence in research as well as the ability and motivation to develop an outstanding department. Currently there are 24 faculty members with diverse research interests including population biology, evolution, molecular biology, ecology, systematics, and physiology. The department is jointly responsible for teaching and administering a large undergraduate biology program. There are 55 students enrolled in the botany M.Sc. and Ph.D. programs. The department is involved in collaborative teaching and research ventures with the Biotechnology Laboratories, and Departments of Oceanography, Forest Sciences, and Plant Sciences. Research facilities include well-equipped research laboratories, a state-of-the-art electron microscopy facility, an outstanding research herbarium, and access to excellent field facilities at the UBC Botanical Garden, research forests, and the Bamfield Marine Station. Automated DNA sequencing, DNA synthesis, and protein sequencing facilities are available. The head will play an important role in fostering a dynamic environment in which to develop excellence in research and teaching at the university.

Inquiries, nominations, and applications should be directed to the search committee chairman: **Dr. Barry C. McBride, Faculty of Science, 6270 University Boulevard, Vancouver, B.C., Canada V6T 1W5.** Closing date for application is 1 May 1990. Salary will be commensurate with qualifications and experience. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of British Columbia is committed to the federal government's Employment Equity program and encourages applications from all qualified individuals.*

2 MARCH 1990

BIOTECHNOLOGY

DIRECTOR DEPARTMENT OF INFECTIOUS DISEASES PCR DIVISION

Cetus Corporation, a leader in biotechnology, has an opening in the Diagnostics Research Program for an experienced Virologist/Microbiologist to serve as the Director, Department of Infectious Diseases. This is a senior position which reports directly to the Senior Director, Diagnostics Research. The Diagnostics Research Program is involved, in collaboration with Hoffman La-Roche, in the development and design of diagnostic applications of the Polymerase Chain Reaction (PCR) in the areas of infectious disease, genetic disease and cancer.

The successful candidate will have an MD and/or PhD with at least 8 years' postgraduate experience. Previous work will demonstrate extensive experience in clinical microbiology with knowledge of molecular biological principles and applications. Individuals with PCR experience will be given preference. Successful applicant will have supervised an aggressive research program as evidenced by his/her publication record.

Cetus offers competitive salaries and an excellent benefits package along with a collaborative environment that encourages innovation. For consideration, please send your curriculum vitae to Cetus Corporation, Box 90050/SW, 1400 Fifty-Third Street, Emeryville, CA 94608. We are an Equal Opportunity Employer.



The University of Calgary Faculty Positions in Biological Sciences

The University of Calgary Department of Biological Sciences invites applications for faculty positions at the Assistant Professor level. Successful applicants will become participating members of one of the following multidisciplinary research groups:

- **Cell Cycle Regulation Research Group** focuses on molecular regulation of the cell cycle. Applications are invited from individuals investigating oncogenes, proto-oncogenes, anti-oncogenes, growth factors, and cell division cycle (cdc) homologues in development and cancer.
- **Regulatory Mechanisms Research Group** focuses on basic physiological and endocrine control mechanisms, including neural and neuroendocrine control of respiration and circulation, the regulation of force development in muscles, and the physiological basis for environmental compensations. Applications are invited from individuals specializing in Pathophysiology.
- **Musculo-Skeletal Research Group** focuses on structural and functional analyses of muscle, including the morphology and morphogenesis of primitive muscles and myoepithelia, the events of excitation-contraction coupling, the molecular basis of contraction, and mechanisms of muscle fatigue. Applications are invited from individuals in the field of Biomechanics.
- **Nuclear Magnetic Resonance Centre (NMR)** is equipped with two state-of-the-art high field NMR Spectrometers. Applications are invited from individuals investigating protein, nucleic acid, or muscle function to complement an active *in vivo* NMR research programme.
- **Genetic Engineering Research Group** conducts studies on gene cloning, sequencing, site-directed mutagenesis, and regulation of gene expression in both prokaryotes and eukaryotes. Applications are invited from individuals in this general area of investigation.

Qualifications: PhD and at least two years' postdoctoral experience; demonstrated ability to conduct productive and independent medically-related research of high quality.

Successful candidates will be nominated for Scholarships awarded on a competitive basis by The Alberta Heritage Foundation for Medical Research. The Foundation provides a salary for five years (renewable) and establishment funding. Establishment support will cover the cost of setting up a new laboratory with both major and minor equipment, and operating funds for two years. Remuneration will be based on the salary scale at The University of Calgary relative to training and experience. Successful candidates will have 75% of their time protected for research. Limited teaching duties and participation in departmental affairs is required.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary has an Employment Equity Program and encourages applications from all qualified candidates, including women and aboriginal people, visible minorities, and people with disabilities. Applicants should send their curriculum vitae, a synopsis of research objectives, and arrange for three letters of reference to be sent before April 15, 1990 to:

Chairman, Scholarship and Fellowship Review Committee
Department of Biological Sciences
The University of Calgary
2500 University Drive N.W.
Calgary, Alberta, Canada T2N 1N4
Facsimile: (403) 289-9311

Vanderbilt University
Department of Molecular Biology

CHAIR

The College of Arts and Science of Vanderbilt University invites applications and nominations for the position of Chair of the Department of Molecular Biology. We seek an accomplished individual capable of guiding an established group of scientists who have a broad range of interests.

The Department of Molecular Biology has 15 currently authorized tenured and tenure-track faculty, 31 graduate students and 60 undergraduate majors. It is amply housed and funded.

Applications, which should include a curriculum vitae and the names of four references, or letters of nomination should be sent to:

Chair, Search Committee, Department of Molecular Biology, Box 1820, Station B, Vanderbilt University, Nashville, Tennessee 37235

Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.

Assistant Professor

Tenure track position available for **CELL BIOLOGIST**. Preferred areas of research: video image analysis of intercellular transport, genetics of protein sorting, in-vitro protein transport, molecular/cell biology of surface receptors, membrane-cytoskeleton interactions, cell-matrix interactions, lipid sorting.

Salary commensurate with training and experience. Candidates are expected to participate in one team-taught course in the Medical College and in the training of graduate students in cell biology, genetics or developmental biology. To apply, send CV, 3 letters of recommendation and a brief summary of research interests before May 15, 1990, to: **Dr. Enrique Rodriguez-Boulan, Chairman, Cell Biology Search Committee, Department of Cell Biology and Anatomy, Cornell University Medical College, 1300 York Avenue, New York, New York 10021.** EEO/AA/M/F/H/V.

CORNELL UNIVERSITY MEDICAL COLLEGE



POSITIONS OPEN

**CHAIRMAN
DEPARTMENT OF ARTIFICIAL ORGANS
RESEARCH INSTITUTE
THE CLEVELAND CLINIC FOUNDATION**

A national search is being conducted to identify a suitable candidate to chair the Department of Artificial Organs. The department has a long tradition of excellence in artificial organs research and development, including programs devoted to artificial heart and cardiac assist devices, metabolic assist and filtration devices, and biomaterials research. The successful candidate will have the opportunity to recruit senior and junior level faculty and will be expected to foster ties with clinical departments. The department is part of the Research Institute which consists of nine departments comprising over 150 scientists and pre- and postdoctoral trainees.

The Cleveland Clinic Foundation is a national medical referral center with a tradition of excellence in research, teaching, and patient care. Applicants should send their curriculum vitae to: **George C. Hoffman, M.D., Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44195.**

**CHAIRPERSON
DEPARTMENT OF MICROBIOLOGY**

State University of New York (SUNY) at Buffalo announces the search for the chair of the Department of Microbiology in the School of Medicine and Biomedical Sciences. The department has 20 full-time faculty positions and occupies over 30,000 square feet of space in the medical school campus. The department offers courses in microbiology and immunology for students of medicine and dentistry as well as for graduate and undergraduate students. The research program of the department is diverse and excels in many areas of immunology, host-pathogen interactions, and molecular biology. The department offers unique opportunities for growth and development. The candidate should possess an outstanding national and international reputation as an investigator in microbiology, immunology, or molecular biology and should be experienced in teaching and administration. Persons interested in this position should send curriculum vitae, a description of research activities and administrative experience, and the names of three references to the Chairman of the Search Committee: **Pearay L. Ogra, M.D., Department of Pediatrics, Children's Hospital, 219 Bryant Street, Buffalo, NY 14222.** Telephone: 716-878-7587. FAX: 716-878-7631. All materials should be received by 30 June 1990. SUNY is an Equal Opportunity/Affirmative Action Employer.

**DIRECTOR
SEALY CENTER
FOR MOLECULAR CARDIOLOGY
UNIVERSITY OF TEXAS MEDICAL BRANCH
GALVESTON, TEXAS**

The University of Texas Medical Branch (UTMB) invites applications and nominations for the position of director of the Molecular Cardiology Center. Candidates must be highly qualified individuals with an internationally recognized record of scholarly accomplishment. The position offers an excellent opportunity to develop an interdepartmental, first-rate, basic cardiovascular research center.

Applications or nominations should include curriculum vitae. Address all correspondence to the chairman of the search committee for molecular cardiology:

**Luis Reuss, M.D., Chairman
Department of Physiology and Biophysics
The University of Texas Medical Branch
Galveston, TX 77550**

The University of Texas Medical Branch is an Equal Opportunity, M/F/H/V/Affirmative Action Employer. UTMB hires only individuals authorized to work in the United States.

ENGINEERING MANAGER. Manage development of hybrid manufacturing processes in thin film, co-fire, and Rf areas. Provide support for industry/military coordination of military standard specification. Must have Ph.D. in physics and 7 years of experience as a supervisor, advanced engineering. Must have microelectronics industry background. Salary: \$70,000 per year; interview and job in Los Angeles, California; 40 hours per week. Send this ad and your résumé to: **Job# WS 13001, P.O. Box 9560, Sacramento, CA 95823-0560** no later than 1 April 1990.

POSITIONS OPEN

VIROLOGY LABORATORY DIRECTOR. Anmed/Biosafe, Inc., a diagnostic and biotechnical laboratory located in Rockville, Maryland, is seeking a Ph.D. in virology, immunology, or microbiology. Requires background in animal/medical virology including retrovirology and practical experience in QC in vitro testing or equivalent. Anmed/Biosafe, Inc., offers a competitive salary and benefits. Please submit a résumé, salary objective, and three references to: **Anmed/Biosafe, Inc., 7642 Standish Place, Rockville, MD 20855.**

MACARTHUR FOUNDATION

PROGRAM OFFICER. The MacArthur Foundation invites applications for the position of program officer in its health program. The program supports collaborative research on mental health and human development and activities which strengthen the policy process, facilitate knowledge dissemination, and foster collaboration. A program officer participates in the planning, development, and oversight of all program activities. Applicants must have a doctorate (Ph.D., M.D.), 10 years of professional experience, and a track record of research related to mental health and/or human development. Selection criteria include breadth of knowledge and perspective, interest in the application of research results, and demonstrated capacity to work collaboratively. Telephone inquiries will not be accepted. Applicants should send curriculum vitae and letter of interest by 27 March 1990 to: **Coordinator, Search Committee, Health Program, MacArthur Foundation, 140 South Dearborn Street, Suite 700, Chicago, IL 60603.**

The John D. and Catherine T. MacArthur Foundation is an Equal Opportunity Employer.

**COMPUTER SCIENCE
AND TECHNOLOGY RESEARCH
PROGRAM OFFICER**

The National Research Council (NRC) is seeking a program officer for its Computer Science and Technology Board. Responsibilities include designing projects, identifying national experts for project committees, conducting background research, providing analytical support for ongoing projects, maintaining liaison with the computer science community, and drafting project documents. An advanced degree in computer science, electrical engineering, public policy, or a related field and at least 4 years of computer-related technology assessment, applications, and development—including research or management—experience is desired. Ability to communicate technical concepts to a nontechnical audience and familiarity with science and technology policy issues also required. We offer a salary commensurate with experience and an exceptional benefits package. Please send résumé in confidence to: **NRC/CSTB, HA 560 (MK), 2101 Constitution Avenue, N.W., Washington, DC 20418.** Equal Opportunity Employer.

**CURATOR
U.S. DEPARTMENT OF AGRICULTURE
(USDA)
NEMATODE COLLECTION**

Expert on plant parasitic nematode taxonomy. Identifies large numbers of specimens submitted by researchers. Curatorial management of USDA nematode collection through mounting of old and new specimens, cataloging specimens, distribution of specimens on request, and maintenance of records and pertinent literature. Independent research (10%). Ph.D., curatorial and nematode identification experience desirable. Salary: \$35,825 (GS-12). For application information, contact: **Dr. Robin N. Huettel, Research Leader, USDA ARS, Nematology Laboratory, BARC, Beltsville, MD 20705.** Closing date: 16 March 1990. An Equal Opportunity/Affirmative Action Agency.

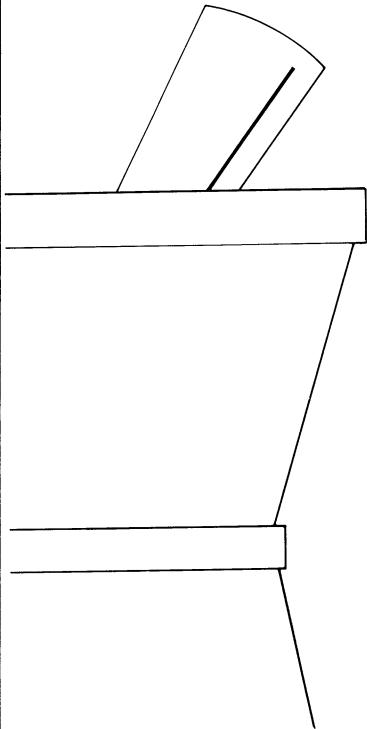
WETLAND ECOLOGISTS

Ebasco Environmental's Northern New Jersey office is seeking several wetland ecologists for entry and staff level positions with knowledge of field delineation of wetlands using multi-parameter methodology, design of freshwater wetland mitigation plans, and regulatory compliance experience. Good oral and written communication skills essential, advanced degree preferred.

Ebasco offers excellent growth opportunities as well as competitive salaries and a comprehensive benefits package. Please send résumé, including salary requirements, to: **T. A. Caparo, Ebasco Services, Inc., 160 Chubb Avenue, Lyndhurst, NJ 07071.**

Clinical Research Associates

Where Research Is The Driving Force, There's Never a Shortage Of Exciting New Discoveries.



IMODIUM®, NIZORAL®, SUFENTA®, HISMANAL®, ALFENTA®: These are just some of the important new drugs that have been developed here at Janssen Research Foundation. And we continue to make new discoveries at an extraordinary pace. In fact, we're the world's most prolific discoverer of new therapeutic agents.

We recognize that our success is based upon the vital contribution made by every member of our research team, including our **Clinical Research Associates**. From writing protocols to training investigators, the work you'll do here as a Janssen CRA is critical.

And you'll be rewarded accordingly.

Working for a member of the Johnson & Johnson Family of Companies, you'll enjoy a competitive salary and a comprehensive benefits package including our on-site total health facility, the Live For Life Wellness Center. And with the frequency with which new discoveries are made here, there's ample opportunity for career advancement.

Biostatisticians, Medical Writers, and professionals in **Regulatory Affairs** and **Professional Services** will find rewarding career opportunities here as well. If you're excited at the prospect of working where new discoveries are continually taking place, we invite you to send your resume and salary history to: Janssen Research Foundation, Employment Office, Box S390, 40 Kingsbridge Road, Piscataway, New Jersey 08854. An Equal Opportunity/Affirmative Action Employer M/F/H/V.

JANSSEN
RESEARCH
FOUNDATION

"Where Research Is The Driving Force"

A Johnson & Johnson Company

POSITION AVAILABLE
DIRECTOR, MEDICATIONS DEVELOPMENT DIVISION
NATIONAL INSTITUTE ON DRUG ABUSE
ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION
PUBLIC HEALTH SERVICE
DEPARTMENT OF HEALTH AND HUMAN SERVICES

The Alcohol, Drug Abuse, and Mental Health Administration invites nominations and applications for the position of Director, Medications Development Division, National Institute on Drug Abuse.

This is a Senior Executive Service position in the career civil service, with an annual salary range of \$71,200 to \$79,200. Physicians may also be eligible for a Physicians' Comparability Allowance of up to \$20,000 per year. The position is located in Rockville, Maryland.

The Director, Medications Development Division provides programmatic, administrative, and general management of the five branches of the Division: the Biometrics Research Branch, the Clinical Trials Branch, the Regulatory Affairs Branch, the Chemistry and Pharmaceuticals Research Branch, and the Pharmacology and Toxicology Branch. The Director is also responsible for coordinating the activities and medications development requirements of the three ADAMHA Institutes into the scientific and management activities of the Division and maintains close contact with designated medications development staff at the National Institute on Alcoholism and Alcohol Abuse and the National Institute of Mental Health.

The Director is also responsible for maintaining close working relationships with senior staff at the Food and Drug Administration on matters relating to operational and scientific procedures involved in medications development as well as the development of policy affecting ADAMHA's programs. Additionally, the Director provides authoritative advice and consultation to senior agency officials on a wide range of matters pertaining to the treatment of brain and behavior disorders and the pharmacological evaluation of new treatment agents.

Minimum qualifications requirements include a degree of Doctor of Medicine, Doctor of Osteopathy, or a bachelor's degree or higher degree in an academic field related to the health sciences pertinent to the work of the position. Candidates must demonstrate evidence of progressively responsible experience in managing large, complex science/research programs in the biomedical/behavioral areas; supervising or collaborating with senior-level scientists in academia, private industry, or the Federal Government; extensive current knowledge of research methodology in the biomedical, behavioral, pharmacological, or clinical sciences in areas relevant to drug abuse.

Further information about the position and qualifications requirements may be obtained by contacting Ms. Leslie Everheart at (301) 443-5030. An SF 171 (Application for Federal Employment) accompanied by a current curriculum vitae and bibliography should be submitted to Ms. Everheart at the Division of Personnel Management, Alcohol, Drug Abuse, and Mental Health Administration, 5600 Fishers Lane, Room 15C-26, Rockville, Maryland 20857. Complete Application material (including the SF 171) must be postmarked by the closing date of April 30, 1990. *Resumes are not acceptable for entrance into the Senior Executive Service.*

Applications from women and minority group members are encouraged.

THE ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION IS AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN

CYTOGENETICIST. Ph.D. level. Board-eligible or Board-certified, to supervise medium-sized clinical laboratory in Bethesda, Maryland, located across the street from NIH. Approximately 1500 to 2000 specimens analyzed per year in a growing laboratory. Supervisory capabilities required. Salary commensurate with prior experience. Anticipated start date no later than 1 July 1990. Please send résumé to: **Dr. Debra Saxe, Molecular Medicine, Inc., 5606 Shields Drive, Bethesda, MD 20817.**

EDITOR (INFORMATION OFFICER B)

The Virginia Museum of Natural History seeks an experienced individual to direct, supervise, and initiate the production of both scientific and popular publications. Salary range \$22,370 to \$30,557. Send complete résumé and state application to: **Personnel Department, Virginia Museum of Natural History, 1001 Douglas Avenue, Martinsville, VA 24112. Telephone: 703-666-8600.** Application deadline: 15 March 1990. *Equal Opportunity/Affirmative Action Employer.*

ECOLOGY/EVOLUTIONARY BIOLOGY: RESEARCH INSTRUCTORS

The Ecology and Evolutionary Biology Department at Rice University seeks to fill two Huxley Research Instructorships. These are 1-year appointments, renewable for a second year. Candidates will be expected to have recently completed Ph.D.'s. Duties will include collaborative research with faculty in the department and some teaching related to one's specialty. Possible areas of research will include topics which complement present faculty interests: molecular evolution, evolution of sociality, plant ecology, global biogeochemistry, microbial ecology, or physiological adaptation. Applications, including curriculum vitae, a summary of research and teaching interests, and three letters of reference, are to be sent to: **Dr. P. A. Harcombe, Ecology and Evolutionary Biology Department, Rice University, P.O. Box 1892, Houston, TX 77251. Telephone: 713-527-4919.** Applications should be received by 25 March 1990. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

ENVIRONMENTAL AND OCCUPATIONAL HEALTH CENTER DIRECTOR. The University of Kansas Medical Center is seeking a director to provide leadership to its environmental and occupational health projects and programs. State funds are available for core support of the center and research and training programs are in place which are funded by both federal and private sources. Space, facilities, and financial resources are available to assure a program of excellence.

Candidates for the position must have an earned M.D., Ph.D., or equivalent degree relevant to the environmental and/or occupational health sciences. It is expected that the candidate will have a significant scholarly record in environmental and/or occupational research and appropriate administrative experience.

Faculty rank will be commensurate with the academic qualifications of the candidate. Salary is competitive and will be consistent with the background and experience of the candidate. Submit a letter of interest and curriculum vitae to: **Stata Norton, Ph.D., Chairperson, Search Committee for Director, Department of Pharmacology, Toxicology and Therapeutics, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103.** Applications received by 15 May 1990 are preferred, but the position will remain available longer if necessary to fill. *The University of Kansas Medical Center is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN PHARMACOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

Applications are invited for a tenured or tenure-track position in pharmacology. Qualifications include an outstanding record of research accomplishment in an area of pharmacology with long-term growth potential, commitment to teaching, and a Ph.D. (or M.D., or both) in pharmacology or related field. Level of appointment and salary will be commensurate with achievement and experience. Curriculum vitae, references, and a summary of research interests should be sent by 30 April 1990 to: **Dr. Larry Stein, Chairman, Department of Pharmacology, College of Medicine, University of California, Irvine, CA 92717.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ECOLOGIST: BIOREMEDIATION OR RESTORATION ECOLOGY

The Department of Biological Sciences at Idaho State University invites ecologists with expertise in bioremediation, restoration ecology, and/or hazardous waste management to apply for a tenure-track **ASSISTANT PROFESSORSHIP.** A Ph.D. in ecology or a closely related field is required. Individuals with expertise in microbial ecology or environmental toxicology particularly are encouraged to apply; we seek an individual who will complement existing research interests of faculty in ecology and microbiology. Primary teaching responsibilities include ecology and environmental science/pollutants courses in a graduate hazardous waste management program, offered in conjunction with the Idaho National Engineering Laboratory. We expect the successful candidate to develop an active independent research program, supervise graduate students, and offer upper division/graduate courses in areas of specialization. Send curriculum vitae, statement of teaching and research interests, and three letters of reference by 30 March 1990 to: **Dr. Rod R. Seeley, Chair, Department of Biological Sciences, Idaho State University, Pocatello, ID 83209.** This position is subject to anticipated funding.

FACULTY POSITION HAIR FOLLICLE RESEARCH NEW YORK UNIVERSITY MEDICAL CENTER

Tenure-track, faculty position available now for a well-trained cell/molecular/developmental biologist to develop a research group involved in studies of the mammalian hair follicle. The department has a major commitment to epithelial biological investigations of which the hair studies are an integral part. Opportunities for collaborative endeavors and a joint appointment in the appropriate basic science department are available. Submit curriculum vitae to: **Dr. Irwin M. Freedberg, Chairman, Department of Dermatology, New York University (NYU) School of Medicine, 550 First Avenue, New York, NY 10016.** *NYU is an Equal Opportunity/Affirmative Action Employer.*

Applications are invited for a 2-YEAR POSITION in the pediatric pathology section at Children's Hospital of Pittsburgh and the University of Pittsburgh School of Medicine, a 240-bed tertiary care facility which includes all subspecialty areas of pediatrics and pediatric surgery including transplantation. The duties include establishment of a molecular pathology laboratory at Children's Hospital, conducting on-going research into molecular aspects of hepatic carcinogenesis, and clinical projects in the area of childhood liver diseases and pediatric tumors. Responsibilities include teaching medical students and residents and participating in interdepartmental conferences. The candidate must be Board-certified in anatomic pathology, have had at least 2 years of training in pediatric pathology, and prior experience in molecular biologic research. Rank and salary are negotiable. Send letter of application, curriculum vitae, and the names of three referees to: **University of Pittsburgh, Department of Pathology, 776 Scaife Hall, c/o Ms. Anna Roman-Koller, Position CHP1, Pittsburgh, PA 15261.**

The University of Pittsburgh Medical Care Division is an Equal Opportunity Employer.

A 4-year public institution with campuses on St. Thomas and St. Croix, U.S. Virgin Islands, serving full-time and part-time students, announces a **FACULTY VACANCY** in the Science and Math Division effective 15 August 1990: **VISITING ASSISTANT OR VISITING ASSOCIATE PROFESSOR** of biochemistry (renewable).

A doctorate in biochemistry and ability to teach biochemistry and cell biology as well as an introductory chemistry course for nursing students and other courses depending on background and interest in research with undergraduates required.

Salary range is \$29,358 to \$48,525 depending on rank and experience. To apply for the position, send letter of application, up-to-date résumé, official transcripts, and three letters of recommendation by 30 March 1990 to: **Dr. William MacLean, Vice President for Academic Affairs, University of the Virgin Islands, Charlotte Amalie, St. Thomas, VI 00802.** (Late applications accepted until position is filled.)

An Equal Opportunity/Affirmative Action Employer and Educator.

POSITIONS OPEN

FACULTY POSITIONS. Institute of Marine and Coastal Sciences (IMCS) (to be filled over the next 2 years): expertise in one of the four following areas: physical oceanography, sedimentology, organism-flow interactions, and sediment geochemistry. Some teaching at the undergraduate or graduate level expected. Ph.D. in related area and an established research program required, with a preference for applicants willing to work on multidisciplinary projects. Send application by 2 April 1990, to: **Dr. Frederick Grassle, Institute of Marine and Coastal Sciences, Rutgers University/Cook College, Blake Hall, New Brunswick, NJ 08903.** *Rutgers is an Equal Opportunity/Affirmative Action Employer.*

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 application of new theoretical treatments, techniques, or instruments to the study of macromolecules, chromosomes, genomic structure, genetic information, or genome evolution. 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 Division, California Institute of Technology, Pasadena, CA 91125.** *Caltech is an Equal Opportunity Employer and welcomes applications from minorities and women.*

FIELD BIOLOGIST/GEOCHEMIST

The U.S. Geological Survey in Menlo Park, California, seeks a biologist or geochemist for studies employing biosentinel species to characterize and compare trace contaminant distribution, bioavailability, and effects among freshwater rivers and streams. Familiarity with multidisciplinary studies of chemistry, bioaccumulation, and effects of either trace element or trace organic contaminants is important; as is interest in field ecology or fisheries biology and ability to integrate fundamental biological and ecological principles into interpretation of field studies. Candidates should have a Ph.D. in related field and capacity for interdisciplinary research. This is a 2-year term appointment with the possibility of conversion to a permanent position. Please submit by 10 April 1990 curriculum vitae, three references, and a statement of interests to: **Samuel N. Luoma, Mail Stop 465, U.S. Geological Survey, 345 Middlefield Road, Menlo Park, CA 94025.** *U.S. citizenship required. U.S. Geological Survey is an Equal Opportunity/Affirmative Action Employer.*

HEALTH EFFECTS SCIENTIST

The Chicago Office of the United States Environmental Protection Agency has an opening for a Health Effects Scientist to evaluate human health and toxicological matters relative to toxic environmental pollutants. Ability to assess, quantify, and communicate human health risk from the exposure to toxic chemicals, such as those at hazardous waste sites, and knowledge of computer modeling techniques is essential.

Salary range is \$35,852 to \$55,381 depending on your experience. All applications must be received or postmarked by 30 March 1990. For application forms please contact:

**U.S. Environmental Protection Agency
Attention: Personnel Branch, 16th Floor
(Recruitment Notice, RN-10)
230 South Dearborn Street
Chicago, IL 60604
Telephone: 312-353-2026**

U.S. citizenship is required.

Applications will be considered without regard to race, religion, color, sex, national origin, or any other nonmerit factors.

INSECT BIOCHEMISTS. Position in the Department of Biological/Biochemical Research at Sandoz Crop Protection. Applicants should have a B.S. or M.S. in biochemistry/chemistry and several years of laboratory experience in insect biochemistry. Experience with radioisotopes, enzymology, analytical biochemistry techniques a must. Must be willing to handle insects and should not have major allergies. Forward résumé and references to: **Sandoz Crop Protection, Human Resources Department #89-341, 975 California Avenue, Palo Alto, CA 94304.** *Affirmative Action/Equal Opportunity Employer.*

Opportunities for Research Assistants BS/MS

Pfizer Central Research has immediate openings for research assistants within its expanding research facility. You will join well-established and growing project teams of interdisciplinary scientists and will work in newly constructed and well-equipped laboratories.

Osteoporosis

Conduct research to discover drugs for treating osteoporosis. In addition to a BS or MS degree, or the equivalent, you should have at least a basic knowledge of protein biochemistry and molecular biology. Experience in protein purification, SDS-gel electrophoresis, Western blotting, HPLC and tissue culture techniques helpful.

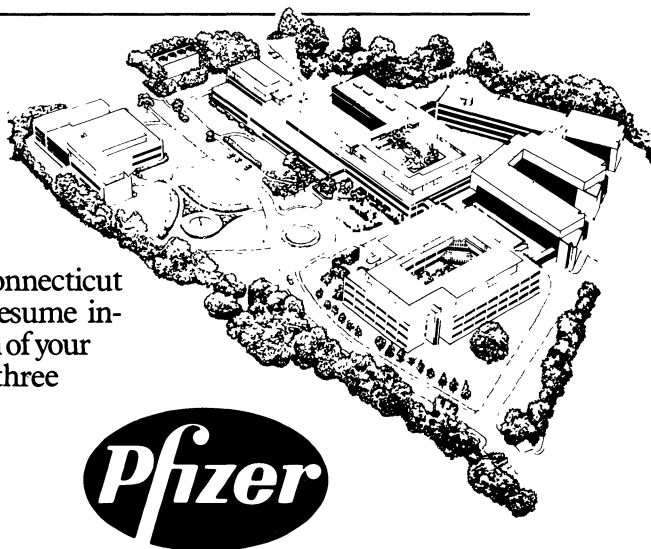
Genetic Toxicology

Assist in establishing *in vitro* and *in vivo* drug evaluation of genetic safety using cell systems. A BS or MS in cell biology, microbiology or the equivalent is required. Previous experience with mammalian cell gene mutation assays using cultured cell lines is desired.

Molecular Immunology

Study drug therapy of immunological disorders by conducting *in vitro* analysis of drug action on the expression of genes in immune cells. A BS or MS plus experience with Northern and basic recombinant DNA techniques as well as cell culture is required. The ability to work independently and to summarize and communicate results effectively is also expected

Pfizer's stimulating research environment provides the opportunity to interact with scientists from several disciplines. In addition, Pfizer offers a competitive compensation/benefit package and provides generous relocation assistance to our southeastern Connecticut shoreline community. Please send a resume indicating position of interest, a description of your research experience, and names of three references to: Mrs. Lorraine C. Corr, Personnel Supervisor, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



POSITIONS OPEN

SALMONELLA GENETICIST. The Center for Vaccine Development, Department of Medicine, University of Maryland School of Medicine, seeks a Ph.D. or M.D./Ph.D. molecular biologist experienced in *Salmonella* genetics. The **ASSISTANT PROFESSOR** position involves research on attenuating and expressing foreign antigens in *S. typhi*. Applicant must demonstrate experience in *Salmonella* genetics; techniques for chromosomal integration of foreign genes and expression of foreign antigens in *Salmonella* are highly desirable. Salary: \$30,000 to \$40,000, depending on qualifications. Send curriculum vitae and names of at least three referees to: **Dr. M. Levine, Center for Vaccine Development, University of Maryland School of Medicine, 10 South Pine Street, Baltimore, MD 21201. An Affirmative Action/Equal Opportunity Employer.**

IMMUNOLOGIST/PATHOLOGIST

National Cancer Institute (NCI), National Institutes of Health (NIH), Public Health Service, is seeking applicants to investigate immunochemical and biologic properties of recombinant/chimeric anti-tumor MAbs and modified constructs, and the immunohistochemical analyses of MAbs of defined specificities to oncogene products and other tumor-associated gene products. Applicants should have an M.D. or Ph.D. degree. Send curriculum vitae, bibliography, and names of references to: **Dr. Jeffrey Schlom, NIH/NCI, Building 10, Room 8B07, 9000 Rockville Pike, Bethesda, MD 20892. U.S. citizenship and/or permanent residency required, depending upon type of appointment. NIH is an Equal Opportunity Employer.**

IMMUNOLOGY/CELL BIOLOGY

Impath Laboratories has an immediate opening for a scientist to join its immunopathology testing program. Position will be responsible for projects analyzing antibodies and molecular probes in tissues. Candidates must have a M.S. (Ph.D. or M.D. preferred) and at least 2 years of experience with testing techniques such as immunohistochemistry, in situ hybridization, immunoblotting, and DNA blotting. Please send curriculum vitae to: **Personnel, Impath Laboratories, 1010 Third Avenue, New York, NY 10021.**

THE EVERGREEN STATE COLLEGE

MARINE ENVIRONMENTAL SCIENCES

One-year renewable position. Must be able to teach in junior/senior level interdisciplinary program in chemical, physical, geographical, and biological oceanography with related topics (fall); marine biology with related topics (winter); and marine ecology, paleontology, and ocean prehistory (spring). Teaching experience required.

GEOGRAPHER

One-year renewable position in MES program. Seek broadly trained geographer with expertise in resource, cultural, physical, or economic geography. Experience in research methods and statistics required.

For both positions, master's degree required, Ph.D. preferred. For information contact: **Faculty Hiring Coordinator, telephone: 206-866-6000, ext. 6861. Review begins 15 March 1990.**

MICROBIAL PHYSIOLOGIST. Available 6 August 1990. The University Department of Microbiology and Immunology, University of Arizona, invites applications for a tenure-track appointment as **ASSISTANT PROFESSOR**. Applicants must have a Ph.D. degree in microbiology and 1 to 2 years of postdoctoral experience. The successful candidate will develop and teach an upper division undergraduate/graduate course in microbial physiology, will supervise undergraduate research projects, and will participate in the graduate program. The candidate will also develop a strong, funded research program. Submit a letter of application, curriculum vitae, a description of research interests to be developed, and three letters of recommendation to: **John J. Marchalonis, Chairman, Department of Microbiology and Immunology, Arizona Health Sciences Center, Room 6103, University of Arizona, Tucson, AZ 85724. Review of application will begin 1 April 1990. The University of Arizona is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

MOLECULAR BIOLOGIST. Tenure-track **ASSISTANT PROFESSORSHIP** in the Department of Biology and Microbiology. Ph.D. in biological sciences with emphasis in molecular-cellular biology. Research emphasis in enhanced agricultural productivity desired. Other areas of research excellence considered. One year of postdoctoral research experience required. Contact: **Nels H. Granholm, Ph.D., Department of Biology and Microbiology, South Dakota State University, P.O. Box 2207B, Brookings, SD 57007. Telephone: 605-688-6141. Screening of applications begins 16 April 1990. Equal Opportunity/Affirmative Action Employer.**

MOLECULAR BIOLOGIST UNIVERSITY OF MINNESOTA

Applications are being accepted for a continuing position in the Bone Marrow Transplantation Program with academic appointment in the Department of Laboratory Medicine and Pathology, University of Minnesota.

Candidates being considered at the **ASSISTANT PROFESSOR** (tenure track) level will have an M.D. or Ph.D. and a minimum of 2 years of experience beyond the degree with emphasis in molecular biology. Demonstration of research productivity is necessary with evidence of publications in peer-reviewed journals, and ability to attract national funding.

Candidates being considered at the **ASSOCIATE PROFESSOR** (tenured) level will be required to have an M.D. or Ph.D. and a minimum of 5 years of experience beyond the degree with emphasis in molecular biology, professional distinction in research, demonstrated effectiveness in teaching and advising, and ability to attract national funding.

Candidates will be expected to lead studies of molecular engineering of antibody genes of potential therapeutic use in human bone marrow transplantation and leukemia/lymphoma.

Salary will be commensurate with education and experience. Send curriculum vitae, a brief description of career plans and goals, and a list of three references to:

**Chair, Search Committee
Bone Marrow Transplantation Program
c/o Laboratory Medicine and Pathology
Box 198, UMHC
420 Delaware Street, S.E.
Minneapolis, MN 55455**

Deadline for receipt of applications is 1 June 1990. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

MOLECULAR GENETICIST

The Philadelphia College of Pharmacy and Science invites applications for a tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** level. The position is effective 15 August 1990.

The successful applicant will teach an upper level course in classical and molecular genetics, an elective course in area of expertise, and may participate in a team-taught freshman biology program. Applicants must have a strong commitment to undergraduate education and will be expected to develop a research program in which undergraduates can participate. Opportunity may also exist for participation in the graduate program.

Applicants should send a letter of application, complete curriculum vitae with transcripts, and the names, addresses, and telephone numbers of three referees to: **Dr. Gilbert L. Zink, Chairman, Department of Biological Sciences, Philadelphia College of Pharmacy and Science, Woodland Avenue at 43rd Street, Philadelphia, PA 19104. The position will remain open until a suitable candidate is identified. An Equal Opportunity/Affirmative Action Employer.**

PHARMACOLOGIST. Faculty position available to teach medical pharmacology and work independently and/or collaboratively with other teaching/research faculty. Primary responsibilities: not more than 25% teaching, at least 75% research time. Salary and academic rank open and commensurate with training, teaching experience, grant track record, and funding support information. Interested qualified candidates are invited to send curriculum vitae and the names of three references to: **Robert E. Mancini, Ph.D., D.O., Associate Dean, Academic and Research Affairs, and Chairman, Department of Pharmacology, Toxicology and Experimental Therapeutics, New York College of Osteopathic Medicine, Box 170, Old Westbury, NY 11568. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

NEUROBIOLOGY AT ROCHESTER TENURE-TRACK FACULTY POSITIONS

The Department of Neurobiology and Anatomy at the University of Rochester School of Medicine is interested in recruiting research-oriented neuroscientists who are capable of contributing to our educational program in human gross anatomy. Our policy of alternate-year teaching allows optimal time for scholarly activities. Our departmental faculty of 35 primary and secondary appointees provide a broad base of collaborative neuroscience research opportunities that range from molecular through systems approaches. Strong interdepartmental programs serve as bridges to several clinical programs, particularly in areas of neurodegenerative disorders. Ample space and facilities are available to allow us to consider newer, as well as established, investigators for these.

Interested applicants are invited to forward current curriculum vitae, three selected reprints, the names of three to five references, and a letter of transmittal. As a courtesy to references, please do not request that letters be sent at this time. Address correspondence to:

**John R. Sladek, Jr., Ph.D.
Kilian and Caroline Schmitt Professor and
Chairman of Neurobiology and Anatomy
University of Rochester School of Medicine
601 Elmwood Avenue, Box 603
Rochester, NY 14642
Telephone: 716-275-2591**

The University of Rochester is an Equal Opportunity Employer.

NEUROCHEMIST

The CNS Division of Ferrosan has a challenging career opportunity for a highly motivated **NEUROCHEMIST**. The successful candidate will join a team of scientists engaged in basic research and drug discovery programs directed toward the identification of novel therapeutic approaches to CNS disorders such as epilepsy, ischemia, anxiety, and schizophrenia. Qualified applicants should have a Ph.D. in neuroscience, or a related field, and 0 to 3 years of postdoctoral training. The successful candidate should have experience with one or more of the following in vitro biochemical and pharmacological techniques: radioligand binding, autoradiography, deoxyglucose techniques, and second messenger system determinations.

The CNS Division, which is a part of Novo Nordisk CNS Unit, is located approximately 5 miles from Copenhagen in Denmark. Interested candidates should submit their curriculum vitae and description of research experience to: **A/S Ferrosan, CNS Division, Sydmarken 5, DK-2860 Soeborg, Denmark, Attention: Personnel Department.**

NEUROPHYSIOLOGIST-ASSISTANT PROFESSOR/DIRECTOR OF RESEARCH in Division of Otolaryngology and Department of Physiology. Available 1 July 1990. Primary responsibility is research in cranial nerve neuromuscular control or cochlear physiology. Funding support provided for 3 years, at which time extramural grants are expected. Skills in intraoperative evoked potential monitoring are advantageous. Send curriculum vitae and three references to: **Scott Estrem, M.D., One Hospital Drive-MA314, Columbia, MO 65212. University of Missouri-Columbia is an Equal Opportunity/Affirmative Action Employer.**

PLANT MOLECULAR BIOLOGIST M.S./B.S.

Westvaco, a leader in pulp and paper products manufacturing, is expanding its forest research program in tree molecular biology. We seek a highly motivated individual to carry out experiments in RFLP analysis and genetic transformation of forest trees. Primary duties will be to perform laboratory experiments with additional responsibility for the day-to-day management of laboratory supplies and equipment. Responsibility for experimental design and data analysis is involved and will increase as experience is gained. The successful candidate will have an M.S. with at least 2 years of experience in molecular biology. Westvaco offers a competitive salary and benefits package. The molecular biology group is housed in new laboratories located 20 miles northwest of Charleston, South Carolina. Submit curriculum vitae, transcripts, and three letters of reference by 16 March 1990 to: **Mr. T. C. Bush, Westvaco, P.O. Box 1950, Summerville, SC 29484.**

Equal Opportunity Employer, M/F.

**FACULTY POSITION
DEPARTMENT OF PHYSICAL THERAPY
FACULTY OF REHABILITATION MEDICINE
UNIVERSITY OF ALBERTA**

Applications are invited for a full-time appointment in the area of orthopedics/manual therapy or geriatrics in the Department of Physical Therapy, University of Alberta. The University of Alberta offers BSc and MSc degrees in Physical Therapy. Qualified candidates must be physical therapists who possess at least a masters degree and have advanced clinical training and experience in the area of Orthopedics/Manual Therapy or Geriatrics.

Salary will be commensurate with qualifications and experience. (Assistant Professor: \$34,970 - 51,434).

Responsibilities include undergraduate and graduate teaching, clinical practice or research, and administrative duties such as curriculum development for a clinical masters program. A strong clinical background is a requirement. For the orthopedic/manual therapy position, preference will be given to candidates who have passed the CPA Orthopedic Division's A and/or B Examinations.

Qualified applicants should send a curriculum vitae, clinical experience record and state their teaching interests in addition to orthopedics/manual therapy or geriatrics together with the names of three referees to:

Dr. Martha C. Piper, Dean
Faculty of Rehabilitation Medicine
3103 UAH Education and Development Centre
University of Alberta
Edmonton, Alberta
T6G 2G4

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

The deadline for receipt of applications is May 30, 1990.

RESEARCH SCIENTIST CELL BIOLOGY

Amgen has emerged as an industry leader in the discovery and development of human therapeutic products through the application of biotechnology. Our continued growth has created an opportunity for a Ph.D. level scientist to develop programs for the functional analysis of growth factors and receptors. The successful candidate will also participate in collaborative research efforts for the isolation and expression of novel factors with therapeutic potential.

Candidates for this position must have a Ph.D. in mammalian cellular physiology or somatic cell genetics and a minimum of 2 years' post-doctoral experience in cellular regulation by extracellular/intracellular factors and transmembrane signaling mechanisms. Familiarity with cloning, cell sorting and isolation of metabolic and drug resistant mutants in various cell lines is essential. Experience in developing ligand-receptor assays is desirable.

Amgen is committed to maintaining an environment that encourages scientific excellence and creativity. We offer an excellent compensation and benefits package, including equity opportunities. If you share our dedication to the future of biotechnology and would like to be a part of a company that places a high priority on its human resources, please send a C.V., in confidence, to:

**AMGEN, INC.
Recruitment, Dept. #514
Amgen Center
Thousand Oaks
CA 91320-1789**

Equal
Opportunity
Employer

AMGEN

Inflammation/Immunology

Cutter Biologicals, Miles Inc., a leading San Francisco manufacturer of biological products has an immediate opening for a research scientist with training in inflammation or immunology. The candidate would join a multi-disciplinary research and development team devoted to investigating the feasibility and efficacy of novel biological anti-inflammatory agents. Since emphasis for this position will be studying cytokine regulation in various inflammatory model systems, we are especially interested in individuals with expertise in this area.

Qualifications are a Ph.D. plus at least two years relevant experience. Extensive mammalian cell culture experience as well as proven ability to establish cell-based bioassays (cytotoxicity and proliferation) is also required. Experience developing hybridoma cell lines is desired.

Send resume & job history to JoAnn McHugh,
P.O. Box 1986, Berkeley, CA 94701.



EOE/AA

National Institutes of Health Public Health Service Department of Health and Human Services

The National Institutes of Health (NIH) invites nominations and applications for the position of **Associate Director for Disease Prevention**. This is a Civil Service position in the Senior Executive Service (SES), with a salary ranging from the ES-1 to ES-4 pay level per annum. The person selected may be eligible for Physician's Comparability Allowance ranging \$5,000 to \$20,000 per year. A one year probationary period must be served by the individual selected if not currently in the Senior Executive Service.

The Associate Director for Disease Prevention provides leadership and coordination of biomedical programs that seek to improve the Nation's health through research, research training, and the exchange of knowledge as these activities relate to disease prevention, effects of nutrition on health and progression of disease, and medical applications of biomedical research.

For more information, contact Dr. Paul Thibault at (301) 496-6521. The following forms are required: Application for Federal Employment (SF-171) accompanied by a current curriculum vitae and bibliography. These must be submitted to:

**Dr. Paul Thibault
National Institutes of Health
Office of the Director Personnel
Building 31, Room 1C-23
9000 Rockville Pike
Bethesda, Maryland 20892**



Applications must be postmarked no later than April 9, 1990.

Selection for this position will be based solely on merit, with no discrimination for non-merit reasons such as race, color, religion, sex, national origin, politics, marital status, physical handicap, age, or membership or non-membership in an employee organization

NIH is an Equal Opportunity Employer

MOLECULAR BIOLOGIST

**Gerontology Research Center
National Institute on Aging
National Institutes of Health
Public Health Service
Department of Health and
Human Services**

The Intramural Research Program of the National Institute on Aging (NIA), Baltimore, Maryland invites nominations and applications for the position of an experienced molecular biologist to lead major research programs related to changes in gene regulation and expression in response to cellular damage, age and age-associated disorders. Current studies include heat shock gene expression, gene induction after DNA damage, and antiproliferative genes. Starting salary dependent on qualifications and experience. Candidates must be a U.S. citizen or permanent resident.

Further information may be obtained by contacting Ms. Barbara Hughes at 301-550-1733. An Application for Federal Employment (SF-171) with a current curriculum vitae and bibliography should be submitted to:

**Personnel Office
Gerontology Research Center
National Institute on Aging
4940 Eastern Avenue
Baltimore, Maryland 21224**

Applications must be postmarked no later than April 15, 1990.



NIH is an Equal Opportunity Employer

CYTOGENETICIST

Amoco Technology Company in Naperville continues to expand its staff and currently has an excellent career opportunity for a Cytogeneticist

We seek an experienced Cytogeneticist to assume a leadership role in designing and developing imaging instrumentation and DNA probe reagents for use in genetic testing. Amoco Technology Company is a leader in the development of DNA probe reagents and instrumentation for use in cytogenetics laboratories. We are presently expanding that effort to include the development of new classes of cytogenetics tests utilizing both DNA probes and advanced microscope imaging systems. These tests will be used in both hospital cytogenetics and pathology labs for routine analysis of genetic defects associated with disease.

The successful candidate will be working closely with a team of molecular biologists, engineers, computer scientists, biochemists, chemists and cytogeneticists participating in this effort. He/she must have at least a PhD or MD in some field of biology or medicine with a minimum of 2 years of experience working as a Cytogeneticist. We prefer an individual who has experience in supervision and who has directed a clinical laboratory.

Amoco offers salaries commensurate with experience, a comprehensive benefits package and a congenial work environment. For immediate consideration, please forward your resume and salary history in strictest confidence to:



**Professional Recruiting Coordinator
AMOCO RESEARCH CENTER
P.O. Box 3011/Dept. TM-2/23
Naperville, IL 60566**
Equal Opportunity Employer M/F/V/H

Exciting Careers Start Here

San Francisco Bay Area

SyStemix, Inc. is an exciting new company developing revolutionary technology for the study of human disease processes and treatments. In order to complete our team of researchers, assembled to develop the SCID-hu mouse for investigating infectious disease and harnessing the human immune response, we are seeking the following:

Project Manager

This position will lead our drug testing group for anti-HIV vaccines. The successful candidate will have good scientific judgement and strong supervisory, interpersonal and organizational skills.

Research Scientist

This position will be leading our T&B cell group in conducting studies of human fetal T&B cell functions both in vitro and in the SCID-hu model. The successful candidate will have a strong background in Cellular Immunology, developmental biology of the immune system, immunohistochemistry and analysis of antibody responses. In addition, we require 5+ years of postdoctoral experience.

SYSTEMIX



To be considered for these unique opportunities please send your resume with cover letter to: **SyStemix, Inc., ATTN: Human Resources, 3400 W. Bayshore Rd., Palo Alto, CA 94303.** Equal Opportunity/Affirmative Action Employer.

Drug Metabolism/ Pharmacokinetics

SmithKline Beecham Pharmaceuticals, a worldwide leader in pharmaceutical research, is seeking a scientist to join our expanding Pharmacokinetics group

The scientist will design and direct primarily clinical (and some preclinical) pharmacokinetic and drug metabolism studies and perform pharmacokinetic and statistical data analysis. The position offers substantial opportunity for collaboration with other scientists involved in the discovery and development of novel therapeutic agents. As part of the 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.

Candidates should possess a Ph.D. or Pharm.D. in Pharmacokinetics, Pharmacy or Pharmaceuticals. An in-depth understanding of pharmacokinetic principles and demonstrated ability to apply those principles in metabolism is required, as well as strong bioanalytical skills.

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, E122, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.



SmithKline Beecham
Pharmaceuticals

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. Margolius, M.D., Ph.D., Chairman
Department of Pharmacology and Experimental Therapeutics

or
Perry V. Halushka, M.D., Ph.D., Director
Division of Clinical Pharmacology

Medical University of South Carolina
171 Ashley Avenue
Charleston, South Carolina 29425

An Equal Opportunity/Affirmative Action Employer.

Natural Products Research

As we continue to expand our Natural Products Discovery Program, we offer exciting research opportunities at our Great Valley, PA and Rensselaer, NY facilities for Senior Research Scientists and Research Scientists in the Natural Products Chemistry and Biology Departments.

C O M M I T T E D T O SCIENTIFIC EXCELLENCE

NATURAL PRODUCTS CHEMISTRY

Senior Research Scientist Great Valley, PA

Successful candidate will be responsible for the isolation and structure determination of natural products of biological interest. Position requires a Ph.D. in organic or analytical chemistry or biochemistry with 1 to 3 years' postdoctoral experience in natural products chemistry. Experience with various separation techniques, particularly using analytical and preparative HPLC methods, is required. A strong background and technical competence in contemporary structural elucidation methods applied to natural products is desired. **Please respond to: GV-230.**

Research Scientist Great Valley, PA

Successful candidate will be a part of an interdisciplinary team involved in the detection, isolation and characterization of natural products. Position requires a BS/MS in organic/analytical chemistry or biochemistry with some experience in natural products. Knowledge of HPLC-photodiode array and other chromatographic methods to support profiling, scale-up and isolation of bioactives from crude mixtures is essential. Experience with spectroscopic techniques and computers is desirable. **Please respond to: GV-274.**

NATURAL PRODUCTS BIOLOGY

Research Scientist Rensselaer, New York

Successful candidate will be responsible for culturing microorganisms for the production of novel compounds and the development of analytical methods, including HPLC and TLC, for the initial characterization of unknown natural products. Position requires a BS/MS in organic chemistry or biochemistry with some experience in analytical biochemistry, chromatography, and industrial microbiology. Some familiarity with fermentation scale-up and the operation of computer controlled batch-fermentors preferred. **Please respond to: RS-077.**

Sterling Drug Inc. offers competitive salaries and a comprehensive benefits program along with outstanding career opportunities for personal and professional growth. For confidential consideration, please refer to position code number, and forward your resume, salary history/requirements, and the names of three references to:

*Human Resources, Sterling Research Group,
A Division of Sterling Drug Inc., 9 Great
Valley Parkway, Malvern, PA 19355. Equal
Opportunity Employer M/F/H/V.*



**STERLING
RESEARCH GROUP**

A Division of Sterling Drug Inc.
A Subsidiary of Eastman Kodak Company

Build A Future With Sterling.

Research Scientist

Animal Health Product Development



Pfizer, a multinational, research-based leader in healthcare products, has a challenging, high-visibility opening on the staff of its Animal Health Research Division.

Based at our Terre Haute, Indiana research facility, you will be involved in the development of new animal health/veterinary pharmaceuticals. This will involve preparation of clinical research plans and experimental protocols to ensure that potential products meet efficacy and safety requirements and are marketable. As a primary investigator, you will conduct on-station research, identify investigators/sites for collaborative research, monitor off-station research, provide clinical consultation for all developmental research projects and supervise project technicians or clinical trial monitors.

This important assignment requires a PhD or a DVM plus an MS with a major in veterinary parasitology or the equivalent. The applicant should have experience in applied large animal parasitology.

We can provide all the professional and personal satisfactions of a Fortune 100 company, including a competitive salary, excellent benefits, relocation assistance and growth potential. For confidential consideration, please send your resume and salary history to: Ms. Christina Batjer, Pfizer Inc, Box 99, Terre Haute, IN 47808. An equal opportunity employer.

RESEARCH SCIENTISTS

Telios Pharmaceuticals, Inc., is a new and growing pharmaceutical company strategically focused in developing synthetic and recombinant extracellular matrix components into a premier portfolio of human therapeutic products. **Telios** is located near the University of California at San Diego and in close proximity to a number of prestigious medical and research institutes. We offer the opportunity to join the company during its organizational stages and participate in the challenging job of building a successful enterprise. Experienced scientists are being sought in the following areas:

Organic Chemist – Peptide Solution Chemistry

Responsibilities include development of solution methods for synthesizing peptides. In addition, the scientist will interact with an engineering staff to develop industrial processes capable of producing pharmaceutical-quality peptides. An MS or Ph.D. degree in organic chemistry is required and experience in solution-phase peptide chemistry is highly desirable.

Organic Chemist – Peptide Structure and Design

Responsibilities include the design and synthesis of biologically active polypeptides and the study of the structure-function relationships between peptides and receptors. A Ph.D. in organic chemistry, demonstrated skills in organic chemistry, knowledge of 2-D NMR techniques, and some familiarity with computer-assisted drug design are required.

Biochemist – Platelet Physiology

Responsibilities include coordinating the development of a unique anti-thrombotic agent. A Ph.D. in biochemistry or physiology is required with experience in protein chemistry and platelet biology highly desirable.

Pharmacologist

Responsibilities include establishing model systems to study the efficacy of our drugs in wound healing, chemotherapy and cardiovascular applications. A Ph.D. with experience in animal physiology and drug formulation are required.

Please send your CV, bibliography and references to:

Telios Pharmaceuticals, Inc.

Director of Personnel
2909 Science Park Road
San Diego, California 92121

POSITIONS OPEN

PEDIATRIC GASTROENTEROLOGY. The Department of Pediatrics at the University of Arizona College of Medicine in Tucson has available a second full-time position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level in pediatric gastroenterology. Applicants with developed interests in clinical or basic research are preferred. Board certification or eligibility in pediatric gastroenterology required. Send résumé to: **Dr. John N. Udall, Jr., Pediatrics, AHSC, 1501 North Campbell Avenue, Tucson, AZ 85724.** The review of applications will begin 1 March 1990, and will continue until the position is filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

PEDIATRIC NEPHROLOGY. The Department of Pediatrics at the University of Arizona College of Medicine in Tucson has available a full-time position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level to head the Section of Nephrology. The emphasis will be on clinical, teaching, and research responsibilities. Board certification or eligibility in nephrology required. Send résumé to: **Dr. Stanley J. Goldberg, Pediatrics, AHSC, 1501 North Campbell Avenue, Tucson, AZ 85724.** The review of applications will begin 1 March 1990 and will continue until position is filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

PHYSIOLOGY AND BIOPHYSICS

Applications are invited for two tenure-leading faculty positions at the **ASSISTANT OR ASSOCIATE PROFESSOR** levels in the Department of Physiology and Biophysics. These positions will be available 1 July 1990. Research areas of interest include endothelial cell-smooth muscle interactions, cardiovascular ion channels, and membrane transport. In addition to carrying out an active research program, the candidate will be expected to participate in the teaching programs of the department which include graduate, medical, and allied health students. A competitive salary and set-up funds are available. Interested applicants should send current curriculum vitae and the names of three references by 30 April 1990 to:

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

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

PROKARYOTIC GENETICS

The Department of Biology at Texas A&M University invites applications for a tenure-track position in bacterial or bacteriophage genetics and molecular biology. Candidates should be using a prokaryotic organism to study fundamental biological problems. Special consideration will be given to applicants interested in developmental, regulatory, or membrane systems. Essential qualifications include a strong record of research accomplishment, the ability to develop a vigorous research program, and a commitment to training undergraduate and graduate students. Please send curriculum vitae, a statement of research interests, and three letters of recommendation by 15 April 1990 to: **Dr. Michael D. Manson, Chairman, Microbiology Search, Department of Biology, Texas A&M University, College Station, TX 77843. Telephone: 1-800-TAM-BIOL. FAX: 409-845-2891.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Position available April 1990 to study signal transduction in rat parotid glands. Research involves an examination of the coordinate roles of phosphoinositide metabolism and cAMP formation in the exocytotic process. These studies will include analysis of the interrelationships between diacylglycerol formation, cytosolic calcium, and amylase secretion. Previous experience with cell isolation techniques and cellular biochemistry is desired. Send curriculum vitae and the names of three references with telephone numbers to: **Dr. Ronald P. Rubin, Department of Pharmacology and Therapeutics, State University of New York-Buffalo, 102 Farber Hall, Buffalo, NY 14214.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION GENE REGULATION/RNA PROCESSING

Available July 1990 or after for a Ph.D. or M.D. to study regulation of tissue specifically expressed, differentially spliced coagulation proteins. Experience in molecular biology desirable. Send curriculum vitae and names of three references to: Dr. P. J. Haidaris, Department of Medicine/Hematology, Box 610, University of Rochester, 601 Elmwood Avenue, Rochester, NY 14642.

The Institute of Marine and Coastal Sciences has established a competitive **POSTDOCTORAL PROGRAM**. All fields relevant to marine and coastal sciences will be considered. Proposals will be considered starting 15 April 1990 for an award starting 1 July 1990. Please send applications to: Dr. Frederick Grassle, Institute of Marine and Coastal Sciences, Box 231, Rutgers University, New Brunswick, NJ 08903. Rutgers is an Equal Opportunity/Affirmative Action Employer.

BIOCHEMIST

POSTDOCTORAL RESEARCH POSITION available to investigate signal transduction in regulation of gastrointestinal smooth muscle contraction. Experience with HPLC, receptor binding assay, lipid metabolism, protein phosphorylation is desirable. Salary: \$24,000. Send research background, curriculum vitae, and names of three referees to: P. Biancani, Ph.D., G. I. Motility Research Laboratory, Department of Medicine, Rhode Island Hospital, Providence, RI 02903. Rhode Island Hospital is a Brown University affiliated hospital and an Equal Opportunity Employer.

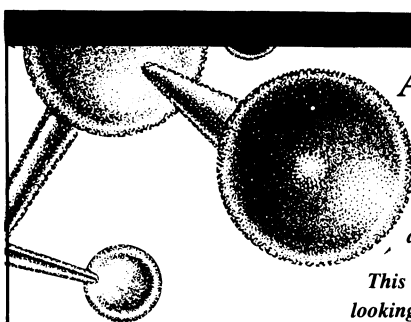
TWO POSTDOCTORAL POSITIONS PROTEIN CRYSTALLOGRAPHY

Two positions are available for crystallographers with experience in single crystal x-ray structure determination. Small molecule crystallographers desiring to gain experience with proteins are encouraged to apply. Several projects are available involving proteins of broad biomedical and biochemical interest. A complete diffraction facility is available including a rotating anode with diffractometer and area detector, along with independent computing and display facilities. Available July 1990. Send résumé to: Dr. Kurt L. Krause, Department of Biochemistry, University of Houston, Houston, TX 77204-5500.

POSTDOCTORAL POSITION. Available June 1990 to study cellular signaling systems involved in regulating neuroarchitecture in the developing mammalian brain. Roles for excitatory amino acids, growth factors, and intracellular calcium in the regulation of neurite outgrowth and cell survival in the hippocampus and cerebral cortex are being examined, both in cell culture paradigms and in situ. The involvement of altered cellular signaling in pathological neuronal degeneration is being studied in parallel, with particular reference to Alzheimer's disease and related disorders. Among the technical approaches employed are: cell culture; quantitative fluorescence imaging of intracellular calcium; immunocytochemistry at the light and E.M. levels; in situ hybridization. Experience with molecular biological techniques is desirable. Considerable flexibility in projects is possible. Salary is available for up to 3 years. Send curriculum vitae, a short one-page summary of previous work, and names of three references to: Mark P. Mattson, Ph.D., Sanders-Brown Research Center on Aging, University of Kentucky Medical Center, Lexington, KY 40536-0230. An Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE. Loyola University Chicago, Department of Pathology, seeks a research associate to work on tissues for research purposes. Required is a familiarity with electron microscopic and immunohistochemical techniques: processing of tissues, cutting of sections (semithin and ultrathin), staining of sections, photography, use of electron microscope, cutting of frozen sections, immunofluorescence labeling. Desired is experience in research and familiarity in handling small laboratory animals. Send curriculum vitae and three references to: Dr. Maria M. Picken, Department of Pathology, Loyola University Medical Center, 2160 South First Avenue, Maywood, IL 60153. Loyola University is an Affirmative Action/Equal Opportunity Employer.

2 MARCH 1990



At Vertex Pharmaceuticals, we're pioneering a unique approach that takes the guesswork out of drug development. By combining biotechnology with chemistry and physics, we're making pharmaceutical discovery a more rational and efficient process.

This approach insures our success. If you are looking for a position at the forefront, contact Vertex.

We're Not Leaving Success To Chance.

Vertex is a privately held company founded in January 1989 to develop small-molecule human therapeutics by application of protein structure-based rational drug design. We are integrating the latest advances in chemistry, biology, and physics to design unique molecules based on the structural features of proteins involved in the control of disease processes. Our goal is to become a major pharmaceutical firm by utilizing rational drug design in the discovery and development of novel drugs.

Currently we are seeking a diverse selection of motivated, experienced professionals to join Vertex's growing scientific staff. Minimum requirements are a Bachelor's and/or Master's degree in the appropriate discipline, with at least four years of post-Bachelor's laboratory experience. If you are a high-energy, forward-thinking innovator and team player in search of an environment where your best ideas will be an integral part of our success story, we would like to speak with you.

SCIENTISTS

Molecular Biology—Expression

You will direct a program in eukaryotic and bacterial expression of novel protein targets for drug design. Experience in design of novel expression vectors, manipulation of host cells, and analysis of transcription and translation in heterologous systems is required. A highly qualified candidate would have past experience in directing expression efforts, a strong publication record in eukaryotic and bacterial expression, and a history of contributions to interdisciplinary programs in the areas of immunology, control of gene expression and/or intracellular signaling.

Enzymology & Protein Chemistry

You will design and implement new receptor-binding and enzyme kinetic assays for novel immunoregulatory compounds. You will also participate in the purification and characterization of natural and recombinant proteins. A qualified candidate will have at least two years' research experience in performing quantitative studies of enzyme-catalyzed reactions, computer-assisted kinetic analyses, and equilibrium-binding studies of protein-ligand interactions. Familiarity with modern methods of protein chromatography and electrophoresis is highly desirable.

Physical Biochemistry and X-Ray Crystallography

You will work with an experienced team of X-ray crystallographers and other biophysicists working to provide structural information on targeted proteins. The successful candidate will have a strong background in physical biochemistry,

biophysics, and/or related areas, with an enthusiasm for this rare opportunity to be involved in all aspects of protein structure determination, including crystal growth, data collection, structure solution and refinement. Direct experience with X-ray crystallography is a plus.

Computational Chemistry

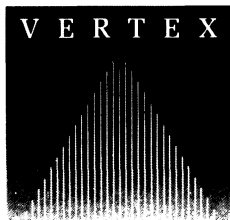
You and the rest of the computational chemistry team will be on the critical bridge between biophysicists, who provide the macromolecular structures of our drug targets of interest, and the chemists who will synthesize drug candidates. The successful candidate will function across the full range of computational chemistry. Molecular modeling and some scientific programming experience with a strong working knowledge of organic chemistry are required, as well as a familiarity with VMS and UNIX operating environments.

Protein NMR

Using our dedicated Bruker AMX 500 MHz NMR, you will use protein NMR both as a protein structure determination tool on therapeutically important protein targets of MW < 20 kD and to study the details of ligand/protein interactions. The successful candidate will have extensive experience in all aspects of protein NMR with a demonstrated record of application of these techniques to real problems. The candidate should be enthusiastic about using NMR as part of an integrated application of X-ray crystallography and computational techniques to the study of protein structure and ligand/protein interactions.

We are also seeking exceptional candidates in gene regulation/transcription yeast genetics, immunology, macromolecular chemistry, scientific programming, and medicinal chemistry. Please refer to the February 16, 1990 issue of Science for details concerning these positions.

Our salaries and benefits are excellent, as is the potential for equity and professional development. Please forward a detailed resume with salary history, indicating area of expertise, to: Vertex Pharmaceuticals, 40 Allston Street, Cambridge, MA 02139-4211. We are an Equal Opportunity Employer.



POSITIONS OPEN

POSTDOCTORAL POSITION AT HARVARD MEDICAL SCHOOL

Position available for biochemist, molecular biologist, or cell biologist to study biochemical basis of chromosome imprinting, structure/function relationships in mammalian DNA methyltransferase, and the role of this enzyme in mammalian development. Please send curriculum vitae and names of three references to: Dr. T. H. Bestor, Harvard Medical School, 45 Shattuck Street, Boston, MA 02115.

POSTDOCTORAL RESEARCH POSITION. Immediate opening in research laboratory involved in studying cytokine expression in the "wasted" mouse model. Experience in molecular biology or immunology preferred. Send résumé to: Dr. G. R. Libertin, Loyola University Chicago, 2160 South First Avenue, Maywood, IL 60153. Loyola University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS. Available in the areas of molecular, cell, and developmental biology. Applicants should send curriculum vitae, references, and a brief description of research interests to: The Postdoctoral Program 90/Department of Biology, Lewis Thomas Laboratory, Princeton University, Princeton, NJ 08544.

Princeton University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION. To examine the expression of specific enzymes that control normal and malignant cell behavior. Experience in molecular biological techniques essential. Stipend of \$25,000 to \$30,000. Send curriculum vitae and references to: Dr. James P. Quigley, Pathology, State University of New York (SUNY) at Stony Brook, Stony Brook, NY 11794. SUNY/Stony Brook is an Affirmative Action/Equal Opportunity Employer and Employer.

POSTDOCTORAL POSITION. Available to study influences of extracellular matrix components on nervous system development in avian and zebrafish embryos. Current work includes studies of neuronal and neural crest differentiation using cell culture, EM, immunocytochemistry, and image analysis. Superb facilities and highly interactive faculty in areas of cell biology and biophysics. Send curriculum vitae and names of three references to: Dr. Sherry Rogers, Department of Anatomy, University of New Mexico School of Medicine, Albuquerque, NM 87131. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION. Boulder, Colorado, to study termination of replication and associated events in *E. coli*, including decatenation and partitioning of daughter chromosomes, chromosome structure, and initiation of cell division. See *Cell* 59, 581 (1989) for recent minireview. Position immediately available on 5-year NIH grant. Send curriculum vitae and names of two references to: Peter Kuempel, Molecular, Cellular, and Developmental Biology Department, University of Colorado, Boulder, CO 80309-0347. Telephone: 303-492-7952. An Equal Opportunity Employer. Applications due no later than 15 April 1990.

POSTDOCTORAL POSITION. Available immediately to study mechanisms of oxygen radicals/singlet oxygen mediated ischemia/reperfusion injury in the heart. Areas include neutrophils, lipid peroxidation, and calcium transport in cardiac membranes. Background in biochemistry/physiology required. Mail or FAX curriculum vitae and brief summary of experience and research goals with three letters of recommendation to: Rakesh C. Kukreja, Ph.D., Cardiology Division, Medical College of Virginia, Richmond, VA 23298. FAX: 804-225-4977.

POSTDOCTORAL POSITION. Immediately available to study the molecular mechanisms of exocytosis in mammalian regulated secretory cells. Studies will use a cell-free reconstituted exocytosis/membrane fusion assay and permeabilized secretory cells for examination of the potential role of GTP-binding proteins in exocytosis. A background in cell or molecular biology is preferred. Please send curriculum vitae and names of three references to: J. D. Jamieson, M.D., Ph.D., Department of Cell Biology, Yale University School of Medicine, New Haven, CT 06510-0082. Telephone: 203-785-4314; FAX 203-785-7446. Yale is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION. Available for molecular biological and biochemical studies of drug resistance by mutants of parasitic amoebae and for development of DNA probes for *Entamoeba histolytica*. Send curriculum vitae and three references to: John Samuelson, M.D./Ph.D., Department of Tropical Public Health, Harvard School of Public Health, Boston, MA 02115. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

A position is available immediately to study transactivation of HIV by the Tat protein. Emphasis is on interactions of Tat with RNA, cellular proteins, and metal ions. A major goal is to identify specific inhibitors of transactivation. A strong background in biochemistry or molecular biology is essential. Please send curriculum vitae and names of three references to: Dr. Alan Frankel, Whitehead Institute, 9 Cambridge Center, Cambridge, MA 02142.

POSTDOCTORAL POSITION. Available to join interdisciplinary neuroscience research group. Research will focus on the biochemical pharmacology of various immunomodulatory, inflammatory, and ischemic modulators with either cultured astrocytes, endothelial cells, neurons, cerebrovascular tissue, and possibly some peripheral tissues. Research may involve an examination of receptor interactions, generation of secondary messengers, calcium mobilization, molecular genetic regulation of neurotransmitter and leukotriene synthesis, metabolism, and receptor expression. In vivo experiments may involve utilization of MRI imaging techniques. Familiarity with liquid or gas chromatography, immunohistochemistry, molecular genetics, enzymology, receptor binding, cell culture, and computers is desirable, but not essential. Send résumé, reprints, and three letters of reference to: Dr. Dana M. Vaughn, Medicinal Biochemistry Laboratory, Scott-Ritchey Research Program, College of Veterinary Medicine, Auburn University, Auburn, AL 36849. Salary commensurate with experience. Auburn University is an Equal Opportunity/Affirmative Action Employer and encourages applications from minorities and women.

POSTDOCTORAL POSITIONS

Available April of 1990 to study: (i) membrane interaction and acylation of normal and oncogenic Ras proteins and (ii) the structural and biochemical properties of Ras and Ras-related proteins important for malignant transformation. Experience in (i) protein purification or cell biology or (ii) molecular biology are preferred. Send a letter describing research interests, curriculum vitae, and names of three references to: Dr. Janice E. Buss or Dr. Channing J. Der, La Jolla Cancer Research Foundation, 10901 North Torrey Pines Road, La Jolla, CA 92037.

An Equal Opportunity Employer.

PRE- AND POSTDOCTORAL POSITIONS

Four predoctoral and three postdoctoral positions funded by the NIH are open in the Department of Microbiology at University of Southern California (USC) School of Medicine. Research advisers for predoctoral and postdoctoral students are available in the areas of coronaviruses and hepatitis viruses (Lai and Ou), oncogenes and transcriptional regulation (Fung and Vogt), control of eukaryotic protein synthesis (Tahara), G-proteins (Fung), recombination and mutation in bacteriophage lambda (Lieb), molecular biology of chemical carcinogenesis (Landolph), oncogenes and oncogenesis (Groffen and Heisterkamp), radiation biology (Hill), molecular biology of differentiated cells (Jong, Suzuki, and Taylor), molecular embryology and development (Nguyen-Huu), cellular immunology (Dennert, Horwitz, Mitchell, Parkman, Pattengale, Stohman, Walker, and Weiner), and molecular immunology (Deans, McMillan, and Moore). For specific information, write to: USC School of Medicine, Department of Microbiology, Graduate Studies, 2011 Zonal Avenue, HMR-401, Los Angeles, CA 90033-1054. Individuals interested in postdoctoral positions should contact prospective advisers directly. Deadline for receipt of completed predoctoral applications is 1 May 1990. Starting date for predoctoral studies is approximately 1 August 1990. There is no deadline for postdoctoral applicants. NIH requires that applicants must be U.S. citizens or permanent residents. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION. Available June of 1990 to work with an interdisciplinary team developing new methods, using polymers that release monoclonal antibodies, to protect mucus epithelia against infectious diseases, including AIDS. Should have experience in cell biology, immunology, biophysics, polymer physics, or chemical engineering. Send résumé and names of three references to: Dr. Mark Saltzman, Department of Chemical Engineering, The Johns Hopkins University, Baltimore, MD 21218. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION. Available immediately to study the ionic basis for the intrinsic pacemaker activity of the sinoatrial node, the natural pacemaker of the heart. Patch-clamp techniques will be used with single, isolated pacemaker cells. Salary: \$30,000 to \$36,000 plus benefits and funds for travel. Experience with patch-clamp or intracellular recording techniques desired. Before 1 April 1990, send curriculum vitae and three letters of reference to: Dr. Richard D. Nathan, Department of Physiology, Texas Tech University Health Sciences Center, Lubbock, TX 79430. Texas Tech University is an Equal Opportunity/Affirmative Action Employer.

A **POSTDOCTORAL POSITION** is available immediately for studying the regulation of gene expression in human tissues. We are investigating the events that result in elevated expression of the *c-myc* oncogene in colorectal cancer cells. This NIH grant-funded position will require an individual with a molecular biology background. Please send curriculum vitae, with names and telephone numbers of three references to:

Paul G. Rothberg, Ph.D.
University of Missouri-Kansas City (UMKC)
School of Medicine, 2411 Holmes, Red IV
Kansas City, MO 64108

UMKC is an Equal Opportunity Institution.

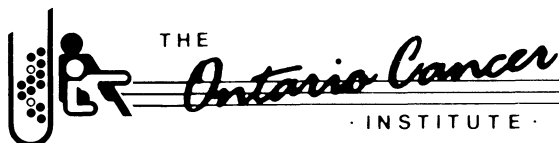
POSTDOCTORAL POSITION MAMMALIAN MOLECULAR GENETICS

A postdoctoral fellow to participate in recombinant DNA-somatic cell genetic studies of eukaryotic (human) ribosomal protein gene families. Applicants must possess recent Ph.D. in molecular biology (genetics) and have some familiarity with recombinant DNA technology, nucleic acid and/or protein biochemistry, or somatic animal cell genetics. Position to begin during the summer of 1990. Salary negotiable. Send letter of inquiry, curriculum vitae, and the names and addresses of three references to: Dr. Donald J. Roufa, Division of Biology, Kansas State University, Manhattan, KS 66506. Kansas State University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL ASSISTANT ENDOCRINOLOGY/INTERNAL MEDICINE

NIH-funded position available immediately to work on isolation and cloning of mitogenic factors for mammary epithelial cells. Minimum qualifications: Ph.D. and previous experience in molecular biology or protein purification. Salary is commensurate with experience with a minimum of \$24,000. Excellent benefits, U.S. citizenship not required. Send résumé and telephone numbers of three references by 1 April 1990 to: Dr. Piotr Chomczynski, Division of Endocrinology and Metabolism, University of Cincinnati College of Medicine, Cincinnati, OH 45267-0547. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION. Available immediately to a scientist interested in multi-approaches to tissue and tumor blood flow and permeability as related to tumor therapy response. Emphasis on noninvasive techniques including positron-emission and MRI with contrast agent as well as invasive radiotracers. Other techniques such as centrifugal elutriation, flow cytometry, clonogenic assay, NMR spectroscopy, and tissue and cell culture are in routine use. Salary: \$18,600 to \$25,000 as commensurate with experience. Motivated individuals with a Ph.D. in physics, biophysics, biochemistry, or physiology are encouraged to apply. Please send curriculum vitae and three references to: Dr. Frank Q. H. Ngo, Director of Radiobiology Laboratory, Research Institute, and Department of Radiotherapy, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44195.



MOLECULAR AND STRUCTURAL BIOLOGY

Senior Scientist Positions

The Ontario Cancer Institute is one of North America's largest cancer research and treatment centers and houses the Department of Medical Biophysics of the University of Toronto. The institute invites applications for senior scientist positions in its newly formed Molecular and Structural Biology group. Current programs in this group include: electron microscopy of macromolecules, DNA-protein interactions, membrane transport and drug resistance, and the structure-function relationship of biologically active polypeptides. To complement this group, up to four candidates are sought with state-of-the-art expertise in areas of research that include NMR spectroscopy, X-ray crystallography, protein engineering, theoretical molecular modelling, or other biophysical techniques.

New members should be eligible for appointment at the assistant or associate professor level in the Department of Medical Biophysics of the University of Toronto, a graduate department that emphasizes strong multidisciplinary research. Preference will be given to individuals with research interests in fields such as: structural aspects of molecular recognition, receptor-ligand interactions, the structure of molecules of the immune system or in molecular design aimed at cancer therapy.

In accordance with Canadian Immigration requirements, priority in the first instance will be given to Canadian citizens and landed immigrants. In accordance with the Employment Equity Policy of the University of Toronto and the Ontario Cancer Institute, applications are invited from all qualified women and men.

Interested persons should send their curriculum vitae, statement of research interests, and names of three references to:

Dr. Victor Ling, Ontario Cancer Institute, 500 Sherbourne Street, Toronto, Ontario, Canada, M4X 1K9

The Chemical Industry Institute of Toxicology (CIIT) is an independent non-profit research corporation. Our mission is to improve the scientific basis for understanding and assessing the potential adverse effects of chemicals, pharmaceuticals, and consumer products on human health. We currently have the following positions available at our Research Triangle Park, N.C. location.

QUALITY ASSURANCE MANAGER

Responsibilities will include developing and implementing QA program, reviewing standard operating procedures and protocols, conducting data quality reviews and laboratory audits, conducting QA training programs and monitoring the QA status of research studies.

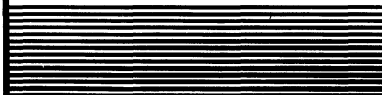
A Ph.D. or M.S. Degree with demonstrated research experience in toxicology or related field, a minimum of two years' QA experience in basic research studies, and a knowledge of Good Laboratory Practice (GLP) regulations are required. Position requires a manager with strong communication and organizational skills and the ability to initiate programs and to work independently. Background in statistics is desirable.

RESEARCH CHEMIST

The successful candidate will perform research on the identification and quantitation of adducts formed by interaction of reactive chemical metabolites with DNA or body proteins (e.g. hemoglobin), quantitation of metabolites (including reactive metabolites) in tissues, cells and organs after exposure to chemical toxicants, and the synthesis of chemical standards that will be used in a variety of chemical analyses.

Qualified candidate should have a Doctoral Degree in Organic, Analytical or Physical Chemistry and a knowledge of modern, synthetic and analytic techniques such as column chromatography, GC, HPLC, Spectrographic (IR, UV, MS, NMR) methods are required. The individual should have strong publication record, good communication skills, and experience working as a member of an interdisciplinary team.

CIIT is located in Research Triangle Park, N.C. which offers many cultural and recreational activities, as well as access to three major universities. We offer competitive salaries and benefits and a stimulating work environment. Applicants interested in either of these positions, please forward a resume, with letter of interest, to: **Human Resources Manager, Chemical Industry Institute of Toxicology, P.O. Box 12137, Research Triangle Park, N.C. 27709.**

**CIIT**

An Equal Opportunity / Affirmative Action Employer



PROFESSOR OF EPIDEMIOLOGY

The Department of Epidemiology at the Harvard School of Public Health is planning to appoint a tenured professor to serve in the Department and the Harvard AIDS Institute.

Applicants for the position should be internationally recognized, give evidence of commitment to and success in teaching graduate students and postdoctoral fellows, and present an outstanding record of epidemiological research, preferably in the area of AIDS.

The successful candidate will be expected to expand and provide scientific leadership for teaching and research programs in the epidemiological aspects of AIDS and to collaborate with other researchers in the Harvard AIDS Institute.

Please forward a curriculum vitae, including bibliography to:

Chairman, AIDS Epidemiology Search Committee
c/o Dean Ann Oliver
Harvard School of Public Health
677 Huntington Avenue
Boston, MA 02115

Qualified women and members of minority groups are encouraged to apply.

Faculty Position Neurobiology

Applications are invited for a tenured track Assistant Professorship in the Department of Cell Biology and Anatomy. Candidate should have a strong research background in cellular, developmental and/or molecular neurobiology and interest in teaching human neuroscience.

Please send CV, a summary of research plans and 3 letters of recommendation by May 15, 1990, to: **Dr. Moses Chao, Department of Cell Biology and Anatomy, Cornell University Medical College, 1300 York Avenue, New York, New York 10021.** EEO/AA/M/F/H/V.

**CORNELL
UNIVERSITY
MEDICAL
COLLEGE**



POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE.

Position open in program investigating immunology of host-arthropod interaction. Experience required in antigen purification, tissue culture, and analysis of humoral and cell-mediated immune responses. Send curriculum vitae along with names, addresses, and telephone numbers of three references to: **Dr. Stephen K. Wikle, Department of Microbiology and Immunology, School of Medicine, University of North Dakota, Grand Forks, ND 58202.**

POSTDOCTORAL/RESEARCH ASSOCIATE OR ASSISTANT PROFESSOR.

Research track positions available for Ph.D. or M.D. with strong background in recombinant DNA technology to pursue research in a basic science/clinical collaborative effort. Projects address the molecular basis of autoimmunity in diabetes mellitus. Please submit curriculum vitae and names of three references to: **Dr. Michael P. Czech, Department of Biochemistry, or Dr. Aldo Rossini, Department of Medicine, University of Massachusetts Medical Center, Worcester, MA 01655.** This medical center is a strong Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE.

Directed mutagenesis study of the role of amino acid residues at an enzyme active site. Candidates for a position in this project should have research experience in enzymology or biophysical chemistry. For recent published work by the group, see *J. Biol. Chem.* **264**, 9391 (1989), and **265**, 2740 (1990). Training will be provided in obtaining rate constants for ligand binding and release, interconversion of conformers, and catalysis. Methods for the study of transient state kinetics as well as steady state kinetics will be included. Starting salary: \$22,000 or higher depending on relevant experience. To apply send curriculum vitae and three references to: **Dr. R. L. Blakley, Department of Biochemical and Clinical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101.** An Equal Opportunity Employer.

MOLECULAR PARASITOLOGY. Applications are invited for an appointment by 1 July 1990 in the Division of Geographic Medicine, Case Western Reserve University, Cleveland, Ohio, at the level of **RESEARCH ASSOCIATE** with salary dependent on qualifications and prior experience. This position will be part of a large multi-investigator group studying the pathogenic mechanisms and human host immune response to the protozoan *Entamoeba histolytica* with the long-term goal of developing an efficacious subunit vaccine. A successful candidate will have a Ph.D. or M.D. degree, extensive experience with molecular biology techniques, and have completed a relevant postdoctoral fellowship. There is an opportunity for a future tenure-track position dependent on performance. Interested individuals should send curriculum vitae complete with references to: **Jonathan I. Ravdin, M.D., Department of Medicine, University Hospitals of Cleveland, Cleveland, OH 44106.**

ASSISTANT RESEARCH CHEMIST, 37.5 hours per week; \$16.20 per hour. Responsible for design and synthesis of fluorescent-labeled and radioisotope-labeled proteins and for studies of protein stability. May supervise graduate students in experimental work and theoretical discussion. Require Ph.D. in chemistry and strong experience in organic synthesis, chemical kinetics, reaction mechanisms, structural elucidation by spectroscopic methods (UV, IR, GC-MS, ^1H , and ^{13}C -NMR), and quantum mechanics calculations. Job site and interview: Santa Cruz, California. Send this ad and résumé to: **Job. No. JW12815, P.O. Box 9560, Sacramento, CA 95823-9560** no later than 18 March 1990.

The University of California, San Diego (UCSD), Department of Pediatrics, is seeking Ph.D. applications for three positions as **ASSISTANT RESEARCH VIROLOGIST**. Candidates should have experience in molecular biology and retrovirology or herpesvirology to conduct research in AIDS pathogenesis and the role of viral cofactors. Salary based on University of California policy. Interested individuals should send curriculum vitae with a list of three references no later than 30 April 1990 to: **Stephen A. Spector, M.D., Associate Professor, Department of Pediatrics, UCSD Medical Center, 225 Dickinson Street (H-814-H), San Diego, CA 92103.** Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

RESEARCH ASSOCIATE ASSISTANT/ASSOCIATE PROFESSOR YALE UNIVERSITY

The Division of Digestive Diseases and the Yale Liver Center seek applications from candidates with M.D. or Ph.D. degree for postdoctoral and full-time faculty positions, with emphasis on research in mechanisms of hepatocyte transport and function. Experience with fluorescence imaging or electrophysiologic techniques in isolated cell systems is desirable. Interested candidates should submit curriculum vitae and three references to: **J. L. Boyer, Department of Medicine, Box 3333, Yale University School of Medicine, New Haven, CT 06510.** Yale University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE. In molecular biology to study eukaryotic transcription factors. Ph.D. in biology or microbiology is required. Studies will involve in vitro transcription, footprinting, gel-shift, factor purification, cDNA cloning, mutagenesis, and analysis of mutants. Applicants should have at least 2 years of prior predoctoral or postdoctoral experience with particular training in the in vitro analysis of prokaryotic or eukaryotic DNA binding proteins. Salary: \$19,600 per year, 40 hours per week. Qualified applicants may apply with curriculum vitae to: **Employment Security Commission, 516 North Mangum Street, Durham, NC 27702**, or your nearest Job Service Office. Refer to: **Job Order # NC3091726, dot code 090.227-010.** If not a U.S. citizen, specify current visa status.

RESEARCH ASSISTANTS/ASSOCIATES. For a San Diego biopharmaceutical company currently designing and developing drugs for treatment and diagnosis of cardiovascular diseases and the treatment of cerebrovascular and neurological diseases. Company growth has created immediate openings in our CNS, Cardiovascular, and New Drug Development divisions. We are seeking qualified people with a related B.S. or M.S. degree and 3 to 5 years of experience in one or more of the following areas: animal physiology, hemodynamics, neurobiology, and pharmaceutical formulations. We offer competitive salary and benefits including equity participation in a fast-paced, highly motivated R&D environment. Please send a résumé with a cover letter specifying the position for which you are applying to: **Box 22, SCIENCE.**

The Department of Surgery, Division of Plastic, Reconstructive and Hand Surgery, University of Cincinnati, is seeking a Ph.D. trained in anatomy, cell biology, or physiology with an interest in **RESEARCH** in areas of wound healing, burns, microsurgery, developmental biology, or craniofacial surgery. Experience with grant funding preferred. Candidate is expected to develop a program in plastic surgical research with foundations in basic science. Position would require interactive working relationships with plastic surgeons (clinical faculty and residents) and basic scientists at the University of Cincinnati and the Shriners Burns Institute. Salary commensurate with qualifications and experience. Send curriculum vitae to: **Henry W. Neale, M.D., Division of Plastic Surgery, University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, OH 45267-0558.**

RESEARCH MOLECULAR BIOLOGIST. To develop a molecular biology research program for loblolly pine and/or other tree species that will augment the gains we are getting from our conventional tree breeding program. To explore the use of recombinant DNA technologies to fingerprint germplasm gene constructs needed to obtain the transfer of selected genes into trees utilizing *Agrobacterium tumefaciens* as a vector or utilizing a particle accelerator. To develop the required gene constructs needed to obtain the expression of selected transferred genes in specific regions of a tree. Ph.D. in plant molecular biology and 4 years of experience required. Also required are experience with and intimate knowledge of plant molecular biology tools such as restriction fragment length polymorphisms, gene structure, DNA sequencing, genomic DNA library screening, transfer DNA expression, site-directed in vitro mutagenesis as well as all of the basic techniques of DNA and RNA analysis, and familiarity with DNA and protein software computer systems; \$42,000 per year. Qualified applicants send résumé to: **South Carolina Employment Security Commission, P.O. Box 1868, Summerville, SC 29484**, or to the nearest South Carolina Job Service Center. **Job Order Control #SC 0917911.**



Support new areas of growth

Hoechst-Roussel Pharmaceuticals Inc., a fast growing subsidiary of Fortune 100 Hoechst Celanese Corp., and a world leader in neuroscience research, has several exciting career opportunities available due to the expansion of its biological research group to support central nervous system drug development programs.

Senior Research Psychopharmacologist

Responsibilities involve in vivo preclinical evaluation of potential new drug entities for the treatment of Alzheimer's disease, schizophrenia and other neuropsychiatric diseases using behavioral and/or electrophysiological techniques. Ph.D. in pharmacology, physiology or neurosciences is required and prior experience is preferred, especially in passive avoidance procedure.

Pharmacologist I/ Pharmacologist II

Responsibilities involve in vivo preclinical evaluation of potential new drug entities for the treatment of Alzheimer's disease and schizophrenia using various behavioral models, such as match-to-sample in primates. M.S. in Biological Sciences and prior experience in behavioral pharmacology and in handling monkeys is desirable.

Positions are located in our modern research facility in Bridgewater, NJ. We offer a competitive salary, flexible benefits program and Performance Sharing Plan. Please submit resume with salary requirements to: Jim Hamilton, Manager of Employment, Dept. 3131, Hoechst-Roussel Pharmaceuticals Inc., Route 202-206 North, P.O. Box 2500, Somerville, NJ 08876-1256. An affirmative action employer M/F/H/V.

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Hoechst 

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ONCOLOGY RESEARCH WASHINGTON DC AREA

Molecular Oncology Inc. is a young, fast-growing biotech research company involved in the transfer of the latest molecular diagnostics to the clinical laboratory and to novel therapeutics. If you're an enthusiastic individual with demonstrated abilities, we have a place for you on our team.

Laboratory Director – Tumor Biology

Experienced scientist to lead a small group studying tumor cell invasion and metastases. This effort will focus on the relationships of basement membrane and proteolysis to tumor progression. M.D. or Ph.D. degree required.

Group Leader – Antibody Development

Independent scientist with 2-5 years supervisory experience to develop monoclonal and polyclonal antibodies for research and product applications. M.D. or Ph.D. degree required.

Molecular Biologist

Molecular biologist with 1-5 years experience to participate in the following research areas: (1) the detection of metastatic disease by nucleic acid hybridization; or (2) the development of novel recombinant therapeutic proteins. All levels from research assistant to scientist will be considered.

Send employment history and C.V. to:



Molecular Oncology Inc.

Department S-2
19 Firstfield Road
Gaithersburg, MD 20878

Principals only. MOI is an equal opportunity employer.

THOMAS JEFFERSON UNIVERSITY COLLEGE OF ALLIED HEALTH SCIENCES PHILADELPHIA, PA 19107

Chairman, Department of Laboratory Sciences

Thomas Jefferson University, an academic health center located in Center City Philadelphia, is accepting applications for the leadership and management of its upper division baccalaureate degree programs in laboratory sciences (e.g. Medical Technology, Cytotechnology and Cytogenetics Technology). Qualifications: earned doctorate and experience in research, teaching and academic program management required. Salary and rank commensurate with education and experience. Position available July 1, 1990. Qualified applicants should submit a curriculum vitae by April 30, 1990 to JoAnn R. Gurenlian, RDH, MS, Vice Chairman of the Search Committee for Chairman, Department of Laboratory Sciences, College of Allied Health Sciences, Thomas Jefferson University, 130 South 9th Street, 22nd Floor, Philadelphia, PA 19107-5233. *Equal Opportunity/Affirmative Action Employer.*



Thomas
Jefferson
University

Research Molecular Biologists/ PhD's

Enzo Therapeutics, Inc., a subsidiary of Enzo Biochem, Inc., seeks Molecular Biologists with experience in nucleic acid manipulation, mammalian expression vectors and gene transfer. An active and growing research and development effort requires candidates with the ability to design and implement cohesive research programs in addition to good communication and interactive skills.

Send resume to:

ENZO DIAGNOSTICS, INC.

325 Hudson Street,
New York, NY 10013
Equal Opportunity Employer M/F

POSITION AVAILABLE Director, Division of Basic Brain and Behavioral Sciences National Institute of Mental Health Alcohol, Drug Abuse, and Mental Health Administration Public Health Service Department of Health and Human Services

The Alcohol, Drug Abuse, and Mental Health Administration invites nominations and applications for the position of Director, Division of Basic Brain and Behavioral Sciences, National Institute of Mental Health (NIMH).

This is a Senior Executive Service position in the career civil service, with an annual salary range of \$71,200 to \$79,200. Physicians may also be eligible for a Physicians' Comparability Allowance of up to \$20,000 per year. The position is located in Rockville, Maryland.

The Division of Basic Brain and Behavioral Sciences, National Institute of Mental Health (NIMH), (1) directs, plans and supports programs of research, research training, and resource development in the neurosciences, behavioral sciences, and psychobiology; (2) reviews and assesses the performance of such programs; (3) collaborates with other Federal agencies and with outside organizations; and (4) provides administrative support for these programs. As Director, the incumbent is responsible for the program and administrative management of the Division of Basic Brain and Behavioral Sciences.

Minimum qualifications requirements include a degree of Doctor of Medicine, Doctor of Osteopathy, or a bachelor's degree or higher degree in an academic field related to the health sciences pertinent to the work of the position; and progressively responsible experience in the scientific administration of mental health research funded through grants and contracts which demonstrates a familiarity with the extramural review function. Candidates must also have experience in the management of programs; demonstrating competence to assume leadership in planning, staffing, directing, coordinating and allocating resources, and other responsibilities associated with executive leadership of a major national program.

Further information about the position and qualifications requirements may be obtained by contacting Ms. Leslie Everheart at (301) 443-5030. An SF-171 (Application for Federal Employment) accompanied by a current curriculum vitae and bibliography should be submitted to Ms. Leslie Everheart, Division of Personnel Management, ADAMHA, Parklawn Building, Room 15C-26, 5600 Fishers Lane, Rockville, Maryland 20857, (301) 443-5030. Complete application material (including the SF 171) must be postmarked by the closing date of April 20, 1990. Resumes are not acceptable for entrance into the Senior Executive Service.

Applications from women and minority group members are especially solicited.

The Alcohol, Drug Abuse, and Mental Health Administration is an Equal Opportunity Employer

RESEARCH FELLOWS HORMONE REGULATION OF TUMOR CELL GROWTH

Positions available for PhD scientists:

(1) **BIOCHEMIST/PROTEIN CHEMIST** to characterize the structure of a cell-cell adhesion glycoprotein regulating thyroid hormone dependent tumor cell growth. Project includes isolation and sequencing of peptide fragments encoding surface receptor recognition, peptide synthesis and receptor identification/isolation. Experience in protein/peptide chemistry and HPLC is required.

(2) **MOLECULAR BIOLOGIST** to study control of hormone dependent gene expression by adhesion proteins and characterization/sequencing of receptor cDNA clones. Experience with eukaryote or prokaryote recombinant DNA methods is required.

(3) **CELL BIOLOGIST** with related experience in immunology or endocrinology to study the cellular basis of adhesion protein regulation of thyroid hormone induced growth in serum-free defined culture including receptor dynamics and mechanism of action. Monoclonal antibodies blocking adhesion/growth activity will be studied.

Salaries are based on experience. **Predoctoral students within 12 months of the final thesis are urged to apply. Senior investigators may be eligible for Research Track (non-tenure) positions.** Send a curriculum vitae and the names of three references to: **Professor David Sirbasku, The Department of Biochemistry and Molecular Biology, The University of Texas Medical School, P.O. Box 20708, Houston, TX 77225.** An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

Microbial Seed Coatings

BioTechnica International Inc. (BTI) is a world leader in the development and application of next-generation technologies in the areas of agricultural biotechnology, microbial production systems and diagnostics. We have an opening at our Cambridge, MA facility for a highly-motivated Research Scientist to work in collaboration with microbiologists and lead a group developing systems for coating seeds with microorganisms of agronomic importance. The successful candidate will have several years of industrial experience working with polymers including film coating and microencapsulation, and will have a proven record of innovative research and leadership potential. Experience working with biological materials and biocompatible polymers would be ideal. Knowledge of seed physiology and seed coating techniques is desirable. Salary negotiable depending upon experience.

Qualified candidates should forward resume to BioTechnica International, Inc., Human Resources Department, 85 Bolton St., Cambridge, MA 02140. BTI is an equal opportunity/affirmative action employer.



BioTechnica International, Inc.

BUILDING A NEW LAB?

LET THE SCIENCE FREE PRODUCT
INFORMATION SERVICE PUT YOU IN
TOUCH WITH THE VENDORS WHOSE
PRODUCTS YOU WILL NEED.

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SCIENCE MAGAZINE
NEW LAB SERVICE DEPT.
1515 BROADWAY
NEW YORK, N.Y. 10036



Our Research Centre is situated north of Lausanne near the Lake of Geneva, Switzerland.

We are offering a

POSTDOCTORAL FELLOWSHIP IN TOXICOLOGY

For a period of two years.

The aim of our project is to develop sensitive techniques for measuring human exposure to dietary contaminants for risk evaluation. In order to do these studies, you will have to develop analytical methods for measuring DNA and protein adducted with carcinogens. In conjunction, routes of metabolism of xenobiotics will be needed to be elucidated by enzymatic and spectroscopic means.

The successful candidate holds a Ph.D with a good publication record in the area of xenobiotic metabolism and a solid background in organic and analytical chemistry, and ³²p-postlabelling of DNA.

Please send your application with curriculum vitae and three names for reference purposes to Mrs. M. Germanier Audrin, Personnel Services, Nestlé Research Centre, P.O. Box 353, CH-1800 VEVEY, Switzerland.

POSTDOCTORAL SCIENTIST Thrombosis Research

The Upjohn Company, a recognized leader in pharmaceutical research, development and marketing, is seeking applicants for a two-year, postdoctoral position in our Cardiovascular Diseases Research Group. The successful candidate will study the contributions of the monocyte-macrophage to the thrombogenic state of atherosclerotic blood vessels and will work with a multi-disciplinary team in identifying products of these cells that promote procoagulant responses of vascular endothelium and smooth muscle cells. Studies will involve the use of cell culture, protein isolation and characterization, molecular biology, immunohistochemistry, electron microscopy and animal models.

Qualified applicants will have a recent Ph.D. in biochemistry, pharmacology, or a related science. Experience in cell culture techniques, protein purification, antibody production, and immunoassays is highly desirable. Direct experience with the biology of endothelial cells and/or monocytes-macrophages, or in the area of coagulation biochemistry would be most beneficial.

Upjohn offers very competitive compensation and benefits programs in addition to a stimulating multi-disciplinary research environment at our modern laboratories located in Kalamazoo, Michigan. For confidential consideration, please forward your CV/resume to **THE UPJOHN COMPANY, CORPORATE RECRUITING, KALAMAZOO, MI, 49001-9988**, or materials may be faxed to 616/329-5525. Refer to Position No. 5637-BA/Cardiovascular in your correspondence. An Equal Opportunity Employer M/F.

Our Commitment to Scientific Excellence Continues...

Upjohn

BIOTECHNOLOGY

POSTDOCTORAL FELLOWS VIROLOGY

Cetus Corporation, a leader in biotechnology, has openings in the Diagnostics Research Program for experienced Virologists. The Diagnostics Research Program is involved, in collaboration with Hoffman La-Roche, in the development and design of diagnostic applications of the Polymerase Chain Reaction (PCR).

The successful candidates will have an MD and/or PhD with 0-3 years' postdoctoral experience in virology. Preference will be given to individuals with a strong molecular biology background, including PCR experience.

A position is available in the laboratory of M. Manos to study the role of human papillomavirus (HPV) in genital cancers. The successful candidate will have experience in the areas of gene expression, molecular virology, or tumor biology and, preferentially, in HPV. Projects include:

- the analysis of new HPV types, including genome structure, expression, and "potency" of transforming genes
- the role of cellular and viral factors in the progression of genital cancers
- retrospective and prospective epidemiological studies to elucidate the role of HPV in cancers

Respond to Box #90051/SW

A position is also available in the laboratory of J. Sninsky to study human retroviruses. The successful candidate will have experience in the area of molecular virology, with preference given to retrovirologists. Projects include:

- search for additional members of the retrovirus family involved in human disease
- characterization of human endogenous retroviral sequences
- host and viral factors involved in disease progression with emphasis on prognostic markers

Respond to Box #90052/SW

Cetus offers an excellent benefits package along with a collaborative environment that encourages career growth. For consideration, please send your curriculum vitae, indicating appropriate Box #, to Cetus Corporation, 1400 Fifty-Third Street, Emeryville, CA 94608. We are an Equal Opportunity Employer.



POSITIONS OPEN

IMMUNOTOXIN RESEARCH

Positions are available for **POSTDOCTORAL** scientists interested in developing novel modes of cell-targeted therapy. A strong background in biochemistry/cell biology is required, as the work encompasses diverse areas, including the development of monoclonal antibodies, mechanisms of toxin action, therapeutic studies in athymic mice, and the production of mutant toxins. Boston offers opportunities for learning, culture, sports, and recreation.

Send curriculum vitae and references to:

Dr. Vic Raso
Boston Biomedical Research Institute (BBRI)
20 Staniford Street
Boston, MA 02114

BBRI is an Equal Opportunity/Affirmative Action Employer.

SENIOR RADIOCHEMIST. Responsible for development of new, and implementation of existing, radioanalytical processes as applied to environmental radiochemistry and high-level nuclear waste storage; will develop new analytical techniques apart from those commonly available and will also verify and document analytical processes and results; will evaluate anomalous results and quality assurance of analytical data. Ph.D. in nuclear chemistry or radiochemistry. One year of postdoctoral laboratory experience required in areas of determination of solubility and complexation of transuranic elements, radioanalysis at the environmental level, and making radioactive standards with various levels of radioactivity. Job and interview site: San Diego, California. Salary: \$46,000 per year; 40 hours per week. Send this ad and your résumé or letter of qualifications to: **Job #WS 12787, P.O. Box 9560, Sacramento, CA 95823-0560** not later than 30 April 1990.

SOIL CLASSIFICATION AND LAND USE. Department of Soil Science, University of Minnesota. **ASSISTANT OR ASSOCIATE PROFESSOR**, 12-month, tenure-track position available 1 July 1990. A Ph.D. in soil science or closely related field by date of appointment is required. Associate must meet university requirements at that level stature. Duties include research/teaching in basic and applied soil classification and land use, with emphasis on extrapolation of site-specific data to landscape units. Skills and experience in those duties are desired qualifications, with special consideration given for expertise in landscape level management and response. Letter of application, curriculum vitae, relevant transcripts, a one-page statement of professional goals, and names, addresses, and telephone numbers of three references by 1 May 1990 to: **Dr. D. F. Grigal, Department of Soil Science, University of Minnesota, St. Paul, MN 55108.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically encourages applications from women and minorities.*

TRANSGENIC SCIENTIST

The Department of Microbiology and Immunology, School of Medicine, University of Maryland at Baltimore, and the Medical Biotechnology Center of the Maryland Biotechnology Institute invite applications at the level of **RESEARCH ASSISTANT PROFESSOR** to manage and operate a core facility for the production of transgenic animals. The applicant should have experience in all aspects of the production of transgenic mice. The laboratory is and will be well equipped with pertinent major and minor instrumentation, equipment and technical personnel. The laboratory animal facility provides high quality animal husbandry services and support. Opportunity exists for independent research and for collaboration with cellular and molecular biologists representing a diversity of interests. Applicants should possess Ph.D., M.D., or D.V.M. degrees with relevant postdoctoral experience. The position is available as early as 1 July 1990 and includes excellent fringe benefits.

Candidates should submit current curriculum vitae and the names, addresses, and telephone numbers of three professional references to:

Louis DeTolla, V.M.D., Ph.D.
Chair, Transgenic Search Committee
The University of Maryland at Baltimore
School of Medicine
10 South Pine Street, Room 300, MSTF
Baltimore, MD 21201

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

POSITIONS OPEN

STAFF SCIENTIST SYNCHROTRON RADIATION STUDIES CORNELL UNIVERSITY

CHESS, the Synchrotron Radiation Facility at Cornell University, has completed a major expansion program which will double the research capability of the laboratory. CHESS is a national synchrotron radiation laboratory, supported by the National Science Foundation, which obtains photons from the 8-GeV Cornell Electron Storage Ring (CESR). We are seeking to add permanent staff scientists to our organization (at the level of **SENIOR RESEARCH ASSOCIATE**, Cornell University), to conduct an experimental research program using synchrotron radiation. The position involves contributions to the operations of the laboratory through development of new experimental techniques. The field of research should make use of the unique synchrotron x-rays provided by CHESS in the hard x-ray domain. Salary is negotiable and will be commensurate with qualifications. Experience and Ph.D. required.

Résumés should be sent to:

Professor Boris W. Batterman
Director, CHESS
Wilson Laboratory, Cornell University
Ithaca, NY 14853

Cornell University is an Equal Opportunity Employer.

SYNTHETIC ORGANIC CHEMIST. Annual salary: \$34,200; 40-hour week, 9:00 a.m. to 5:00 p.m., Monday through Friday. Job description: synthesis, purification, and analysis of complicated organic and inorganic chemicals for specialty applications in pharmaceuticals, polypeptides, polymer research diagnostics, and electronic applications; ability to handle polymeric resin; familiarity with modern analysis method including NMR, IR, GC, UV, HPLC, TLC, and LC. Requires Ph.D. in organic chemistry and 3 years of training in laboratory synthesis. Submit résumé or curriculum vitae to: **The Philadelphia Job Bank, 444 North 3rd Street, 3rd Floor, Philadelphia, PA 19123, Job Order #4304930.**

TRANSGENICS RESEARCH

POSTDOCTORAL POSITION available immediately at the Biomedical Research Center, University of British Columbia, to study mechanisms of mammalian development with emphasis on the hematopoietic system, using transgenic mouse models of gene function via embryonic stem cell culture systems and targeted recombination. Candidates must have completed doctoral training (M.D. or Ph.D. or equivalent) with previous research experience in molecular biology desirable. Curriculum vitae and three letters of recommendation to: **Dr. Jamey Marth, The Biomedical Research Center, 2222 Health Sciences Mall, The University of British Columbia, Vancouver, B.C., V6T 1W5 Canada.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP

To study eicosanoid and cytokine interrelationships in the pulmonary alveolar macrophage. Background in arachidonic acid metabolism preferred. Cell culture experience, immunoassay, and HPLC experience desirable. Send curriculum vitae to: **Dr. Laurence M. Demers, Department of Pathology, The M. S. Hershey Medical Center, Pennsylvania State University, Hershey, PA 17033.** *An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

PRE- AND POSTDOCTORAL FELLOWSHIPS

The Monell Chemical Senses Center (MCSC) offers fellowships and 2- to 3-month internships in a multidisciplinary basic and clinical research program studying nutrition and the chemical senses (taste and smell) in animals and humans. Predoctoral fellowships for students enrolled in an accredited doctoral program include a stipend, research supplies, and travel to a scientific meeting and the sponsoring home institution. Postdoctoral fellowships include a stipend, research supplies, and travel support to a scientific meeting. Internships intended for graduate students include return travel to Philadelphia and an allowance for lodging and meals. For information, contact: **Dr. Mark Friedman, MCSC, 3500 Market Street, Philadelphia, PA 19104.** *An Equal Opportunity Employer.*

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP in molecular and cellular immunology basis of monokine aberrations in immunosuppressed trauma patients. Advanced formal training in interactive immunology program, including seminars, laboratory work, PCR-based study. Tissue culture and some molecular biology experience required. Send curriculum vitae and three letters of recommendation to: **Dr. Carol Miller-Graziano, Division of Research, University of Massachusetts Medical Center, 55 Lake Avenue, North, Worcester, MA 01655.** **Telephone: 508-856-2387.** *Affirmative Action/Equal Opportunity Employer.*

PREDOCTORAL AND POSTDOCTORAL FELLOWSHIPS

The Eppley Institute at the University of Nebraska Medical Center (UNMC), one of 15 National Cancer Institute-designated Laboratory Cancer Research Centers, has excellent training opportunities in the areas of cancer, cellular, and molecular biology. Funds are available through an NIH training grant, individual grants, and other sources. Predoctoral stipends are \$11,000 per year, plus tuition remission and medical insurance. Postdoctoral fellowship stipends are commensurate with experience and are nationally competitive. Prospective postdoctoral fellows should forward curriculum vitae, three letters of recommendation, and a brief description of research interest. For complete information, prospective predoctoral students and postdoctoral fellows should contact: **Director, Eppley Institute, UNMC, Omaha, NE 68188-6085.** *Affirmative Action/Equal Opportunity Employer.*

RESEARCH FELLOW

Contribute your knowledge in our immunogenetics laboratory, Manhattan's East 60's. This highly qualified individual will perform research in the characterization of genetic determinants of disease susceptibility. Ph.D. or equivalent with documented experience in the application of molecular genetic techniques required. We offer an excellent benefit package including liberal vacation. You can either mail your résumé, with salary history/requirements, to: **PR/Human Resources, The New York Blood Center, 150 Amsterdam Avenue, New York, NY 10023,** or call for FAX number, **telephone: 212-468-2151.** *Equal Opportunity Employer, M/F.*

POSTDOCTORAL FELLOWSHIPS FOR M.D.'S AND Ph.D.'S (beginning 1 July 1990), Obesity Research Center, St. Luke's/Roosevelt Hospital Center, Columbia University, and Rockefeller University.

Postdoctoral positions, for 2 or 3 years, funded by an NIH institutional training grant, available within a multidisciplinary program in nutrition dealing primarily with obesity and eating disorders. Faculty trainers are: Streamson C. Chua, M.D.; Neile Edens, Ph.D.; Steven Heymsfield, M.D.; Jules Hirsch, M.D.; Harry Kissileff, Ph.D.; Rudolph L. Leibel, M.D.; Carol Maggio, Ph.D.; Dwight Matthews, Ph.D.; Richard Pierson, M.D.; F. Xavier Pi-Sunyer, M.D.; Theodore B. Van Itallie, M.D.; and Mei U. Yang, Ph.D.

Research interests of faculty are: molecular physiology of neuropeptides relevant to energy homeostasis in rodents; molecular genetics and biology of obesity; catecholamine receptor biochemistry; free-fatty acid reesterification cycle activity; energy homeostasis in man and animals; fat cell metabolism; compartmentation of movement of lipid within cells; contribution of obesity to diabetes mellitus; stable isotope methodology; hormonal regulation of energy and protein metabolism; methods of nutritional assessment; methods of body composition assessment; thermogenesis; nutritional support; determinants of thermogenesis, food intake regulation, insulin resistance, adipocyte metabolism, pathophysiology of body fat distribution; determinants of protein loss during dieting; hormonal regulation of catabolism; caloric requirements of obese, formerly obese, and nonobese; autonomic function of heart rate fluctuation as an index of sympathetic and parasympathetic tone; adipose tissue composition and metabolism; human food intake regulation; physiological psychology of appetite and satiety in bulimia and obesity; animal models of obesity; adipose tissue and appetite; and gastrointestinal factors in satiety.

Send letters of reference and curriculum vitae to: **F. Xavier Pi-Sunyer, M.D., Program Director, Nutrition Research, Training Program, St. Luke's/Roosevelt Hospital Center, 114th Street and Amsterdam Avenue, New York, NY 10025.** **Telephone: 212-523-4161.** *An Equal Opportunity Employer, M/F.*

Call for Abstracts

FOURTH ANNUAL NORTH AMERICAN & 1990 INTERNATIONAL CYSTIC FIBROSIS (CF) CONFERENCE

*Crystal Gateway Marriott
Arlington, Virginia
October 3-6, 1990*

A multidisciplinary conference
for researchers, physicians,
and
allied health professionals
on the latest advances in
CF research and care.

Program Chairmen

Francis S. Collins, M.D., Ph.D.
Niels Hoiby, M.D., Ph.D.

Plenary Sessions: The CF Gene One Year Later • Multidisciplinary Approach to Pancreatic Disease • Immunopathology & New Approaches to Therapy

Symposia: Liver Disease • CF 101 • Biology & Physiology of the Intestine • Late-Breaking Science • Controversies in the Management of Pseudomonas Infections • Models of Gene Transfection • Diagnosis & Management of Diabetes • Lung Injury & Repair • New Advances in Cell Biology • Signaling & Transport • P Glycoproteins • Controversies in Care • Inflammatory Mediators • Issues in Surgical Intervention • Structure & Function of Membrane Proteins • Family Dynamics

Short Courses: Study Design & Clinical Epidemiology • Molecular Biology for Basic Scientists in Other Disciplines • Introduction to Ion Transport & Molecular Biology

Conference proceedings will be published as a supplement to *Pediatric Pulmonology*. Travel stipends will be awarded to overseas presenters of published abstracts. **ABSTRACT DEADLINE: MAY 1, 1990**

For abstract forms and registration materials, contact the



6931 Arlington Rd.
Bethesda, MD 20814
ATT: Caroline McPherson
(301) 951-4422

Postdoctoral Positions Available

Laboratory of Molecular Genetics National Institute on Aging National Institutes of Health

Postdoctoral and Staff Fellowship research positions are available immediately to study the regulation of mammalian stress response genes, and genes associated with negative growth control including:

- 1) Regulation of heat shock protein expression *in-vivo*,
- 2) Transcriptional regulation of newly isolated mammalian genes induced by DNA damage and growth arrest, and
- 3) Regulation of a novel antiproliferative gene.

Experience in molecular biology is desirable, but not essential.

Starting salary commensurate with qualifications and experience. Interested candidates should submit curriculum vitae to:

Nikki J. Holbrook, Ph.D., Senior Investigator
David Danner, M.D., Ph.D.
Gerontology Research Center
National Institute on Aging
4940 Eastern Avenue
Baltimore, Maryland 21224



NIH is an Equal Opportunity Employer

ROCKEFELLER FOUNDATION BIOTECHNOLOGY CAREER FELLOWSHIPS

The Rockefeller Foundation announces a program of career development fellowships designed to enable scientists from developing countries, trained at outstanding centers for advanced research in biotechnology, to continue to work at those or other institutions for three months each year, over a period of at least three years, conducting advanced research and keeping abreast of new developments in their fields. The program will focus upon the development and application of advances in molecular and cellular biology and immunology relevant to agriculture, health, and reproductive biology.

Funding will be shared between the Foundation and the host laboratory, with the Foundation providing travel and per diem support. It is hoped that the fellowships will encourage the establishment of ongoing working relationships between outstanding younger scientists working at third world institutions, and research teams at advanced laboratories.

Applicants to this program should have at least Ph.D.- or M.D.-level training, a proven record of scientific productivity, and a permanent position at a research or teaching institution in their home country. A written project proposal must be developed and submitted jointly by the candidate and the laboratory sponsor.

Information about application procedures can be obtained by writing to **Biotechnology Career Fellowships, Fellowship Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, New York 10036, USA.**

FELLOWSHIPS

POSTDOCTORAL FELLOWS. The Westinghouse Savannah River Company has immediate openings for two postdoctoral fellows in the Environmental Sciences Section of the Savannah River Laboratory.

These openings are for 1-year contracts, which are renewable for one additional year. Minimum requirements: Ph.D. in soil microbiology or microbial ecology. Preference will be given to those with experience in any of the following: molecular biology, bioremediation, bioreactor design, studies in contaminated groundwaters or soils, and/or biodegradation of xenobiotics. Candidates must qualify as Oak Ridge Associated Universities postdoctoral fellow, curriculum vitae, reprints, and names, addresses, and telephone numbers of three references.

Applicant must be able to obtain a U.S. Department of Energy "Q" clearance. *U.S. citizenship required.*

Salary is commensurate with your training and experience. For confidential consideration, please send résumé and salary history to: **Dr. Terry C. Hazen, Environmental Sciences Section, Savannah River Laboratory, Westinghouse Savannah River Company, Aiken, SC 29808-0001.** An Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIPS in hyperthermia biology, radiation biology, and radiopharmaceutical chemistry.

Four positions available immediately at the Thomas Jefferson University (TJU) Hospital. Ph.D., M.D., D.V.M., or equivalent required. Areas of interest:

- Relationship of heat-induced structural lesions in cytomatrix, nuclear matrix/chromatin complex and mitotic apparatus, to cytotoxicity and potentially lethal damage in synchronous mammalian cells (R. A. Coss, Ph.D.).
- Induction of DNA damage, chromosome damage (PCC) and potentially lethal damage and their repair after ionizing radiation, nonhypoxic cell sensitizers, and/or hyperthermia in mammalian cells and in repair deficient mutants (G. Iliakis, Ph.D.).
- Relationship of protein and RNA synthesis to thermotolerance development and decay, hyperthermia cytotoxicity and stepdown heating in mammalian cells (D. B. Leeper, Ph.D.).
- Radiopharmaceutical studies of organometallic chemistry, radiolabeled monoclonal antibodies and synthesis of novel molecules for diagnostic or therapeutic applications in oncology (M. L. Thakur, Ph.D.).

Salary: \$20,000+ depending on experience. *Applicants must be U.S. citizens or permanent residents.* Send résumé, names of three references, and indicate investigator of preference to: **Dennis B. Leeper, Ph.D., Professor and Director, Laboratory of Experimental Radiation Oncology, Department of Radiation Oncology and Nuclear Medicine, Thomas Jefferson University, Philadelphia, PA 19107.** TJU is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

THE JOHNS HOPKINS UNIVERSITY SCHOOL OF HYGIENE AND PUBLIC HEALTH OCCUPATIONAL HYGIENE FELLOWSHIP

A private sector corporation has provided support for an outstanding applicant for the doctor of philosophy degree. The candidate should be interested in a university research and teaching career.

Applicants please submit inquiries to:

Dr. Morton Corn
Department of Environmental Health Sciences
The Johns Hopkins University
School of Hygiene and Public Health, Room 6010
615 North Wolfe Street
Baltimore, MD 21205.

MOLECULAR BIOLOGIST

Applications are invited for a research position in molecular genetics of cancer at the **POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE** level. Outstanding laboratory facilities and stimulating group and institutional environment. Areas of active research include: isolation and characterization of genes which predispose to cancer and study of gene deregulation and amplification in tumor cells. Ph.D. in genetics or biochemistry and ability to function independently in molecular biology at the bench level are essential. Apply with curriculum vitae and names of three references to: **Dr. R. S. K. Chaganti, Member and Professor, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.** Telephone: 212-639-8121.

FELLOWSHIPS

POSTDOCTORAL FELLOW. Investigations of alterations in vascular proteoglycans in aging and disease require the experience of a scientist with a strong background in biochemistry/immunochemistry. Write: **H. Fillit, M.D., The Laboratory for Immunology and Aging, Department of Geriatrics, Box 1070, The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029-6574,** or telephone: 212-241-4274. An Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP MOLECULAR BIOLOGY OF INBORN ERRORS

Position immediately available for qualified Ph.D. interested in the molecular biology investigation of inborn errors of metabolism. Research interests include galactosemia, cystinuria, and maple syrup urine disease. Background in protein purification desired. Will train in recombinant DNA techniques. Send statement of search interests, curriculum vitae, and three letters of reference to: **Stanton Segal, M.D., Division of Biochemical Development and Molecular Diseases, The Children's Hospital of Philadelphia, Philadelphia, PA 19104.**

POSTDOCTORAL FELLOW. Position open to study systemic and renal hemodynamics and changes in vasoactive humoral substances before and after altered divalent ion nutrition. Ph.D. in physiology or pharmacology required. Position is for 2 years of support; salary is negotiable. Closing date: 1 May 1990. Submit curriculum vitae to: **Edward T. Zawada, Jr., M.D., Professor and Chairman, University of South Dakota, School of Medicine, P.O. Box 5046, Sioux Falls, SD 57117-5046.** Affirmative Action/Equal Opportunity Employer.

INTERNATIONAL CANCER RESEARCH FELLOWSHIP

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

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

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

SITUATIONS WANTED

IMMUNOLOGIST, Ph.D. (1983). Cellular/immunochemical techniques, hybridomas, idiotype, DNA/RNA sequencing, PCR. Publications. Seeks research or research/teaching position. Box 20, SCIENCE.

Ph.D. desires upper management position in commercial biotechnology/diagnostics. Management experience: product development, technology transfer, DNA probe diagnostics, quality assurance. Box 21, SCIENCE.

ANNOUNCEMENTS

THE EXTRACELLULAR MATRIX AND THE REPRODUCTIVE TRACT SYNTHESIS, DEGRADATION, AND HORMONAL REGULATION 13 TO 16 MAY 1990 UNIVERSITY OF ROCHESTER

For information, contact: **Continuing Professional Education, University of Rochester Medical Center, 601 Elmwood Avenue, Rochester, NY 14642.** Telephone: 716-275-4392, 8:00 a.m. to 4:30 p.m., Monday through Friday.

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