

coral reefs on the bank include Bird and Denis. The other islands of the Seychelles are isolated from the bank by depths of 4 to 5 kilometers and include the elevated reef limestones of the Aldabra group, together with St. Pierre. As one might expect, the ecology and biogeography reflect the complex composition of the Seychelles.

The largest part of the volume (69 percent of the pages) is concerned with the relatively well-known vertebrate fauna. Marine invertebrates receive 16 percent and plants only 7 percent, with the remainder of the volume devoted to the geology, the climate, and the human population of the Seychelles.

The chapters on amphibians, snakes, lizards, and tortoises are particularly interesting. Amphibia are confined to the high granitic islands, where no fewer than seven species of caecilians are found (only about 180 are known worldwide). Some lizards have also undergone radiation within the Seychelles, as have the giant land tortoises. Bour reviews the taxonomy and history of the land tortoises and shows that the Aldabra land tortoise, *Dipsochelys elephantina* (= *Geochelone* = *Testudo gigantea*), belongs to a group of species representing a tortoise radiation within the Seychelles that included the granitic islands. Coe and Swingland review the biology of the Aldabra tortoise.

Other authors summarize for different groups what is known from historical records in an attempt to determine the original distribution of species within the islands. Almost all the authors provide information on the ecology of individual species. This information is much more valuable because it is based on the authors' own fieldwork in the region. Thus the ecological sections are stronger than those dealing with biogeography.

The available data on phylogenetic relationships and distribution of taxa in the Seychelles are insufficient for anything beyond a narrative approach to biogeography. Most authors conclude only that affinities are Oriental, Malagasy, or tropical African, for example. There is a conspicuous (and pleasant) absence of controversy on biogeographic methods—Croizat is not cited, and I was unable to locate the word "vicariance" anywhere in the 654 pages of text. This fact plus the excellent natural history and the thousand-plus references make it a worthwhile volume.

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Blind ad replies should be addressed as follows:

**Box (give number)**  
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1515 Massachusetts Avenue, NW  
Washington, D.C. 20005

## POSITIONS WANTED

**Associate Professor** with teaching and research experience in plant biotechnology seeks to relocate in New York City-New Jersey or Washington, D.C. area. Publications with research and grant-seeking potential. Box 6, SCIENCE. X

**Biochemist**, Ph.D. with several years of academic research in protein purification, bacterial physiology, antibiotic development, cell surface antigens, human blood group determinants, and immunohistochemistry. Additional expertise in toxicology and risk assessment, DNA binding, mutagenesis, mitochondrial metabolism and molecular biology. Good publication record, excellent communication skills, plus supervisory, training, administrative, and budget experience. Seeking industrial research and/or administrative position. Box 287, SCIENCE. X

Recent **Bioscience Ph.D.** with postdoctoral experience seeks position as foundation program officer. Box 2, SCIENCE. X

**Physical Biochemist**, MIT (Ph.D.), Yale (postdoctorate), with industrial experience involving enzymes in thin films; seeks challenging position in or near large metropolitan area. Box 3, SCIENCE. 1/11, 18

**Psychiatrist**, M.D., specialized in neuropsychiatry, 5 years of experience (Department of Psychopharmacology). Interested in research in psychopharmacology and psychogenetics. Available after April 1985. 778 Seneca Avenue, Ridgewood, New York 11385; telephone: 212-381-0606, c/o Mr. Dizdarevic.

**Research Technician** with broad experience in immunology, molecular biology, hybridization techniques, and cellular biology offers assistance in an American research laboratory (preferably). Reply to: Jeroen Knops, Institute of Immunology and Genetics, German Cancer Research Center, Im Neuenheimer Feld 280, D-6900 Heidelberg, Federal Republic of Germany. 1/11, 18, 25

## POSITIONS WANTED

**Entomologist**, Ph.D., excellent references, many publications. Experience in genetic polymorphism, subspeciation, ecology, laboratory rearing, aphid biotypes, electrophoresis; willing to travel; teaching zoology, evolution. Seeks research/teaching position, government or industry. Box 7, SCIENCE. X

**Microbiologist**, B.A., RM(AAM) in pathogenic bacteriology/virology, 15 years of experience in veterinary research, diagnostic virology, serology, electron microscopy; veterinary vaccine development; mammalian, insect, and microcarrier cell culture; laboratory design/safety; public speaking, technical writing, publications; equipment purchase; personnel management; resource management planning. Seeks management position/director of quality control with biotech firm. Box 8, SCIENCE. 1/11, 18, 25; 2/1

## POSITIONS OPEN

**ADJUNCT ASSISTANT PROFESSOR** (non-tenured, but long-term appointment possible) to conduct research on the molecular basis of mutation in prokaryotic and eukaryotic systems in a strong academic department housed in a modern campus within easy commuting distance from New York City and suburbs. Candidates with a recent Ph.D., some postdoctoral experience, and a strong record of productivity in any area of molecular biology are encouraged to apply to: **Dr. Z. Humayun, Department of Microbiology F607, New Jersey Medical School, 100 Bergen Street, Newark, N.J. 07103. An Equal Opportunity/Affirmative Action Employer, M/F/H/V.**

## AGRICULTURE RESEARCH

1) A position is open for a **Plant Physiologist** to participate in a group effort directed toward the study of corn seed development and maturation. The research will focus upon, but is not limited to, the dynamics and mechanisms of nitrogen partition into amino acids, and the pathways leading to protein synthesis and deposition.

2) A position is open for a **Microbial Geneticist** within a group focusing on the biochemistry, genetics, and physiology of anaerobic rumen and gut bacteria. The research will center on development of DNA transfer mechanisms and study of gene expression/regulation at the molecular level of fermentative abilities of these bacteria. Experimentation will involve classical and molecular genetic analyses, screening methodologies, generation and characterization of mutants and of appropriate DNA's or RNA's encoding or regulating enzymes of interest.

Applicants must have a Ph.D. or equivalent and appropriate postdoctoral training. Salary is based on qualifications and experience, GS-11/12/13 (\$25,489 to \$36,327). U.S. citizenship is required. Send curriculum vitae for position (1) to: **Dr. C. G. Crawford**, and (2) to: **Dr. R. Hespell, Northern Regional Research Center, U.S. Department of Agriculture (USDA), ARS, 1815 North University Street, Peoria, Ill. 61604. The USDA is an Equal Opportunity/Affirmative Action Employer.**

**ASSISTANT DIRECTOR**, Center for Polar Desert Research. Applicants should have advanced degree in biology, geology, or related field. Duties will include overall administrative functioning of the center, liaison responsibilities with various government agencies, and research proposal preparation. A courtesy faculty appointment may be available to appropriate candidate. Salary range for 12 months: \$22,000 to \$28,000. Applicants should forward a résumé and the names of five references by 25 January 1985 to: **Dr. E. I. Friedmann, Department of Biological Science, Florida State University (FSU), Tallahassee, Fla. 32306. FSU is an Affirmative Action/Equal Opportunity Employer.**

**ASSISTANT OR ASSOCIATE PROFESSOR OF ANATOMY** for a tenure-track appointment at the Northeastern Ohio Universities College of Medicine. Ph.D. or M.D. degree with a record of productivity in research required. Excellent opportunities for collaborative research and participation in graduate education. Teaching responsibility entirely in histology; candidate must have experience and strong interest in this subject. Send curriculum vitae, bibliography, statement of teaching and research goals, research funding (past and present), and names of three references no later than 15 February 1985 to: **The Office of the Vice Provost, Northeastern Ohio Universities College of Medicine, Rootstown, Ohio 44272. An Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### MEDICAL COLLEGE OF OHIO AT TOLEDO DEPARTMENT OF BIOCHEMISTRY

The Department of Biochemistry invites scientists holding Ph.D. and/or M.D. degrees to submit applications for appointments as **ASSISTANT PROFESSOR** (tenure track). Candidates who approach problems of cellular control, growth, and development in eukaryotic systems in terms of gene regulation and structure are particularly encouraged to apply. The Medical College of Ohio is located in a growing residential area of Toledo. The Department of Biochemistry is in a modern building with well-equipped laboratories. The Biochemistry Faculty have broad research interests including gene regulation, hormone action, neurochemistry, and enzyme regulation. By 1 March 1985, candidates should submit applications which would include curriculum vitae, reprints, a statement of planned research, and three references to:

**Chairman of Search Committee**  
**Department of Biochemistry**  
**Medical College of Ohio**  
**C.S. Number 10008**  
**Toledo, Ohio 43699**  
*Equal Opportunity Employer*

### DEPARTMENT OF BOTANY University of Toronto

The Botany Department, University of Toronto is seeking candidates in genetics for a tenure-stream faculty position at the assistant professor level. Applicants should have an interest in research and teaching in plant population genetics and/or plant developmental genetics. Salary will be at the assistant professor level and commensurate with experience. The successful candidate will be expected to teach plant genetics, conduct an independent research programme, and collaborate with other faculty in the department in the development of an active research group in genetics. The successful applicant's appointment would start on or as soon as possible after 1 July 1985. Candidates should submit curriculum vitae and arrange for three letters of reference to be sent to: **Dr. J. P. Williams, Chairman, Department of Botany, University of Toronto, Toronto, Ontario, Canada M5S 1A1. Closing date for receipt of applications is 15 February 1985. This position is subject to final budgetary approval.**

**ASSISTANT PROFESSOR OF MOLECULAR PATHOLOGY (BIOCHEMISTRY)**, tenure-track position, available on basic medical sciences campus of Northeastern Ohio Universities College of Medicine (NEOUCOM). Candidate with Ph.D. degree, preferably a bioanalytical chemist, should be able to organize and run a GC/MS and HPLC laboratory, participate in independent and cooperative research with basic and clinical scientists, and participate in the teaching and training of medical and graduate students. NEOUCOM offers a 6-year combined B.S./M.D. degree program in consortium with The University of Akron, Kent State University, and Youngstown State University. Send curriculum vitae and references by 15 February 1985 to: **The Office of the Provost, Northeast Ohio Universities College of Medicine, Rootstown, Ohio 44272. An Equal Opportunity/Affirmative Action Employer.**

**CHAIRMAN, PHYSIOLOGY PROGRAM**, Northeastern Ohio Universities College of Medicine. The chairman is responsible for physiology curriculum taught to medical students; for recruitment and development of physiology faculty; for the education of graduate students in the biomedical disciplines through the graduate programs of the College's three consortium universities; for a personal research program; and for the day-to-day administration of the physiology program.

The Northeastern Ohio Universities College of Medicine, in consortium with The University of Akron, Kent State University, and Youngstown State University, offers a 6-year combined B.S./M.D. degree program. Undergraduate clinical education takes place in associated hospitals in Akron, Canton, Youngstown, and surrounding areas.

The College enjoys strong support from the state of Ohio, with a capital expansion project about to begin on the basic medical sciences campus, Rootstown. Ph.D. or M.D. degree, qualifications for senior faculty appointment, experience in medical school education and administration required.

Send curriculum vitae with list of references by 15 February 1985 to: **Office of the Provost and Dean, Northeastern Ohio Universities College of Medicine, Rootstown, Ohio 44272. An Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

Anticipated tenure-track **ASSISTANT PROFESSOR OF CHEMISTRY** position for fall 1985. The applicant must have a Ph.D. in chemistry or biochemistry, preferably with postdoctoral training, and demonstrated competence in biologically related research. The development of a vigorous research program is required. The applicant must also be able to participate in the teaching of introductory chemistry as well as undergraduate and graduate level biochemistry.

Candidate should submit a résumé and a concise statement of research goals and objectives, and have three letters of reference forwarded to: **Professor David Boykin, Department of Chemistry, Georgia State University, Atlanta, Georgia 30303.** Application deadline: 4 February 1985. *An Affirmative Action/Equal Opportunity Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR MICROBIOLOGY AND IMMUNOLOGY

The Department of Microbiology and Immunology at the University of Washington is recruiting for faculty member at the assistant (postdoctoral experience required) or associate professor level whose research interests are in some area of general prokaryotic microbiology approached at the molecular/genetic level. Areas include but are not limited to bacterial behavior, development, membrane function, metabolism, and mechanisms of genetic exchange. The appointee will be expected to teach in general microbiology and supervise doctoral candidates. Applicants should send curriculum vitae, a short statement of research interests and goals, and the names of three references to:

**Dr. Eugene W. Nester**  
Professor and Chairman  
Department of Microbiology/Immunology SC-42  
University of Washington  
Seattle, Washington 98195  
Deadline: 31 March 1985

*Affirmative Action/Equal Opportunity Employer*

**ASSISTANT/ASSOCIATE PROFESSOR OF PHARMACEUTICAL CHEMISTRY OR PHARMACEUTICS**, School of Pharmacy, University of Colorado. Applications are invited for a tenure-track position in pharmaceutical chemistry or pharmaceuticals at the University of Colorado School of Pharmacy. The position requires an earned doctorate in pharmaceuticals, pharmaceutical chemistry, chemistry or closely related field. The successful applicant will be expected to develop a strong extramurally funded research program in his/her area of interest. Other responsibilities include teaching pharmaceutical chemistry and/or pharmaceuticals. Preference will be given to candidates with interest in physical pharmaceutical chemistry and an undergraduate degree in pharmacy. The position will be available in August 1985. Academic year (9-month) salary will be \$24,000 to \$28,000; assistance in obtaining summer salary will be available. Submit curriculum vitae, a brief description of plans for developing research program, and the names of three references by 28 February 1985 to: **Dr. Duane C. Bloedow, School of Pharmacy, Campus Box 297, University of Colorado, Boulder, Colorado 80309.** *The University of Colorado is an Equal Opportunity/Affirmative Action Employer.*

**AUDITORY/VESTIBULAR NEUROBIOLOGIST.** Tenure-track assistant professor position, jointly appointed in Department of Neuroscience and Division of Otolaryngology. Ph.D. and/or M.D. degree and postdoctoral experience expected. Successful candidate will be expected to conduct vigorous independent research program and participate in graduate and medical education. Equipped laboratory and start-up funds provided. Projected starting date: 1 July 1985. Send curriculum vitae, statement of research goals and teaching interests, and names of three references by 1 February to: **J. B. Munson, Chair of A/V Search Committee, Department of Neuroscience, Box J-244, University of Florida College of Medicine, Gainesville, Florida 32610.** *Equal Opportunity/Affirmative Action Employer.*

### BIOCHEMICAL EPIDEMIOLOGIST

For research program in carcinogenesis and molecular biology. Clinical and laboratory dimensions Ph.D. level with relevant biochemical and epidemiological experience. Excellent working conditions. Available immediately. Send curriculum vitae and salary requirements to:

**Preventive Medicine Institute/Strang Clinic**  
55 East 34 Street  
New York, N.Y. 10016  
Attention: **Dr. Daniel G. Miller**

## POSITIONS OPEN

**ASSISTANT PROFESSOR, PLANT PHYSIOLOGY.** The Department of Biology, University of Missouri-St. Louis, has a tenure-track opening for a plant physiologist in the cellular, molecular, or ecological area. Interest in woody plant physiology desirable but not necessary. Teaching responsibilities include introductory botany and upper level undergraduate/graduate courses in plant physiology and the area of specialization as well as supervision of graduate student research. The successful candidate will be expected to develop a productive research program and secure extramural funding.

This position offers an opportunity to collaborate with the Missouri Botanical Garden. Applications, including curriculum vitae, statement of research interests and goals, reprints of selected research papers, and names and addresses of three professional references, should be sent by 15 February 1985 to: **Chairperson, Plant Physiology Search Committee, Department of Biology, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, Mo. 63121.**

**ASSOCIATE DIRECTOR, CENTER FOR HUMAN TOXICOLOGY, UNIVERSITY OF UTAH.** Ph.D., and/or M.D. in pharmacology or related science. Candidate must have knowledge and experience in analytical toxicology and state-of-the-art analytical instrumentation, forensic toxicology, including laboratory handling of forensic samples. Other experience to include staff management and operation of a service laboratory in toxicology. Successful candidate will develop a research program in pharmacology/toxicology. Applications accepted until 1 March 1985 or until a qualified candidate is identified. Send curriculum vitae and four references to: **Douglas E. Rollins, M.D., Ph.D., 38 Skaggs Hall, University of Utah, Salt Lake City, Utah 84112.** *Equal Opportunity/Affirmative Action Employer.*

### ASSOCIATE VICE PRESIDENT FOR RESEARCH DIRECTOR, RESEARCH ADMINISTRATION The University of Chicago

Reports directly to the Vice President for Research and works closely with him, deans, and other officers in implementing the University's research policies. Responsible for the management of the University's Office of Sponsored Programs which handles all grants and contracts. Oversees the University's patent process and works with the faculty in maintaining an efficient system for patent monitoring, licensing, and development. Acts as the principal liaison with the University's Patent Review Board. Works with the Vice President for Research, deans, and faculty to develop and strengthen the University's research interaction with private industry. Qualified applicants should possess a Ph.D. or equivalent in a research area or in engineering, have served as a faculty member or administrator of a major research university and have in-depth knowledge of federal research policies and practices. Must be knowledgeable about research trends and opportunities in federal agencies and be capable of developing systems for keeping faculty members apprised of such trends and opportunities. Some experience working in a major federal agency is desirable. Send your curriculum vitae or résumé with salary history to: **Walter E. Massey, Vice President for Research, THE UNIVERSITY OF CHICAGO, 5801 South Ellis Avenue, Chicago, Ill. 60637.** *The University of Chicago is an Affirmative Action/Equal Opportunity Employer.*

### BIOCHEMISTRY FACULTY POSITIONS

The Department of Biochemistry will have two tenure-track positions available beginning September 1985. Preference will be given to candidates with two or more years of postdoctoral experience, previous faculty status, established record of research productivity, and funded or pending research grants. We are particularly interested in individuals who are conducting research on problems of fundamental biological significance using the methods of modern molecular biology, including recombinant DNA technology. In addition, a commitment to excellence in teaching medical and graduate students is expected. Rank and salary will be commensurate with experience. Applications will be accepted until suitable candidates are identified. Please submit curriculum vitae, a brief summary of proposed research, and the names of at least three individuals who would be willing to provide letters of reference to: **Dr. Kenneth G. Mann, Professor and Chairman, Department of Biochemistry, University of Vermont, College of Medicine, Burlington, Vermont 05405.** *The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.*

## POSITIONS OPEN

The University of Michigan, School of Natural Resources, is seeking to fill a senior-level, full-time, 9-month, tenure-track position at **ASSOCIATE OR FULL PROFESSOR LEVEL IN NATURAL RESOURCES ECONOMICS.** The primary focus is directed toward the policy, management and planning of renewable natural resources. Qualifications for the position are excellence in research and teaching and a Ph.D. in economics/resource economics, a demonstrated research interest and record in resource economics, and experience in applying economics to natural resource management. A joint appointment with the Economics Department is expected. It is expected that the position be filled by 1 September 1985.

Applicants should submit curriculum vitae and list of publications along with supportive information on their research and teaching interests in relation to this position and their past experience. All materials should be sent to: **Dr. James E. Crowfoot, Dean, School of Natural Resources, 3516 Dana Building, The University of Michigan, Ann Arbor, Mich. 48109-1115.** Closing date for initial reviews: 25 January 1985, or until a suitable candidate is found.

*A nondiscriminatory, Affirmative Action Employer*

**BIOCHEMIST—WILLIAMS COLLEGE** has an opening for fall 1985 for a 2-year assistant professor position in biochemistry (Ph.D. required; postdoctoral experience preferred). Applicants should have a strong commitment to both teaching and research. Teaching duties each semester normally include complete responsibility for one course with laboratory and supervision of senior research projects. Williams College is a highly selective, coeducational, liberal arts institution of approximately 155 faculty, 1900 undergraduates, and 30 to 40 chemistry majors each year, located in northwestern Massachusetts. The Chemistry Department is accredited by the ACS and has excellent facilities for teaching and research. Send résumé, undergraduate and graduate transcripts, description of research interests for undergraduates, and names of three references to: **Dr. James F. Skinner, Chairman, Department of Chemistry, Williams College, Williamstown, Mass. 01267,** by 20 February 1985. *Affirmative Action/Equal Opportunity Employer. We are especially interested in identifying minority and women candidates.*

**BIOPSYCHOLOGIST.** The Department of Psychology invites applications for a full-time, 1-year (non-continuing) assistant professorship in biopsychology, to teach one-semester courses in physiological psychology, animal behavior (both with laboratory), and a seminar or course on topic of incumbent's interest. Specific area(s) of competence open, although a background in neuroethology, developmental neurobiology, or neuroanatomy/neurophysiology is especially desirable. Qualifications required are Ph.D. (or expected by fall 1985), excellence in undergraduate teaching, and competence in conducting/directing independent research. Send letter of application, current curriculum vitae, transcripts, reprints/preprints, and three letters of reference by 15 February 1985 to: **Loche Van Atta, Chair, Biopsychology Search Committee, Department of Psychology, Oberlin College, Oberlin, Ohio 44074.** *Oberlin College is an Affirmative Action/Equal Opportunity Employer and specifically encourages women and minority applicants.*

The University of Michigan, School of Natural Resources, is seeking to fill a full-time, 9-month, tenure-track position in **FOREST MANAGEMENT.** Rank will be commensurate with qualifications and experience. The primary focus is directed toward forest management in a research oriented, interdisciplinary professional school focused on renewable natural resources. Qualifications for the position are excellence in research and teaching and a Ph.D. with advanced preparation and experience in areas that include silviculture, forest economics, management sciences, or biometrics. It is expected that the position be filled by 1 September 1985. Appointment to the George Willis Pack Endowed Chair is possible with a strong record of accomplishments in forest economics.

Applicants should submit curriculum vitae and list of publications along with supportive information on their research and teaching interests in relation to this position and their past experience. All materials should be sent to: **Dr. James E. Crowfoot, Dean, School of Natural Resources, 3516 Dana Building, The University of Michigan, Ann Arbor, Mich. 48109-1115.** Closing date for initial reviews: 25 January 1985 or until a suitable candidate is found.

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Environmental Monitoring and Services, Inc. (EMSI) invites applications for two positions:

**CELLULAR IMMUNOLOGIST.** The ideal candidate will have at least 3 years of postdoctoral experience (or equivalent), broad knowledge in cellular and molecular immunology, and experience with NK cells. This immunologist will conduct basic research on peripheral blood and pulmonary NK cells (emphasis in regulation, target recognition, effector heterogeneity, and NK cell cloning) and will participate in ongoing research into the response of immune cells to pollutants.

**IMMUNOLOGIST.** The ideal candidate will have 4 years of postdoctoral experience (or equivalent) and expertise in the biology and biochemistry of human mononuclear phagocytes. This immunologist will participate in ongoing research and develop research on the effects of environmental pollutants on cells and fluids of the human immune system (obtained in some cases by bronchoalveolar lavage). Another important aspect of the studies will be to elucidate the interaction between alveolar macrophages and various lung cell types. Supervisory experience is desirable.

EMSI's scientists work closely with scientists at the Clinical Environmental Laboratory of U.S. Environmental Protection Agency (EPA) located at the University of North Carolina in Chapel Hill. These immunologists will work in the EPA Immunology and Biochemistry Section (Dr. Hillel S. Koren, chief) in a university-like setting.

EMSI is a subsidiary of Combustion Engineering, Inc., and offers a competitive salary and excellent benefits. By 8 February 1985 qualified applicants should send curriculum vitae, a statement of research interests, and the names of four references to: Dr. L. Jack Roger, Environmental Monitoring and Services, 800 Eastowne Drive, Suite 200, Chapel Hill, N.C. 27514.

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#### HARVARD SCHOOL OF PUBLIC HEALTH

The Harvard School of Public Health, Department of Biostatistics, is seeking the following faculty. (Appointments may be joint with the Dana Farber Cancer Institute, Harvard Medical School.) **ASSISTANT OR ASSOCIATE PROFESSOR** (two) having special interest in each or a combination of the following areas: clinical trials, environmental problems, and statistical computing. Duties involve teaching, interdisciplinary health science collaboration, and methodological research in biostatistical science. Candidates at the assistant professor level should have one or more years of postdoctoral experience in a health sciences environment with a strong record of productivity; applicants for associate professor should have a distinguished record of research in the health sciences. **ASSISTANT PROFESSOR OF BIOMEDICAL COMPUTING:** minimal educational requirements are an M.D. with graduate training in computer science or a doctorate in computing science with extensive experience in clinical applications. Applicants should have a wide range of language and operating system experience. Background in biomedical applications should include successful systems design for large computer systems, data base management, computer networking, or distributed data processing. Experience lecturing to "first time" users is essential. Priority will be given to applicants having knowledge of modern biostatistical science and experience in clinical trials.

*Qualified female and minority candidates are especially urged to apply.* Send curriculum vitae, supporting documentation of successful systems design (for biomedical computing post), and the names of at least three references to:

Professor M. Zelen, Chairman  
Ad Hoc Search Committee  
Department of Biostatistics  
Harvard School of Public Health  
677 Huntington Avenue  
Boston, Mass. 02115

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## BIO EXPERIMENTAL TOXICOLOGIST

### THE POSITION

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### THE CANDIDATE

The successful candidate should have experience in toxicology and/or pharmacology. Surgical expertise in laboratory animals would be an asset. A doctorate in a relevant discipline is preferred. This fast track position requires a manager-scientist who welcomes the challenge of multiple projects and concepts, who can operate on a flexible schedule and respond to changing priorities while maintaining staff motivation.

Compensation package is negotiable depending on qualifications and experience.

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Please forward curriculum vitae to:

Dr. Colin Bier  
Bio-Research Laboratories Ltd.  
87 Senneville Road  
Senneville, Quebec Canada H9X 3R3

## CSIRO

### AUSTRALIA

### SIR FREDERICK McMASTER BEQUEST SENIOR FELLOWSHIPS IN VETERINARY SCIENCE AND AGRICULTURE

The late Sir Frederick McMaster, a prominent Australian grazier, made a bequest to CSIRO to further research in veterinary science and agriculture. CSIRO has accordingly created a number of senior fellowships to support research in the fields of veterinary science, agriculture, and related fields of biology of relevance to the organization's work.

The fellowships are tenable in Australia in the following CSIRO Divisions/Units: Animal Health, Animal Production, the Australian National Animal Health Laboratory, the Centre for Irrigation Research, Entomology, Food Research, Horticultural Research, Human Nutrition, Molecular Biology, Plant Industry, Soils, Tropical Animal Science, Tropical Crops and Pastures, Water and Land Resources, the Wheat Research Unit, and Wildlife and Rangelands Research. These divisions/units have laboratories located throughout Australia and employ some 2800 staff of whom about 1000 are professional scientists. All division/units are well equipped to undertake research in their particular areas of interest.

It is expected that fellowships will range in duration from 3 to 12 months. The length will be the subject of negotiation and will be largely dependent on the nature of the proposal.

The support available to cover airfares, living allowance, and honorarium will depend on individual circumstances and is expected to average A\$20,000 to A\$25,000 per fellow. Successful applicants will be encouraged to obtain supplementary support from other sources.

Applications for Sir Frederick McMaster Fellowships or expressions of interest are invited from senior overseas scientists. These should include relevant personal particulars, qualifications and experience, a research/activities proposal, the names of any CSIRO collaborators and a preferred division or location, the proposed duration of the fellowship, and an estimate of the financial and other support that would be required.

Applications or expressions of interest should be directed to:

The Secretary  
Sir Frederick McMaster Fellowship Selection Committee  
CSIRO  
P.O. Box 225  
Dickson, ACT 2602  
Australia

by 1 March 1985.

A brochure setting out the conditions applying to the fellowships is available on application to the Secretary, Sir Frederick McMaster Fellowship Selection Committee.

*CSIRO is an Equal Opportunity Employer*

## POSITIONS OPEN

**THE SMITHSONIAN INSTITUTION** invites applications for the position of **ASSISTANT SECRETARY FOR MUSEUMS**, Washington, D.C. The assistant secretary assists and advises the secretary of the Institution on all museum-related policies, programs and activities of the Institution and is responsible for the central planning, coordination and oversight of the Institution's museum operations, and related support activities. The assistant secretary formulates and issues policy guidelines and standards for the planning and development of museum activities including collections management, exhibition, conservation and preservation, and related functions; provides oversight, direction and supervision to museum directors throughout the Institution; reviews policies, programs and operations of the museum directors and provides leadership and guidance in their management of museum activities; and collaborates with appropriate other assistant secretaries to help promote the research, public service, and international program goals and objectives of the Institution. In addition to museum operations, the assistant secretary oversees a variety of the museum support activities. Applicants must have the demonstrated administrative and managerial ability; a comprehensive knowledge of and experience in the management of museum activities, including collections management, exhibition, conservation and preservation, and related functions; and scholarly attainment in a field of the arts, humanities, or sciences. Anticipated salary as of January 1985: \$72,300 per annum. Send a Standard Form 171, Personal Qualifications Statement, and curriculum vitae and bibliography by 15 February 1985 to: **Office of Personnel Administration, Smithsonian Institution, Washington, D.C. 20560, attn: MPA-EX-85.** An Equal Opportunity Employer.

### BACTERIOLOGIST

Applications are invited for a tenure-track position, effective 1 July 1985, as assistant professor or associate professor, depending upon qualifications, in the Department of Microbiology and Immunology. Applicants should have a Ph.D. and postdoctoral training in microbial biochemistry, the molecular basis of host-parasite relationships, or biochemical aspects of microbial structure. Applicants must have demonstrated continuous ability to conduct and publish original, independent research.

The deadline for applications is 1 March 1985.

*The University of Western Ontario is an Equal Opportunity Employer.*

Address correspondence to: **Dr. N. R. Sinclair, Chairman, Department of Microbiology and Immunology, University of Western Ontario, London, Ontario, Canada N6A 5C1.**

**BIOLOGICAL CHEMIST.** Tenure-track position for a biological chemist to specialize in: biochemistry and pharmacology of the insect nervous system; or biochemical genetics; or natural and synthetic products affecting host-finding and feeding behavior and other insect-host interactions. A Ph.D. or equivalent degree, with research training in (molecular or cellular) biochemistry required. An 11-month appointment at the assistant professor level available 1 July 1985, consisting of 60 percent research and 40 percent teaching. Activities include development of a research program in one of the above areas, supervision of graduate students, and course instruction. Applications accepted until 1 March 1985, or until a suitable candidate is selected. Submit curriculum vitae, transcripts, reprints, doctoral dissertation summary, a statement of research interests, and names and addresses of five referees to: **Professor T. A. Miller, Chairman, Search Committee, Division of Toxicology and Physiology, Department of Entomology, University of California, Riverside, Calif. 92521.** *The University of California is an Equal Opportunity/Affirmative Action Employer, and encourages applications from minority and women candidates.*

### BIOLOGIST

Tenure-track assistant professor position beginning fall 1985, for an invertebrate zoologist with a strong background in physiology. Preference will be given to candidates with experience in SEM/TEM and an ability to teach either developmental biology or animal histology. Participation in the department's lower division offerings for both majors and nonmajors is expected. Ph.D. required. Send curriculum vitae and the names of three references by 15 February 1985 to: **Director of Personnel, St. Ambrose College, 518 West Locust Street, Davenport, Iowa 52803.**

*Equal Employment Opportunity*

## POSITIONS OPEN

**BIOCHEMIST** for appointment as assistant professor of pediatrics at Harvard Medical School within academic Newborn Medicine Division. Must possess Ph.D. degree in biochemistry or related field with at least 2 years of postdoctoral experience. Requires demonstrated productivity as evidenced by publication record and capability of achieving external funding. Experience in fetal lung cell culture, lipid biochemistry, and enzyme chemistry required. Ability to utilize modern molecular biology approaches desirable. Reply with curriculum vitae and names of referees to: **Dr. Barry T. Smith, Joint Program in Neonatology, Harvard Medical School, 75 Francis Street, Boston, Mass. 02115.**

**BIOCHEMISTRY** postdoctoral to senior faculty positions available in expanding department in accredited school. Qualified candidates in all areas considered with some preference for research on blood coagulation-platelets-endothelial cells, protein synthesis, molecular or regulatory biology, immunochimistry. Excellent initial support; light teaching; beautiful beaches and 12-month tennis. Senior appointments need grant track record. Send curriculum vitae, three supporting letters, and two-page summary of research interest to: **Dr. P. Ganguly, Department of Biochemistry, University of Puerto Rico, Medical Sciences Campus, G.P.O. Box 5067, San Juan, P.R. 00936. Telephone: 809-753-4885.**

### BIostatistician/EPIDEMIOLOGIST IMMEDIATELY AVAILABLE

The University of Arizona seeks individual experienced in applied biostatistics for epidemiological/statistical activities associated with cancer therapeutic and prevention clinical trials. Position includes an academic appointment in the College of Medicine and possible appointment and teaching responsibilities in the Department of Statistics. Doctorate degree in epidemiology or biostatistics with computing background preferred, ability to develop complementary research studies and work with other researchers important. Send curriculum vitae, salary background, and references to: **Thomas E. Moon, Ph.D., Head, Biometry, Computing and Epidemiology Unit, Arizona Cancer Center, 1501 North Campbell Avenue, Tucson, Ariz. 85724.** *The University of Arizona is an Equal Opportunity Employer.*

### CELL BIOLOGY

The Department of Zoology at the University of Massachusetts, Amherst, seeks to fill a tenure-track position at the **ASSISTANT or ASSOCIATE PROFESSOR** level beginning 1 September 1985. Candidates should have postdoctoral experience, and have demonstrated the ability to develop a productive, funded research program in an area of cell biology. Teaching duties will include vertebrate histology, and participation in graduate training. Salary will be commensurate with experience. Send curriculum vitae, a statement of research interests, reprints, and three letters of recommendation by 15 February 1985 to: **Chairman, Cell Biology Search Committee, Department of Zoology, University of Massachusetts, Amherst, Mass. 01003.** *The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.*

The **INSTITUTE FOR ENZYME RESEARCH** at the **UNIVERSITY OF WISCONSIN-MADISON** has an opening for a **CHAIRPERSON** of one of its five sections. The position is at the full professor or associate professor level and provides a joint (one-half time) appointment with the Department of Chemistry. (The present section chairmen are members of the Department of Biochemistry.) The duties involve basic research and training of postdoctoral associates at the Institute and participation in the activities of the Chemistry Department. The latter will include teaching, predoctoral research training, and committee service commensurate with the share of the appointment in that department. Candidates are expected to have demonstrable records of accomplishment in independent, original research, to have shown ability in leading and supervising research groups, and to have established reputations in their fields of research. Because of the present balance of research interests and activities on the campus, preference will be given to candidates experienced and active in the areas of protein structure and function using physical techniques.

To ensure consideration, an application should be submitted before 15 February 1985 to: **Professor Henry A. Lardy, Chairman of the Search Committee, Institute for Enzyme Research, University of Wisconsin, 1710 University Avenue, Madison, Wis. 53705.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**BOTANIST.** Assistant professor, full-time, to begin 1 September 1985. A Ph.D. or satisfactory progress towards its completion with teaching experience in general botany and ecology is desired. Other teaching responsibilities will include semester courses in plant morphology, plant taxonomy, general biology for nonmajors, and laboratory supervision in a general biology course for majors. Applicants should send curriculum vitae with emphasis on content of courses taught and evidence of laboratory and field expertise, and three letters of recommendation by 15 February 1985 to: **Dr. J. Preston Cole, Vice-President and Dean of the College, Coe College, Cedar Rapids, Iowa 52402.** *Affirmative Action/Equal Opportunity Employer.*

**CANCER/MOLECULAR PATHOLOGIST.** Faculty position at associate professor level available in Department of Pathology. Primary responsibility: develop and lead active research program/cancer biology. Close collaboration with basic science and clinical departments now establishing a major Cancer Center Program is expected. Generous research space, technical support, and funds available. Applicants with M.D. or equivalent degree and established record of research in cancer should apply by 28 February 1985. Submit curriculum vitae to: **Chairman, Search Committee (Cancer Biology), Department of Pathology and Laboratory Medicine, University of Cincinnati Medical Center, 234 Goodman Street, ML 529, Cincinnati, Ohio 45267-0529.** *Affirmative Action/Equal Opportunity Employer.*

### CELL BIOLOGY AND PHYSIOLOGY WASHINGTON UNIVERSITY SCHOOL OF MEDICINE ST. LOUIS, MISSOURI

The Department of Physiology, Washington University School of Medicine, St. Louis, Missouri, is expanding its commitment to research in cell biology and cellular biophysics. Tenure-track positions are available for investigators in the following areas: (i) membrane protein function and biogenesis; (ii) assembly, function, and movement of intracellular organelles; (iii) cell motility and contractility; and (iv) cell-cell and cell-matrix interactions. Successful candidates will be expected to develop an independent research program and to participate in the training of medical and graduate students. Please submit curriculum vitae and the names of three references to: **Dr. Philip Stahl, Department of Physiology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, Mo. 63110.** *An Affirmative Action/Equal Opportunity Employer.*

**CELLULAR AND MOLECULAR PHARMACOLOGY.** Applications are invited for a faculty rank position (instructor, \$27,913 first year, renewable for a 3-year period) to participate in research on the regulation of cell surface and cytoskeletal components of brain-derived cells by cyclic nucleotides and calcium. Send curriculum vitae and names of three references to: **Dr. Bruce McL. Breckenridge, Department of Pharmacology, UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY—Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854.** *An Equal Opportunity/Affirmative Action Employer, M/F.*

### CHAIRMAN DEPARTMENT OF MICROBIOLOGY LOUISIANA STATE UNIVERSITY BATON ROUGE

Louisiana State University invites applications and nominations for the position of chairman of the Department of Microbiology. The department currently consists of 11 tenure-track faculty members, with plans for future expansion to 16. Approximately 230 undergraduates and 35 graduate students presently major in microbiology. Candidates for this position must hold a doctorate in microbiology or a related discipline, must have demonstrated a distinguished record of scholarship and professional achievement as evidenced by publications and grant awards, and must have leadership and administrative ability consistent with building a nationally recognized department. The salary will be commensurate with qualifications. The appointment is available as of August 1985. Candidates should submit application materials, including curriculum vitae, references, and statement of research interests, before 29 March 1985 to:

**H. D. Braymer, Chairman  
Search Committee  
Department of Microbiology  
Louisiana State University  
Baton Rouge, La. 70803**

*LSU is an Equal Opportunity/Affirmative Action Employer.*

## NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Computer Research is seeking qualified applicants for the position of Assistant Program Director, Associate Program Director or Program Director for the Intelligence Systems Program and Theoretical Computer Science Program. The positions are in the excepted service and will be filled on either a permanent, rotator or temporary basis. The per annum salary for the permanent or temporary position as Assistant Program Director will be at GG/GH-13 level, \$36,327; Associate Program Director will be at GG/GH-14, \$42,928; and, Program Director will be at GG/GH-15, \$50,495. Normally the rotator candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF's Circular No. 167, Rotator Program. The salary range for the rotator position will be as follows: Assistant Program Director, \$30,000 to \$45,000; Associate Program Director, \$35,000 to \$55,000; and, Program Director, \$40,000 to \$66,400. Applicants should have a Ph.D. or equivalent experience and training in an appropriate field and successful scientific research experience beyond the Ph.D. as follows: Three to four years for the Assistant Program Director; four to six years for the Associate Program Director; and, six to eight years for the Program Director. A broad general knowledge of computer research and some administrative experience are also required. **Applicants should send resumes indicating current salary to: National Science Foundation, Personnel Administration Branch, Rm. 212, 1800 G St. NW., Washington, DC 20550. Attn: Catherine Handle. For further information contact Kent K. Curtis, Division Director, 202/357-9747 or by netmail to [curtis.nsf-cs@ARPANET](mailto:curtis.nsf-cs@ARPANET). Hearing impaired individuals should call 202/357-7492.** NSF is an Equal Opportunity Employer.

## NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Information Science and Technology is seeking qualified applicants for the position of Program Director for the Information Impact Program. The position is in the excepted service and will be filled on either a permanent, rotator or temporary basis. The per annum salary for the permanent or temporary position will be at GH-15 level, \$50,495. Normally, the rotator candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF's Circular No. 167, Rotator Program. The salary range for the rotator position is \$40,000 to \$66,400. Responsibilities include all aspects of proposal development, review and evaluation, grants and program administration, and representation of Information Science within the Foundation and to the research community. Applicants should have a Ph.D. or equivalent experience in behavioral, social or information sciences with emphasis on information systems, technology, processes, economics of information, and, in addition, 6 to 8 years of successful scientific research experience beyond the Ph.D. A broad, general understanding of current research in information science and some administrative experience is desired. **Applicants should send resumes indicating current salary to: National Science Foundation, Personnel Administration Branch, 1800 G St. NW., Washington, DC 20550. Attn: Catherine Handle. When applying for the permanent position indicate #EX 85-12S, in the cover letter and when applying for the rotator/temporary position indicate #EX 85-13S. For further information call Dr. Charles N. Brownstein (202) 357-9572. Hearing impaired individuals should call 202/357-7492.** NSF is an Equal Opportunity Employer.

## CARDIOVASCULAR PHARMACOLOGIST

**Ph.D. Level**

BURROUGHS WELLCOME CO., an innovative pharmaceutical company located in the Research Triangle Park, N.C., and having close research contact with 3 major universities, is seeking a Cardiovascular Pharmacologist to initiate a strong research and drug development program in the area of myocardial ischemia.

Requirements are a Ph.D. or equivalent in Pharmacology or Physiology with at least 1 year experience in the area of cardiovascular research related to cardiac function. Must have experience and training in experimental myocardial infarction models and a broad knowledge of cardiac, coronary and cardiovascular physiology and pharmacology. A record of professional achievement, the ability to work with a scientific team, and the ability to communicate scientific work orally and in writing are needed.

BURROUGHS WELLCOME CO., offers a competitive salary, a comprehensive company-paid benefit package and a challenging environment in which to apply your professional capabilities.

Qualified Minority, Female, Veteran and Handicapped individuals are encouraged to apply.

To apply, forward a curriculum vitae with salary requirements to:

**Employment Supervisor  
Position #846**

**BURROUGHS WELLCOME CO.**

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Action  
Employer



3030 Cornwallis  
Road  
Research Triangle  
Park, NC 27709

**Wellcome**

## NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Social and Economic Science is seeking qualified applicants for two (2) positions as Program Director and Associate Program Director for Sociology. The positions are excepted from the competitive civil service and will be filled on a one- or two-year rotational or temporary basis. The per annum salary for the temporary positions are: Program Director, GH-15, \$50,495 and Associate Program Director, GG-14, \$42,928. Normally, the rotator candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF's Circular No. 167, Rotator Program. The salary range for the rotator Program Director is from \$40,000 to \$66,400, and for the Associate Program Director, \$35,000 to \$55,000. Applicants should have a Ph.D. in Sociology or equivalent experience. In addition, for the Program Director 6 to 8 years of successful scientific research experience in sociology or a closely related field is required and for the Associate Program Director 4 to 6 years is the requirement. A broad, general understanding of current sociological research is required and some administrative experience is desirable. Responsibilities include all aspects of proposal development, review and evaluation, grants and program administration, and representation of Sociology within the Foundation and to the research community. **Applicants should submit a resume no later than February 1, 1985 for the Program Director vacancy and April 15, 1985 for the Associate Program Director vacancy to the National Science Foundation, Personnel Administration Branch, Rm. 212, 1800 G St. NW., Washington, DC 20550. Attn: Mrs. Catherine Handle, EX 85-10S. For further information contact Dr. Joanne Miller (202) 357-7802.** NSF is an Equal Opportunity Employer.

## Pesticide Residue Chemist

American Cyanamid Company, a leading manufacturer of agricultural chemicals, invites applications for a PhD level position in the Metabolism & Residue Research Section of the Agricultural Research Division, Princeton, New Jersey. As part of a multidisciplinary team, the successful applicant will work closely with metabolism chemists to develop analytical methods for residues of new products and metabolites in various agricultural commodities and environmental samples, conduct analyses of field samples, and write appropriate technical reports to support government registration.

Qualified candidates must possess a PhD in Analytical or Biological Chemistry with 0-2 years' experience in trace analysis research. Proficiency in GC and HPLC is essential, as are excellent oral and written communications skills.

We offer very competitive compensation, a comprehensive benefits program and a research environment conducive to professional growth. Please forward your resume with salary requirements, in confidence, to the Employment Office.



**American Cyanamid Company**

Agricultural Research Division  
P.O. Box 400  
Princeton, New Jersey 08540  
An Equal Opportunity Employer M/F/H  
No agencies please.

## POSITIONS OPEN

### CHAIRMAN OF PHARMACOLOGY

Applications are being accepted for the position of chairman of pharmacology at the University of Pittsburgh School of Medicine. This endowed chair requires an established investigator (M.D., M.D.-Ph.D., or Ph.D.) of national reputation with a strong commitment to medical and graduate student teaching as well as an appreciation of clinical pharmacology. Adequate space and funding for the recruitment of new faculty members is available. Inquiries will be held in strict confidence.

Submit curriculum vitae and bibliography to:

Thomas J. Gill, III, M.D.  
Chairman, Pharmacology Search Committee  
University of Pittsburgh School of Medicine  
Department of Pathology  
716 Scaife Hall  
Pittsburgh, Pa. 15261

Closing date: 31 March 1985.

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

**CHEMICAL ENGINEERING, WEST VIRGINIA UNIVERSITY.** We are seeking faculty candidates for a tenure-track faculty position for the 1985-1986 academic year. We are especially interested in candidates with research interests in biochemical separations. We will also consider applicants from closely related fields such as applied microbiology or biochemistry if they are capable of participating in our undergraduate and graduate instructional programs. The candidates must have an earned Ph.D. Candidates should have a strong commitment to research, scholarly and professional activity, as well as undergraduate and graduate education. While we prefer to make the appointment at the assistant professor level, we will consider exceptionally well-qualified candidates at a higher rank. Please send a résumé and a list of at least three references or nominations by 1 March 1985 to: **Dr. Joseph D. Henry, Jr., Professor and Chairman, Department of Chemical Engineering, P.O. Box 6101, West Virginia University, Morgantown, West Virginia 26506-6101.** *West Virginia University is an Equal Opportunity Employer.*

**CLINICAL ENGINEER, ANESTHESIOLOGY.** Medical College of Virginia/Virginia Commonwealth University. Bachelor's degree in engineering, background in design/maintenance of electronic monitoring equipment in medicine, familiarity with anesthetic gas and respiratory equipment, to work with anesthesiologists in maintenance, repair and development of anesthesia devices and systems. Computer experience desirable. Application deadline: 25 January 1985. Send curriculum vitae to: **Dr. R. L. Keenan, MCV Box 695, Richmond, Va. 23298.** *An Affirmative Action/Equal Opportunity Employer.*

Tenure-track position (assistant professors) for a **COMPARATIVE VERTEBRATE ANATOMIST, CELL AND MOLECULAR BIOLOGIST, and IMMUNOLOGIST** will be available starting 1 August 1985. Applicants are required to have Ph.D., teaching and research experience, and develop research program in discipline. Applications should be sent to: **Dr. Franklin R. Ampy, Acting Chairman, Department of Zoology, Howard University, 415 College Street, NW, Washington, D.C. 20059.**

**Continuing Medical Education PROGRAM COORDINATOR.** Salary: \$1955 to \$2531 per month. B.S./M.S./Ph.D. with interest and knowledge to develop postgraduate seminars and symposia with CME credit. Must have initiative to organize meetings of scientific value. Work in coordination with the associate dean for academic programs. Direct inquiries with curriculum vitae to: **Don McGary, Charles R. Drew Postgraduate Medical School, 1621 East 120 Street, Los Angeles, Calif. 90059.**

### DIRECTOR, MEDICAL TECHNOLOGY PROGRAM, BOWLING GREEN STATE UNIVERSITY, OHIO

Tenure-track, 12-month position. Responsible for overall administration of an accredited university-based program and some teaching. Ph.D. or equivalent, MT(ASCP) or equivalent required. Experience in clinical teaching and administrative settings with some background in research preferred. Salary commensurate with experience. Submit letter of application, résumé, and three letters of reference by 15 February to: **Dr. Clyde Willis, Dean, College of Health and Community Services, Bowling Green State University, Bowling Green, Ohio 43403.**

## POSITIONS OPEN

**DEVELOPMENTAL BIOLOGIST**—Tenure-track position open fall 1985 for assistant professor. Candidates must have Ph.D., be committed to undergraduate teaching, be able to develop a course in experimental developmental biology as well as a research program that involves undergraduates, and have an interest in teaching introductory biology. Send résumé and three letters of recommendation to: **Dr. Patricia S. Brown, Head, Department of Biology, Siena College, Loudonville (Albany), N.Y. 12211.**

### Director Johnson Research Foundation University of Pennsylvania

The School of Medicine of the University of Pennsylvania invites nominations and applications for the directorship of the Johnson Research Foundation. An international leader in the development and application of biophysical approaches to biomedical research is sought to direct the future program of this distinguished research unit. Nominations, applications, and requests for additional information should be addressed to: **Dr. Albert I. Winegrad, Chairman, Johnson Research Foundation Search Committee, Cox Institute, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania 19104.** *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

### ECOLOGIST

Ph.D.-granting department invites applications for a tenure-track assistant professorship. The position is for a quantitative population or community ecologist with substantial field experience. Applicants should have research expertise with vascular plants. Postdoctoral experience is preferred. Duties include teaching, supervision of graduate students and conducting a rigorous, extramurally funded research program. Send résumé, reprints, research plan, and names of four references to: **Dr. Rex Lowe, Ecology Search Committee, Department of Biological Sciences, Bowling Green State University, Bowling Green, Ohio 43403,** by 18 February 1985. *An Equal Opportunity/Affirmative Action Employer.* This is an anticipated position.

### ELECTRON MICROSCOPIST

**STAFF APPOINTMENT:** The Biology Department of Hamilton College seeks an electron microscopist to maintain the department's transmission electron microscope, participate in research with students and faculty members of biology and other sciences departments, and teach a one-semester course in electron microscopy techniques. It is expected that the successful candidate will have a master's degree. Independent research is encouraged. The purchase of a scanning electron microscope by the department is anticipated in the next year and it is expected that the candidate will have expertise on and will be able to maintain the scanning electron microscope as well. Applications should be received by 4 February 1985 and should include curriculum vitae, transcripts, and the names of three references. Send résumés to: **Professor Tom Brady, Chairman, Biology Department, Hamilton College, Clinton, N.Y. 13323.**

*Hamilton College is an Equal Opportunity Employer. Women and members of minority groups are strongly encouraged to apply.*

### SENIOR FACULTY POSITION

Ph.D.-granting department invites applications for a position in microbiology. The successful candidate will be expected to maintain an extramurally funded research program in an area such as gene expression or genome organization, molecular genetics/biotechnology, or microbial applications to agriculture. Other duties include teaching and supervision of graduate student research. A well established scientist eligible for consideration at advanced rank is preferred; however, less experienced candidates will also be considered. Send résumé, recent reprints, research plan, and names of four references by 18 February 1985 to: **Dr. Doris Beck, Microbiology Search Committee, Department of Biological Sciences, Bowling Green State University, Bowling Green, Ohio 43403.** *An Equal Opportunity/Affirmative Action Employer.* This is an anticipated position.

## POSITIONS OPEN

**DIRECTOR,** National Severe Storms Laboratory: The Environmental Research Laboratories, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce in Norman, Oklahoma, is seeking applicants for a scientific manager to serve as director, National Severe Storms Laboratory. The director conceives, implements, and evaluates research programs on severe local storms involving tornados, hail, lightning, and local floods. This involves extensive inter- and intra-agency coordination as well as the direction of a 40-member staff engaged in research activities. Position is Career Reserved in the Senior Executive Service. Salary range: ES-1 to ES-6: \$59,223 to \$69,900 per annum, negotiable based on experience, scientific achievement, and technical/managerial qualifications. **QUALIFICATIONS:** Knowledge of theory and state-of-the-art in a combination of disciplines (meteorology, mathematics, remote sensing techniques, hydrology, and fluid dynamics) to design, direct, and evaluate interdisciplinary research programs. Competence in the scientific management of theoretical and experimental research studies of a large-scale nature. Personal research in meteorology. Executive competence in broad areas of administration such as program planning and evaluation, multigroup coordination, resource acquisition and administration, organizational representation, and human resource utilization including EEO. **TO APPLY:** Interested persons should contact: **B. J. Peterson, NOAA/MASC, Personnel Division, 325 Broadway, Boulder, Colo. 80303; telephone: (303) 497-5780 or FTS 320-5780, for application forms.** Reference: Vac MASC/NOAA 84-300. Position Announcement closes 15 February 1985.

The Transition Zone Horticultural Institute (TZHI) is inviting applications for **EXECUTIVE DIRECTOR.** We seek a person with an academic background in plant science with administrative experience and an interest in ecological horticulture. Studies involving use of native plants for food, ornamentation, windbreaks, wildlife habitats, and the perpetuation of rare and endangered species are encouraged. Closing date is 15 April 1985. Send application, including curriculum vitae and three letters of recommendation, to: **TZHI Search Committee, P.O. Box 670, Flagstaff, Ariz. 86002.**

**FACULTY APPOINTMENT**—The Department of Pharmacology at Duke University is seeking applicants for a faculty position. The applicant should hold the M.D. or Ph.D. degree and have a record of productive postdoctoral research. All areas of biological science relevant to pharmacology will be considered. Candidates are expected to participate in the teaching activities of the department and to develop an independent research program. Send curriculum vitae, names of three individuals for references, and brief description of proposed research to: **Dr. Norman Kirshner, Department of Pharmacology, Duke University Medical Center, Durham, N.C. 27710.** *Duke University is an Affirmative Action/Equal Opportunity Employer.*

**FACULTY OPENING**—The Division of Applied Mechanics, Department of Mechanical Engineering, Stanford University, invites applications for a position at the **assistant professor** level. Desired are applicants with the highest capability for research and graduate level teaching in the areas of fundamental continuum mechanics, inelasticity and computational solid mechanics. A Ph.D. is required. Send résumé, transcripts, reprints of selected papers, and names of three referees to: **Professor Thomas J. R. Hughes, Chairman of the Division of Applied Mechanics, Stanford University, Stanford, Calif. 94305.** *Stanford University is an Equal Opportunity/Affirmative Action Employer.*

### FACULTY

**PHYSICS:** Full-time position available fall 1985 with responsibilities which include teaching calculus-based physics for engineering students and other assigned courses at the introductory levels of physics.

Minimum qualifications: master's degree in physics and 1 year of full-time teaching experience (or equivalent). Preferred qualifications: Ph.D. in physics, degree in mathematics, engineering, or related field, 2 years of full-time teaching experience in higher education.

Send letter of application, detailed résumé, and supporting materials by 15 February to: **LAKE-LAND COMMUNITY COLLEGE, Personnel Division, Mentor, Ohio 44060.** *An Affirmative Action/Equal Opportunity Employer.*



# NIOSH ANNOUNCES RESEARCH AWARDS FOR PH.D. & M.D. SCIENTISTS!



The National Institute for Occupational Safety and Health announces outstanding opportunities for research in

- applied psychology • ergonomics
- bioacoustics • health physics

The National Research Council in cooperation with the National Institute for Occupational Safety and Health will offer competitive research awards in 1985 for independent scientific research. Recipients will be free to work on problems of their own choice as guest investigators at NIOSH. This program is open to experienced senior scientists only. Stipend is determined on an individual basis and will be comparable to that received in similar government and academic positions. Relocation reimbursement and funds for professional travel on tenure are available, and a health insurance program is offered.

For further information and application materials please write to:

**Dr. Janet C. Haartz**  
NIOSH/Division of Biomedical and Behavioral Sciences  
4676 Columbia Parkway  
Cincinnati, Ohio 45226

**1985 Deadlines for application are January 15, April 15 and August 15.**

## Postdoctoral Scientist/ Veterinary Immunology

The Department of Immunology of SmithKline & French Laboratories in collaboration with Norden Laboratories, Lincoln, Nebraska is seeking a Postdoctoral Scientist to work in an environment designed to encourage innovative research, personal and professional growth. The postdoctoral appointment will be for two years at SKF, Philadelphia.

The successful candidate will:

- Develop mouse monoclonal antibodies (MAB) to Veterinary vaccines.
- Determine epitope specificity of MAB using immunologic and biochemical techniques.
- Characterize epitope specificity of vaccinated vs. infected animals.
- Establish affinity chromatography techniques for preparation of vaccine antigens.
- Develop diagnostic tests.
- Adapt transfection technology to immortalize B-cells of hyperimmune animals of Veterinary importance.
- Interact closely with scientists from Norden Laboratories in Lincoln, Nebraska.

Candidates are required to have:

- A Ph.D. in Virology, Cell Biology, Immunology, or Veterinary Sciences with 0 to 2 years postdoctoral experience.
- Experience in protein purification desired but not required.
- Effective oral and written communication skills.
- Publication record commensurate with level of training.
- Ability to begin position by March 1, 1985.

We offer an excellent salary, benefits and relocation package. Please forward your C.V. to Connie Soucie, Mgr., Employee Selection & Development, Norden Laboratories, P.O. Box 80809, Lincoln, NE 68501.

We are an Equal Opportunity Employer, M/F/H/V



## NATURAL RESOURCES DIRECTOR

Collier County Government is seeking an experienced Environmentalist to direct the natural resources department. Salary range is \$31,888-\$44,643 with excellent fringe benefits. The position is responsible for directing and implementing the natural resources management element of Collier County's comprehensive plan. Duties include preparing environmental assessment plans, and advising county agencies on environmental policies.

The applicant must be degreed in environmental science or a related field and have 2 years experience in environmental policy formulation, or an equivalent combination of training and experience.

Please send resume with salary history and requirements to Director of Personnel.

**COLLIER COUNTY GOVERNMENT CENTER**  
3301 E. Tamiami Trail  
Naples, FL 33962

Collier County is an Equal Opportunity Employer

## OHIO EMINENT SCHOLAR OF MOLECULAR GENETICS THE COLLEGE OF BIOLOGICAL SCIENCES THE OHIO STATE UNIVERSITY

The College of Biological Sciences of the Ohio State University seeks applicants for an endowed professorship in molecular genetics that has recently been funded by the State of Ohio.

Applicants must be recognized leaders in their research specialty with proven records of excellence in training graduate and postdoctoral students. The successful candidate will be expected to maintain an active research program in an area of molecular genetics, preferably with a eukaryotic system. The incumbent will be expected to provide intellectual leadership to the expanding molecular genetics group at the Ohio State University but no administrative duties are associated with the position.

The successful candidate will hold a tenured academic appointment in an appropriate department of the College of Biological Sciences. Ample laboratory and office space will be provided in the modern Biological Sciences Building which houses most faculty in molecular genetics and related areas. A generous allocation of funds will be provided to design and equip the research space. In addition a yearly allocation will be provided to the Eminent Scholar for use in research activities at the Scholar's discretion. The salary for this nine-month position is negotiable, depending on the qualifications of the applicant.

Curriculum vitae should be sent to:

**Dr. Philip S. Perlman**  
The Ohio State University  
621 Biological Sciences Building  
484 W. 12th Avenue  
Columbus, Ohio 43210.

Inquiries regarding existing programs and faculty in molecular genetics and related fields at OSU and about current plans to expand them are encouraged and should be sent to the same address.

The closing date for receipt of applications is February 15, 1985 or until a suitable candidate is identified.

The Ohio State University is an Affirmative Action/Equal Opportunity Employer.

## Research

## Pharmaceutical Research Opportunities



American Critical Care, a high growth pharmaceutical company specializing in cardiovascular drugs, has two immediate openings for Research Personnel:

### Cardiovascular Pharmacology

The person selected for this position will be responsible for the evaluation of the in vitro and in vivo pharmacologic actions of various research compounds including computerized data analysis and preparation of written reports. Minimum requirements include a BS in a biological science with at least 1-2 years of lab experience in pharmacology/physiology preferably in the antiarrhythmic area. (Dept. CP)

### Toxicology

This position requires conducting preclinical toxicology studies to evaluate the safety of potential pharmaceutical agents. Qualified candidates must have a Bachelor's degree and 2-4 years of experience in toxicology, preferably with exposure to GLP's and some computer experience. (Dept. T)

Our R&D facility is located in a beautiful park setting in the far north suburbs of Chicago. The work environment is progressive and fast paced and the compensation package is excellent. For confidential consideration, please send resume, including salary history, and specify your area of interest by indicating the department name/code:

Personnel Manager  
(Dept. CP or Dept. T)



### American Critical Care

Division of  
American Hospital Supply Corporation  
1600 Waukegan Road  
McGaw Park IL USA 60085

We are an equal opportunity employer m/f

## POSITIONS OPEN

**EXERCISE SCIENTIST:** Tenure-track position, at Alma College, selective undergraduate program in exercise and health science; doctorate, teaching experience, active research, expertise in teaching functional human anatomy, biomechanics and such related areas as human physiology, exercise physiology or health are required. ACSM certification and potential for leadership are desirable.

Send applications, credentials, and three recommendations to: **Dr. Charles Gray, Chairman, Exercise and Health Science, Alma College, Alma, Mich. 48801**, before 6 February 1985. *An Equal Opportunity Employer.*

### HARVARD UNIVERSITY EXPERIMENTAL ANIMAL ECOLOGIST

The Department of Organismic and Evolutionary Biology is seeking to fill a nontenured professorship in the area of experimental animal ecology at the population or community level, working in any habitat. Applications are encouraged from individuals with a strong experimental focus in research, but combined with a solid background in ecological theory. The incumbent will be expected to develop a strong teaching and research program involving undergraduate and graduate students. Although the position is available beginning 1 July 1985, the starting date could be delayed to permit the completion of a postdoctoral commitment.

Those interested in applying should send a letter describing teaching/research experience and future plans, curriculum vitae, copies of representative publications, and the names of three individuals willing to serve as sources of recommendation to: **Lisa Workman, Department of Organismic and Evolutionary Biology, Harvard University, 26 Oxford Street, Cambridge, Massachusetts 02138**, no later than 15 February 1985.

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

**FACULTY POSITION**, Harvard Medical School, Beth Israel Hospital, for Ph.D. with background in molecular genetics or molecular pharmacology, whose broad interests are in mutagenesis, gene rearrangement, and DNA repair. Apply or inquire to: **Dr. Lowell Schnipper, Beth Israel Hospital-Harvard Medical School, 330 Brookline Avenue, Boston, Mass. 00215**. *The Beth Israel Hospital is an Equal Opportunity Employer.*

Tenure-track **FACULTY POSITION IN BIOLOGY** to begin fall 1985. Ph.D. and teaching experience required; postdoctoral research experience preferred. Duties: active research program and teaching of introductory and specialty courses. Animal physiologist preferred; other strong candidates may also apply. Send résumé and three reference letters by 31 January to: **Marvin Wasserman, Department of Biology, Queens College, Flushing, N.Y. 11367**. *Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITION FACULTY OF PHARMACY UNIVERSITY OF TORONTO

Applications are invited for a tenure or tenure-stream appointment; subject to budgetary approval, at the level of assistant or associate professor and commencing immediately. Candidates must hold the Ph.D. degree in chemistry or molecular biology and have at least 2 years of postdoctoral research training in the field of chemical mechanisms of drug toxicity. The candidate also should hold the M.D. degree, be Board-certified in internal medicine, and be eligible for a cross-appointment in the Department of Medicine. It is expected that the candidate will have demonstrated an ability to function as an independent investigator, as evidenced by grants and publications and to supervise graduate students. The candidate will be expected to develop an independent programme of research, to supervise graduate students, to teach toxicology and drug metabolism at the graduate and undergraduate levels, and to contribute to a collaborative programme of clinical research in toxicology with the Department of Medicine. It is expected that the successful applicant will develop collaborative associations with existing investigators in the faculty and elsewhere within the University. *In accordance with Canadian immigration requirements, this advertisement is directed, in the first instance, to Canadian citizens and permanent residents.* Send curriculum vitae, the names of three referees, and a brief outline of future research by 30 January 1985 to: **Dean, Faculty of Pharmacy, University of Toronto, 19 Russell Street, Toronto, Ontario, Canada M5S 1A1**.

## POSITIONS OPEN

### FACULTY AND STAFF POSITIONS IN MARINE AFFAIRS

The Division of Marine Affairs of the Rosenstiel School of Marine and Atmospheric Science at the University of Miami seeks applicants for research faculty and project directors positions to become available in 1985. The division endeavors to develop research, training and technology-transfer programs that emphasize integrated coastal resources management and policy in tropical Latin American and tropical Asia. Faculty positions are located in Miami, but international travel is required. Project directors must be willing to accept long-term overseas assignments. All disciplines relevant to coastal resources and development will be considered. Preference will be given to self-motivated applicants who can demonstrate the potential to manage projects and develop a viable and coherent program in a selected country or region. Rank, salary, benefits, overseas allowances, and beginning dates are open to negotiations. Qualified applicants should submit a complete résumé, names and addresses of five references, and a detailed statement of interest to: **Dr. Francis Williams, Search Committee Chairman, Division of Marine Affairs, Rosenstiel School of Marine and Atmospheric Science, 4600 Rickenbacker Causeway, Miami, Florida 33149**. *The University of Miami is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION HARVARD MEDICAL SCHOOL

Berman-Gund Laboratory for the Study of Retinal Degenerations seeks a retinal cell biologist with expertise in electron microscopy and immunocytochemistry. Ph.D. with postdoctoral experience required. Independent investigator desired. Laboratory fully equipped. Program includes morphometric analyses on postmortem donor eyes with retinal degenerations with aid of full-time senior technician. Opportunity to work with other scientists in multidisciplinary effort. Academic rank commensurate with accomplishments. Send curriculum vitae and names of three references to: **Dr. E. L. Berson, Director, Berman-Gund Laboratory, Massachusetts Eye and Ear Infirmary, 243 Charles Street, Boston, Mass. 02114**. *An Equal Opportunity/Affirmative Action Employer.*

### National Institutes of Health National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) Immunochemist

An **IMMUNOCHEMIST POSTDOCTORAL RESEARCH** position is available to study the membrane and cytoplasmic antigens of glioma-derived tissue culture lines. The presence of the antigenic proteins, their induction by differentiation agents, and their characterization are to be studied. A background in tissue culture and cell biology, as well as gel electrophoresis, is desirable.

Collaboration with other immunologists, molecular biologists, and tumor biochemists is essential. Immunochemistry laboratory facilities are available, as well as microcinematography, fluorescent microscopy, quantitative morphometrics, image analysis and processing, and SEM-EDX (microanalysis), to study the antigenic characteristics of brain tumors.

This position will be in the Surgical Neurology Branch, NINCDS, National Institutes for Health, Public Health Service. Salary range for this staff fellowship position is \$17,000 to \$35,467 per year, commensurate with experience. Send curriculum vitae and three references to: **Janet E. Follin, Personnel Department, NINCDS, National Institutes of Health, 9000 Rockville Pike, Building 31, Room 8A23, Bethesda, Md. 20205**. *NIH is an Equal Opportunity Employer.* (For more information, telephone: Ms. Follin on 301-496-6334.)

### INSTRUCTOR/ASSISTANT PROFESSOR

Faculty position (nontenure-track) in Department of Physiology and Biophysics available before 1 July 1985 to conduct research on neural regeneration in the olfactory system. Ph.D. or M.D. in neurophysiology or a related field required. Individuals with expertise in neuroanatomical and/or electrophysiological techniques preferred. Opportunity to teach in the graduate and professional schools. Salary will depend on experience. Support available for up to 4 years. Send curriculum vitae and names of three references to: **Dr. Richard M. Costanzo, Department of Physiology and Biophysics, Medical College of Virginia, Box 551 MCV Station, Richmond, Va. 23298**. *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### FACULTY POSITIONS IN MECHANICAL ENGINEERING

**THE DEPARTMENT OF MECHANICAL ENGINEERING, UNIVERSITY OF ROCHESTER**, invites applications for two tenure-track positions. We are seeking experimentalists with skills and interests in any of the following areas: fluid dynamics, materials, or nuclear and thermal sciences. Duties normally include the teaching of one graduate or undergraduate course per semester, development of an active research program, and supervision of graduate student. Applicants should have a doctorate and one engineering degree. The appointment will be at the level of assistant or associate professor. Send curriculum vitae and names of three references to: **Professor Roger Gans, Chairman, Department of Mechanical Engineering, University of Rochester, Rochester, New York 14627**. *The University of Rochester is an Affirmative Action/Equal Opportunity Employer.*

### BOSTON UNIVERSITY SCHOOL OF MEDICINE

The Department of Anatomy has a vacancy available 1 July 1985 for a **FACULTY MEMBER** at the assistant professor level. Applicants should be able to participate fully in teaching gross anatomy to medical, dental, and graduate students and should preferably have research interest in cell biology. Applicants with active research programs will be considered for appointments at the level of associate professor. Interested individuals should submit copies of their curriculum vitae, a brief statement of research interests, copies of relevant publications, and the names of three references to: **Dr. Alan Peters, Chairman and Waterhouse Professor, Department of Anatomy, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118**. *Boston University is an Affirmative Action/Equal Opportunity Employer, M/F.*

Applications and nominations are invited for **HEAD, DEPARTMENT OF POULTRY SCIENCE**, and **CHAIRMAN of the DIVISION OF POULTRY SCIENCE** in the College of Agriculture, The University of Georgia. The Ph.D. degree in poultry science or related discipline(s) and demonstrated teaching, research, and service accomplishments are required. Salary is competitive and commensurate with qualifications and experience. Applicants should send résumé and names and addresses of four individuals who can be contacted as references. Applications must be received by 1 March 1985. Position is available 1 April 1985. Send applications and nominations to: **Dr. O. J. Fletcher, Department of Avian Medicine, Poultry Disease Research Center, 953 College Station Road, Athens, Ga. 30605**. *The University of Georgia is an Equal Opportunity/Affirmative Action Institution.*

**HEAD—DEPARTMENT OF PLANT SCIENCE.** The College of Agriculture, University of Wyoming, invites nomination/applications for the headship, Department of Plant Science. The College of Agriculture is seeking an enthusiastic and progressive individual with national/international stature to stimulate and lead the department. The head acts primarily as an administrator but may engage in teaching, research and/or extension according to personal preference. An earned Ph.D. in an appropriate life science is required along with at least 5 years of research, teaching, and/or extension activity. Administrative experience desirable. Application deadline is 15 February 1985 or until a suitable candidate is identified. Send letter of application, current résumé, and three letters of reference to: **S. E. Williams, Plant Science Head Search Committee, Plant Science Department, P.O. Box 3354, University Station, Laramie, Wyo. 82071**. Telephone: 307-766-2179. *An Equal Opportunity/Affirmative Action Employer.*

### JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE IMMUNOCHEMIST Allergy Research

Applications are invited from persons skilled in protein purification and analysis, who are interested in structure-function relationships pertaining to immunochemical and immunogenetic studies of human immune response to allergens. Knowledge of recombinant DNA technology is an advantage. Relevant postdoctoral training and publications essential. Applicants should have demonstrated a flair for innovative, independent research. Faculty position (junior level) and salary negotiable. Applications (including curriculum vitae and names of three referees) to: **Dr. David G. Marsh, Johns Hopkins University School of Medicine, at the Good Samaritan Hospital, Baltimore, Md. 21239**. *Affirmative Action/Equal Opportunity Employer.*

## UNIVERSITY OF NEW BRUNSWICK DEPARTMENT OF BIOLOGY

The Department of Biology at the University of New Brunswick, Fredericton campus, has a position for a **botanist** who will be required to teach **elementary genetics**, to contribute to teaching in the botany program and to carry out a vigorous research program. A candidate is sought who will strengthen existing areas of research and teaching in the department.

Assistant professor, 2-year term appointment possibly leading to tenure-track, to start 1 July 1985 or sooner, by arrangement. *This position has budgetary approval.*

Apply, giving full curriculum vitae, a letter indicating the nature of a proposed research program, and a statement indicating how the candidate would contribute to strengthening existing areas of the departmental program. Please provide the names of three academic referees to:

**Dr. M. D. B. Burt**  
Chairman, Department of Biology  
University of New Brunswick  
Bag Service 45111

Fredericton, New Brunswick, Canada, E3B 6E1

Closing date: As soon as an acceptable candidate is identified.

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

*An Equal Opportunity Employer*



UNIVERSITY OF NEW BRUNSWICK

## Research Scientist Renal Pharmacology

G.D. Searle Research & Development Division has an outstanding opportunity for a Renal Pharmacologist to conduct studies and supervise a research unit to discover novel antihypertensive diuretics.

The individual selected for this position will have an important role in the identification of agents acting on the renal system as they relate to sodium and water excretion, renal blood flow and regulation of blood pressure. Responsibilities will also include studies on the mechanism of action of drugs and the development of state-of-the-art methods including isolated perfused kidney systems. The position requires supervision of the antihypertensive and diuretic screening procedures.

Qualifications include a Ph.D. degree and postdoctoral training in Renal Pharmacology or a closely related discipline. Two-four years appropriate industrial experience is also required. Supervisory experience, strong interpersonal skills, and a proven track record of success are desired.

In return for your expertise, Searle R&D offers a salary commensurate with experience, comprehensive benefits including relocation assistance, and the opportunity to develop a productive cardiovascular-renal drug discovery program. To apply in strict confidence, please submit resume including publication list to:

Sheila Copeland, #7BF-9  
Sr. Employment Counselor  
Searle R&D Division  
4901 Searle Pkwy.  
Skokie, IL 60077

Equal Opportunity Employer M/F/H

**SEARLE**

11 JANUARY 1985

## National Synchrotron Light Source

### Invites Proposals from Insertion Device Teams

As a result of an NSLS expansion project, several undulator and wiggler devices will be developed and made available for use by the scientific community. Some of the beam lines on these devices will be designed and instrumented by Insertion Device Teams (IDTs) with their own funds. IDTs will be multi-institutional with membership based on the common interests of the individual scientists making up each team.

The NSLS is currently accepting statements of interest from potential IDTs for branch lines on the NSLS Superconducting Wiggler on Port X17 of the 2.5 GeV storage ring. These lines will have two horizontal milliradians of wiggler radiation with a critical energy of 24 KeV.

All correspondence should be sent to:

**Dr. Martin Blume**  
National Synchrotron Light Source  
Building 510F  
Brookhaven National Laboratory  
Associated Universities, Inc.  
Upton, L.I., New York 11973



Brookhaven  
National Laboratory  
Associated Universities, Inc.

## VETERINARY PATHOLOGIST

Travenol Laboratories, a recognized leader in the health care industry, has an immediate need for a Veterinary Pathologist. This individual will have managerial responsibilities for the Histology Laboratory and the Animal Resources section.

Additional responsibilities are the histopathologic evaluation of slides and serving as a pathology study monitor for product safety and efficacy studies. As manager of the Animal Resources section, the pathologist will be expected to develop a long-term plan to improve the quality of services provided to the scientific staff.

Qualified candidates will have a DVM degree with advanced training in pathology and 3-7 years of research experience in pathology.

Travenol's focus on R&D provides a challenging career environment with excellent salaries and full benefits including profit sharing, employee stock purchase plan and relocation assistance. For prompt, confidential consideration, send your resume with salary history to: Vern Von Feldt.



Travenol Laboratories, Inc.  
Dept. FQ  
6301 Lincoln Avenue  
Morton Grove, IL 60053

Equal Opportunity Employer

## POSITIONS OPEN

### THE UNIVERSITY OF CALIFORNIA, SAN FRANCISCO, SCHOOL OF MEDICINE

Is seeking qualified individuals with training and experience in molecular immunology and immunogenetics for faculty positions in the Department of Microbiology and Immunology, with joint appointments in the Cancer Research Institute. Successful applicants will occupy tenured or tenure-track positions, depending on level of experience and achievement. Responsibilities will include teaching immunology to professional health students and participation in the graduate program in immunology. Applications with curriculum vitae should be sent to: **Dr. Joel W. Goodman, Department of Microbiology and Immunology, S-412, University of California, San Francisco, California 94143.**

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

### FOREST BIOTECHNOLOGY SCIENTIST

Westvaco is a leading manufacturer of paper and packaging. We are searching for an exceptional individual to work as a key member of a multidisciplinary biotechnology team.

Although this person will be a Westvaco employee, he/she will be located at the Institute of Paper Chemistry (IPC) in Appleton, Wisconsin. The IPC has an existing active multidisciplinary research program directed towards the production of embryos and plantlets of loblolly pine and Douglas-fir by somatic embryogenesis and other forms of tissue culture. The purpose of this position is to enhance the IPC's research efforts in this area.

#### Qualifications:

- 1) Ph.D. or equivalent in plant physiology with a fundamental knowledge of in vitro and in vivo plant growth systems.
- 2) A demonstrated ability to conduct advanced biological research as a member of a multidisciplinary team.
- 3) Demonstrated research competence in specialty area.
- 4) Ability to accomplish agreed-upon project goals with little technical guidance.

Position available immediately. Salary commensurate with education and experience. Interested applicants should submit a résumé with a copy of all college transcripts and three letters of recommendation, as soon as possible, but no later than 28 February 1985, to: **D. S. Canavera, Westvaco Corporation, Box 1950, Summerville, S.C. 29484.**

### MOLECULAR BIOLOGIST/NEUROBIOLOGIST

**RESEARCH ASSOCIATE** position available February 1985 for a recent Ph.D., with experience in recombinant DNA technology, to join an ongoing study of the formation of synaptic contacts on sympathetic neurons during regeneration and development. He or she will have a major role in experiments designed to investigate the regulation of proteins associated with synapse function. Opportunity to learn functional and morphological approaches to neurobiological problems. Send curriculum vitae and names of three references to: **Dr. Lawrence M. Marshall, Department of Physiology 206H, University of North Carolina, Chapel Hill, N.C. 27514.** An Affirmative Action/Equal Opportunity Employer.

**MOLECULAR GENETICIST**—Crop Plants, University of Wisconsin (UW)—Madison. The Department of Agronomy is accepting applications for this tenure-track position, assistant professor level. Research (75 percent) will center on the structure, function, and regulation of plant genes in nuclear and/or cytoplasmic genomes at molecular and physiological levels in agronomic crop plants. Instruction (25 percent): Share the teaching of specialized departmental courses and eventually develop a course dealing with molecular technology in the improvement of agronomic crops. Research and communication linkages with departmental plant physiologists and plant breeders will be encouraged, as will campus-wide interactions as a member of the UW-Madison Biotechnology Center. Preference will be given to applicants with training and/or experience in plant breeding and genetics in addition to training in molecular genetics and cell biology. Postdoctoral experience is desired. Applicants should submit curriculum vitae and three letters of reference by 22 February 1985 to: **Dr. Robert A. Forsberg, Chairman, Department of Agronomy, University of Wisconsin-Madison, Madison, Wis. 53706.** An Equal Opportunity Employer.

## POSITIONS OPEN

**VALDOSTA STATE COLLEGE, Valdosta, Georgia. HEAD, DEPARTMENT OF BIOLOGY.** Valdosta State College is accepting applications for the position of head, Biology Department, a tenure-track, 12-month appointment carrying the rank of associate or full professor. Assignment includes 1/3 administration, 2/3 teaching. Position to be filled by 1 July 1985. Ph.D. in the life sciences required. Teaching and administrative experience preferred. An Affirmative Action/Equal Opportunity Employer. Send application, current résumé, transcripts, and names, addresses, and telephone numbers to three references to: **E. Edward Sheeley, Ph.D., Department of Biology, Valdosta State College, Valdosta, Ga. 31698.**

**INFORMATION SYSTEMS FACULTY:** Two tenure-track positions available September 1985 at Drexel University for candidates prepared to teach existing courses and to develop new courses and research projects in areas such as: information systems applications; expert systems; computer and communication networks; information management; human-computer interaction; social, political, and economic aspects of information.

Doctorate or equivalent required. Appointment at assistant or associate professor level with nationally competitive salary. Candidates should have strong interests in interdisciplinary research and in teaching at both graduate and undergraduate levels. Drexel University is a pioneer in mandatory undergraduate ownership of microcomputers.

Résumé should accompany application to: **Dr. Belver Griffith, Search Committee, College of Information Studies, Drexel University, Philadelphia, Pa. 19104. Telephone: 215-895-2488 or 895-2474.** Closing date: 15 February 1985. An Equal Opportunity/Affirmative Action Employer; applications from women and minorities especially desired.

**MICROBIOLOGIST: FACULTY POSITION.** The faculty of the Department of Biological Sciences, School of Sciences, **SOUTHERN ILLINOIS UNIVERSITY AT EDWARDSVILLE**, anticipates an appointment at the assistant professor level, available September 1985. Duties will include participation in teaching undergraduate microbiology courses, microbial genetics, or microbial physiology, and a graduate course in the area of the candidate's specialization. Candidates will be expected to carry out an active research program and to seek outside research funding. Qualifications include a doctoral degree in microbiology or a closely related area, and research or postdoctoral experience. Teaching experience will be considered valuable. Closing date for applications is 15 February 1985. Please submit curriculum vitae, three letters of recommendation, copies of recent publications, and a summary of future research plans to:

**Chairman, Microbiologist Search Committee  
Faculty of Biological Sciences  
Southern Illinois University at Edwardsville  
Edwardsville, Ill. 62026-1001**

Southern Illinois University at Edwardsville is located in a rural setting, 25 minutes from downtown St. Louis. The campus occupies 2,600 acres and has an enrollment of about 10,000 students. The Department of Biological Sciences has a faculty of 14 members and confers bachelor's and master's degrees. The Department of Biological Sciences is a unit of the School of Sciences and the faculty have the opportunity to interact with programs in the other natural sciences, and mathematics. As an Affirmative Action Employer, SIUE offers Equal Employment Opportunity without regard to race, color, creed or religion, age, sex, national origin, or handicap.

**MOLECULAR BIOLOGIST:** The School of Veterinary Medicine, Auburn University, invites applications for a position of molecular biologist or molecular microbiologist. Minimum requirements are a Ph.D., D.V.M., or M.D. and completion of a postdoctoral program in a reputable molecular biology laboratory or equivalent research experience. The candidate's research capabilities should be supported by publications in respected journals. Experience with recombinant DNA and monoclonal technology is desirable. Responsibilities include development of a research program in molecular biology development and teach a graduate level course in molecular biology and advise graduate students. Salary commensurate with qualifications and experience. Closing date is 15 February 1985, or until a suitable candidate is identified. Send applications, including résumé and three references, to: **Dr. S. D. Beckett, Office of Research, School of Veterinary Medicine, Auburn University, Auburn, Alabama 36849.** An Equal Opportunity Employer.

## POSITIONS OPEN

### INSTRUCTOR IN BOTANY

Anticipated for fall 1985. Ph.D. degree preferred and experience in teaching botanical subjects required. Duties include teaching in introductory biology and botany courses and coordinating introductory laboratories. Must demonstrate a commitment to undergraduate education and interest in developing new and innovative laboratory exercises. Send curriculum vitae, transcripts, and letters from three referees to: **Instructor Search Committee, Department of Botany, Louisiana State University (LSU), Baton Rouge, La. 70803.** Review of applications will begin 1 February 1985. Louisiana State University is an Equal Opportunity/Affirmative Action Employer.

**MICROBIOLOGIST**—U.S. Environmental Protection Agency job vacancy: Health Effects Research Laboratory, Cincinnati, Ohio. Requirements: U.S. citizenship, M.S. degree in microbiology, experience in environmental microbiology/working with experimental animals. Salary range: \$21,066 to \$27,348. Further information: **Nancy A. Foster, Personnel Management Division, U.S. Environmental Protection Agency, 26 West St. Clair Street, Cincinnati, Ohio 45268. Telephone: 513-684-7804.** Submit applications (SF-171, Personal Qualifications Statement) to: **N. A. Foster**, prior to 31 January 1985. Equal Opportunity Employer.

### MOLECULAR AND CELL BIOLOGY/ BIOCHEMISTRY/BIPHYSICS Postdoctoral Opportunities

Broad range of membrane research projects: (i) nature of lipid-protein interaction in membranes; membrane dynamics; (ii) membrane reconstitution; (iii) enzyme and protein chemistry; (iv) cloning and site specific mutagenesis of membrane proteins; (v) muscle physiology—Ca<sup>2+</sup> release mechanism in excitation-contraction coupling.

Send curriculum vitae, bibliography, three letters of recommendation, and short statement regarding career goals, interest, and experience to: **Professor S. Fleischer, Department of Molecular Biology, Vanderbilt University, Nashville, Tenn. 37235.**

*An Equal Opportunity/Affirmative Action Employer*

**MOLECULAR IMMUNOLOGIST.** The Department of Biology requests applications and nominations for a tenure-track position in molecular immunology at the assistant or associate professor level. The position requirements include the establishment of a strong, fundable research program in an area of immunology such as immunogenetics, development of the immune system, or related molecular biology area; the ability to teach upper-division and graduate courses in immunology; experience in one or more of the technologies of molecular biology such as hybridoma antibody production, recombinant DNA, or in vitro culture; the participation in a developing area of biotechnology; and a doctorate in an appropriate discipline. Postdoctoral research experience in immunology is strongly preferred. Applicants should submit letters of application, transcripts of all university work, the names of three references, and a description of their research program by 1 March 1985 to: **Dr. William K. Collin, Chairman, Department of Biology, California State University, Fresno, Calif. 93740.** The university is an Equal Opportunity Employer and encourages applications from qualified women, minorities, and individuals of other underrepresented groups.

**PHARMACOLOGIST**—Unusual and challenging opportunity for an individual with broad interests and experience in detection and evaluation of medicinally active compounds offered by well-known service organization whose pharmacology laboratory employing nearly 100 scientists and technicians is located near Taipei, Taiwan. Position requires permanent resident in Taiwan and ability to speak fluent Mandarin Chinese. Please contact: **Dr. M. H. Pindell, President, Panlabs, Inc., P.O. Box P, Sunapee, N.H. 03782.**

### PHOSPHONITIDES IN PHOTORECEPTORS

Postdoctoral positions are available in a laboratory studying transduction in photoreceptors. In particular, the involvement of phosphonitides is being investigated [for one example, *Nature* **311**, 160 (1984)]. Available 1 January 1985 or later. Salary commensurate with experience. Applicants with experience in: (i) phospholipid biochemistry or (ii) single cell electrophysiology are invited to send curriculum vitae and the names of three references to: **Professor Joel E. Brown, Department of Ophthalmology, Box 8096, Washington University School of Medicine, 660 South Euclid, St. Louis, Mo. 63110.**



## PREDOCTORAL FELLOWSHIPS IN BIOMEDICAL SCIENCES UNIVERSITY OF KENTUCKY MEDICAL CENTER

**GRADUATE FELLOWSHIPS** with competitive stipends are available in programs and departments listed below. Strong background in science and a sincere interest in an academic/research career are required. The individual graduate programs are related through coursework offerings and collaborative research projects. There are also collaborative research projects with the faculty of the College of Agriculture, College of Arts and Sciences, the Sanders-Brown Center on Aging and the Kentucky Tobacco and Health Research Institute. All graduate programs are administered through the Graduate School of the University of Kentucky. For more specific information write to or call collect the Director of Graduate Studies of the graduate program of interest.

### PROGRAMS AND DIRECTORS OF GRADUATE STUDY

**ANATOMY**—Major research areas include biology of aging; developmental biology; electro-biology; neurobiology including cortical development and plasticity, brain stem peptides, peripheral nervous system, neuroendocrinology; reproductive biology; respiratory biology. Techniques available—autoradiography, electron microscopy, fluorescence microscopy, histochemistry, immunohistochemistry, morphometrics, radioimmunoassay, stereotaxic surgery, tissue culture.  
H. H. Traurig (606) 233-5185

**BIOCHEMISTRY**—Departmental research interests in (a) nucleic acids and molecular biology; protein synthesis, DNA enzymes, messenger RNA, DNA, plant and fungal viruses, somatic cell genetics, and purine metabolism; (b) cell surfaces; inositol-containing phospholipids, glycoprotein biosynthesis, cell surfaces of parasites; and (c) enzymes and proteins; calmodulin and calcium-dependent regulatory systems, transition state enzyme inhibitors, enzyme kinetics, emphysema-related proteins. Fellowships range up to \$10,000 per year.  
M. S. Coleman (606) 233-5443

**MEDICAL MICROBIOLOGY AND IMMUNOLOGY**—Research programs are focused in (a) Immunology—immunobiology, immunogenetics, cellular immunology and neuroimmunology, (b) Molecular genetics—coordinated genetic and functional studies of viruses, bacteria and mammalian cells including gene regulation and chromosome mapping, (c) Cancer—DNA and RNA tumor viruses, regulation of cell mitosis, membrane biology, tumor cell progression, tumor immunology and (d) Pathogenesis—mechanisms of pathogenesis of viruses, bacteria and fungi.  
M. R. Steiner (606) 233-5462

**PHARMACOLOGY**—Faculty research interests are (a) neuropsychopharmacology of benzodiazepines, opioids, nicotine and hallucinogens with emphasis on their receptors and the relationship to problems of dependence, (b) toxicology with emphasis on drug metabolism and chemical carcinogenesis, (c) drug receptors and membrane carriers, (d) cardiovascular and respiratory pharmacology.  
J. W. Flesher (606) 233-5125

**PHYSIOLOGY AND BIOPHYSICS**—Research opportunities within a broad spectrum of traditional and innovative research areas: cardiovascular, endocrine, reproductive, renal, respiratory physiology, and neurophysiology; the physiology of aging; studies on the integration of living systems; and physiological correlates of behavior. The department collaborates with other disciplines to satisfy the special research interest of the student and provides the state-of-the-art research technology.  
C. E. Ott (606) 233-5348

**TOXICOLOGY**—Multidisciplinary program offering M.S. and Ph.D. degrees in toxicology. After completing a basic core curriculum, students may specialize in one or more of 20 subdisciplines such as: behavioral, biochemical, or genetic toxicology; equine, mammalian, or reproductive toxicology; aquatic, environmental or pesticide toxicology; immunotoxicology or neurotoxicology.  
W. Birge (606) 233-6305, 202 Medical Center, Annex #5

Students are eligible for out-of-state tuition waiver. Direct inquiries and requests for application materials to the Director of Graduate Studies, (Department of Interest), University of Kentucky Medical Center, Lexington, KY 40536.

An affirmative action/equal opportunity employer.

## PEPTIDE CHEMIST

The Merrell Dow Research Institute, Indianapolis Center, has an opening for an innovative scientist in its expanding peptide research group. We seek an individual to carry out the solid-phase synthesis of peptide and peptide related drugs.

The successful candidate will have a BS or MS degree and 1-4 years hands on expertise with a variety of solid support, cleavage techniques, and purification methods.

We offer professional growth and advancement in our modern, rapidly expanding research facility, a pleasant working environment in the north-west suburbs of Indianapolis, and a highly competitive salary and benefits package.

Please send your resume in confidence to:

Personnel Services Manager

Merrell Dow

**MERRELL DOW  
RESEARCH INSTITUTE**  
P.O. Box 68740  
Indianapolis, Indiana 46268

Equal Opportunity Employer M/F/H/V

## PHARMACOLOGISTS

Stuart Pharmaceuticals, a Division of ICI Americas Inc. and one of the nation's fastest-growing pharmaceutical companies, has the following openings:

**SR. RESEARCH PHARMACOLOGIST** — Osteoarthritis research. Position requires Ph.D. in Pharmacology with experience evaluating potential anti-osteoarthritic drugs *in vivo*. Expertise with proteoglycan biochemistry, enzyme purification, and protease assay systems is also useful.

**RENAL** — Anti-hypertensive research. BS/MS in biological science and experience in monitoring contractions of isolated tissues. Small animal surgery and *in vivo* methodology advantageous.

**PULMONARY** — Development and biological characterization of animal models toward treatment of respiratory diseases. BS/MS plus two years in lab setting. Requires background in biochemistry and good writing skills.

Modern laboratories in suburban campus setting 25 miles south of Philadelphia. Competitive salaries/benefits including tax-sheltered investment program. Send detailed CV and salary history and requirements in strict confidence. Principals only.

N. E. Gilpin, Employee Relations



**STUART PHARMACEUTICALS**

Division of ICI Americas Inc.  
Wilmington, Delaware 19897

An Equal Opportunity Employer M/F.

## PROFESSIONAL STAFF POSITIONS NATIONAL RESEARCH COUNCIL

Applications are invited for two staff positions with the Board of Agriculture of the National Research Council.

**PROJECT DIRECTOR** is sought to manage a study of public-private sector relationships in biotechnology applied to agriculture. Extensive working familiarity with agricultural research programs and experience with both public and private sector agricultural research administration and policy are required.

A Ph.D. or equivalent in a directly relevant field and approximately 5 to 7 years of relevant professional experience are strongly preferred. Evidence of management and communication skills are required. The incumbent will work with a study committee of experts and be responsible for all phases of project management.

**STAFF OFFICER** is sought to assist the project director on a study of current and potential applications of new biotechnologies to agriculture.

A Ph.D. or equivalent with approximately four years of research experience in molecular genetics is strongly preferred. Evidence of communication skills in scientific and policy topics for both technical and nontechnical audiences is required. Knowledge of national agricultural research institutions and policy is desirable.

Please submit resume by January 30 to:

**Dr. Charles M. Benbrook**  
Executive Director  
Board on Agriculture  
National Research Council  
2101 Constitution Avenue, N.W.  
Washington, D.C. 20418

An Equal Opportunity Employer

## POSITIONS OPEN

### UNIVERSITÉ DE MONTRÉAL

#### Two Positions in the Field of Molecular Genetics or Protein Conformation

The Department of Biochemistry is seeking two highly qualified individuals working in the application of molecular genetics or protein conformation to medically or biologically relevant topics. Applications are invited for positions at the level of: (i) full professor, a senior tenured position for candidates currently engaged in highly productive research, and (ii) research assistant professor (non-tenure-track position) for an individual with postdoctoral experience who is able to establish an independent research program, direct graduate students, and compete for a provincial or a federal scientist award. Because participation in teaching at the graduate and undergraduate levels is required, the candidates will be expected to have a good command of the French language within 2 years of the appointment.

By 28 February, interested candidates should have forwarded complete curriculum vitae, a one-page statement of research objectives and, in the case of the junior position, the names of three referees to: **Dr. Rejean Daigneault, Directeur, Département de biochimie, Faculté de médecine, Université de Montréal, C.P. 6128, succursale A, Montréal, Québec, Canada H3C 3J7.**

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

### NEUROSCIENCE RESEARCH GROUPS

The University of Alberta intends to establish a neuroscience research group, or groups, funded through the Alberta Heritage Foundation for Medical Research. Proposals are invited from productive investigators wishing to join and/or direct these groups. Proposals will be considered in any area of neuroscience, but there is particular interest locally in the areas of rehabilitation neuroscience, developmental neurobiology, and Alzheimer's disease. Basic science approaches which will lead to important clinical applications, are particularly desirable. University rank, departmental affiliation, and salary will be appropriate to the experience of successful candidates. Applicants should apply, enclosing curriculum vitae, a short statement of proposed research, and the names of three referees, by 31 January 1985 to:

**Associate Dean of Medicine, Research  
Faculty of Medicine  
University of Alberta  
13-117 Clinical Sciences Building  
Edmonton, Alberta, Canada T6G 2G3**

*The University of Alberta is an Equal Opportunity Employer, but in accordance with Canadian immigration requirements priority will be given to Canadian citizens and permanent residents of Canada.*

### Ph.D. AND TECHNICAL POSITIONS PLANT BIOTECHNOLOGY

NPI, a firmly established plant research and product company, is seeking applicants for senior scientist (Ph.D. level) and technical positions (M.S. or B.S.) in plant molecular biology. Ph.D. level appointees would be expected to participate in ongoing projects and initiate independent research programs, possibly through interactions with our groups in plant tissue culture, microbiology or phytochemistry. Preference will be given to technical position applicants who have experience in recombinant DNA techniques.

To apply for a position, send your curriculum vitae, names of three references, and a statement of interests to:

**Dr. Tom Ulrich  
NPI  
417 Wakara Way  
Salt Lake City, Utah 84108**

### POSTDOCTORAL FELLOW Department of Animal, Dairy and Veterinary Sciences UTAH STATE UNIVERSITY

Develop immunologic assays to identify, characterize, and isolate bacterial cell surface antigens using monoclonal antibodies. Requires Ph.D. level with experience in chromatographic, electrophoretic, and immunochemical techniques a must and experience in cell culture desirable. Closing date: 15 March 1985. Starting date immediately following. Send résumé and names of three references to: **Mark C. Healey, D.V.M., Ph.D., UTAH STATE UNIVERSITY, UMC 56, Logan, Utah 84322. An Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

### BERKELEY PHYSICS Tenure-Track Appointments

The Department of Physics of the University of California, Berkeley, expects during the next year to make one tenure appointment and two appointments at the assistant professor level. The search will cover all fields of physics but with emphasis upon theoretical astrophysics, theoretical statistical physics, high energy particle theory, experimental plasma physics, and experimental condensed matter physics. One appointment is tenable 1 July 1985, and the other two are tenable 1 July 1986, although arrangements for getting a successful applicant to Berkeley in some other capacity before that date could be pursued.

Applicants should write, as soon as possible, and definitely before 1 April 1985 to: **The Chairman, Department of Physics, University of California 94720**, giving curriculum vitae, publication list, and references. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

**PHYSIOLOGIST**—Immediate opening for research physiologist to participate in the development of research programs in neuroendocrinology, including short and long-term goal setting, budget preparation, and research protocol design. Assists in selection of technical and professional research personnel. Orients, trains, assigns work, and evaluates performance of staff. Using peptide neuroendocrinology knowledge and experience, develops research hypotheses, and designs experiments to test same. Interprets data; prepares and writes grant proposals. Position requires a Ph.D. in animal science or physiology with specific training in endocrinology and neuroendocrinology with a minimum of 2 years of postdoctoral endocrine research experience; 3 to 5 years of experience in all aspects of in vivo peptide neuroendocrinology including cannulation of pituitary portal vessel circulation, stereotaxic surgery, peptide radioimmunoassays, chromatography and brain microdissection; to include experience in both the development and supervision of a neuroendocrine research laboratory. Hours: 8:30 a.m. to 5 p.m. Salary: \$30,000. Send résumé to: **T. Salabert, Department of Employment Security, 130 West Exchange Street, Providence, R.I. 02902 (Identification Number 178).**

### PLANT MOLECULAR BIOLOGY

A tenure-track position at the assistant professor level is available starting fall 1985 in the Department of Botany. Applicants are expected to have demonstrated research excellence and a strong commitment to undergraduate and graduate teaching. Postdoctoral experience desired. Send curriculum vitae and statement of research and teaching interests and goals to: **Dr. Robert J. Ferl, Chairman, Search Committee, Department of Botany, University of Florida, Gainesville, Fla. 32611.** Applicants should request three letters of reference to be sent to the above address. Deadline for applications is 15 February 1985.

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

**POSTDOCTORAL ASSOCIATE** position immediately available for recent Ph.D. biochemist to participate in research program on cellular stress responses including synthesis of heat shock proteins (HSP). Focus will be on the isolation of mammalian HSP 70 mRNA and cloning of a cDNA probe for this message. Expertise in nucleic acid and protein chemistry essential. This is a collaborative program between the Department of Surgery at Yale Medical School and the Department of Biology, Yale University. Salary dependent upon experience. Send curriculum vitae to: **Graeme L. Hammond, M.D., Department of Surgery, Yale Medical School, P.O. Box 3333, New Haven, Conn. 06510. Equal Opportunity Employer.**

**POSTDOCTORAL, INSTRUCTOR, AND ASSISTANT PROFESSOR** positions available immediately for research in cellular immunology/immunogenetics. Specific areas include lymphocyte interactions, suppressor cells, and macrophage function or physiology. Applicants should submit their curriculum vitae and three letters of reference to: **Martin E. Dorf, Department of Pathology, Harvard Medical School, 25 Shattuck Street, Boston, Massachusetts 02115. Harvard Medical School is an Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

### PLASMA PHYSICS POSITIONS

The Plasma Physics Group at the University of California, Irvine, has two openings. An assistant specialist for scientific programming; B.A. degree in physics required and knowledge of FORTRAN. An assistant research physicist (experimentalist) to work on intense ion beams; Ph.D. or equivalent required. Send résumé to: **Professor N. Rostoker, Physics Department, University of California, Irvine, Calif. 92717. An Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available on or before 1 July 1985 to participate in the molecular cloning and study of the bovine interleukin 2 (IL-2) and other lymphokine genes. The research will involve recombinant DNA and sequencing technologies as well as investigations of the activity of transfected genes in bovine lymphoid cells using appropriate expression vectors. Experience in any of these areas of research or related fields of biochemistry or immunology preferred but not required. The granting agency requires U.S. citizenship or permanent resident status. Send curriculum vitae to: **N. S. Magnuson, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, Wash. 99164. Washington State University is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available to study the genetic and biochemical basis of cell differentiation of skeletal muscle tissue. Background in recombinant DNA techniques or biochemistry preferred. Send letter of application, résumé, and names of references to:

**Dr. Frank E. Stockdale  
Stanford School of Medicine, M-211  
Stanford, California 94305**

A **POSTDOCTORAL POSITION** is available January 1985 to study the structure, function, and biogenesis of proteins that catalyze the intracellular and extracellular transfer of lipids. Experience in molecular genetics is preferred. Exceptional environment featuring productive interactions between basic research and clinical scientists. Send curriculum vitae, a brief description of research experience and future interests, and the names of three references to: **Dr. J. Harmony, Department of Anatomy and Cell Biology (ML 521), College of Medicine, 231 Bethesda Avenue, University of Cincinnati, Cincinnati, Ohio 45267-0521. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available immediately to conduct research on the cellular mechanism of human carcinogenesis. Experience with gene cloning or RNA polymerase II methodology preferred. Respond to: **Dr. John Leavitt, Molecular Carcinogenesis Program, Linus Pauling Institute of Science and Medicine, 440 Page Mill Road, Palo Alto, Calif. 94306.**

**POSTDOCTORAL POSITION** for research on the pathological effects of oncogene expression in transgenic mice. Apply with curriculum vitae to:

**R. L. Brinster  
School of Veterinary Medicine  
University of Pennsylvania  
Philadelphia, Pennsylvania 19104**

**POSTDOCTORAL POSITION** at University of California, San Diego, to study molecular genetics of cell-type specific differentiation in *Dictyostelium*. Experience in the manipulation of cloned nucleic acids is desirable. Send curriculum vitae and names of references to:

**Dr. William F. Loomis  
Department of Biology, B-022  
University of California, San Diego  
La Jolla, Calif. 92093**

**POSTDOCTORAL POSITION** available to work on interdisciplinary NIH-Program Project examining the molecular and cell biology of regulation of hepatic lipoprotein assembly/secretion using already developed monoclonal antibody library and cDNA probes. Experience in physical biochemistry, molecular and/or cell biology desirable. Training in these areas available. Send curriculum vitae and names of three references to: **Roger A. Davis, Cell Biology Unit, Department of Physiology, Louisiana State University Medical Center (LSUMC), 1901 Perdido Street, New Orleans, La. 70112.**

*Louisiana State University Medical Center is an Equal Opportunity/Affirmative Action Employer.*

The International Rice Research Institute is seeking candidates for the position of

## **SOIL CHEMIST**

at its headquarters at Los Baños in the Philippines. The position will become vacant on June 30, 1985. Candidates should have an excellent knowledge of soil chemistry, and an interest in applying chemical principles to the study of rice production, and a strong interest in field as well as laboratory studies. Salary and conditions will be fully compatible with international standards. Applications including full details of education and experience should be sent to the

**Director General  
The International Rice Research Institute  
P.O. Box 933  
Manila, Philippines**

from whom further details regarding the position and the Institute may be obtained.

## **EXECUTIVE DIRECTOR**

### **HUNTSMAN MARINE LABORATORY ST. ANDREWS, NEW BRUNSWICK**

Applications are invited for the above position which becomes available 31 August 1985. The Huntsman Marine Laboratory is operated by a consortium of Universities, Government Departments and Private Sector Agencies as a base for research and teaching in the marine sciences. The Laboratory also undertakes contract research in several areas of Marine Biology.

Applicants should submit a curriculum vitae and request that at least two letters of reference be forwarded to: Dr. W. C. Leggett, Chairman, HML Search Committee, c/o Department of Biology, McGill University, 1205 Ave. Dr. Penfield, Montreal, Que. H3A 1B1

*Application deadline:* February 28, 1985. In accordance with Canadian Immigration requirements, Canadian citizens and permanent residents of Canada will be considered first in this competition.

Would you like to live in the Boston/Cambridge area and work adjacent to the MIT Campus? American Science and Engineering, Inc., is seeking individuals who enjoy physics and who wish to work in an industrial R&D environment. AS&E has been a world leader in the development of high resolution X-ray and gamma-ray imaging systems for space research, medical diagnostics, security inspection and defense related non-destructive testing for twenty-five years. AS&E scientists have made significant contributions to X-ray astronomy and solar physics including the discovery of the first non-solar celestial X-ray source. Our inventions have included the first practical X-ray telescope, the fourth generation CT scanner and the first film-safe X-ray inspection systems. Openings exist in the areas of diagnostic radiology and industrial computed tomography.

## **■ Experimental Physicists**

There are opportunities to participate in the development of new techniques and applications of computer tomography and digital, diagnostic radiology. Research and development efforts involve new concepts in X-ray detection, X-ray scanning and new biomedical and industrial applications.

Candidates will work with other physicists and our EE, ME and software personnel. We require physicists with strong aptitude in supervising and carrying out an entire experiment involving electronics, mechanics, physics and software.

These positions require a Ph.D. in experimental physics, medical physics or observational astronomy and a background in photon detection or particle counting. Familiarity with computer controlled instrumentation or digital image processing would be helpful. Post-doctoral experience is desirable, but not required for these positions. The ability to write coherent scientific papers and technical proposals is mandatory.

**Qualified candidates should call or send resume to John Loughlin, 1-800-225-1608.**

AS&E is an Affirmative Action/Equal Opportunity Employer located in Cambridge, Massachusetts.

# **AS&E**

**American Science and Engineering, Inc.  
Fort Washington  
Cambridge, Massachusetts 02139**

## POSITIONS OPEN

**POSTDOCTORAL POSITION.** Position available summer or fall for an established multidisciplinary project on the viruses causing Japanese encephalitis (JE) and dengue fever; both constitute problems in world health. Current work is directed at developing a functional map for the cloned JEV genome and characterizing the gene for the major envelope protein, the latter with a view to developing a synthetic vaccine. Another objective is to use existing cDNA and monoclonal antibody probes to study viral replication processes. Experience with rDNA methods preferred. Salary range: \$18,000 to \$22,000. Send résumé and names of three references to: **Dr. Maurice J. Fournier or Dr. Thomas L. Mason, Department of Biochemistry, University of Massachusetts, Amherst, Mass. 01003.** Deadline for submission of application: 15 February 1985. *An Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION.** Natural products chemist or plant pathologist with chemical experience to isolate and identify new fungal toxins against weeds in collaboration with a natural product chemist and plant pathologists. Salary: \$20,000. Position available immediately. Send curriculum vitae and arrange for two letters of recommendation to be sent to: **Professor Scott Chilton, Department of Botany, North Carolina State University, Box 7612, Raleigh, N.C. 27695.** Telephone: 919-737-3792.

### POSTDOCTORAL POSITIONS (TWO) AVAILABLE

Immediately for work on biochemistry and molecular biology of connective tissue proteinases and their inhibitors. Experience in protein chemistry, enzymology, and recombinant DNA technology helpful but not essential. Send curriculum vitae and names of three references to: **Dr. Hideaki Nagase, Department of Medicine, University of Medicine and Dentistry of New Jersey—Rutgers Medical School, Piscataway, New Jersey 08854.**

**POSTDOCTORAL POSITION** in mammalian developmental neurogenetics available to study gene action, cell lineage, and CNS development using mutant mice and experimental chimeras. Background in neuroanatomy, developmental biology and/or immunology desirable. Send curriculum vitae and names of three references to: **Richard J. Mullen, Ph.D., Department of Anatomy, University of Utah School of Medicine, Salt Lake City, Utah 84132.**

**POSTDOCTORAL POSITION** available to study structure-function relationships in isozymes of human aldehyde dehydrogenase. The research involves localization of the active site via chemical modification by affinity and suicide reagents. Ph.D. in biochemistry or chemistry required; experience in protein chemistry is an advantage. Send curriculum vitae and names of three references to: **Dr. Regina Pietruszko, Center of Alcohol Studies, Rutgers University, Piscataway, New Jersey 08854.** *An Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION(S)** available January 1985 at New Jersey Medical School, Newark, New Jersey, to study the effect of development on heart cytochrome oxidase. Areas of research include the structure-function relationship of cytochrome oxidase, enzyme purification and analysis of subunits, and development of monoclonal antibodies. Previous experience in the field of membrane bioenergetics preferred. Salary commensurate with experience. Send résumé and three references to: **Ellie Mattner, Personnel Department, University of Medicine and Dentistry, 100 Bergen Street, Newark, N.J. 07103.** *Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

### POSTDOCTORAL RESEARCH ASSOCIATE

Position available in laboratory studying plasma membrane biochemistry during mammalian spermatogenesis. Applicants should have a recent Ph.D. in biochemistry or cell biology and be competent in techniques of membrane protein isolation, purification, and characterization. Experience in HPLC methodology advantageous, but not required. Position is funded by NIH and is available immediately. Send curriculum vitae, bibliography, and the names of three references to: **Dr. Clarke F. Millette, Harvard Medical School, Laboratory of Human Reproduction and Reproductive Biology, Department of Anatomy, 45 Shattuck Street, Boston, Mass. 02115.** *Harvard Medical School is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL

An immediate opening for a recent Ph.D. in immunology with expertise in hybridoma technology. Candidate will work independently within a multidisciplinary group in the Department of Nuclear Medicine. Research involves the production of monoclonal antibodies and their use as carriers of radionuclides for diagnosis and therapy. Salary: \$18,000. Please contact: **Dr. A. I. Kassiss, Shields Warren Radiation Laboratory, 50 Binney Street, Boston, Mass. 02115; telephone: 617-732-2185.**

### POSTDOCTORAL POSITION PLANT MOLECULAR GENETICS

Position is available immediately to work on the molecular genetics of transposable elements and gene regulation in maize. Research experience in molecular biology required. Salary starts at \$16,000. Send curriculum vitae and names of three references to: **Dr. Jeff Bennetzen, Department of Biological Sciences, Purdue University, West Lafayette, Ind. 47907.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to conduct molecular biology studies of plants in conjunction with ongoing projects on protoplast fusion, organelle transfer, stress resistance, and plant breeding. The initial appointment is for 2 years with opportunity for extension. Interested candidates should hold a Ph.D. in microbiology, genetics, or biochemistry with training and experience in molecular biology. Salary is commensurate with experience and qualifications. Send curriculum vitae and names of three references to: **K. C. Sink, Department of Horticulture, Michigan State University, East Lansing, Mich. 48824-1112.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to study growth of neurites from amphibian retinal explants in vitro. Ph.D. and experience in cell and organ culture required. Includes some instructional responsibility for undergraduate laboratory students. Salary commensurate with qualifications. Send curriculum vitae and references to: **Philip Grant, Department of Biology, University of Oregon, Eugene, Ore. 97403,** before 25 January 1985.

**POSTDOCTORAL/RESEARCH ASSOCIATE** position at Yale Medical School available to study intestinal ion transport using membrane vesicles, intact epithelia, and isolated cells. Ph.D. in life sciences (physiology or biochemistry) with research experience in membrane transport preferred. Starting date: September 1985. Send résumé, statement of research interests, and names of three references to: **Dr. Henry J. Binder, Institute of Physiology, University of Zürich-Irchel, 8057 Zürich, Switzerland.** *Yale University is an Affirmative Action Employer.*

**RESEARCH ASSISTANT**—Immediately available in protein chemistry. Qualified applicants should have a B.S. or M.S. in chemistry or biochemistry. Experience with protein purification and analytical instrumentation (HPLC, protein sequencer) is preferred. Applicants should be enthusiastic and able to work independently. Employment includes liberal fringe benefits and salary will be commensurate with experience. Interested applicants should send résumé with three letters of reference to: **Personnel Manager, W. ALTON JONES CELL SCIENCE CENTER, 10 Old Barn Road, Lake Placid, New York 12946.** Refer to: Job SA-301.

*An Affirmative Action/Equal Opportunity Employer*

**RESEARCH ASSOCIATES (TWO)** in membrane biochemistry and biophysics to participate in independent and team research in the study of lateral diffusion of macromolecules related to catalytic events in native and reconstituted membranes. Approaches include fluorescence recovery after photobleaching, resonance energy transfer, differential scanning calorimetry, and freeze fracture EM. Background in membrane biochemistry and/or biophysics preferred; practical experience in electron microscopy helpful. M.D. or Ph.D. *Women and minorities are encouraged to voluntarily identify themselves.* Send curriculum vitae and names of references to: **Dr. C. R. Hackenbrock, Laboratories for Cell Biology, Department of Anatomy, University of North Carolina—Chapel Hill, 108 Swing Building, Chapel Hill, N.C. 27514,** by 28 February 1985. *Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE.** Position is available for studies of the neurochemical bases of seizure predisposition in genetically epileptic animals. Studies will be focused on the relationship between abnormalities in neurotransmitter systems of the central nervous system and the regulation of seizure susceptibility and severity. Requirements: Ph.D. in neuropharmacology, neurochemistry, or related discipline plus evidence of future productivity as a neuroscientist. Experience with electrophysiology is desirable but not essential. Position available on or after 15 February 1985. Salary: \$19,000 or greater depending on credentials. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae and names of three references to: **Phillip C. Jobe, Ph.D., Professor and Chair (Designee), Department of Basic Science, University of Illinois College of Medicine at Peoria, P.O. Box 1649, Peoria, Ill. 61656.** Applications must be received by 31 January 1985.

### POSTDOCTORAL RESEARCH OPPORTUNITIES

Postdoctoral and research associate openings are available for a biochemist, immunochemist, and/or molecular biologist to study cell culture models for colon cancer and metastasis. Applicants should have interest or experience in protein purification, monoclonal antibody development, or recombinant DNA technology. Qualified candidates should submit curriculum vitae and three letters of reference to: **Dr. Michael G. Brattain, Bristol-Baylor Laboratory, Baylor College of Medicine, One Baylor Plaza, Houston, Texas 77030.** *An Equal Opportunity/Affirmative Action Employer.* Please respond by 25 January 1985.

### PRINCIPAL STAFF OFFICER

The National Academy of Sciences seeks candidates with broad knowledge of national and international population activities to direct and plan studies for the committee on population.

Applicants should have a Ph.D. or equivalent in a social science, strong writing skills, and experience in population studies including demography. In addition, 15 years of professional experience in the management of projects, research, and committees or strong groups is required.

Please submit résumé to:

**POPULATION  
Personnel Office  
National Academy of Sciences  
2101 Constitution Ave., N.W.  
Washington, D.C. 20418**

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

Full-time academic appointment in Department of Psychiatry, the University of Michigan Medical School, as **TEAM PSYCHIATRIST** in the Adult Psychiatry Program. Responsibilities include direction of inter-disciplinary team, coordination of clinical care, teaching and supervision of house officers and medical students, and clinical research activities. Board-certification in psychiatry is desirable as is an interest and experience in research. Please send curriculum vitae to: **George C. Curtis, M.D., Professor and Chief of Adult Service, Department of Psychiatry, University of Michigan Medical Center, Ann Arbor, Mich. 48109.** *The University of Michigan is an Affirmative Action Employer.*

**RESEARCH ASSISTANT**—Immediate opening, to perform research in the area of cell biology and lipid biochemistry. B.S. or M.S. in biology or biochemistry with some background in lipid and organic chemistry. Experience desired in cell culture, enzyme assays, thin-layer chromatography, radiolabeling techniques, and general lipid methodology. Send curriculum vitae and letters of reference to: **The Personnel Manager, W. ALTON JONES CELL SCIENCE CENTER, 10 Old Barn Road, Lake Placid, New York 12946.** Refer to Job CA-103.

*An Affirmative Action/Equal Opportunity Employer*

**RESEARCH ASSOCIATE IN NEUROPHARMACOLOGY:** Postdoctoral position available immediately for Ph.D. to study physiological actions and pharmacology of neurotransmitters in isolated spinal cord preparations. Working knowledge of electrical recording techniques desired. Salary and duration negotiable. Send curriculum vitae and three letters of reference to: **Dr. R. A. Davidoff, Department of Neurology, P.O. Box 016960, University of Miami School of Medicine, Miami, Fla. 33101.** *An Equal Opportunity Employer.*



**SEARLE Pharmaceutical Research  
and Development Center,**

located at Sophia Antipolis - FRANCE  
has a vacancy for the position of

**ASSOCIATE DIRECTOR**

**Department of Product Safety  
Assessment**

- The candidate should have an advanced degree in Toxicology-Pathology, preferably a Ph.D degree in a related science. A minimum of ten years experience is desired, preferably in the Pharmaceutical Industry.
  - He will closely assist the Director of the Department in the management of the Department and in the scientific evaluation of preclinical protocols and reports destined to support IND and NDA applications.
  - The PSA Department consists of 60 persons of which about one fifth are professional personnel.
  - Knowledge of French is highly desirable.
  - SEARLE R & D offers excellent laboratory facilities, competitive compensation, benefits and paid relocation.
- The Center is located in an attractive part of France (between Nice and Cannes) and is part of G.D. Searle and Co, an international pharmaceutical Company.

- Applications with a full C.V. should be sent to Mr. G. du Parc, Personnel Manager, Searle R & D, Sophia Antipolis, BP 23 06561 Valbonne Cedex, FRANCE.

Organisation et Publicité

**SEARLE**

Complete confidentiality will be assured.  
Only applications fulfilling the criteria  
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**LIMAGRAIN**

**RESEARCH DIVISION (France)**

For several years the Research of Limagrain Group has been engaged in successful improvement of plant varieties. Today we enlarge again this Research activities by creating a Biotechnology Laboratory, and we are looking for:

- **Senior Research Scientists (PhD)** réf. 324
- **Research Scientists (MSc)** réf. 325
- **Assistant Scientists (BSc)** réf. 326

Applicants must have a strong Research experience in one or more of these fields:

- Plant Biology and Physiology
- Molecular Biology
- Microbiology, Virology
- Genetics
- Plant Pathology, Immunology

A reasonable fluency in French should be an advantage. These positions are offered in **CLERMONT-FERRAND**, a city of the French Massif Central with a very interesting scientific and natural environment.

Interested and qualified candidates are invited to submit curriculum vitae, previous experience and references to:

**LIMAGRAIN** - B.P. 51 - 63360 GERZAT (France). Tél. (73) 38.20.09.

Senior Staff Fellow (Ph.D.)  
Salary range—\$20,688 to \$39,960  
(3-7 years research experience)

**NATIONAL INSTITUTES OF HEALTH  
NATIONAL INSTITUTE OF ENVIRONMENTAL  
HEALTH SCIENCES  
LABORATORY OF PULMONARY  
PATHOBIOLOGY**

Research is being carried out on the basic mechanisms through which inhaled inorganic particles cause interstitial lung disease. Biochemistry, cell biology and morphology are used in concert to correlate *in vitro* studies of macrophages and fibroblasts with *in vivo* findings in models of disease induced by particle inhalation. A talented researcher is being sought to add expertise in biochemistry, physical chemistry, modern cell biology, cell physiology or some combination of these fields. The candidate must have a demonstrated record of independent scientific achievement as well as the ability to collaborate in a highly cooperative setting. The initial appointment is for two years, with additional extensions possible for an outstanding individual. Salary is commensurate with the candidate's qualifications and experience. Send curriculum vitae, including a publication list, and three letters of recommendation to:

**Mr. Bruce Wiggins, Code: HN-V27  
NIEHS Personnel Office  
P.O. Box 12233 (MD 1-01), Research Triangle Park, NC 27709  
(919) 541-3317**

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## POSITIONS OPEN

**PROFESSOR AND HEAD, DEPARTMENT OF ANIMAL SCIENCES.** The College of Agriculture, University of Illinois at Urbana-Champaign, invites applications from outstanding individuals with strong background in research and experience in resident instruction or extension education, as well as demonstrated administrative skills. A Ph.D. in animal science, dairy science, or closely related field is required. A Department of Animal Sciences is being formed from a merger of our Departments of Animal Science and Dairy Science. Availability of the position is anticipated to be 1 May 1985, or as soon as possible thereafter. Applications should be received by 15 February 1985. Applicants should send a letter of application, résumé, and the names of five persons familiar with the candidate's qualifications. Send applications to: **Dr. William L. George, Chair, Search/Advisory Committee, College of Agriculture, University of Illinois, 104 Mumford Hall, 1301 West Gregory Drive, Urbana, Ill. 61801.**

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

### RESEARCH ASSOCIATE

Full-time research Ph.D. in organic chemistry with experience in synthesis, purification, and conformational analysis of phosphorus compounds including nucleotides, operation of high field multinuclear NMR, and HPLC at \$16,000 per year. Send résumé and three letters of recommendation to: **Utah Job Service, 1234 South Main Street, Salt Lake City, Utah 84147.** Refer to: **Job Order Number 48410.**

**RESEARCH ASSOCIATE.** Duties: Perform basic research for the development and evaluation of enzyme-linked immunosorbent assay (ELISA) for *Bordetella pertussis* and the optimum method for *Bordetella pertussis* isolation. Minimum requirements: Ph.D. in microbiology or immunology; or M.D. in medicine (foreign medical degree with ECFMG certification is acceptable). Must also have 2 months' experience in the job offered or 2 months' experience in the related occupation of research assistant. Research assistant experience must have been in scientific research which involved independent work with procedures used in developing ELISA for *Bordetella pertussis* and methods for *Bordetella pertussis* isolation. Research experience in these procedures and methods through academic preparation is also acceptable. References required. Pay and hours: \$23,000 per year, 8 a.m. to 4:30 p.m., 40 hours per week, no overtime. To apply send résumé to: **Ohio Bureau of Employment Services, Job Order Number: 0595677, 1916 Central Parkway, Cincinnati, Ohio 45214.** Employer paid ad.

University of Medicine and Dentistry of New Jersey (UMDNJ)-New Jersey Medical School, Department of Microbiology. **TWO RESEARCH ASSOCIATE POSITIONS** available. Research topics: Molecular genetics of polyomaviruses, knowledge of recombinant DNA technology and experience in molecular genetics preferable. Salary commensurate with experience. Send curriculum vitae, a list of publications, and three references to: **Dr. Giampiero di Mayorca, Professor and Chairman, Department of Microbiology, Room E607, UMDNJ-New Jersey Medical School, 100 Bergen Street, Newark, New Jersey 07103.** UMDNJ is an Equal Opportunity/Affirmative Action Employer.

### RESEARCH

#### POSTDOCTORAL POSITION

Postdoctoral research position to study the roles of polypeptides in cell growth at biochemical and functional levels. Send résumé and three references to:

**SS, Personnel Department  
Institute for  
Cancer Research**

**FOX CHASE  
CANCER CENTER  
7701 Burholme Avenue  
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**RESPIRATION MECHANICS/FLUID DYNAMICS**—Staff and postdoctoral positions studying fluid dynamics and gas exchange in airways flows. Advanced degrees in either physiology or engineering. Annual salaries: \$22,000 and up, commensurate with experience. Send résumé to: **Dr. Jeffrey Fredberg, The Biomechanics Institute, 896 Beacon Street, Boston, Mass. 02215.**

## POSITIONS OPEN

### RESEARCH POSITIONS

Three **Postdoctoral** and/or **Research Associate Positions** available for studies on:

- 1) Novel tissue growth factors. Candidates preferred with experience in tissue culture, protein isolation and characterization HPLC, monoclonal antibodies, and hybridoma technology;
- 2) Regulation of cell surface receptors. Candidates with a Ph.D. in biochemistry or molecular biology preferred. Techniques to be used are isolation and characterization of membrane receptor proteins using monoclonal antibodies, and cDNA cloning sequencing and gene transfer experiments;
- 3) Developmental and hormonal regulation of gene expression. Candidates with experience in recombinant DNA, cloning sequencing, expression vectors, and cell transfection studies preferred.

Submit statement of interest, curriculum vitae, and names of three references to: **Dr. Henry G. Friesen, Professor and Head, Department of Physiology, The University of Manitoba, 770 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E 0W3.**

**RESPIRATORY PHYSIOLOGIST** (Ph.D. or M.D.) sought to join three investigatively oriented and funded M.D.'s in a Pulmonary Division of a Department of Medicine. The group has interest in ventilatory control, hypoxia, upper airway physiology, and sleep disordered breathing. Ample laboratory space and initial research funds are available. A faculty appointment with the Department of Medicine with a co-appointment within the Department of Physiology is offered. Candidates should forward curriculum vitae to: **Clifford Zwillich, M.D., P.O. Box 850, Department of Medicine, The Pennsylvania State University Medical Center, Hershey, Pa. 17033.** Applications must be received by 1 March 1985.

**SENIOR HEALTH PHYSICIST/CHEMIST** to perform chemical and physical analysis on radioactive waste water, reactor water, condensate demins, calibrate, operate and maintain nuclear laboratory and in-line instruments; perform counting room calibration and analysis of water, air, and gaseous samples using nuclear measuring instruments. Require B.S. in chemical or nuclear engineering with 5 years of experience. Salary \$29,945.00 per year. Apply in person or by résumé to: **Georgia Department of Labor, 117 Savannah Avenue, Statesboro, Georgia 30458.** Control Number GA 5034280.

Position available for recent Ph.D. in **TUMOR BIOLOGY** to participate in ongoing research on tumor vascular function and mechanisms of chemo-resistance in metastatic cancer. Experience is desirable. The appointee will also be expected to pursue an independent research program. Salary will be commensurate with experience. Send curriculum vitae, statement of research interests, and names of three references to: **Paul Braunschweiler, Ph.D., Department of Experimental Therapeutics, AMC Cancer Research Center, 1600 Pierce Street, Lakewood, Colo. 80214.** An Equal Opportunity/Affirmative Action Employer.

### VICE PRESIDENT FOR ACADEMIC AFFAIRS AND DEAN OF THE SCHOOL OF MEDICINE

The Medical College of Ohio invites applications and nominations for the position of Vice President for Academic Affairs and Dean of the School of Medicine. The Medical College is a free-standing state-supported academic health science center consisting of four schools: School of Medicine, Graduate School of Medical Sciences, School of Nursing, and School of Allied Health. Vice President for Academic Affairs and Dean of the School of Medicine is the principal academic leader of the center, and the chief administrative officer of the School of Medicine. The preferred candidate should be a physician with a distinguished record of educational and research accomplishments, and major administrative experience.

Nominations and applications should be received no later than 1 March 1985 and should be addressed to:

**Amir Askari, Ph.D., Chairman  
Search Committee for Vice President for Academic Affairs and Dean of the School of Medicine  
Department of Pharmacology  
Medical College of Ohio  
C.S. Number 10008  
Toledo, Ohio 43699**

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## POSITIONS OPEN

**SCIENCE WRITER/EDITOR.** Twelve-month, curatorial-level position now open at a major museum of natural history, anthropology, and art. Incumbent edits quarterly public magazine, newsletter, brochures, scientific publications. Applicants must have proven experience in editing, popular and technical writing, design and layout, public information, print and non-print media; a background in a natural history field or anthropology; M.S. or Ph.D. and professional experience in museums or higher education preferred. Send résumé, names of three references, and supporting materials by 1 February 1985 to: **E. A. Munyer, Assistant Director, Illinois State Museum, Springfield, Ill. 62706.** Equal Opportunity Employer.

### SUBCELLULAR PHYSIOLOGY AND BIOCHEMISTRY

#### Postdoctoral and Staff Scientist Positions

Our research group is utilizing advanced cryogenic-based techniques (cryomicrodissection, ultra-low temperature autoradiography, intracellular reference phase analysis) to study: (i) the subcellular commerce in microsomes and its hormonal control, (ii) the structure and solvent properties of cellular water, (iii) solute and water interactions with the nuclear and cytoplasmic ground substances, (iv) polymerization equilibria of cytomatrix proteins. We invite inquiries from investigators with career interests in these and related areas.

Address correspondence, including résumé, to: **Dr. S. B. Horowitz, Chairman, Department of Physiology and Biophysics, Michigan Cancer Foundation, 110 E. Warren Avenue, Detroit, Michigan 48201.**

## REQUEST FOR PROPOSALS

### REQUEST FOR PROPOSALS

The Johns Hopkins Center for Alternatives to Animal Testing is soliciting proposals. These research proposals should provide the fundamental knowledge base to develop alternative methods to whole animals for the safety evaluation of commercial products.

The center is specifically interested in the use of human cells and tissues. Funds are available for studies of skin and eye irritation, inflammation, acute toxicity, and other organ specific toxicity. At the present time funds are unavailable for mutagenicity and carcinogenicity.

Grants will normally be funded up to a maximum of \$20,000 per year including 15 percent overhead or actual costs, whichever is less. All grants will be on a yearly basis with continuation funding dependent upon an acceptable continuation of proposal.

Abstract deadline: 30 March 1985.  
Application deadline: 30 May 1985.

Application instructions can be obtained by contacting: **Joan S. Poling, Secretary to the Director, Room 2306, School of Hygiene and Public Health.**

## CONFERENCE

**The New York Academy of Sciences and  
The International Union of  
Pure and Applied Chemistry  
CONFERENCE ON BIOORGANIC CHEMISTRY  
6 May to 8 May 1985  
The Barbizon-Plaza Hotel  
New York City**

This 3-day symposium will feature invited speakers eminent in the field of bioorganic chemistry. The topics to be covered will include enzyme mimics, the chemistry of biologically important natural products, and the chemistry of enzymes of nucleic acids.

There will be two contributed poster sessions. The deadline for submission of abstracts is 1 March 1985. The abstracts should include the name of the author(s), institution, and a 200-word summary of the work to be presented. Send abstracts to: **Dr. Ronald Breslow, Columbia University, Department of Chemistry, 566 Chandler Laboratory, New York, N.Y. 10027.**

Conference organizers: **Ronald Breslow, Ph.D.** (chairman), Columbia University; **Koji Nakanishi, Ph.D.**, Columbia University; **E. T. Kaiser, Ph.D.**, Rockefeller University.

Inquiries should be addressed to: **Ellen Marks, Conference Director, The New York Academy of Sciences, 2 East 63 Street, New York, N.Y. 10021.**

# SCIENCE

## Posters

The following posters of *Science* covers are available:

30 March 1979, Tropical flowering tree;

23 February 1983, Landsat photo of Detroit, Michigan;

29 July 1983, Cheetah;

2 December 1983, Snowshoe hare;

23 December 1983, Cathedral window/DNA molecule.

Combination of space covers in scroll format: 1 June 1979, 23 November 1979, 10 April 1981.

Price is \$5 each (**prepaid**).

Write to AAAS, Department POST, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005.

## Announcing the 10th Annual

# AAAS Colloquium on R&D Policy R&D in FY 1986

3 & 4 April 1985  
The Capital Hilton  
Washington, DC

For information, see the 1st, 15th, and 22nd February and 1st March issues of *Science* or write or call: AAAS/COSEPP, 1776 Massachusetts Avenue, NW, 6th Floor, Washington, DC 20036; phone: (202) 467-4310

American Association for the Advancement of Science

# SCIENCE

*News Department Reprint Series*

## Tumor Viruses and Oncogenes

During the past 2 to 3 years interest in oncogenes—genes that can cause cells to become cancerous—has surged. A series of discoveries is providing important clues to the origins of cancer and to the normal mechanisms that regulate the growth and development of cells.

This collection of articles from *Science* by Jean L. Marx, Gina Kolata, and Roger Lewin covers many of those discoveries, including: Recent advances in understanding how oncogenes might work; the relation of oncogenes to naturally occurring growth factors; a description of the discovery of human T-cell leukemia virus—one of the best candidates for a viral cause of human cancer. This series is available now.

Single copies \$2.00, twenty or more \$1.00 each. *Orders must be prepaid.*

Write to AAAS, Dept. TVO, 1515 Massachusetts Ave., N.W., Washington, D.C. 20005.

# SCIENCE

*News Department Reprint Series*

## Artificial Intelligence

This collection of articles from *Science* by M. Mitchell Waldrop explores the newly emerging field of artificial intelligence, AI. What AI has really accomplished, where might it plausibly be expected to go, and what are its limits? In particular, the articles focus on the foundations of AI—the effort to understand the phenomenon of intelligence. Included are such topics as expert systems, natural language understanding, computer vision, and parallel processing. This series is available now.

Single copies \$2.00; twenty or more \$1.00 each. *Orders must be prepaid.*

Write to AAAS, Dept. AI, 1515 Massachusetts Ave., N.W., Washington, D.C. 20005.

## COURSES

**LASER INTERACTIONS WITH CELLS AND TISSUES:** A minicourse. Topics: Laser physics, optics, and delivery systems subcellular microsurgery—Fluorescence excitation laser tissue interactions, including clinical uses. Information: comprehensive course, 27 to 29 March 1985, offers three morning lectures, three afternoon and two evening laboratories and book: \$750. Contact: **Michael W. Berns, Ph.D., Department of Cell Biology, University of California, Irvine, Calif. 92717; telephone: 714-856-7033.** Sponsors: UCI-NIH Biotech Resource Facility—Beckman Laser Institute.



## HARVARD SCHOOL OF PUBLIC HEALTH

**ANNOUNCES A FULL RANGE OF SHORT COURSES** in occupational and environmental health, radiation protection, medical sciences & management, & quantitative methods. **Write or call: Harvard School of Public Health, Office of Continuing Education, Dept. S, 677 Huntington Ave., Boston, MA 02115; 617/732-1171.**

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## ASSISTANTSHIPS

**PLANT BIOLOGY—Graduate Assistantships.** Twelve-month support to study development, biochemistry, or molecular biology of plants. Write to: **Dr. Harry Roy, Graduate Coordinator, Biology Department, Rensselaer Polytechnic Institute, Troy, N.Y. 12180-3590.**

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## PROGRAMS

### CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Ph.D.—O.D. Program Director, Admissions Office, Room 11, The New England College of Optometry, 424 Beacon Street, Boston, Mass. 02115.**

### PREDOCTORAL TRAINING PROGRAM IN ANATOMY AND CELLULAR BIOLOGY

The Department of Anatomy and Cellular Biology, Tufts University Schools of Medicine, Dental Medicine, Veterinary Medicine, and the Sackler Graduate School of Biomedical Sciences, invites applications for its Ph.D. training program. In the area of cell/developmental biology, major research programs include the influences of extracellular macromolecules on cell behavior in embryonic development; tissue remodeling and tumorigenesis; control of cell multiplication; the role of contractile proteins in cell motility; mechanisms of protein and steroid hormone action; endocytosis; hormonal effects on cell differentiation; and genetic manipulation and hormone regulation of early embryogenesis. In the area of reproductive biology and neuroendocrinology, major research programs include regulation of gonadotropin secretion; hypothalamic control of anterior pituitary function; the role of endogenous opiate peptides in reproductive physiology; and neurotransmitters. Other areas of research include pulmonary cell biology and metabolism; the effects of stress on immunosuppression; muscle biology; and the effects of aging, stress, and malnutrition on the musculoskeletal system. All students admitted to the program receive tuition waivers; stipends may also be available for qualified trainees. Applications should be completed by 1 March 1985 for entrance to the program in September 1985.

For application materials write:

**Dr. Karen R. Hitchcock, Ph.D.**  
Professor and Chairman  
Department of Anatomy and Cellular Biology  
Tufts University School of Medicine  
136 Harrison Avenue  
Boston, Massachusetts 02111

## AWARDS

### ARE YOU INTERESTED IN WORKING IN SPACE BIOLOGY?

NASA is offering several **RESEARCH ASSOCIATE AWARDS** for scientists to work in laboratories capable of providing scientific advice and facilities relevant to **SPACE BIOLOGY**. The awards vary from \$16,000 to \$20,000 based on experience. They are planned for a 12-month period with the possibility of renewal. Proposals are due 1 April for 1 July funding and 1 October for 1 January funding. Eligible are postdoctoral U.S. citizens. For information or application forms contact, **Dr. X. J. Musacchia, Graduate Programs and Research, University of Louisville, Louisville, Kentucky 40292** or **Dr. Thora W. Halstead, Space Biology Research Associates' Program, Life Sciences Division, NASA Headquarters, Washington, D.C. 20546.** Specify which award date you are applying for.

## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIPS IN GENE EXPRESSION

Positions are available to study the role of histone modification in gene expression, chromatin reassembly and in vitro development of nuclease hypersensitive sites, the role of chromatin structure in developing strong promoter regions, and in the study of in vitro transcription.

Applicants should send their curriculum vitae and two references to:

**Dr. Roger Chalkley**  
Department of Biochemistry  
University of Iowa  
Iowa City, Iowa 52242

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**POSTDOCTORAL FELLOWSHIP** available June 1985. To work on the biochemistry/physiology of smooth muscle. Research on  $Ca^{2+}$ -dependent regulatory mechanisms. Recent Ph.D. with experience in muscle biochemistry/physiology, or techniques of protein purification, preferred. Send curriculum vitae and names of three references to: **Dr. D. J. Hartshorne, Muscle Biology Group, Department of Nutrition and Food Science, University of Arizona, Tucson, Ariz. 85721.** *An Affirmative Action/Equal Opportunity Employer.*

### CARDIAC ELECTROPHYSIOLOGY ROCKEFELLER UNIVERSITY

**POSTDOCTORAL FELLOWSHIP** available to study autonomic modulation of cardiac cell K conductance using voltage clamp of isolated cells and multicellular preparations from mammalian hearts. Electrophysiological experience required. U.S. citizens/residents send curriculum vitae and names of three referees to: **Dr. David Gadsby, Rockefeller University, 1230 York Avenue, New York, N.Y. 10021.** *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE POSITION** available immediately to study neural mechanisms underlying visceral pain, especially cardiac pain. The methodology includes the use of electrophysiological techniques to study spinothalamic and spinoreticular tract cells and the application of cardiovascular techniques. Candidates with a background in neuroanatomy, neurophysiology, neuropharmacology, or cardiovascular physiology are preferred. Salary range is \$17,000 to \$20,000. The position is sponsored by The Corporate Business of Oklahoma.

Please send curriculum vitae with three letters of reference immediately to: **Dr. Robert D. Foreman, Associate Professor of Physiology and Biophysics, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Okla. 73190.**

**POSTDOCTORAL RESEARCH FELLOWSHIP IN IMMUNOLOGY.** Applications are invited from candidates with a Ph.D. degree and interest in B lymphocyte differentiation and repertoire diversification or antibody class regulation. Position available immediately. Please send curriculum vitae and references to: **Judy M. Teale, Ph.D., Department of Microbiology, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, Texas 78284.** *An Equal Opportunity/Affirmative Action Employer.*

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIPS** available NIMH program centered on research in psychobiology. M.D. or Ph.D. fellows conduct own research with either human subjects or models to study both physiological and behavioral processes underlying a variety of clinical conditions. To apply send curriculum vitae, three letters of reference, and letter describing research interest to: **Myron Hofer M.D., Columbia University, State Psychiatric Institute, 722 West 168 St. York, N.Y. 10032.** *An Affirmative Action/Equal Opportunity Employer.*

A **POSTDOCTORAL FELLOWSHIP IN ORGANIC CHEMISTRY** is available immediately to study mechanisms and the design of mechanism-based enzyme inhibitors for ADP-ribosylases and NAD glycohydrolases. Experienced organic chemistry and/or enzymology desirable. Interested candidates should send curriculum vitae as well as the names of three references to: **James Slama, Department of Biochemistry, University of Texas Health Science Center, San Antonio, Texas 78284.** *An Equal Opportunity/Affirmative Action Employer.*

### FELLOWSHIPS IN REPRODUCTIVE BIOLOGY NORTHWESTERN UNIVERSITY

Postdoctoral and predoctoral fellowships available in reproductive biology for outstanding students. A diverse but cohesive program of research in the biochemical, cellular, physiological and behavioral aspects of reproduction. Participating faculty include: **Erwin Goldberg** (immunology and reproductive biochemistry), **Michael Zicker-Dunn** (ovarian protein kinase: adenylylation), **William Klein** (receptors; CNS differentiation), **Andrew LaBarbera** (mechanism of tropin action), **Jon Levine** (neuroendocrinology), **Neena Schwartz** (gonadal-pituitary endocrinology), **Joseph Takahashi** (circadian rhythms and circadian clock), and **Fred Turek** (photoperiodism and circadian rhythms). Send curriculum vitae and three references to: **Dr. Neena Schwartz, Department of Neurobiology and Physiology, Northwestern University, Evanston, Illinois 60201.**

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Investigators interested in utilizing the service and consultations on plasma fractionation should write to: **Dr. Y. L. Hao, Director, Blood Protein Research Laboratories, Inc., 1600 E. Drive, Rockville, Maryland 20850**





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## RESEARCH AND DEVELOPMENT CAREER OPPORTUNITIES

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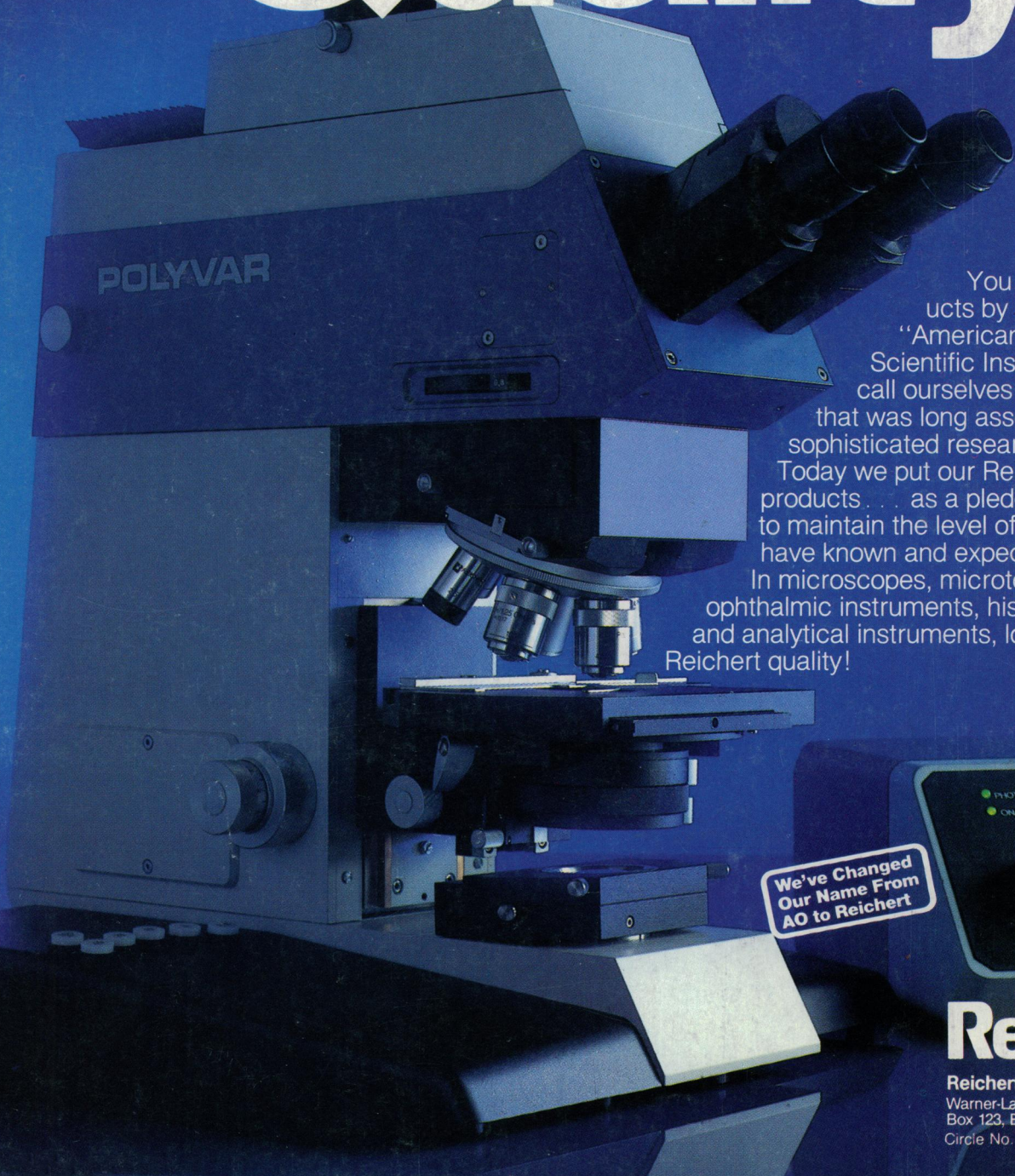
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