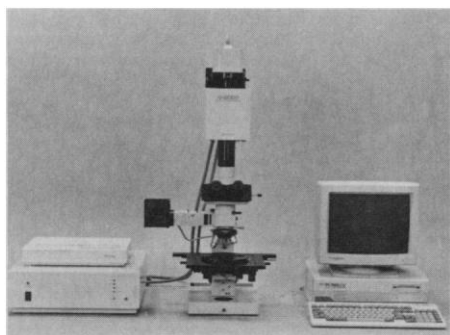


### Photodiode Array Spectrometer

The Model U-6000 Fourier transform is a visible microscope, photodiode array spectrometer. The U-6000 measures the transmittance, reflectance, or fluorescence of microscopic samples using a standard micro-



scope and interferometer with diode array detector. Typical applications include forensic analysis, biological cells and tissues, and wafers from the semiconductor industry. Particles as small as 3  $\mu\text{m}$  can be measured spectrophotometrically. Hitachi Instruments. Circle 456.

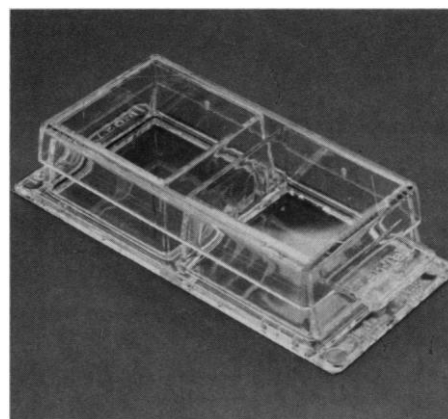
### X-ray Microanalysis System

VOYAGER is an x-ray microanalysis system that features state-of-the-art computer power through its SPARC-based workstation from Sun Microsystems, UNIX multitasking operating system, high-resolution monitor, and windowing display capability. The user has on-screen control over all experiment and software operations. The x-ray detector features a diamond window and germanium crystal that provide improved resolution, light element sensitivity, and extended spectral range. The system includes a program that allows the user to produce custom reports combining entered text with tabular data, spectral data, and images directly from the VOYAGER screen. Tractor Northern. Circle 442.

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.

### Hybridization Incubator

Model HB-1 is a new incubator for hybridization designed for conventional techniques in which DNA, RNA, or protein are immobilized onto nylon or nitrocellulose filters. The desired sequence is detected with radioactive probes. Model HB-1 has a temperature range of 30° to 70°C. It can be positioned either on its back or on one side, for minimum use of laboratory space. It has a folding door with magnetic latch and holds up to six hybridization tubes, each of which accommodates up to five membranes per tube. Only 1 ml of liquid is needed per membrane. Techne. Circle 463.



### Ultraviolet Cross-Linker

The Cross-Linker CL-400 provides a high-intensity short-wave (254 nm) ultraviolet light that exposes nucleic acid onto nylon membrane in a fraction of the time



required by techniques such as baking. The unit features a 10 inch by 10 inch grid lamp with a uniform ultraviolet light intensity of 18,000  $\mu\text{W}/\text{cm}^2$ . The lamp is controlled by a built-in digital timer. Lamp life is rated at 5000 hours. UVP. Circle 468.

### RNA Extraction Kit

The RNA Extraction Kit can prepare pure RNA quickly and in high yield from eukaryotic cells and tissues. The RNA obtained is suitable for immediate use in Northern blots, in vitro translation, or as a source of mRNA for cDNA synthesis. The salts used in the reaction provide protection against ribonuclease activity, the major concern during any RNA extraction procedure. Pharmacia LKB Biotechnology. Circle 461.

### Coverglass Chambers for Cell Culture

This disposable cell culture chamber's thin glass growth surface allows high magnification microscopy with inverted microscope

systems and use with fluorescent probes. The Coverglass Chamber was developed for use with Meridian Instruments' ACAS Laser Cytometer, which performs fluorescent image analysis and selective cell ablation microsurgery. The chambers can also be used in time-lapse video microscopic studies of living cells. The Coverglass Chamber is a rectangle approximately 25 mm by 56 mm divided into two parts with a growth surface of 4.2  $\text{cm}^2$  each. Nunc. Circle 454.

### DNA and RNA Linkers and Transilluminators

The BIOSLINK series of linkers and linker-transilluminators are combination units for DNA or RNA fixation to all nylon membranes using ultraviolet light. Units equipped with a transilluminator also allow visualization of DNA or RNA in gels. All are available in 254-nm and 312-nm wavelength models. Complete binding to membranes takes only a few seconds. The BIOSLINK unit's detection cell monitors the amount of energy applied to the membrane. The programming system allows the amount of energy applied to the blot to be preset. BIOS Corp. Circle 457.

### Literature

*Syringe and Peristaltic Pumps, 1991*, is a 110-page, full-color catalog. Harvard Apparatus. Circle 435.

*Catalog 28* contains more than 340 pages of products for sample preparation, gas chromatography, and high-performance liquid chromatography. Among the new products are guaranteed performance capillary columns for environmental analyses, solid-phase extraction tubes for robotics systems, new chemical standards, and a line of ultrafiltration cartridges, pumps, and accessories. Supelco. Circle 437.

# 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, Announcements, Courses and Training, Meetings, Situations Wanted, 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. 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.)

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

School of Science and Technology accepting applications for a faculty position, temporary, contingent on funding, as **ASSISTANT PROFESSOR**, general biology, to begin 15 August 1990. Candidate will participate in the undergraduate and graduate life science curriculum, with emphasis on the undergraduate curriculum including general biology courses, and microbiology, botany, and zoology. Supervision of M.S. students and development of an extramurally funded research program expected. Ph.D. or substantial progress toward a Ph.D. required. Preference given to candidates who have completed Ph.D. Application deadline: 7 May 1990 or until filled. For complete job announcement, write or call: **Personnel Office, New Mexico Highlands University, Las Vegas, NM 87701. Telephone: 505-454-3242. Affirmative Action/Equal Opportunity Employer.**

**ASSISTANT/ASSOCIATE PROFESSOR.** The Department of Otorhinolaryngology is seeking applications for a tenure-track research scientist. The successful candidate will have 2 years of postdoctoral experience, a research interest in the neurobiology of the auditory or vestibular system using biochemical or pharmacological methodology, and the ability to build an independently funded neuroscience research program. Applicants should send curriculum vitae, statement of current and planned research interest, and three reference letters to: **Dr. Glenn C. Thompson, Department of Otorhinolaryngology, University of Oklahoma Health Sciences Center (OUHSC), P.O. Box 26901, Oklahoma City, OK 73190-3048. OUHSC is an Affirmative Action/Equal Opportunity Employer.**

Florida International University (FIU), the State University of Florida at Miami. Tenure-track position at **ASSISTANT OR ASSOCIATE PROFESSOR** level for a person with research interests in environmental chemistry. Position is a joint, 12-month appointment between the Department of Chemistry and the Drinking Water Research Center. Available either August 1990 or January 1991. Ph.D. required; postdoctoral experience desirable. Active research program expected. Teaching responsibilities at both graduate and undergraduate levels in candidate's area of expertise. Closing date: 24 May 1990. Send curriculum vitae, transcripts, research plans, and three letters of reference to: **L. Keller, Department of Chemistry, Florida International University, Miami, FL 33199. FIU is rapidly growing with over 19,000 students. A new chemistry/physics building will open in 1990. FIU is an Affirmative Action/Equal Opportunity Employer.**

## FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ARTS AND SCIENCES GEOLOGY DEPARTMENT PALEONTOLOGIST/STRATIGRAPHER

The Department of Geology at Florida International University invites applications for a full-time, tenure-earning position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level in paleontology/stratigraphy. The successful applicant will be expected to teach at the undergraduate and graduate levels, and must have demonstrated an ability to conduct high-quality teaching and the potential to establish a vigorous research program. A completed Ph.D. is required, and applicants should have a background in invertebrate or vertebrate paleontology.

Deadline for application: 7 June 1990. Appointment will begin in August 1990.

Send a résumé, brief description of teaching and research interest, transcripts, and three letters of recommendation to: **Dr. Florentin Maurrasse, Chairman, Department of Geology, Florida International University, University Park Campus, Miami, FL 33199. Florida International University is a member of the State University System of Florida and an Affirmative Action/Equal Opportunity Employer.**

**AUDITORY EVOKED RESPONSES, ADVANCED TECHNIQUES.** A postdoctoral bioengineer and a Unix programmer needed to work on brain potentials in humans and computer simulations utilizing boundary element methods to determine the effects of skull shape upon solutions determining dipole characteristics. Send curriculum vitae and career goals, with names and telephone numbers of references, by 11 May 1990 to: **Dr. Don L. Jewett, University of California, San Francisco, CA 94143-0728. FAX: 415-476-1304. The University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### ASSISTANT PROFESSOR

The Department of Food Science and Nutrition, University of Minnesota, seeks a food scientist for a 12-month, tenure-track position as assistant professor. A Ph.D. in food science, biochemistry, microbiology, or related field is required. Prefer primary interest in biotechnology, biochemistry, enzymology, microbiology, or protein chemistry as related to dairy foods research. Research, teaching, and public service responsibilities will depend on expertise and interests of the candidate, and should include some aspect of cheese technology. Advise undergraduate, M.S., and Ph.D. students. Candidate must have a commitment to teaching and research and will be expected to establish and maintain a strong externally funded research program. Postdoctoral or industry experience is preferred. By 1 September 1990, send curriculum vitae, publication list, statement of research interests, and names and addresses of at least three references to: **Sue Harlander, Chair, Search and Screen Committee, Department of Food Science and Nutrition, University of Minnesota, 1334 Eckles Avenue, St. Paul, MN 55108. Appointment available 1 November 1990. The University of Minnesota is an Equal Opportunity Educator and Employer and especially invites and encourages applications from women and minorities.**

## THE PENNSYLVANIA STATE UNIVERSITY BIOENGINEERING

**ASSISTANT OR ASSOCIATE PROFESSOR** of bioengineering (tenure track). Applications are sought from individuals with a Ph.D. in areas related to biomechanics and/or biomaterials with the ability to teach graduate level applied mechanics and establish a research program to study the mechanical properties of tissues and blood at the cellular level, including such areas as the interaction of blood with natural and artificial surfaces, and cardiac or muscle mechanics. Postdoctoral experience or a demonstrated ability to compete for extramural funding is desirable. Send curriculum vitae, statement of research goals, and names of three references by 1 June 1990 to: **Dr. Herbert H. Lipowsky, Bioengineering Program, The Pennsylvania State University, 233 Hallowell Building, Department SM, University Park, PA 16802.**

*An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

## ASSISTANT/ASSOCIATE PROFESSORS EMORY UNIVERSITY

The Emory-Egleston Children's Research Center, Department of Pediatrics, Emory University, is seeking qualified applicants for tenure-track appointments. On the assistant professor level, applicants should have a Ph.D. with 2 to 3 years of productive postdoctoral training and will be expected to develop a strong, independent, fundable research program. On the associate professor or professor level, candidates should have a strong record of peer-reviewed grants and research publications. Appointments will be made in each of several research areas:

- Developmental research in cardiac physiology, cell biology, or biochemistry.
- Developmental neuroscience.
- Oncogenesis, with particular emphasis on leukemic growth factors or oncogene expression in brain tumor.

Interested persons should send curriculum vitae and three letters of recommendation to: **George W. Brumley, M.D., Emory-Egleston Children's Research Center, Department of Pediatrics, 2040 Ridgewood Drive, N.E., Atlanta, GA 30322. Emory University is an Equal Opportunity/Affirmative Action Employer.**

School of Science and Technology is accepting applications for two tenure-track **FACULTY POSITIONS** to begin 15 August 1990. Participation in the environmental science undergraduate curriculum and graduate life science curriculum, including such areas as radiation, toxicology, air quality, occupational health and safety practices, and vector and pest control. Development of a hazardous waste management program. Ph.D. or substantial progress toward a Ph.D. required. Application deadline: 30 April 1990 or until filled. For complete job announcement, write or call: **Personnel Office, New Mexico Highlands University, Las Vegas, NM 87701. Telephone: 505-454-3242. Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

### BIOLOGY/SCIENCE EDUCATION

The University of Missouri-Kansas City (UMKC) seeks applicants in science education for a 9-month, tenure-track position in biology at the **ASSISTANT PROFESSOR** level with responsibilities to the Department of Biology (55%) and the School of Education (45%). Major responsibilities: teaching of undergraduate and/or graduate courses in biology and methods courses in natural science, supervision of secondary student teachers, conduct research, serve on graduate student committees, and provide service to the campus and community. Ph.D. in biology required. Research/scientific publications in biology, science education, or both. Public school teaching experience preferred.

Applicants send a letter of application, including a statement of teaching and research goals, curriculum vitae, reprints of key publications, graduate transcripts, and arrange for the transmission of three current letters of recommendation to: **Dr. Edward Underwood, Co-chair, Committee, Biology/Science Education, School of Education, UMKC, 5100 Rockhill Road, Kansas City, MO 64110-2499.**

Review of applications will begin 1 May 1990 and continue until position is filled. *The University of Missouri-Kansas City is an Equal Opportunity Employer.*

### ASSOCIATE EDITOR

We're looking for a Ph.D. biochemist/molecular biologist with a broad range of interests and research experience in one or more of the following areas: signal transduction, intracellular molecular trafficking, or structural biophysics. Requirements include at least 2 or 3 years of postdoctoral experience and publications in the refereed literature.

Science editors have varied responsibilities in manuscript selection ranging from editing for clarity to soliciting papers. Previous editorial experience is not required. This is a full-time position in our Washington offices.

Please send résumé and list of publications with cover letter and salary requirements to:

**Mr. Gregory Stokes**  
AAAS  
1333 H Street, N.W.  
Washington, DC 20005  
*Equal Opportunity Employer.*

**ENVIRONMENTAL SCIENTIST.** Consumers Union (CU), the publisher of *Consumer Reports* magazine, is expanding its work on environmental, health, and safety issues. We seek a Ph.D. or M.S. with equivalent experience in a biological, physical, medical, or engineering discipline and demonstrated expertise in environmental impact and/or environmental risk assessment. Experience with public policy-making processes on environmental and health issues is also highly desirable. Responsibilities include conducting product testing, literature research, and policy analysis in support of articles in *Consumer Reports* and of advocacy on regulatory and legislative issues. Outstanding communication skills essential. Position available now. Send letter and résumé to: **Edward Groth III, Ph.D., Associate Technical Director, Consumers Union, 256 Washington Street, Mount Vernon, NY 10553.** *CU is an Affirmative Action/Equal Opportunity Employer.*

**ENVIRONMENTAL SCIENCES PROGRAM DIRECTOR.** Northern Arizona University. **ASSOCIATE PROFESSOR** rank anticipated to direct multidisciplinary undergraduate environmental sciences program. Responsibilities include teaching, advising, conducting research, and administration. Candidate must qualify for a joint appointment in either the biology, chemistry, or geology departments. Available fall of 1990. Salary is negotiable based upon qualifications and experience. The position will remain open until filled. Send curriculum vitae, a statement of teaching and research interests, and the names, addresses, and telephone numbers of three references to: **Chair, Environmental Sciences Search Committee, College of Arts and Sciences, P.O. Box 5621, Northern Arizona University, Flagstaff, AZ 86011-5621.** *Northern Arizona University is a committed Equal Opportunity/Affirmative Action Institution. Minorities and women are encouraged to apply. For additional information call: 602-523-4561.*

## POSITIONS OPEN

### CHEMIST

The U.S. Pharmacopeia's (USPC) Drug Research and Testing Laboratory has an immediate opening for a Chemist III. The responsibilities of this newly created, nonsupervisory bench position will include evaluation of analytical methodology and of reference standards using modern analytical instrumentation. The incumbent will plan, conduct, and document studies with emphasis on biotechnology-derived drugs. Candidates should possess a graduate degree in analytical or pharmaceutical chemistry, experience with modern chromatographic and electrophoretic analysis of protein and peptides, and excellent writing skills. A working knowledge of enzyme assays is desirable.

The USPC offers a comprehensive benefits package, a starting salary commensurate with experience, and a highly professional, smoke-free work environment. Please forward résumé with salary requirements to: **Personnel Department, The U.S. Pharmacopeial Convention, Inc., 12601 Twinbrook Parkway, Rockville, MD 20852.** *Equal Opportunity Employer.*

### DIRECTOR

#### ELECTRON MICROSCOPE LABORATORY

Applications are solicited for director of the Electron Microscope (EM) Facility of the Department of Biological Sciences. This is a career-track, nonfaculty, 12-month position; salary competitive, depending on qualifications and experience. Appointment begins 1 July or 1 September 1990. Qualifications: Ph.D. preferred, broad experience with EM techniques, involving a diversity of biological systems. Duties: manage EM facility (two laboratories, two scanning and two transmission scopes, three darkrooms, supporting equipment), conduct independent research and collaborate with faculty, and instruct students and faculty in EM techniques. Send curriculum vitae, statement of professional interests, and three letters of recommendation to:

**Chair, EM Search Committee**  
**Department of Biological Sciences**  
**University of Wisconsin-Milwaukee**  
P.O. Box 413  
Milwaukee, WI 53201

Application deadline is 1 June 1990.  
*The University of Wisconsin-Milwaukee is an Equal Opportunity/Affirmative Action Employer.*

**SUPERVISOR/ASSISTANT IN BIOCHEMISTRY.** Supervise research team involved in the study of regional and whole body protein metabolic information in man, implementing multilabeled molecules, mass spectroscopic analysis, and computer-assisted metabolic mathematical modeling techniques. Apply steady and nonsteady state tracer methodology in large animals and man using stable and radioactive isotopes and gas chromatography/mass spectrometer to develop suitable methodologies for use in man. Design and execute experimental models in various body compartments. Write research protocols and grants. Requirements include Ph.D. in metabolic or nutritional biochemistry with at least 2 years of pre- or postdoctoral research experience in the above areas. Must have thorough knowledge of physiology, animal surgical techniques, and mathematical modeling; demonstrated expertise in the theory, calibration methodologies, and operation of isotope ratio and GC mass spectrometer; large animal and human studies. Salary: \$30,000; 40 hours per week. Respond with two copies of résumé only to: **Job Order #00396, Massachusetts Department of Employment and Training, Special Programs Department, 19 Staniford Street, Boston, MA 02114.**

**FACULTY POSITION.** Primate models for HIV and AIDS. The Department of Microbiology and the Center for AIDS Research at the University of Alabama at Birmingham invites applications for a tenure-track position at the rank of **ASSISTANT AND/OR ASSOCIATE PROFESSOR.** Applicants need to be highly qualified in primate retrovirus biology and molecular biology, have a funded research program in the area of simian immunodeficiency virus, and have experience in teaching students. Send curriculum vitae and statement of research interests to: **Eric Hunter, Ph.D., Director, Center for AIDS Research, The University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294.** The closing date for applications is 1 June 1990. *The University of Alabama at Birmingham is an Equal Opportunity/Affirmative Action Employer.*

## CHAIR DEPARTMENT OF MICROBIOLOGY

Applications are invited for the position of Professor and Head of the Department of Microbiology at the University of Saskatchewan. The Head is expected to pursue and build an active research program in microbial pathogenesis, microbial genetics, virology or immunology. The Department Head has combined responsibility for the basic science department within the College of Medicine and for the Clinical Microbiology department in the University Hospital. The department's service responsibilities in the University Hospital include bacteriology, serology, mycology, parasitology, mycobacteriology, and clinical immunology and HLA tissue typing. The department has teaching responsibilities in the health sciences (Medicine, Dentistry, Occupational Therapy, Nursing, Pharmacy) and College of Arts and Sciences. The department offers a postgraduate degree program at the M.Sc. and Ph.D. levels in the basic sciences and at the Ph.D. level in Clinical Microbiology. The thirteen member faculty of the Department of Microbiology in the College of Medicine includes basic science microbiologists, virologists, immunologists, and medical microbiologists. Clinical infectious disease physicians in the University Hospital are cross-appointed to the department.

Potential applicants should send a curriculum vitae, a brief statement of current research interests and addresses of three referees to:

**I.M. McDonald, M.D., Dean of Medicine, University of Saskatchewan, B103 Health Sciences Bldg., Saskatoon, Sask. S7N 0W0.**

The closing date for applications is May 31, 1990, in accordance with Canadian Immigration Regulations, preference will be given to Canadians and landed immigrants.

### Faculty Positions in Biochemistry or Tumor Cell Biology St Jude Children's Research Hospital

St Jude Children's Research Hospital, a private research institute, is engaged in a major expansion of its facilities and scientific activities. A new research building to be completed in early 1991 will provide 240,000 square feet of new laboratory space which will house the institute's basic science programs. As part of this expansion, new faculty positions are now available in the Departments of Biochemistry and Tumor Cell Biology. Although preference will be given to applicants who have recently completed postdoctoral training and are seeking positions at the level of Assistant Member, more senior investigators with appropriate research interests and qualifications will be considered for positions of higher faculty rank. Candidates with programs focusing on the regulation of cell growth, differentiation and transformation, the biochemistry and molecular biology of signal transduction, and mechanisms of gene regulation are particularly encouraged to apply. Opportunities exist for collaborative interactions with ongoing basic research programs in Virology and Molecular Biology, Immunology, and Pharmacology, as well as with clinical investigators in Hematology/Oncology and Infectious Disease. In addition to new facilities and excellent start-up funds, salaries are nationally competitive and include a generous benefits package. A strong institutional commitment to its faculty ensures stability in program development and continuity of research activities. Applicants should submit a curriculum vitae, a letter summarizing their research accomplishments and goals, and the names of three references to either:

**James N. Ihle, Ph.D.**  
**Chairman, Department of Biochemistry**  
or  
**Charles J. Sherr, M.D., Ph.D.**  
**Howard Hughes Medical Institute**  
**Chairman, Department of Tumor Cell Biology**  
**St Jude Children's Research Hospital**  
**332 North Lauderdale**  
**Memphis, TN 38105**

St. Jude Children's Research Hospital is an  
Equal Opportunity Employer

## POSITIONS OPEN

The Department of Biochemistry, Purdue University, is seeking a tenure-track faculty member at either the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. We wish to attract a scientist whose research interests complement the strong programs on this campus which focus on various aspects of macromolecular structure and function. Exceptionally good facilities are available at Purdue for such studies, and the new faculty member will assist with their operation and development. The area of specialization could focus on protein structure and function, the use of recombinant DNA approaches to study macromolecular function, or a related area.

The person hired will participate in the teaching program of the department which encompasses undergraduate, graduate, and medical curricula.

We invite applications from candidates who have established a strong record of research accomplishments in postdoctoral positions. A curriculum vitae, names and addresses of three individuals who can supply letters of reference, and a two-page summary of research interests are required for an application. Screening of applicants will commence 1 July 1990 and continue until the position is filled.

**Biochemistry Search Committee**  
Department of Biochemistry  
Purdue University  
West Lafayette, IN 47907-6799

*Purdue University is an Affirmative Action/  
Equal Opportunity Employer.*

## FACULTY POSITION IN MICROBIOLOGY RETROVIRAL MOLECULAR BIOLOGY UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE

Applications are invited for a tenure-track position at any level in the Department of Microbiology. Candidates should have established research experience in the molecular biology of retroviruses. Significant opportunities are available to collaborate with other investigators interested in animal and human retroviruses. The department has an established program in animal virology, prokaryotic genetics, and a developing immunology group. Applicants should have a doctoral degree and at least 2 years of postdoctoral experience.

Please send: (i) curriculum vitae, (ii) names and addresses of at least three references, and (iii) a short summary of research interests to: **James C. Alwine, Search Committee, Department of Microbiology, School of Medicine, University of Pennsylvania, Philadelphia, PA 19104-6076.** *Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

## SCRIPPS INSTITUTION OF OCEANOGRAPHY (SIO) FACULTY POSITION IN COASTAL STUDIES

SIO is seeking an outstanding scientist or engineer to fill a tenured or tenure-track professorial position, the rank and salary commensurate with qualifications and experience in accord with University of California pay scale. Fields of interest include, but are not limited to, sediment transport and physical oceanography in shallow nearshore and coastal waters. At the time of appointment, the candidate must hold a Ph.D. degree in physical oceanography, coastal engineering, marine geology, or a related science. The position will involve graduate teaching, supervising graduate student research, and conducting a vigorous research program supported by extramural funds. Candidates at the associate or full professorial level must show evidence of a strong research record; assistant level candidates will be evaluated on their potential from their publication record and letters of recommendation, as appropriate to their level of experience. Applications are encouraged both from junior scientists and from scientists with an interest in conducting observational work.

Send a detailed résumé (including teaching experience), copies of selected recent publications, and names of five references to:

**Chairman, Coastal Studies Search Committee**  
SIO Graduate Department, A-008  
Scripps Institution of Oceanography  
University of California, San Diego  
La Jolla, CA 92093

Applications must be received by 1 August 1990 to be ensured of consideration.

*An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### FACULTY POSITION

Applications are invited for a faculty position at the **ASSISTANT PROFESSOR** level in the biological chemistry department at the University of Michigan for research on the mechanisms of folate-dependent enzymes. The successful candidate should be experienced in the use of NMR and EPR spectroscopy and rapid reaction kinetics to probe enzyme mechanisms, and should have demonstrated expertise in prokaryotic molecular biology. A Ph.D. in biochemistry or a closely related field is required. Responsibilities will include teaching undergraduate or graduate students in the Department of Biological Chemistry. Applicants should submit curriculum vitae, a description of research interests, copies of publications, and arrange to have letters of recommendation sent to: **Professor Rowena G. Matthews, Department of Biological Chemistry, The University of Michigan Medical School, 5416 Medical Science I, Ann Arbor, MI 48109-0606.** The deadline for applications is 15 May 1990.

*The University of Michigan is an Affirmative Action/Equal Opportunity Employer. Applications from qualified women and/or minorities are particularly invited.*



### FACULTY POSITION IN AGING RESEARCH



The Division of Geriatric Medicine of St. Louis University School of Medicine and the St. Louis Veterans Administration (VA) Medical Center invite applications for a full-time research position studying biochemical mechanisms of aging and the diseases of aging. Ph.D. required and molecular biology experience helpful, but specific research area is open. Division has ongoing research in neurobiology, Alzheimer's disease, osteoporosis, anorexia, diabetes, and carcinogenesis. Appointment will be at VA Medical Center with joint appointment in Division of Geriatric Medicine and other basic science department. Academic rank is open and will be commensurate with experience and funding record. To apply, send curriculum vitae, statement of research interests, and names of three references to: **Dr. H. J. Armbricht, Geriatric Center (111G-JB), St. Louis VA Medical Center, St. Louis, MO 63125.** *We are an Equal Opportunity/Affirmative Action Employer, M/F/H/V. Women and minorities are encouraged to apply.*

### FACULTY POSITION IN PSYCHOPHARMACOLOGY

The Department of Psychiatry of the School of Medicine, University of California, San Francisco (UCSF), is seeking applicants with established records of research in basic psychopharmacology. Candidates should have an M.D. degree and should be trained in both psychiatry and a laboratory science as demonstrated by a Ph.D. and/or relevant postdoctoral experience. In addition to a basic research role, the incumbent will be expected to participate in core teaching of medical students and residents and provide supervision to trainees on research electives. The position will be a tenure-track appointment in the School of Medicine at the **ASSISTANT PROFESSOR** level. Laboratory space and start-up funds will be provided and a joint appointment in a relevant basic science department will be offered if appropriate. The position will be available on or before 1 July 1991, and applications should be received by 1 August 1990. Please send résumé to: **Glen Elliott, Ph.D., M.D., Search Committee Chair, UCSF Department of Psychiatry, 401 Parnassus Avenue, Box F, San Francisco, CA 94143-0984.** *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

Applications are invited for an **INSTRUCTOR** level laboratory position in the Medical University of South Carolina Obstetrics/Gynecology Department. Successful candidate will have an M.S. degree preferably in biology and be well versed in radioimmunoassay and molecular biology techniques. Familiarity with laboratory work involved with in vitro fertilization and embryo transfer program desirable, not essential. Salary up to \$27,000 per year. Send curriculum vitae and have three letters of recommendation sent to: **Rajesh Mathur, Ph.D., Professor, Department of Obstetrics and Gynecology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.** *Equal Opportunity Employer. Apply before 11 May 1990.*

## POSITIONS OPEN

### FACULTY APPOINTMENT IN CHEMISTRY

The Department of Chemistry at Brock University is seeking applicants for a faculty appointment to commence between 1 July 1990 and 1 January 1991. The successful candidate will be expected to establish a viable research programme in addition to carrying a normal teaching load in the department. Applicants from all areas of chemistry will be considered, but we are particularly interested in applications from those with a strong background in biophysical or bioorganic chemistry.

The position is a 3-year term appointment. Extension of the appointment beyond the initial 3-year period cannot be guaranteed at this time, but several vacancies for tenure-track positions as a consequence of retirement are expected to occur in the mid-1990s.

*Brock University is an Equal Opportunity Employer. Qualified women and minority candidates are especially encouraged to apply.*

Applications including a curriculum vitae, the names of three referees, and a detailed research plan should be sent as soon as possible. Candidates can expedite matters by having referees write the department directly.

*In accordance with Canadian Immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents of Canada.*

Applications will be accepted until the position is filled. **Dr. Mary Frances Richardson, Search Committee Co-ordinator, Department of Chemistry, Brock University, St. Catharines, Ontario L2S 3A1, Canada.** *Smoking at Brock University is strictly controlled.*

### FACULTY POSITION MATERNAL/FETAL MEDICINE

The Department of Obstetrics and Gynecology at the University of Tennessee College of Medicine is actively recruiting a full-time **PERINATOLOGIST** for its Division of Maternal/Fetal Medicine. The teaching hospital serves as the Tertiary Care Center for 80 counties in West Tennessee, East Arkansas, North Mississippi, Southern Missouri, and a part of Kentucky; an area with approximately 40,000 deliveries per year. About 50% of the pregnancies delivered at the center are high risk pregnancies. Perinatal services each year include over 20,000 outpatient visits, 7,800 deliveries, and over 1,400 patients seen in Reproductive Genetics. Excellent opportunity to participate in teaching in a Board-approved fellowship program and collaborate in ongoing research in clinical perinatology, critical care in obstetrics, and ultrasound and prenatal diagnosis. Board-eligibility/certification in maternal/fetal medicine is required. Interested candidates should send curriculum vitae to: **Baha M. Sibai, M.D., Division of Maternal/Fetal Medicine, University of Tennessee, Memphis, 853 Jefferson Avenue, Room E-102, Memphis, TN 38103. Telephone: 901-528-5660.** *The University of Tennessee, Memphis, is an Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

### FACULTY POSITION MICROBIOLOGY

Scholl College of Podiatric Medicine invites applications for a full-time microbiology faculty position in the Department of Physiological Sciences. This addition to our faculty must have a Ph.D. in microbiology, postdoctoral research, and teaching experience.

Major responsibilities will include the design and instruction of a comprehensive course in medical microbiology, including laboratories, for second year medical students. The successful candidate will also participate in our newly created research program and will interact with clinicians regarding infectious diseases and clinical microbiology.

If our vision of higher education matches your professional achievements, we offer excellent benefits, faculty rank, and salary commensurate with experience. This position is available 1 July 1990. Qualified applicants should submit a letter of application, curriculum vitae, official transcripts of all graduate and undergraduate training, and three letters of recommendation by 15 May 1990 to:

**Dr. Sandra Lee**  
Chairman, Department of Physiological Sciences  
Scholl College of Podiatric Medicine  
1001 North Dearborn Street  
Chicago, IL 60610

*Scholl College of Podiatric Medicine is an Equal Opportunity Employer.*

## DIRECTOR

### PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY

The Director of the Princeton Plasma Physics Laboratory is the Laboratory's Chief Executive Officer, responsible for providing scientific and administrative leadership for the Laboratory's research and development programs in thermonuclear fusion. The Laboratory employs approximately 790 persons, including 110 scientists, 175 engineers, 300 technicians, and 205 administrative and support staff members. The annual operating budget currently is in excess of \$80,000,000.

The Plasma Physics Laboratory is a research and development activity funded principally by the United States Department of Energy. The Director reports to the Provost of Princeton University, and is the University Officer responsible for establishing and carrying out the Laboratory's scientific program, which is developed in close consultation with and approved by the Department of Energy as part of the National Fusion Program. In addition to the primary responsibility in relation to the fusion program, the Director is also responsible for coordination and liaison with appropriate academic departments and programs within the University.

Requirements for the position include demonstrated successful executive leadership in managing research and development programs and a record of exceptional scientific achievement in either the field of plasma physics or a related field.

Nominations and applications (including resume) should be sent to: **PROVOST PAUL BENACERRAF, PRINCETON UNIVERSITY, POST OFFICE BOX 7106, PRINCETON, NEW JERSEY, 08543-7106**



**Princeton University**

An Equal Opportunity/Affirmative Action Employer  
Minority/Female/Handicapped/Veteran

## Research Opportunities in STRUCTURAL BIOLOGY

The following positions are available at the National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Public Health Service:

- (1) Investigator whose program will complement existing research activity. Applicants specializing in innovative biological electron microscopy, image processing, or X-ray crystallography are particularly encouraged. The successful applicant will have a productive track record attesting exceptional promise for future development.
- (2) Postdoctoral Fellow(s) to participate in ongoing research in high-resolution biological electron microscopy including cryo-electron microscopy and image processing. An extensive range of projects in virus assembly, the cytoskeleton (intermediate filaments), biomembranes, fibrous proteins, and image processing algorithms are pursued in a well-equipped laboratory.

Salary is \$25,000 - \$54,721 per annum depending on experience. Send CV, several reprints, summary of research interests and names of three references to:

**Dr. A.C. Steven**  
National Institutes of Health  
Building 6, Room 114  
9000 Rockville Pike  
Bethesda, MD 20892



NIH is an Equal Opportunity Employer

## WYETH-AYERST LABORATORIES

Committed to future growth and excellence in  
the pharmaceutical industry.

Wyeth-Ayerst Research, one of the world's largest pharmaceutical research and development groups, has made a major corporate commitment to expansion within our Clinical Research & Development Division. Now is your time to become part of our fast-paced, innovative global research organization in the following disciplines:

**We encourage progress in an environment  
dedicated to innovative pharmaceutical research.**

**SENIOR CLINICAL SCIENTIST** - To coordinate clinical monitoring activities at headquarters in conjunction with field staff worldwide. Requirements include a PhD in clinical science or a PharmD degree with 2-3 years experience in several of the following therapeutic areas:

- Reproductive
- Cardiovascular electrophysiology
- Endocrinology
- Central Nervous System

**CLINICAL SCIENTIST II** - To conduct clinical investigational trials including reviewing preclinical/clinical data, maintaining documentation and evaluating results. Requirements include a Bachelor's degree or Master's degree with relevant experience and the ability to solve complex problems.

**REGIONAL CLINICAL ASSISTANTS/ASSOCIATES** - Nationwide Opportunities. To assist clinical directors in monitoring Phase I-IV clinical trials. Requirements include a medically allied Bachelor's degree, 2-3 years experience monitoring clinical trials and knowledge of FDA regulations.

If your goals match our commitment, we want to talk with you about advancing tomorrow's state-of-the-art in our challenging, progressive environment. We offer a competitive salary and benefits package that are among the best in the industry. For confidential consideration, forward your resume with salary requirements to: **Wyeth-Ayerst Research Personnel, P.O. Box 8299, Philadelphia, PA 19101**. Equal Opportunity Employer, M/F/H/V responses encouraged.

**WYETH  
AYERST**



## Inflammation and Molecular Biology

To develop innovative new therapies for today's complex medical problems, Syntex relies on research that combines the vision of a talented scientific team with the state-of-the-art drug discovery and evaluation techniques. Exciting career challenges and opportunities for personal scientific attainment await talented, energetic and motivated scientists at our headquarters and main research facilities in the San Francisco Bay Area. We invite the following qualified specialists to become part of our research efforts.

### Research Section Leader-Inflammation Biology

Direct drug discovery projects in inflammation research in the areas of phospholipases and eicosanoid metabolism, kinin receptors and tissue proteases. A PhD in Biochemistry or related field, plus at least 6 years of directly applicable scientific experience which has included some supervision of personnel.

### Molecular Virologist-Molecular Biology

Identify essential gene products of herpes viruses that may be potential targets for antiviral chemotherapy. Determine function(s) of these essential gene products at the molecular level to establish high through-put reporter gene assays for potential inhibitors. A PhD in Molecular Virology or related field, 2 to 3 years of postdoctoral training with herpes viruses plus recent experience with tissue cultures, cloning, growth of viruses and gene expression are required.

As an international leader in the pharmaceutical industry, Syntex offers competitive salaries, an incentive bonus plan and a comprehensive relocation package. For immediate consideration, please send your resume to: Syntex, Staffing, Dept. KH/S427, 3401 Hillview Avenue, Palo Alto, CA 94304. Syntex is an Equal Opportunity Employer.



## DIAGNOSTIC RESEARCH

**R**

oche Diagnostic Systems, a subsidiary of Hoffmann-La Roche Inc., has several research opportunities in the areas of Clinical Chemistry and Drugs of Abuse.

### CLINICAL CHEMISTRY

**SECTION MANAGER/GROUP LEADER:** You will spearhead the development of reagents for a new analyzer; and manage a group of professionals including several PhDs. Qualifications include a PhD in Chemistry or Biochemistry, experience in the diagnostic industry and a managerial background.

Additional openings also exist at the PhD, MS and BS levels.

### DRUGS OF ABUSE

We have 2 opportunities for individuals with a PhD in Chemistry, Biochemistry or Biochemical Engineering and a good publication record. Familiarity with immunoassay development/technologies in an industrial setting an asset.

One position will involve the research and development of new *in vitro* immunoassay products; the other will research and evaluate new *in vitro* diagnostic technologies.

We offer competitive salaries, a generous benefits package and a state-of-the-art environment that affords scientific growth. For consideration, please send your resume with present salary (those without this information will not be acknowledged), indicating position and department of interest, to: **Mrs. Eleanor M. Malone, Department DR, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.

## Roche Diagnostic Systems



a subsidiary of Hoffmann-La Roche Inc

## POSITIONS OPEN

**FARM ADVISER.** Groundwater toxicology, Santa Clara, Alameda, Contra Costa, and San Mateo counties; headquarters: Santa Clara County. The University of California (UC), Division of Agriculture and Natural Resources (DANR), Cooperative Extension (CE), is seeking a career-track academic candidate to develop, conduct, and evaluate educational/applied research programs to address specific, identified problems within groundwater hydrology, groundwater contamination, and toxic materials for the residents of the southern San Francisco Bay Area. Assure Affirmative Action in development and delivery of programs. Minimum of master's degree or equivalent combination of education and experience in field related to groundwater hydrology, soil/water science, and/or sub-surface contamination required. Doctorate level course work or field experience, training in toxicology preferred. Course work or experience in agricultural science, knowledge of CE policies and procedures, good teaching ability, and computer literacy desirable. Ability to communicate well in public speaking and writing required. Beginning salary: CE assistant or associate adviser, commensurate with experience and professional qualifications. For complete description and application, contact: **UC, DANR, Personnel, 6th Floor, 300 Lakeside Drive, Oakland, CA 94612-3560. Telephone: 415-987-0088.** Closes 13 June 1990. Refer to **#A-90-028.** Affirmative Action/Equal Opportunity Employer, M/F/H.

**SKIN CANCER GENETICIST.** We are seeking an individual with experience in skin cancer research with animals to establish a new laboratory in our Department of Genetics. The successful candidate will be expected to develop a strong independent research program on UV-induced skin cancer and to collaborate with members of our laboratories of molecular genetics, biochemical genetics, immunogenetics, population genetics, quantitative genetics, and cell biology. This position will be a critical component of a major new research initiative involving our pedigreed colony of 1200 *Monodelphis domestica*, which is a unique model for UV-induced melanoma. Research with rodents, human subjects, and our pedigreed colony of 3200 baboons also is possible. Academic affiliation also may be possible. Salary and rank will be commensurate with experience. This is an excellent opportunity for a creative scientist to have a leadership role in an expanding genetics department. Mail résumé, statement of research interests, and names, addresses, and telephone numbers of three references to: **Personnel Director (001), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78228-0147.** Equal Opportunity Employer, M/F.

**MATERIALS SCIENTIST.** For a university in southwestern Ohio. Individual will conduct independent research on the use of graphite, rigid-rod polymeric molecular composite, and other fibers in advanced polymer composites, including: (i) the processing of molecular composites in filament form; (ii) fiber-matrix interphase modification via different techniques, including electrodeposition of polymers onto graphite fibers; (iii) evaluation of interfacial bond strength from fiber fragmentation within single-fiber composites; (iv) fabrication of prepregs and composite panels, and mechanical characterization of the latter; and (v) analysis of composite failure modes and loci via scanning electron microscopy, fractoemission, and other analytical techniques. Requires Ph.D. in materials or engineering science, with doctoral level research experience in the field of polymeric composites, demonstrated by a doctoral thesis in this area. Research experience is required in the following specific areas with a minimum of 2 years at the postdoctoral level: (i) electrodeposition of polymers onto graphite fibers, and the fabrication, mechanical characterization, and failure analysis of the corresponding epoxy composites; (ii) evaluation of fiber-matrix interfacial bond strength from single-fiber composite techniques including specimen preparation and testing, and statistical analysis of the data; (iii) use of fractoemission to determine the locus and mode of failure in advanced composites; and (iv) processing and mechanical and microstructural characterization of molecular composites made from rigid-rod and flexible-coil polymers. Must have at least one publication in each of the above-mentioned areas, as proof of experimental and theoretical capabilities. Forty hours per week, 7:45 a.m. to 4:30 p.m.; \$44,100 per year. Must have proof of legal authority to work permanently in the United States. Send résumé in duplicate (no calls) to: **J. Davies, JO#1232972, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

## POSITIONS OPEN

### UNIVERSITY OF NEW ENGLAND MEDICAL BIOLOGY

The Department of Life Sciences at the University of New England invites applications for a tenure-track **ASSISTANT PROFESSOR**. Areas of interest/expertise must include genetics, cell biology, and general or human physiology.

The position supports undergraduate programs in medical biology, premedicine, general biology, marine biology, environmental science, and environmental studies.

The Department of Life Sciences is reforming its curriculum to emphasize interdisciplinarity, integration between disciplines, collaborative learning/teaching, environmental awareness and other social/global issues, and development of skills/methods such as communication, critical thinking, and research. We also endeavor to encourage students to be active as opposed to passive learners. Applicants must document strong interest/experience in these educational goals.

Please submit a résumé and statement of teaching philosophy by 18 May 1990 to: **Michael Miles, Director of Personnel, University of New England, Biddeford, ME 04005.**

*The University of New England is an Affirmative Action/Equal Opportunity Employer and actively seeks applications from women and minorities.*

### MOLECULAR GENETICIST/ PSYCHOPHARMACOLOGIST

Mayo Clinic/Mayo Medical School invites applicants for a **FACULTY POSITION** in the Department of Psychiatry and Psychology, in close collaboration with members in the Department of Pharmacology and/or the Department of Biochemistry and Molecular Biology. Candidates should have primary interests in major psychiatric disorders and be pursuing these interests with the methods of molecular genetics and/or molecular pharmacology. M.D. and clinical training in psychiatry are desirable but not required. Mayo will provide generous space and start-up funds in addition to an attractive package of salary and benefits. Academic rank will be determined by qualifications; established investigators are also encouraged to apply. Submit curriculum vitae with names and addresses of three or more references to: **Toshihiko Maruta, M.D., Chairperson of Search Committee, Department of Psychiatry and Psychology, Mayo Medical School, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Employer.**

### MOLECULAR NEUROBIOLOGY POSITIONS FOR SENIOR, STAFF, AND FOREIGN FELLOWS NATIONAL INSTITUTE FOR DRUG ABUSE

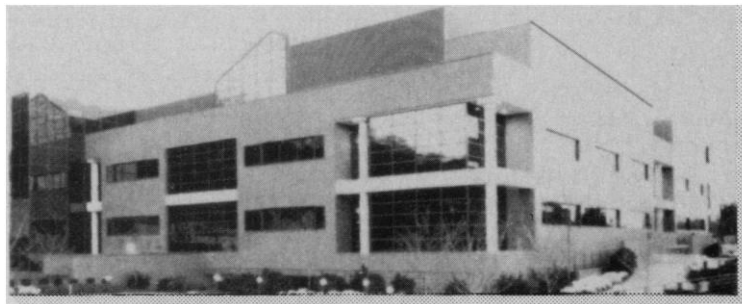
The Laboratory of Molecular Neurobiology, National Institute for Drug Abuse (NIDA)/Addiction Research Center (ARC), wishes to enhance efforts in: (i) cloning drug and neurotransmitter receptors, (ii) characterizing neurotransmitter gene expression to transgenic mice, and (iii) understanding mechanisms of neurotransmitter gene regulation in brain. Approaches include: *Xenopus* oocyte expression and sib selection of cDNAs, transgenic mice, protein purification and antibody production, and liquid binding. Salary and benefits are competitive. Applicants with expertise and interests in molecular biology, molecular neurobiology, *Xenopus* expression systems, and behavioral, biochemical, and genetic characterization transgenic animals are encouraged to apply to:

**George R. Uhl, M.D., Ph.D.**  
Laboratory of Molecular Neurobiology  
Box 5180  
Baltimore, MD 21224

*The ARC is an Equal Opportunity/Affirmative Action Employer, M/F/H/V. ADAMHA is smoke free.*

**PROTEIN CHEMIST.** Biotechnology branch is seeking a qualified Ph.D. level scientist to join a multidisciplinary research team. The salary range is from \$42,600 to \$55,000 depending upon background and experience. The successful candidate will have a strong background in protein synthesis, sequencing, characterization, and purification. Candidates with a background in NMR, x-ray crystallography, and molecular modeling would be particularly well suited. For consideration, please send curriculum vitae and references to: **Dr. David Kaplan, U.S. Army Natick Research, Development and Engineering Center, Attention: STRNC-YMT, Natick, MA 01760-5020. U.S. citizenship is required. Equal Opportunity Employer.**

## RESEARCH SCIENTISTS



## The Merrell Dow Research Institute Distinguished Discoveries, Distinctive Careers

**Innovative science and drug discovery are the goals of the Merrell Dow Research Institute. In cardiovascular diseases, CNS pharmacology, tumor biology, inflammatory diseases and metabolic diseases, we are advancing the state of the science through Research Discovery, Drug Development and Medical Research. Work with other eminent scientists at Merrell Dow in a creative environment which encourages original research, publications and collaborations. The new facilities are well equipped with state-of-the-art technology. Challenging opportunities are currently available for the following:**

### SENIOR RESEARCH SCIENTISTS IN DIABETES RESEARCH

Merrell Dow Research Institute is expanding its diabetes research group and has an opening for a Ph.D. with 2-5 years of research experience beyond the Ph.D. degree. Preference will be given to candidates with expertise in one of the two following areas, although outstanding candidates with interests in other areas of diabetes are encouraged to apply:

(1) Biochemical pharmacologist with an interest in intermediary metabolism, especially lipid or carbohydrate metabolism. The person will be expected to contribute significantly toward understanding the mechanism of action of novel antidiabetic compounds. The individual should be capable of initiating an independent research effort toward a better understanding of metabolic abnormalities in diabetes.

(2) Endocrinologist with research experience in any area of endocrinology relevant to the discovery of new therapeutic approaches to treating or preventing diabetes. Individuals with an interest in pancreatic islet hormone interactions, influence of hormones on carbohydrate and lipid metabolism or gastrointestinal/neural hormones that may affect energy metabolism are particularly encouraged to apply. (Job Code KMR)

### SENIOR RESEARCH MOLECULAR BIOLOGIST—NEUROBIOLOGY

This individual should be skilled in the use of molecular cloning techniques to investigate the function and regulation of specific proteins and receptors. The successful candidate will complement an ongoing group in cell biochemistry whose goal is to discover new therapeutic targets. The minimum qualification is postdoctoral training with 2-5 years experience in molecular biology and neurobiology. The person must be familiar with the construction of vectors conferring control of gene expression, transfection techniques for establishing both transient and stable cell lines and hands on experience in site-directed mutagenesis and construction of hybrid genes. (Job Code RMP)

### BEHAVIOR/NEURO-PHARMACOLOGIST

We have a challenging opportunity for a behavioral pharmacologist to join our expanding CNS Research group. The successful candidate would join a multi-disciplinary group and be expected to contribute actively to both basic research and drug discovery programs directed toward new therapeutic approaches for CNS disorders. Qualified applicants should have a Ph.D. in Pharmacology/Neuroscience with 1-3 years postdoctoral experience in behavioral models relevant to the discovery and development of new modalities for affective and/or psychotic conditions. He/she should have practical experience working with defined neuronal pathways and neurotransmitter systems, be experienced with using state-of-the-art behavioral equipment, and show clear evidence of familiarity with these areas of expertise by scientific publications. The Institute offers an environment conducive to creative research, expects the highest caliber of science and encourages publication of scientific findings. (Job Code MGP)

### DRUG DEVELOPMENT

We have an immediate opening in Program Management (Scientific Integration) for M.S./Ph.D. level individuals. Candidates should have a strong background in pharmacology or biochemistry. Additional experience in the drug development process, such as clinical research or regulatory affairs is strongly desired.

The primary responsibility of the successful candidate will be the preparation and updating of Clinical Investigator's Brochures for compounds in Phases I, II, and III of development and participation in all aspects relating to the preparation of New Drug Applications. Additional responsibilities will include authoring of position papers and other scientific summary documents. Demonstrated communications skills, both written and verbal, are an absolute necessity. (Job Code LER)

**We offer excellent compensation, comprehensive benefits including relocation assistance, and the opportunity to contribute significantly to our ongoing achievement. To find out more about your advantages with MDRI, please send your resume, indicating position of interest and the job code to: Director of Human Resources.**

## MERRELL DOW RESEARCH INSTITUTE

2110 East Galbraith Road  
Cincinnati, OH 45215

*Equal Opportunity Employer M/F/H/V*

## RESEARCH SCIENTISTS WANTED:

State Department of Health Services (DHS) is recruiting for Research Scientists I, II, III, & IV for a civil service examination. Minimum qualifications start with graduation from college and one year postgraduate education in a field relevant to environmental epidemiology or public health environmental biochemistry to possession of doctoral degree and four years of professional research experience in a field of medical specialization relevant to environmental epidemiology (for Research Scientist IV). If interested, please send your resume to the Department of Health Service, Health Hazard Assessment Division, 714 P Street, Room 460, Sacramento, CA 95814, ATTN: Donna Rowe.



## Product Development Scientist Northern California

The Immunocytometry Division of Becton Dickinson develops and markets, on a worldwide basis, sophisticated flow cytometry instruments and reagent systems used for cell analysis. We currently are looking for a Product Development Scientist who'll be responsible for methods of production, purification, formulation, and testing of new process formulas and products.

We need an immunologist and/or protein chemist with flow cytometry experience to work within product development to create reagents and monoclonals for the flow cytometer. You must have experience in protein purification and conjugation, at least 2-4 years' supervisory experience as well as a PhD in the life sciences. Flow cytometry experience is required.

We offer competitive salaries and excellent benefits. Send your resume or C.V. to Becton Dickinson Immunocytometry Systems, Employment, Dept. SW-RB, 2350 Qume Drive, San Jose, CA 95131-1807. An equal opportunity employer.

**BECTON  
DICKINSON**

## POSITIONS OPEN

### MOLECULAR RETROVIROLOGY

Applications are invited for a tenure-track position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level in retrovirology at The Johns Hopkins University (JHU) School of Hygiene and Public Health. The Johns Hopkins medical institutions have a broad research program in the epidemiology, virology, immunology, pathogenesis, and treatment of HIV infection. The successful applicant will be a creative scientist who will be expected to establish an independent research program in the molecular aspects of HIV pathogenesis. New laboratories and extensive opportunities for collaboration are available. *Women and members of minority groups are encouraged to apply.* Interested candidates should submit curriculum vitae, description of research goals, and names of three references to: **Dr. Gordon Ada, Department of Immunology and Infectious Diseases, JHU School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205.** JHU is an Affirmative Action/Equal Opportunity Employer.

### NUCLEIC ACID CHEMISTS

Applications are invited from synthetic organic chemists to join a pioneer group in the antisense chemotherapy field. We are seeking two self-motivated, team-oriented individuals to develop approaches to chemical synthesis of oligonucleotides and their novel analogues suitable for viral inhibition or regulation of gene expression. A Ph.D. in organic chemistry/biochemistry with related experience is desirable. A strong background in synthetic nucleic acid chemistry and allied analytical techniques are required. Inquiries can be made to: **Dr. Paul Zamecnik or Dr. Sudhir Agrawal** either by telephone: 508-842-8921, or by letter with curriculum vitae addressed to: **Worcester Foundation for Experimental Biology, c/o Personnel Office, 222 Maple Avenue, Shrewsbury, MA 01545.**

*An Equal Opportunity/  
Affirmative Action Employer, M/F/H.*

**CELL/MOLECULAR PHYSIOLOGIST.** The Department of Physiology, Medical University of South Carolina, Charleston, South Carolina, invites applications for a tenure-track faculty position at the rank of **ASSISTANT/ASSOCIATE PROFESSOR.** Applicants should have Ph.D. or M.D. degree and postdoctoral research experience. We are particularly interested in individuals who have an established or promising investigative program using cellular, biophysical, and/or molecular approaches to physiological problems. Preference will be shown to individuals studying mechanisms of signal transduction, function of membrane proteins, receptors, and regulation of gene expression, and whose research complements existing departmental programs and future development in molecular/cellular endocrinology, eicosanoids and sepsis, membrane biology, and cellular neurophysiology. Excellent opportunities exist for participation in several established thematic interdisciplinary programs in neuroendocrinology, circulatory shock, cardiology, neural trauma, and epithelial transport. Substantial start-up funds are available. Applicants should send curriculum vitae, current reprints, a statement of research interests and career goals, and names and addresses of three references to: **Dr. J. G. Ondo, Department of Physiology, Medical University of South Carolina, Charleston, SC 29425.**

*An Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITION PROTEIN MODELING BOSTON UNIVERSITY

Computational modeling of ligand-receptor interactions, with applications in molecular immunology and vaccine design. Strong mathematical and computer skills required. Experience in molecular immunology or computational chemistry helpful but not essential. One- to three-year position available (pending funding), to begin July or September 1990. Send curriculum vitae including publication list and names of two or three references to: **Dr. Jay Banks, Department of Biomedical Engineering, Boston University, 44 Cummings Street, Boston, MA 02215.**

*Boston University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**HUMAN SYSTEMS PHYSIOLOGIST.** North-east Missouri State University (NMSU) has an opening for a **VISITING ASSISTANT PROFESSOR** (non-tenure track), starting August 1990, in human/systems physiology. Initial appointment is for 1 year with possibility of renewal. Teaching responsibilities will include anatomy and physiology and introductory biology for nonmajors (fall) and pathophysiology and introductory biology (spring). Teaching and research are mutually supportive activities at NMSU; thus, the successful candidate must be committed to teaching and will be given the opportunity to involve undergraduates and M.S. students in an active research program. The mission of NMSU, the state's liberal arts and sciences university, is to provide an outstanding educational environment to a select student body while remaining economically accessible. The candidate must possess a Ph.D., an excellent undergraduate record from a selective liberal arts and sciences institution, strong graduate experiences, and must display leadership and service qualities. *Women and minorities are especially encouraged to apply.* Please send letter of application indicating teaching and research goals, curriculum vitae, undergraduate and graduate transcripts, and three letters of recommendation to: **Dr. Michael G. Tannenbaum, Division of Science, NMSU, Kirksville, MO 63501. Telephone: 816-785-7253.** Complete applications will be accepted and reviewed until the position is filled.

### MOLECULAR PHYSIOLOGIST

The University of Michigan, Department of Physiology, invites applications for a tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** level. We seek a person applying techniques of molecular biology to the study of physiological processes. We are especially interested in individuals studying the nervous system but will consider outstanding individuals carrying out research related to any area of physiology. Newly remodeled space, core facilities, and an attractive start-up package are available. Candidates should have a Ph.D., M.D., or equivalent degree and a minimum of 2 years of postdoctoral experience. The successful candidate is expected to develop an independent research program and participate in graduate and professional teaching programs of the department. Applications, including curriculum vitae, description of research interests, plans for future research, and names of three references, should be sent to: **John A. Williams, M.D., Ph.D., Professor and Chairman, Department of Physiology, 7744 Medical Science II, University of Michigan, Ann Arbor, MI 48109-0622.** *The University of Michigan is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL ASSOCIATE** (Ph.D. or M.D.). To study the role of the structure on major histocompatibility complex class I proteins in antigen recognition by T cells. Opportunity to use and learn the techniques of molecular biology, protein chemistry, and cellular immunology, as well as to develop an independent line of inquiry. Apply to: **Dr. Jeffrey Frelinger, Department of Microbiology and Immunology, University of North Carolina at Chapel Hill, CB7290 804 FLOB, Chapel Hill, NC 27599.** *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.*

**Two POSTDOCTORAL POSITIONS.** Available immediately to study conformation of carcinogen-modified DNA using 2D NMR and other techniques and to explore types of mutations induced by chemical carcinogens or radiation at the DNA level. Candidates should have a Ph.D. degree and some experience in the areas mentioned. Send curriculum vitae and two letters of reference to: **Dr. D. Grunberger, Institute of Cancer Research, Columbia University College of Physicians and Surgeons, 701 West 168th Street, New York, NY 10032.** *An Equal Opportunity Employer.*

### POSTDOCTORAL POSITION

A postdoctoral position is available immediately and through December 1990 to study regulation of zygotic gene activation in the mouse embryo and the continued identification, characterization, and functional analysis of a stage-specific zygotic gene product. Experience in molecular biology is desirable. Send curriculum vitae and names of three references to: **Dr. Richard Schultz, Department of Biology, University of Pennsylvania, Philadelphia, PA 19104.** *Equal Opportunity/Affirmative Action Employer.*



## Research Scientist Pharmacokinetics

American Cyanamid's Medical Research Division is currently seeking a Research Scientist to become part of a research and development team in Pharmacokinetics.

The successful candidate will design, conduct, analyze and report pharmacokinetic and pharmacodynamic studies essential to the registration of new drug entities. Your responsibilities will include the establishment of appropriate *in vitro* and *in vivo* models, and coordination of research activities with other areas of the Medical Research Division.

A Ph. D. (or equivalent), training in pharmacokinetics, and two to four years' experience are required. Excellent oral and written communication skills are also essential.

Located at the Lederle Laboratories campus of American Cyanamid in Pearl River, New York, just 20 miles north of New York City, you will enjoy a competitive salary and liberal fringe benefits, including a 401k savings plan. For consideration, we invite you to submit your resume with salary history, in confidence, to: Professional Employment Office, Dept. J.K., Lederle Laboratories, N. Middletown Road, Pearl River, NY 10965. An Equal Opportunity Employer m/f.



## Ultra/Microfiltration Product Marketing Specialist

Accelerated growth at Supelco, Inc., a leading manufacturer of separation products, has created an immediate need for an ultra/microfiltration product marketing specialist. You must be able to develop and coordinate a marketing plan for our current products, and expand our product line into other areas of the microfiltration and membrane technology markets. To do this, you should have a good working knowledge of filtration, as well as those industries using ultra/microfiltration. A degree in chemistry or related science is required — plus at least two years of hands-on marketing experience and excellent communication skills.

We can offer you a professional environment in scenic central Pennsylvania (far from the rat race, but near Penn State University), plus an attractive salary and excellent benefits (including profit sharing and 401K plan). If you qualify, please send resume and salary requirements to:

Personnel Dept.  
Supelco, Inc.  
Supelco Park  
Bellefonte, PA 16823-0048



An Equal Opportunity Employer

## Postdoctoral Researcher

Genentech, Inc., a leader in the field of biotechnology, has an immediate opening for a Postdoctoral Researcher in our Developmental Biology department.

The successful candidate will join a group involved in developing cancer therapeutics based upon the role of receptor tyrosine kinases and other receptor types involved in aggressive malignancies. This work will involve molecular and cellular biology and may include work with relevant animal models.

Qualified candidates must have a relevant Ph.D., experience in molecular and cellular biology as well as the biology of receptors. The ideal candidate will also have an avid interest in cancer therapeutics.

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

Genentech, Inc.  
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U.S. Public Health Service  
National Institutes of Health  
National Cancer Institute  
Division of Cancer Treatment  
Developmental Therapeutics Program  
Laboratory of Biological Chemistry

## POST-DOCTORAL FELLOW (\$25,000 - \$28,000)

Position involves studies of the expression, post-translational modification and functions of specific HIV-I encoded and 20-25 kDa GTP binding proteins.

Candidates must have Ph.D. in molecular biology, biochemistry, microbiology or pharmacology. Experience in molecular biology or biochemistry desirable but not essential. Candidates may have no more than three years of post-doctoral experience.

For information, contact:

Dr. Richard Kahn  
National Cancer Institute  
National Institutes of Health  
Building 37, Room 5D-09  
9000 Rockville Pike  
Bethesda, MD 20892  
(301) 496-4116



U.S. Citizenship Not Required  
NIH is an Equal Opportunity Employer

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study the receptors and signaling mechanisms involved in responses of leukocytes to bacterial lipopolysaccharide. Experience in cell biology preferred. Send curriculum vitae and names of references to:

**Samuel D. Wright**  
The Rockefeller University  
1230 York Avenue  
New York, NY 10021

### POSTDOCTORAL POSITION

Position is available for a NIH-funded study of:  
**PROTECTIVE IMMUNITY IN FILARIASIS.**

We are looking for an imaginative person with experience in recombinant DNA techniques to complement our ongoing program. Experience in parasitology is not essential. Send curriculum vitae and names of three references to: **Gary J. Weil, M.D., The Jewish Hospital at Washington University Medical Center, 216 South Kingshighway, St. Louis, MO 63110.**

**POSTDOCTORAL POSITIONS TO MAP KINASE STRUCTURE AND FUNCTION.** Postdoctoral positions available (1 June 1990 and another in 1991) to study the regulation and functions of MAP kinase (Mitogen Activated Protein kinase), a Ser/Thr kinase regulated by tyrosine phosphorylation. Background and interest in kinases and/or phosphatases in signal transduction for growth factors. Submit curriculum vitae and names of three references to: **Dr. Tom Sturgill, Box 419, Departments of Medicine and Pharmacology, University of Virginia, Charlottesville, VA 22908.** An Equal Opportunity Employer.

### POSTDOCTORAL POSITION

To study the molecular biology of Down syndrome and/or the molecular analysis of human chromosomes 21 and 3. Projects include the cloning and characterization of gene-rich chromosomal regions, analysis of translocation breakpoints, and genome mapping, using tissue culture, YAC cloning, and pulsed field gels. Experience in molecular biology/human genetics preferred. Send curriculum vitae, statement of research interests, and names of three references to: **Dr. K. Gardiner, Eleanor Roosevelt Institute, 1899 Gaylord Street, Denver, CO 80206.** An Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL POSITIONS

Immediate openings for postdoctoral fellows with strong backgrounds in molecular and/or cellular biology to study the molecular pathogenesis of muscular dystrophy, excitation-contraction coupling in skeletal and cardiac muscle, or the molecular biology of  $Ca^{2+}$  channels in excitable cells. Current research projects involve structural and functional studies of dystrophin and dystrophin-associated glycoproteins, expression and molecular role of the various subunits of the dihydropyridine receptor in skeletal muscle, structural and functional studies of the junctional sarcoplasmic reticulum proteins involved in the regulation of  $Ca^{2+}$  release, and the purification and cDNA cloning of surface and intracellular  $Ca^{2+}$  channels in neuronal cells. Send curriculum vitae and three letters of recommendations to:

**Dr. Kevin P. Campbell**  
Howard Hughes Medical Institute, 400 EMRB  
Department of Physiology and Biophysics  
University of Iowa College of Medicine  
Iowa City, IA 52242

Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL RESEARCH ASSOCIATE

Brookhaven National Laboratory has a position available in the Medical Department for a recent Ph.D. trained in genetics and/or molecular biology. Experience in cytogenetic and molecular biology techniques, including DNA cloning and library construction, PCR, restriction and Southern analyses, and in situ hybridization is required. Experience with mammalian/human tissue culture techniques is desirable. The work will include research on the molecular mechanism involved in the induction of cytogenetic effects by mutagenic/clastogenic agents, with emphasis on roles of replicative DNA polymerases and associated proteins. Interested candidates should contact: **Dr. M. A. Bender, Medical Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., NY 11973.** Equal Opportunity Employer, M/F.

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS IN MOLECULAR VIROLOGY.** To study molecular biology of RNA-dependent RNA replication, gene expression/regulation, RNA-RNA recombination, and host specificity in (+) strand RNA viruses. Send curriculum vitae, brief statement of research experience and further goals, and have three reference letters sent to: **Dr. Paul Ahlquist, Institute for Molecular Virology, University of Wisconsin, Madison, WI 53706.** Telephone: 608-262-4540. Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITION.** Available in molecular immunology to study peptides in antigen processing, binding, and presentation. Experience in synthesis of peptides, particularly larger and chemically modified peptides, is essential. A very active immunology program will provide necessary biological experience. The candidate will have access to synthesizer, sequencer, amino acid analyzer, and mass spectrometer. U.S. citizenship or green card required. Send experience and references to: **Dr. Stanley Nathenson, Microbiology and Immunology, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.** Equal Opportunity Employer.

**POSTDOCTORAL POSITIONS.** Available to join an NIH-funded laboratory working on molecular aspects of Herpes simplex virus latency and pathogenesis. Investigations focus on the regulation and modes of action of genes involved in HSV-1 latency and reactivation. Starting dates: one immediate, one flexible. Candidates should have a Ph.D. in an area of biological science; emphasis in molecular biology and/or virology preferred, but not essential. Highly competitive salary commensurate with experience and productivity. Minimum appointment for 2 years. Submit curriculum vitae and names, addresses, and telephone numbers of three individuals to be contacted as references to: **Steven L. Wechsler, Ph.D., Virology Research Laboratory, Cedars-Sinai Medical Center/University of California, Los Angeles, School of Medicine, Halper Building, Room 111, 8700 Beverly Boulevard, Los Angeles, CA 90048.**

**POSTDOCTORAL FELLOW.** Two- to four-year position available 1 July 1990 to study plasminogen/plasminogen activator regulation by endothelial cells. M.D. and/or Ph.D. required with experience in molecular biological techniques. Send curriculum vitae and letters of reference to: **Dr. Katherine A. Hajjar, Departments of Medicine/Pediatrics, Cornell University Medical College, 1300 York Avenue, New York, NY 10021.** Cornell University is an Equal Opportunity/Affirmative Action Employer.

**CELLULAR IMAGING, POSTDOCTORAL FELLOWSHIP.** A postdoctoral position is available 1 July 1990, in cellular imaging using UV and visible confocal microscopy. Optical tweezers will be used in conjunction with confocal microscopy to control and image intracellular organelles or probes. Candidates should feel comfortable with optics and computers. Competitive salary. Please send letter of interest, curriculum vitae, and names of three references to: **Dr. David Clapham, Department of Pharmacology, Mayo Foundation, Rochester, MN 55905.** An Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE.** Conduct studies on the structure/function of a mammalian neutral endopeptidase involved in peptide metabolism. Research involves analysis of recombinant enzymes modified by site-directed mutagenesis. A Ph.D. in biochemistry, biology, or related fields preferred. Stipend commensurate with experience. Send curriculum vitae and names of references to: **Dr. Louis B. Hersh, Biochemistry Department, University of Texas Southwestern Medical School, 5323 Harry Hines Boulevard, Dallas, TX 75235-9038.** An Equal Opportunity University.

### POSTDOCTORAL RESEARCH IN PROTEIN STRUCTURE, DYNAMICS, FUNCTION

Postdoctoral positions are available to study front line problems in protein structure and function by use of advanced hydrogen exchange, NMR, and other physical/chemical methods. Competitive salary. Please send curriculum vitae and statement of research interests and ask that letters of reference be sent to: **S. W. Englander, Department of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, PA 19104-6059.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION.** Available to study zinc binding domains in *E. coli* DNA topoisomerase I. Ph.D. required. Experience in protein biochemistry or bioinorganic chemistry desirable. Send curriculum vitae, relevant reprints, and three names or letters of reference to: **Dr. Yuk-Ching Tse-Dinh, Department of Biochemistry and Molecular Biology, New York Medical College, Valhalla, NY 10595.** Telephone: 914-993-4061. Equal Opportunity Employer.

### P450 CHEMIST

**POSTDOCTORAL POSITION** for Ph.D. experienced with cytochrome P450 protein chemistry and enzymology to work on project studying structure/function relationships of mitochondrial P450scc and its electron transport proteins. Experience with the steroidogenic mitochondrial P450 enzymes preferred but not essential. Send curriculum vitae and letters of recommendation to: **Dr. Walter L. Miller, Building MR-IV, Room 209, University of California, San Francisco, CA 94143-0978.**

**POSTDOCTORAL RESEARCH SCIENTIST.** Columbia University Orthopaedic Research Laboratory. A position is available for an enthusiastic Ph.D. to study the biochemistry of cartilage and other connective tissues within the biochemistry section of an active multidisciplinary research team in a newly equipped laboratory. Candidates should be knowledgeable in protein/carbohydrate biochemistry, immunochemistry, tissue culture, and/or molecular biology. A competitive salary range of \$28,000 to \$35,000 per annum is being offered. Interested candidates should send their curriculum vitae to: **A. Ratcliffe, Ph.D., Orthopaedic Research Laboratory, Columbia-Presbyterian Medical Center, 630 West 168th Street, BB-1412, New York, NY 10032.**

University of California, San Francisco (UCSF). **RESEARCH FELLOWSHIP** available in the Cardiovascular Research Institute examining atherosclerosis and atherogenesis in human arterial tissue. Project emphasizing lipoprotein composition and interaction with the connective tissue matrix. Position includes salary and assigned technical support. M.D. or Ph.D. Send curriculum vitae to: **Dr. Joseph H. Rapp, Cardiovascular Research Institute, UCSF, Box 0222, San Francisco, CA 94143.**

**RESEARCH ASSOCIATE,** \$25,000 per year, 40 hours per week, 8:00 a.m. to 5:00 p.m. Will research the pathway of replication of hepatitis B viruses for treatment of hepatitis disease and liver cancer. Must have a Ph.D. in molecular genetics or equivalent, and 1 year of experience in medical research with hepatitis B virus and 2 years of experience in DNA cloning and sequencing, site-directed mutagenesis, transfection and isolation of stable cell lines, and RNA and DNA analysis of transfected cells and cell cultures. Submit résumés to: **New Mexico Department of Labor, 501 Mountain, N.E., Albuquerque, NM 87102, CC#1001, Job Order #276234.**

**RESEARCH ASSOCIATE.** Research to elucidate carcinogenesis mechanism. Isolation, characterization, and study of the mechanism of action of cancer-related genes. Salary: \$2083.55 per month; 40 hours per week. Ph.D. in biosciences or zoology with 2 years of experience in job offered or cancer-related research required. Experience with cancer-related research, protein purification and gel analysis technique, tissue culture, development of polyclonal and monoclonal antibody and molecular biology techniques required. Job site interview in San Jose, California. Send ad and résumé to: **Job #WS 14274, P.O. Box 9560, Sacramento, CA 95823-0560** no later than 11 May 1990.

**RESEARCH ASSOCIATE, GEOCHEMISTRY.** The Chesapeake Biological Laboratory (CBL) of University of Maryland System's Center for Environmental and Estuarine Studies (CEES) is seeking a Ph.D. in marine chemistry, chemistry, chemical engineering, or a closely related field, with interest and expertise in the environmental behaviors of metals and/or naturally occurring radioisotopes. We look for novel approaches, especially well grounded in mathematics, to the study of elemental geochemistry in coastal marine systems. A 2-year position is currently available. *Applications from women and minorities are encouraged.* Send curriculum vitae and names and addresses of three references to the chair of the search committee: **Dr. H. Rodger Harvey, CBL, Box 38, Solomons, MD 20688.**

## Macintosh Programmer

International Biotechnologies, Inc., a Subsidiary of Eastman Kodak Company and a leading developer of microcomputer software for the molecular biology community, is seeking a highly motivated Macintosh programmer to join an expanding development team.

Responsibilities of this junior-level position include the enhancement of our existing sequence analysis software, *MacVector*, as well as participation in the identification and development of exciting new applications.

The successful candidate will have a strong programming background with at least one year of applied programming experience on the Macintosh using the THINK C environment. In addition, the candidate will have a working knowledge of biology, with emphasis in molecular biology.

IBI offers a fast-paced, challenging work environment and a competitive compensation program. For confidential consideration, please send your resume and salary history to the attention of Software Product Development. IBI is an equal opportunity employer.



**INTERNATIONAL BIOTECHNOLOGIES, INC.**  
Subsidiary of Eastman Kodak Company  
P.O. Box 9558, New Haven, CT 06535

## NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Undergraduate Science, Engineering and Mathematics Education (USEME) is seeking candidates for Program Director positions in all NSF disciplines including: biology, chemistry, computer science, engineering, geosciences, mathematics and physics.

USEME was established within the NSF's Science and Engineering Education Directorate to serve as focal point for NSF's mission in undergraduate education. Programs will focus on key areas such as course and curriculum development, instrumentation and laboratory development, faculty enhancement, students, and major initiatives aimed at increasing participation in scientific careers of underrepresented groups such as women, minorities and the disabled.

Program directors in USEME are senior officers who take responsibility for identifying and characterizing national issues in undergraduate education, leading to the design, development and management of leadership activities and high leverage NSF programs. The Foundation relies heavily on program director intellectual capacity and judgement in the final decisions of the proposal and award process. USEME program directors serve as spokespersons for undergraduate education both across the entire Foundation, and to many important national communities.

Individuals are sought who can provide leadership and vision in USEME's mission to strengthen U.S. undergraduate education; who will establish direction to programs and provide technical and educational expertise for guiding the development of projects; and who themselves possess the knowledge and creativity to identify significant solutions to problems both within their disciplines and across the disciplines.

Applicants should have a PH.D. or equivalent experience and 6 or more years of successful academic experience as a faculty member involved in teaching and research; in addition, academic administrative experience is preferred.

The positions will be filled by August 1990, on a one-or two-year rotational basis. The salary ranges from \$50,342 to 78,190 per annum.

Applications should be submitted as soon as possible. Send resume to the National Science Foundation, Room 208, 1800 G Street, NW., Washington, DC 20550. Attn: Catherine Handle. For further information call 202/357-9681. Hearing impaired individuals should call 202/357-7492. For technical information, call Dr. Robert F. Watson, Division Director, USEME, 202/357-9644. NSF is an Equal Opportunity Employer.

## 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 **Director, Division of Planning and Evaluation**, Office of Science Policy and Legislation, Office of the Director. 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. A one-year probationary period must be served by the individual selected if not currently in the Senior Executive Service.

The Director, Division of Planning and Evaluation, plans and conducts a comprehensive program of policy research, evaluation, economic and resource analyses, and program planning activities for NIH; advises the Director, NIH, and staff on program planning issues and policies, and on evaluation of the programs of the operating organizations of NIH; and carries out staff functions relating to program development, policy research, economic and resource analysis, and program evaluation.

For more information, contact Dr. Paul Thibault at (301) 496-2400. 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 G. Thibault**  
National Institutes of Health  
Office of the Director  
Personnel Office  
Building 31, Room 1C-27  
9000 Rockville Pike  
Bethesda, Maryland 20892



**APPLICATIONS MUST BE RECEIVED NO LATER THAN  
MAY 14, 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 or mental handicap, age, or membership or non-membership in an employee organization.

## THE JACKSON LABORATORY Bar Harbor, ME USA 04609

**T**HE JACKSON LABORATORY is an independent research institution having a major emphasis on mammalian genetics, developmental biology, immunology, and cancer. Most investigators utilize murine model systems. The Laboratory is undertaking an expansion of its research staff at all levels. Excellent candidates in all areas of research appropriate for The Jackson Laboratory are sought, including those candidates whose programs focus on the study of the whole organism as an integrated system, and in the areas of mammalian genetics, developmental biology, immunogenetics, endocrinology, reproductive biology, hematology, neurobiology, or cancer. Applicants should send curriculum vitae, description of research interests, and the names of three professional references to:



**The Jackson  
Laboratory**

**Dr. John Eppig**  
Chair, Search Committee  
600 Main Street  
Bar Harbor, ME USA 04609

*The Jackson Laboratory is an Affirmative Action/  
Equal Opportunity Employer*

## POSITIONS OPEN

### POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE

Positions are now available to study the structure, function, and regulation of the cardiac gap junction protein using an oocyte translation system, biochemical, and molecular biological approaches. The laboratory is part of a highly interactive, multidisciplinary NIH-funded program project under the direction of Dr. Jose Jalife, Chairman, Department of Pharmacology. Experience in protein biochemistry and molecular biology is preferred. Send curriculum vitae and three letters of reference to: **Dr. Mary Lou Vallano, Department of Pharmacology, State University of New York (SUNY) Health Science Center at Syracuse, 766 Irving Avenue, Syracuse, NY 13210.**

*SUNY Health Science Center at Syracuse is an Equal Opportunity/Affirmative Action Employer.*

Applicants with a Ph.D. in molecular biology with postdoctoral experience/master's degree in biology or biochemistry with at least 5 years of laboratory experience in protein chemistry and/or molecular DNA cloning and manipulation techniques are requested to apply for this **RESEARCH ASSOCIATE** position. The individual will be working as part of a research group focusing on developmental neuroendocrinology and will be involved in teaching and supervising the activities of other laboratory assistants, clinical fellows, and students besides being involved in developing certain techniques and carrying out parts of certain projects. Individuals who are interested should apply by sending a copy of their curriculum vitae and three reference letters to: **Dr. Sherin Devaskar, The Pediatric Research Institute, 3662 Park Avenue, St. Louis, MO 63110. St. Louis University is an Equal Opportunity Employer, M/F/V/H.**

**RESEARCH ASSOCIATE.** Position available in Division of Immunology at teaching hospital affiliated with leading medical school to conduct research on lymphocytes of children with primary immunodeficiency diseases with the purpose of elucidating defects in the signaling pathways of the lymphocytes. Duties include: isolating lymphocytes from the blood and establishing lymphocytes into cell lines; studying the activation of these cells measuring the metabolism (synthesis and breakdown) of membrane phospholipids, the generation of second messenger molecules in the cell, the induction of the synthesis of new proteins at the DNA and RNA level, and the stability of these proteins. Independently plan course of research and write up results of experiments for submission to scientific journals and for presentation at scientific meetings.

Applicant must have an M.D. degree, with a minimum of 3 years of postdoctoral experience in medicine/immunology, in particular with techniques of cell separation, fractionation of lipids, and measurement of biochemical intermediates and of proteins. Salary: \$42,000 per annum. *An Affirmative Action/Equal Opportunity Employer.*

Send two résumés to: **Department of Employment and Training, Hurley Building, Special Programs, 19 Staniford Street, Boston, MA 02114** and refer to Job Reference #00472.

## POSITIONS OPEN

**RESEARCH ASSOCIATE.** Position available in Division of Immunology at teaching hospital affiliated with leading medical school. Duties will include conducting basic research on the mechanisms of allergy; specifically, to study the mechanism of the production of immunoglobulin E. Isolate lymphocytes and establish cell lines from human subjects. Measure IgE production after in vitro culture by radio immunoassay and enzymatic assay techniques. Analyze the surface antigens of the cells by immunofluorescence. Utilize molecular genetic techniques to follow the course of production of IgE. Independently plan experiments and develop a course of research. Write up results of experiments for submission to scientific journals and for presentation at scientific meetings.

Applicant must have a Ph.D. or M.D. degree, with a minimum of 3 years of postdoctoral experience in a laboratory of cellular immunology research. Salary: \$42,000 per annum. Send two résumés to: **Department of Employment and Training, Hurley Building, 19 Staniford Street, Boston, MA 02114**, and refer to Job Order #00457. *An Equal Opportunity/Affirmative Action Employer.*

**RESEARCH SPECIALIST.** M.S./M.A. required, Ph.D. desired. Research expertise in lymphology/immunology required. Emphasis on experimental surgery, radioisotopes, flow cytometry, fluorescent and video microscopy, polymerase chain reaction, in vitro endothelial lymphocyte cell culture, knowledge of computer systems, grant management, manuscript preparation. Desired: medical student research teaching/clinical background. Send curriculum vitae/bibliography/references to: **M. H. Witte, M.D., Department of Surgery, Arizona Health Sciences Center, Tucson, AZ 85724** prior to 10 May 1990. *Women and minorities are urged to apply. The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

### RESEARCH TECHNICIAN

Genetics laboratory seeks a research technician to participate in a new program on catalytic RNA structure. B.A. or M.S. degree required, expertise in nucleic acid chemistry/biochemistry or macromolecular crystallization preferred.

HIMI offers an excellent salary (\$22,000 plus per year), a generous retirement plan, and flexible benefits, including health insurance. Please send curriculum vitae and the names of three references to: **Professor T. R. Cech, Catalytic RNA Search, Campus Box 215, University of Colorado, Boulder, CO 80309.** Closing date: 15 May 1990.

**Howard Hughes Medical Institute**  
*An Equal Opportunity Employer.*

**SENIOR CHEMIST.** Conduct a quality advanced program in macromolecular and surface science to demonstrate and apply technical competence in areas such as: synthesis and characterization of polymeric materials, surface phenomena, and/or colloid science of organic materials; structure and property characterizations of polymers and surfactants used in the formulation of solutions, emulsions, and dispersions; study physical interaction, reaction, and reaction mechanisms of organic and inorganic materials with hair fibers and skin; develop structure and property functions for relating physical and chemical properties of formulations to end-use products; utilize chemical engineering principles to assist in development of new process technologies, statistical process control, and design of experiments to meet advanced formulation needs of personal care and toiletry products; interpret UV/VIS/NIR, FTIR, NMR, x-ray, ESCA, SIMS, DSC, GPC, GS, DSC spectra using such spectrometers; interpret data obtained by surface, INSTRON, and electrophoresis equipment; use personal and main-frame computers to implement statistical and physical chemical programs in BASIC and FORTRAN. Requires master's and Ph.D. in chemical engineering/macromolecular and surface science. Must have 6 months of experience in the job offered or 1 year of experience as a chemist, macromolecular science and polymer science. Must have 1 year of experience in using UV/VIS/NIR, IR, NMR, ESCA, and x-ray spectrometers. Forty-hour work week. Hours: 9:00 a.m. to 5:00 p.m. Salary: \$39,900 per year. Qualified applicants send résumé to: **Illinois Department of Employment Security, 401 South State Street-3 South, Chicago, IL 60605, Attention: Joan Sykstus. Reference #V-IL 1067-S.** *An Employer-paid ad.*

## POSITIONS OPEN

**RESEARCH SCIENTIST.** Research and develop medicine and vaccine against AIDS. Conduct research into biological aspects of human or animals to develop new theories and facts. Carry out experiments, organize data, interpret results, and prepare acceptable reports, publications, or presentations. Forty hours per week; overtime as required; 8:00 a.m. to 5:00 p.m.; \$17.75 per hour; Ph.D. in microbiology, 1 year of training in postdoctoral research and 1 year of experience required. Must have experience in handling blood-transmitted pathogens and of radioactive materials in research experiments. Knowledge and expertise in various techniques in tissue culture, immunology, and virology required. Medical background in human and animals. Send résumé and copy of ad to: **DEED, 1100 North Eutaw Street, Room #212, Baltimore, MD 21201. Job # 7079774.** *Proof of legal right to work in the United States required.*

### TOXICOLOGIST

NSI Technology Services Corporation, a nationwide environmental research and development firm, is seeking a senior-level toxicologist to conduct inhalation studies. Past experience in performing acute, subchronic, and chronic inhalation exposures using a variety of gases, solids, and liquids is highly desirable.

The successful candidate should have a Ph.D. in toxicology or closely related field with 5 to 10 years of research experience. Board certification is required. Qualified candidates are encouraged to submit their résumé, including salary requirements and salary history to: **Attention: 4240-TOX, NSI Technology Services Corporation, Environmental Sciences, A Subsidiary of ManTech International Corporation, P.O. Box 12313, Research Triangle Park, NC 27709.** *Equal Opportunity Employer.*

### VOLCANOLOGIST

National Museum of Natural History, Smithsonian Institution. The Global Volcanism Program seeks applicants for a research geologist position in volcanology on our professional staff. The position is to be filled at the GS-12/GM-13 level (\$35,825 to \$42,601 per year, depending on qualifications), and a Ph.D. or equivalent experience is required. We seek a person with (i) a broad space/time perspective on volcanism, (ii) demonstrated, in-depth experience with the history of at least one active volcano (to temper and guide work on a global scale), and (iii) familiarity with the databases, international networks, and contemporary volcanic processes that make up most of the program's daily work. Questions may be directed to: **Tom Simkin, Search Committee Chair, NHB stop 119, Washington, DC 20560. Telephone: 202-357-2786.**

Applicants should send curriculum vitae (including names of three references and list of publications), a statement of research and career goals, and a completed Form SF-171 (Personal Qualifications Statement) to: **Office of Personnel Administration, Branch 1 (MPA-90-1080), P.O. Box 23762, Washington, DC 20026-3762.** Applications must be received by 31 May 1990 and the position will be available 1 September 1990.

*The Smithsonian Institution is an Equal Opportunity/Affirmative Action Employer.*

## SITUATIONS WANTED

**BEHAVIORAL SCIENTIST/RESEARCH PSYCHOLOGIST, Ph.D. (1984).** Skills in teaching, research design, univariate and multivariate statistics. Prefer government/industry, academic research. **Box 33, SCIENCE.**

**BIOCHEMIST/PROGRAMMER, Ph.D. biochemistry (1983),** desires position in development of scientific software for the Macintosh. C language, familiar with Mac Toolbox. **P. Kramer, P.O. Box 1099, Livingston, AL 35470. Telephone: 205-652-9661, ext. 502.**

**Ph.D. BIOCHEMISTRY.** Enzymology/protein chemistry, purification, 2D electrophoresis, Western blot, HPLC, FPLC; biochemical toxicology, neurochemistry. Seeks research and/or government position. **Box 35, SCIENCE.**

Successful Ph.D. **INDUSTRIAL SCIENTIST** seeks administrative/scientific position in an academic or non-profit institution. Background in polymers, materials, organic chemistry. **Box 34, SCIENCE.**

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**SCIENCE**

## Microbiologist Pharmaceutical Research

Alcon Laboratories, Inc. is the leading pharmaceutical manufacturer of products for the diagnosis and treatment of ophthalmic disorders and is headquartered in Fort Worth, Texas.

We currently have an opening in our R&D Division for a Research Fellow of Microbiology. The successful candidate will direct and manage our microbiology resources for pharmaceutical development and antimicrobial research and provide Alcon with a supply of patentable antibiotics, anti-infectives, contact lens disinfectants and antimicrobial preservatives for development into new products.

The ideal candidate should have a PhD in microbiology, 8-10 yrs of pharmaceutical experience, 5 yrs experience managing research programs (preferably those involving antimicrobial agents or therapy), and proven interpersonal and leadership skills and written and oral presentation abilities.

*An Equal Opportunity Employer - M/F/H/V*

Resumes to **Alcon** Mr. Faver  
Employment Dept. (T1-3)  
Alcon Laboratories, Inc.  
PO Box 6600  
Fort Worth, Texas 76115

## Postdoctoral Research Fellowship Program

The Health Care Division of The Procter & Gamble Company has initiated a post-doctoral research program for a veterinary pathologist. This program will provide excellent opportunities for the successful fellow to conduct basic research in the area of gastrointestinal diseases. This project involves interactions with a multidisciplinary team (pathology, microbiology, immunology, and molecular biology) using animal models to study bacterial virulence factors and how therapeutic intervention modifies the normal pathogenesis of disease. The candidate will be given wide latitude in choosing research activities

and approaches. Applicants should have a DVM or equivalent degree and a Ph.D. in pathology. Support will be for one year and renewable for a second year. Our modern research facility is located in a wooded rural setting in southwestern Ohio.

Send letters of application with CV and names of 3 references to:

Dr. T. J. Logan, Manager  
Ph.D. Recruiting  
Pathology Postdoctoral  
Program, Box S  
The Procter & Gamble Co.  
P.O. Box 398707  
Cincinnati, Ohio 45239-8707

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National Institutes of Health, National Institute on Aging

## Fellowships in the MOLECULAR NEUROBIOLOGY OF ALZHEIMER'S DISEASE

Fellowships are available in the newly formed Molecular Neurobiology Unit of the National Institute on Aging located at the Gerontology Research Center in Baltimore, Maryland. Research will be focused on gene expression in the aging CNS and in neurodegenerative disease, including studies of the molecular basis of neuropathology and the role of growth factors in the amelioration of age-related neuronal atrophy. Applicants should have a background in molecular biology, cell biology and/or neuroscience. Experience in modern molecular biological techniques is preferred, but not essential.

Send curriculum vitae, statement of research interests, and the names of three references to:

George R. Martin, Ph.D.  
Scientific Director, NIA  
Gerontology Research Center  
4940 Eastern Avenue  
Baltimore, Maryland 21224



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U.S. DEPARTMENT OF ENERGY

## POSTGRADUATE RESEARCH PROGRAMS

<b>Toxicology</b>	<b>Engineering</b>
<b>Fossil Energy</b>	<b>Physical Sciences</b>
<b>Hazardous Wastes</b>	<b>Environmental Sciences</b>
<b>Artificial Intelligence</b>	<b>Life Sciences</b>
<b>Computer Sciences</b>	<b>Risk Analysis</b>

- Research at national laboratories
- Stipends \$20,000 - \$41,000 depending on degree, program, research area
- Recent graduate degree
- U.S. citizens or PRAs eligible

Information and applications:



**Postgraduate Research Programs**  
Science/Engineering Education Division  
Oak Ridge Associated Universities  
P.O. Box 117  
Oak Ridge, TN 37831-0117  
(615) 576-3190



# WORLD AIDS FOUNDATION

The World AIDS Foundation (WAF) announces its intent to support research and education relating to AIDS in the developing world. The goal of the WAF is to facilitate information exchange and to assist developing countries to respond to the AIDS pandemic.

The Foundation is particularly interested in projects which are catalytic, and once in place could have a multiplicative effect. The WAF is specifically interested in supporting:

- A) short-term, in-country training for clinicians, allied health professionals and technicians;
- B) fellowships to support training for national experts;
- C) development and testing of new concepts and demonstrations for preventing the spread of HIV; and
- D) highly focused workshops which enhance the scientific process and transfer knowledge needed in the effort against HIV infections and AIDS.

The limit of any single funding request to the Foundation is \$200,000.

## Application Procedures:

Concept letters and applications may be prepared in English or French. Applicants should submit concept letters for initial consideration. Following review of concept proposals, applicants may be invited to submit complete proposals.

For further information please contact:

**World AIDS Foundation**  
c/o Asst. Secretary for Health  
Department of Health & Human  
Services  
200 Independence Avenue, SW  
Washington, DC 20201  
U.S.A.

or

**World AIDS Foundation**  
c/o Director Institut Pasteur  
28 Rue du Docteur Roux  
75724 Paris, Cedex 15  
FRANCE

## COURSES AND TRAINING

### SUMMER COURSES IN GROSS ANATOMY, HISTOLOGY, EMBRYOLOGY, AND NEUROANATOMY

Will be offered to medical, dental, health science, and medical illustration students starting 18 June 1990. For further information, contact: **Dr. Martin Dym, Chairman, Department of Anatomy and Cell Biology, Georgetown University Medical Center, 3900 Reservoir Road, N.W., Washington, DC 20007. Telephone: 202-687-1051, ext. 1711.**

### CAREER CHANGE OPPORTUNITY

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

### POSTDOCTORAL AND GRADUATE STUDENT FELLOWSHIPS

The University of Cincinnati College of Medicine offers a modern interdepartmental training program in environmental molecular and cellular carcinogenesis and mutagenesis. Cincinnati is a leading academic and industrial center for environmental studies providing numerous employment opportunities. Experimental approaches within the program include the role of growth factors and oncogenes in cellular transformation, the use of transgenic cells and animals, and molecular toxicology. Participating faculty are: Dr. Roy Albert (carcinogenic mechanisms and risk assessment), Dr. Stuart Baxter (tumor promotion), Dr. Michael Lieberman (growth factors and differentiation), Dr. John Loper (P450 systems in yeast), Dr. Steven Potter (insertional mutagenesis in transgenic mice), Dr. Howard Shertzer (chemoprevention of carcinogenesis), Dr. Peter Stambrook (mutagenesis in transgenic cells and mice), Dr. Edward Stawczek (oncogenes and cell transformation), Dr. James Stringer (recombination and gene targeting in ES cells), and Dr. David Warshawsky (mechanisms of chemical carcinogenesis).

Positions are immediately available and are funded through a national research training program. Applicants must have U.S. citizenship or permanent residency and have completed a Ph.D. degree or equivalent. Candidates should send curriculum vitae and three letters of recommendation to: **Dr. Peter J. Stambrook, Department of Anatomy and Cell Biology, University of Cincinnati College of Medicine, Cincinnati, OH 45267. An Equal Opportunity/Affirmative Action Employer.**

## ANNOUNCEMENTS

### AMERICAN EPILEPSY SOCIETY AWARDS PROGRAM

The American Epilepsy Society announces the 1990 Awards Program designed to encourage and reward clinical and basic science investigators whose research contributes importantly to understanding and conquering childhood onset epilepsy.

**CATEGORY 1 AWARDS:** Two annual awards of \$150,000 each will be made to senior individuals who have a distinguished history of research achievements and professional excellence related to pediatric aspects of epilepsy. One award will go to a clinical investigator and the other to a basic scientist.

**CATEGORY 2 AWARDS:** Three annual awards of \$50,000 each will be made to individuals whose research holds promise of leading to important advances in the understanding, diagnosis, and treatment of childhood onset seizures and epilepsy. At least one award in this category will go to a clinical investigator.

Candidates for the American Epilepsy Society Awards are nominated by their peers. The American Epilepsy Society has the sole responsibility for selection of recipients. Nomination forms are available from the American Epilepsy Society. Deadline for completed nominations is 2 July 1990. Awards will be announced at the annual meeting of the American Epilepsy Society in San Diego, 10 to 15 November 1990.

Contact: **The American Epilepsy Society Awards Program, AES Executive Office, 638 Prospect Avenue, Hartford, CT 06105-4298. Telephone: 203-232-4825.**

The American Epilepsy Society Awards Program has been made possible by funds generously provided by the Milken Family Medical Foundation.

## ANNOUNCEMENTS

### RESEARCH AWARDS

The International Life Sciences Institute Research Foundation (ILSI Research Foundation) announces that two awards for basic research projects in toxicology and environmental health (to include human nutrition), each of up to \$100,000 over 3 years, will be made in 1991. The purpose of the awards is to encourage innovative, new investigators in basic biomedical sciences to apply modern knowledge and techniques to basic problems related to comparative toxicology or environmental influences on growth, development, and aging. The closing date for applications is 1 September 1990. For further information, write: **ILSI Research Foundation, 1126 16th Street, N.W., Suite 100, Washington, DC 20036.**

### DOE HUMAN GENOME PROGRAM ANNOUNCEMENT OF SPECIAL RESEARCH GRANTS

The U.S. Department of Energy (DOE) announces its 1990 Special Research Grants competition in support of the Human Genome Initiative. Several research goals are encompassed in the 21 March 1990 *Federal Register* Notice 90-5, Vol. 55, p. 10486, supporting research and conferences for:

(1) Development of innovative technologies and resources necessary for the physical mapping of human chromosomes.

(2) Development of advanced DNA sequencing technology, particularly innovative new approaches with potential for rapid, cost-effective sequencing.

(3) Development of data management systems for use in DNA mapping and sequencing, including data structures, retrieval schemes, user interfaces, and advanced database theory.

(4) Addressing ethical, legal, and societal issues that may arise from applications of knowledge and materials resulting from the Human Genome Initiative.

For a more detailed description of issues and specific research topics to be addressed relative to this goal, please see "Ethical, Legal, and Social Implications of the Human Genome Initiative" in the *NIH Guide to Grants and Contracts*, Vol. 19, No. 4, 26 January 1990.

**Pre-application and further information:** Before preparing a formal application, potential applicants are encouraged to submit a brief pre-application consisting of two to three pages of narrative describing the research project objectives and method of accomplishment. These will be reviewed relative to the scope and the research objectives of the DOE Human Genome Program. Pre-applications should be sent to: **Dr. Benjamin J. Barnhart, Office of Health and Environmental Research, ER-72 (GTN), Washington, DC 20545, telephone: 301-353-5037.** A response to the pre-applications discussing the potential program relevance of a formal application will be communicated within 4 weeks after receipt.

Formal applications submitted in response to this notice must be received by the Division of Acquisition and Assistance Management by 8 August 1990, for consideration by an ad hoc review panel. The formal applications should be sent to: **U.S. Department of Energy, Office of Energy Research, Division of Acquisition and Assistance Management, ER-64, Room G-236, Washington, DC 20545, Attention: Program Notice 90-5.**

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# The Squibb Institute for Medical Research

## Postdoctoral Fellowship Program

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

*Our Postdoctoral Fellowship program offers outstanding opportunities for scientists to gain significant postdoctoral training in the basic research programs pursued at The Squibb Institute for Medical Research and in collaboration with our research alliances.*

*Postdoctoral Fellowships are awarded for 1-3 years. Opportunities exist in the following areas:*

### MOLECULAR BIOLOGY

#### **Dr. Mariano Barbacid**

Oncogenes, growth factor receptors, and transcriptional factors relating to the development of neoplastic transformation of normal cells.

#### **Dr. Rodrigo Bravo**

Identification of growth factor inducible genes.

#### **Dr. Michael Rosenberg**

Mouse developmental genetics laboratory studying the regulation and expression of proto-oncogenes during development using transgenic mice and ES cell technologies.

### MACROMOLECULAR BIOLOGY

#### **Dr. Thomas Lavoie**

Design, construction, and characterization of novel recombinant antibody based molecules for targeted thrombolysis. Development of expression system for recombinant antibody molecules.

#### **Dr. Shi Chung Ng**

Antibody structure/function relationship, protein folding and assembly, as well as design and expression of novel and potentially therapeutic antibody-targeted molecules.

### NMR SPECTROSCOPY

#### **Dr. Luciano Mueller**

Elucidate structures and dynamics of proteins and their complexes to DNA and ligands, develop NMR methods, in particular, heteronuclear multi-dimensional spectroscopy.

### CELLULAR BIOLOGY

#### **Dr. Richard Gregg**

Regulation of lipid and lipoprotein metabolism; transcriptional, post-transcriptional, and metabolic regulation of enzymes, apolipoproteins, and receptors; mechanism of lipoprotein assembly and secretion; regulation of transport of cholesterol from peripheral tissues to the liver.

### VIROLOGY

#### **Dr. A. Kirk Field**

Structure-function studies of herpesvirus DNA polymerases. Research projects include expanded efforts in heterologous expression, in vitro mutagenesis, enzymology, and computer modeling.

### MACROMOLECULAR CRYSTALLOGRAPHY

#### **Dr. Stephen Sheriff**

Antibody-Antigen Complexes - study molecular recognition using antibody-antigen binding as a model system. Antigens include proteins such as lysozyme and staphylococcal nuclease and small molecules including digoxin.

#### **Dr. Jack Sack**

Calmodulin - study the structural effects of various mutations on the calcium-binding protein, calmodulin, in order to understand the biochemical activity of the mutant proteins.

### MACROMOLECULAR MODELING

#### **Dr. Jiri Novotny**

Study the biophysical basis of macromolecular structure and stability, and develop physical models of molecular recognition in biological systems (e.g. specific interactions between enzymes and substrates, antigens and antibodies, DNA and protein regulators, small molecular-weight drugs and their targets, etc.).

### MACROMOLECULAR CHEMISTRY

#### **Dr. Gary Matsueda**

Design and characterize peptidic enhancers and regulators of enzymes and proteins in thrombolysis. Optimized protecting group chemistry, linkers, and resins used in solid-phase synthesis.

Prepare and characterize recombinant protein chimeras possessing thrombolytic activity.

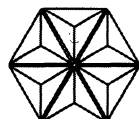
### MICROBIAL MOLECULAR BIOLOGY

#### **Dr. Prabhavathi Fernandes**

Molecular biology and genetics of bacilli and the expression of heterologous proteins in *Bacillus subtilis*.

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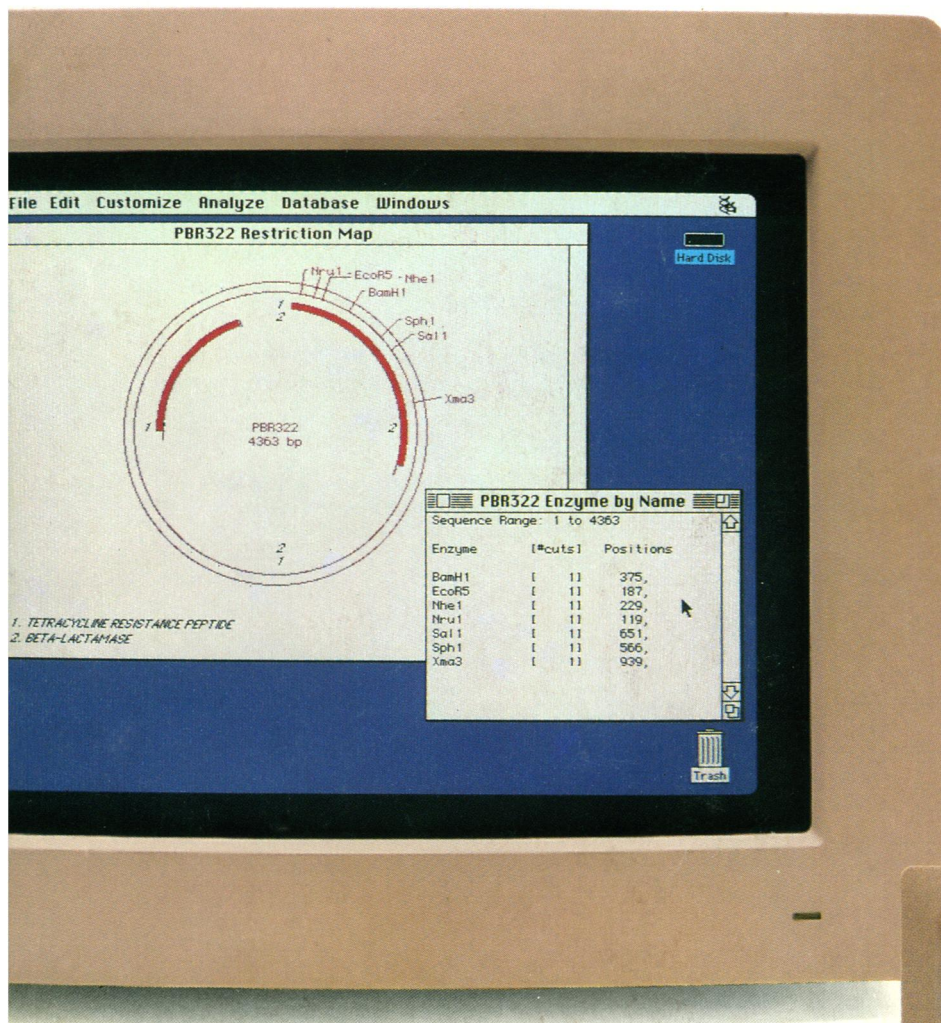
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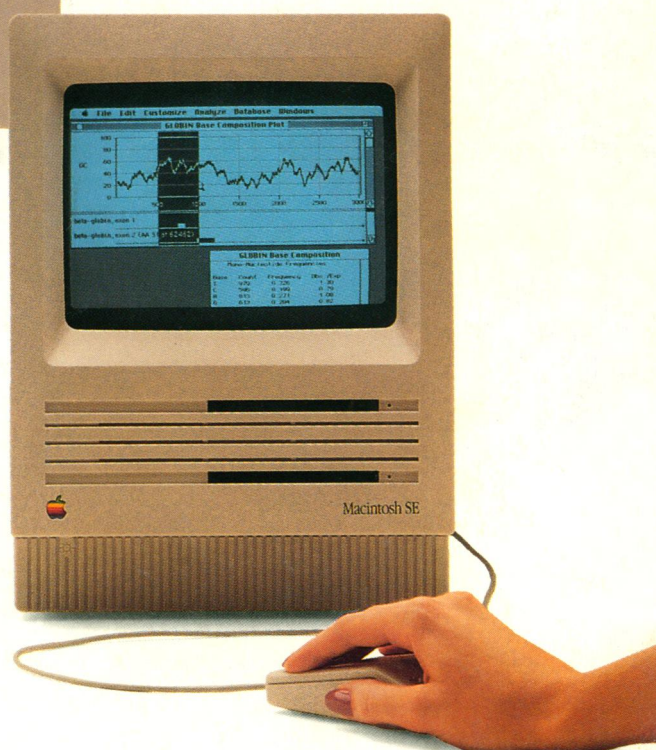
**Dr. José-Luis Millán**

La Jolla Cancer Research Foundation

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