

# Personnel Placement

Personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, or national origin.

**Positions Wanted:** 40¢ per word; \$10 minimum charge, per insertion. \$4 extra for use of box number. Prepayment required. Rate available only to individuals; personnel agencies, companies, colleges, and universities take display rate for all advertising.

**Display (Positions Open, Market Place, and so forth):** \$145 per 25 millimeters (1 column inch), minimum, per insertion (25 millimeters equals 10 lines of 50 spaces and characters each). Ads over 25 millimeters billed at \$5.80 per millimeter. No charge for use of box number. Rates net. No agency commission for ads under 4 inches. No cash discount. Prepayment required for foreign advertising. Purchase orders and billing information required for all other ads.

Advertising closing is each Wednesday, 3½ weeks before Friday issue date requested. Send copy for all positions wanted ads and display ads under 5 inches to:

SCIENCE, Room 207  
1515 Massachusetts Ave., NW  
Washington, D.C. 20005  
Telephone: 202-467-4456

Send copy for display ads, 1/6 page and larger, to:

Scherago Associates, Inc.  
11 West 42nd Street  
New York, N.Y. 10036  
Telephone: 212-736-1858

Blind Ad replies should be addressed as follows:

Box (give number)  
SCIENCE  
1515 Massachusetts Ave., NW  
Washington, D.C. 20005

## POSITIONS WANTED

**Academic/Scientific Publishing Executive** with outstanding qualifications. Marketing, editorial, production, administration of books and journals, seeks position with society or firm. New York City metropolitan area. Box 334, SCIENCE. 9/2, 9, 16

**Biochemist.** Ph.D., seeks faculty/research/administrative position. See Jourdikian ad in the 12 August 1977 issue of SCIENCE. 9/2, 9, 16, 23, 30; 10/7

**Biochemist.** Ph.D. 1969; experience in enzymology, genetics, carbohydrate and aminosugar metabolism, structure and function of the membrane; publications. Seeks position in industry, research institute, or academia. Box 335, SCIENCE. 9/2, 9

**M.D., M.Sc. (Biology),** seeking postdoctoral post or academic/industrial position in medical, nutritional, and biological field. Available immediately. Dr. Hsu, Apartment 5, 125 Clayton Street, San Francisco, California 94117. X

**Chemists:** husband-wife. Both M.S. Husband: toxicology including drugs, pesticides, heavy metals; marine chemistry; knowledge of electronics. Wife: biochemistry (enzyme isolation and characterization); teaching; pesticide analysis. Both familiar with most analytical techniques. Hire one or both, anywhere. No agencies. Box 333, SCIENCE. X

**Ph.D. Cytogeneticist.** Attempting to relocate; 18 years of experience in various areas of genetics. Approximately 200 publications, including books. Prefers academic setting in biomedical setup. Internationally renowned in human cytogenetics community. Box 336, SCIENCE. X

**D.V.M. 1973. French Pharmacologist.** Three years of experience in pharmacology industry, cardiovascular, enzymology, labelled compounds, basic computer analysis, biostatistics. Seeks research position or fellowship, industry, government. Reply: Dr. Morre, 120 Joffre, 81100 Castres, France. 9/2, 9

**Ecologist/Environmental Scientist.** Ph.D. Marine and freshwater invertebrates; resource and water quality assessments; experience in community toxicology; field work in N.Y./N.J.; government, university, and private laboratory experience. Seeks institutional/industrial position in N.Y. metropolitan area. Box 332, SCIENCE. X

## POSITIONS WANTED

**Geochemist, Mineralogist.** Ph.D. 1977. Low-temperature geochemistry, silicate mineral reactions in sediments, chemical thermodynamics. Broad training in geology, chemistry. Publications, some teaching. Seeks position with some applied or basic research. Box 331, SCIENCE. X

**Marine Biologist.** Ph.D. Expertise in marine invertebrate, poikilothermic and mammalian cell culture, virology, ecology, and electron microscopy. Teaching and research background, publications. Desires position teaching, research, or administration. Will relocate. Telephone: 201-635-7869. 16 Sussex Avenue, Chatham, New Jersey 07928. X

**Microsurgery.** Transplantation immunology laboratory supervisor experienced in rat and mice organ transplants such as kidney, spleen, bowel, nerve, and so forth. Also cellular and humoral immunity tests. Seeks position in industry and/or research. Write: D. Racelis, 124 East 91 Street, New York, N.Y. 10028. 9/2, 9

**Scientific Writing/Editorial Work** at home by physically handicapped person. Successful author, with broad background in psychobiology, human biology, and neurosciences. Ph.D. and extensive teaching. J. Nash, 112 East 46 Avenue, Vancouver, B.C., Canada V5W 1Z4. X

## POSITIONS OPEN

**ADMINISTRATIVE ASSISTANT** for animal care and controlled substances officer. Primary duties are: (i) supervise and administer laboratory animal operations and animal caretaker personnel, (ii) administer control procedures for licensed use of controlled drugs for research and instruction, and (iii) assist associate dean for administration in other areas, such as space and facilities, as assigned. Qualifications: familiarity with animal research procedures; master's degree in biology or psychology preferred. Salary range \$12,000 to \$14,000. Send complete résumé and names of three references to: **Robert Melville, Associate Dean of Arts and Sciences, State University of New York-Binghamton, Binghamton, N.Y. 13901.**

*State University of New York at Binghamton is an Equal Opportunity/Affirmative Action Employer.*

### UCLA DEPARTMENT OF ANATOMY

Applications are invited for a state-funded faculty position in anatomy for 1978. The level of the appointment will be negotiable, although not as a senior professor. The appointment will require teaching capability in gross anatomy. Applicants should submit a curriculum vitae, and list references, before 15 October, to: **Dr. D. C. Pease, Department of Anatomy, University of California, Los Angeles, School of Medicine, Los Angeles, Calif. 90024.**

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

### ASSISTANT EDITOR: CLINICAL CHEMISTRY

The American Association for Clinical Chemistry is seeking candidates for this position, in Winston-Salem, N.C. (with possible later move to Washington, D.C.). Critical judgment, excellent skill in English required. Background in clinical, analytical, organic chemistry and/or biochemistry essential. Familiarity with both medical and chemical terminology important, and reading knowledge of French and German highly desirable. Ph.D. preferred but not essential. Send relevant information to:

J. Stanton King, Ph.D.  
P.O. Box 5218  
Winston-Salem, N.C. 27103

The Department of Ecology and Evolutionary Biology has been authorized to add to its faculty, an individual, at the level of **ASSISTANT PROFESSOR**, in one of the three following fields: **population genetics** with emphasis on the intermeshing of theory and field and/or laboratory studies; **aquatic ecology**, with emphasis on community structuring and dynamics; and **physiological plant ecology**, with emphasis on adaptation to desert ecosystems. Preference will be given to candidates doing innovative research with a strong commitment to quality education at the undergraduate and graduate levels. Send curriculum vitae to: **Dr. William Schaffer, Chairman, Search Committee, Department of Ecology and Evolutionary Biology, The University of Arizona, Tucson, Arizona 85721. The University of Arizona is an Equal Opportunity/Affirmative Action/Title IX Employer.**

## POSITIONS OPEN

Department of Chemistry at Purdue University invites applications for a tenure-track position of **ASSISTANT PROFESSOR OF BIOCHEMISTRY** starting August 1978. Candidates with a Ph.D. in biochemistry and some postdoctoral experience are preferred. Exceptional promise in teaching (both at graduate and undergraduate level) and in research are primary requirements. Curriculum vitae, a short summary of research plans, and three letters of recommendation should be sent to: **Dr. Robert A. Benkeser, Head, Department of Chemistry, Purdue University, West Lafayette, Indiana 47907**, by 1 January 1978. *Purdue University is an Equal Opportunity/Equal Access Institution.*

**ASSISTANT PROFESSOR—DEVELOPMENTAL NEUROBIOLOGY.** A faculty position is available at the assistant professor level. Applicant should have an established program, in any of the disciplines of neurobiology, for studying the development of the nervous system, but must be able to teach anatomical subjects. Send curriculum vitae, a brief summary of research interests, and names of three references to: **Search Committee, Department of Anatomy, Case Western Reserve University, Cleveland, Ohio 44106**, not later than 15 October 1977. *An Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR IN PHARMACEUTICS

A position in pharmaceuticals will be available 1 July 1978, for an individual specializing in analytical chemical techniques used to study the mechanistic and pharmacokinetic aspects of drug and toxicant distribution, metabolism, and elimination. This person should be interested in teaching undergraduate and graduate students, while developing a strong independent research program. Salary will be commensurate with experience. Send a curriculum vitae with three references to:

Professor K. A. Connors  
School of Pharmacy  
University of Wisconsin  
425 North Charter Street  
Madison, Wisconsin 53706

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

**ASSISTANT RESEARCH PROFESSOR AND WEED SCIENTIST,** University of Idaho. Position located at the Research and Extension Center, Parma, Idaho. Ph.D. required in weed science or closely related field. Closing date: 1 October 1977.

For information and application forms contact:

Weed Science Screening Committee  
Department of Plant and Soil Sciences  
University of Idaho  
Moscow, Idaho 83843

Texas A & M University's new College of Medicine is seeking to fill **ASSOCIATE AND ASSISTANT PROFESSOR** positions in the Medical Biochemistry Department. Candidates should have a Ph.D. or M.D. and postdoctoral or faculty research experience. Senior position candidates should have an ongoing funded research program in a medically relevant area, experience in teaching medical students, and exposure to clinical medicine. Duties will include research, course development, and teaching medical students. Send complete curriculum vitae to: **Dr. Garret Ihler, Department of Medical Biochemistry, Texas A & M University, Attention: Route 3, College Station, Texas 77843.**

*Equal Employment Opportunity through Affirmative Action.*

### ASSOCIATE DEAN, THE GRADUATE COLLEGE

The Graduate College at the University of Illinois at the Medical Center is recruiting an individual with a doctorate in the health science fields and a background in the health sciences to serve as associate dean. Prior teaching and research experience are required; some previous administrative experience is desirable. Maintaining a research program or some teaching in the area of specialization are compatible with this position. Responsibilities will include the evaluation of graduate programs and courses, graduate student admission, and the facilitation of faculty research efforts. The Medical Center presently has extensive graduate programs in the Colleges of Medicine, Dentistry, Nursing, Pharmacy, and Public Health which lead to the M.S. and the Ph.D. degrees. Please send curriculum vitae to: **Dr. William J. Grove, Vice Chancellor for Academic Affairs, University of Illinois at the Medical Center, Box 6998, Chicago, Illinois 60680. The University of Illinois is an Affirmative Action Employer.**

# BEHAVIORAL PHARMACOLOGY GROUP LEADER

As a major ethical pharmaceutical manufacturer, Lederle Laboratories can offer an excellent career opportunity to a scientist capable of assuming group leader responsibilities in our Behavioral Pharmacology area. Responsibilities include primate research and supervision of a basic screening & secondary evaluation staff. We seek a PhD, preferably with 5 or more years experience and a background in primate laboratory management for the study of the effects of psychotropic drugs on behavior. Professional recognition and compensation are available supplemented by comprehensive benefits. Location is a rural suburban community 30 miles from New York City. Send resume and salary history in confidence to Mr. G. J. Stein,



**LEDERLE LABORATORIES**  
American Cyanamid Company  
Pearl River, New York 10965

Equal opportunity employer, male/female



## NOBEL CONFERENCE XIII

Gustavus Adolphus College  
Saint Peter, Minnesota 56082

"THE NATURE OF LIFE"  
October 4 and 5, 1977

### DR. MAX DELBRÜCK

Nobel Prize in Medicine, 1969  
California Institute of Technology, Pasadena  
"Mind from Matter?"

### DR. RENÉ DUBOS

The Rockefeller University,  
New York  
"Biological Memory and  
The Living Earth"

### DR. SIDNEY W. FOX

University of Miami,  
Coral Gables, Florida  
"The Origin and Nature of  
Protolife"

### DR. BERNARD M. LOOMER

Claremont Graduate  
School, California  
"The Web of Life"

### DR. PETER R. MARLER

The Rockefeller University,  
New York  
"In the Mind's Eye:  
Perception and Innate  
Knowledge"

The Nobel Conference is arranged with the authorization of the Nobel Foundation, Stockholm, and with the assistance of an Advisory Committee of Nobel laureates. For reservations write Nobel Conference, Gustavus Adolphus College, Saint Peter, Minnesota 56082.

## DEPARTMENT OF BOTANY UNIVERSITY OF CALIFORNIA DAVIS, CALIFORNIA 95616

The department announces the availability of three positions effective 1 July 1978. Applicants should submit a curriculum vitae, list of publications with reprints, graduate and undergraduate transcripts, a résumé of research and teaching goals, and request that three letters of recommendation be sent to Chairperson of the appropriate Search Committee (see below). Closing date for applications is 15 November 1977. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

**PALEOBOTANIST.** Ph.D. Assistant or associate professor level, depending upon qualifications and experience of applicants. Candidates must have demonstrated potential for excellence in research and teaching and must have a strong background in geology as well as botany. Teaching will involve one or more courses in paleobotany which could include paleobiogeography of the Tertiary and Quaternary, paleoecology, palynology, and paleobotanical methods (for preparation, identification and dating of micro- and macrofossils, and human artifacts). Candidates may also be involved in general botany or biology teaching and should be interested in directing graduate student research. **Chairperson of Search Committee: Dr. John M. Tucker.**

**PLANT PHYSIOLOGIST/WEED SCIENTIST.** Ph.D. Assistant professor. The major thrust of the research program should involve the mechanisms of absorption of organic molecules (for example, herbicides, naturally occurring molecules) by roots and germinating seeds. Other aspects could include translocation of such molecules from roots, as well as the influence of edaphic and biotic factors on these processes. A related mission (applied) research program should also be developed. Candidates should be prepared to teach an upper division undergraduate plant physiology or weed science course, to be in charge of a seminar, and to direct graduate student research, possibly in connection with a graduate level course in the candidate's specialty. **Chairperson of Search Committee: Dr. Floyd M. Ashton.**

**PLANT PHYSIOLOGIST.** Ph.D. Assistant professor. Applicants must have demonstrated potential for excellence in research and teaching. The successful candidate will be expected to conduct research on the mechanism of photosynthesis, emphasizing aspects of the light reactions or photosynthetic electron transport and be able to direct graduate student research in these areas. Teaching will involve introductory upper division and/or graduate plant physiology courses as well as participation in introductory botany and/or biology. **Chairperson of Search Committee: Dr. Richard H. Falk.**

## Alternatives To Growth '77

Second of Five Biennial  
World Conferences on Growth  
October 2-4, 1977

Theme: "The Nature of Growth in Equitable and Sustainable Societies"

Is there a limit to how much growth the world can sustain? Are present industrially oriented growth patterns in humanity's best interest?

The Alternatives to Growth program exists as a forum to encourage international research and debate on these and other crucial questions about future growth. It has five two-year phases, each highlighted by a world conference, Mitchell Prize competition and related activities. Phase Two of the program — a three-day assembly featuring more than 50 distinguished speakers and the awarding of \$50,000 in prizes — is set for October 2-4, 1977 at The Woodlands, a new town north of Houston, Texas. Some 500 leaders from business, government and education are expected to participate.

For registration material or further information contact:



**ATG Conference**  
c/o Society for International Development  
1346 Connecticut Ave., N.W.  
Washington, D.C. 20036  
202/296-3810  
Cable SOCINTDEV Telex 64293

Sponsors: Club of Rome · University of Houston  
Mitchell Energy & Development Corp.

## POSITIONS OPEN

### ONCOLOGY RESEARCH CENTER BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY

Applications are invited for two positions in tumor immunology (**ASSOCIATE and ASSISTANT PROFESSOR**). Candidates should be established investigators and capable of developing their own program. There will be opportunities for basic science and clinical interdisciplinary research activities.

**Dr. Charles L. Spurr, Director ORC; Dr. Quentin Myrvik, Professor and Chairman, Department of Microbiology, 300 South Hawthorne Road, Winston-Salem, N.C. 27103.**

**BIOCHEMIST** needed for expanding hospital laboratory located in large Great Lakes city. Will be responsible for overall supervision of the chemistry functions and provide R & D for new methodology. Minimum requirements are a Ph.D. in biochemistry or chemistry with supervision experience in clinical laboratory preferred. Submit curriculum vitae and salary requirements to: **Box 338, SCIENCE. An Equal Opportunity Employer, M/F.**

**BIOCHEMISTRY.** Tenure-track position, assistant professor, 12 months, 2/3 research, 1/3 teaching, doctoral program. Specialization in mammalian biochemistry with emphasis on metabolic regulation, postdoctoral experience desired; closing date: 20 September 1977. Send inquiries and résumé to: **Dr. H. J. Klosterman, Chairman, Biochemistry Department, North Dakota State University, Fargo, N.D. 58102. An Equal Opportunity/Affirmative Action Employer.**

### PHARMACOGNOSY DEPARTMENT CHAIRMAN

The School of Pharmacy at the University of Mississippi invites applications from qualified persons with a Ph.D. in pharmacognosy (natural products chemistry) or a closely related field for the position of chairman, Department of Pharmacognosy. Rank and salary are open.

Applicants should have a history of active research in broad-based natural products chemistry. A background in microbiology and pharmacy and teaching experience are desirable.

Duties include administration of the department, teaching, graduate student direction, research, and service.

More complete details on request. Complete curriculum vitae and letters of application or requests for additional information should be sent to: **Dr. Mickey C. Smith, School of Pharmacy, University of Mississippi, University, Miss. 38677.**

Deadline for receipt of applications is 15 October 1977.

*The University of Mississippi is an Equal Opportunity Employer, M/F.*

### CHAIRPERSON DEPARTMENT OF MICROBIOLOGY MIAMI UNIVERSITY, OXFORD, OHIO

The Department of Microbiology at Miami University is seeking a chairperson beginning August 1978. The department, with 8 faculty members, 20 graduate students (M.S./Ph.D.), and approximately 250 undergraduate majors, carries out an extensive program of undergraduate and graduate instruction and research. Applicants must have a reputation for excellence in research and teaching. Inquiries and recommendations are welcome. Applicants should send curriculum vitae, and solicit three letters of reference to arrive by 25 October 1977, to:

**G. Gordon, Chairman, Search Committee  
Department of Chemistry  
Miami University  
Oxford, Ohio 45056**

*An Equal Opportunity/Affirmative Action Employer*

### DEAN OF OCEANOGRAPHY

Oregon State University invites nominations/applications for dean, School of Oceanography. The position is now open. Completed applications should be received by 1 November 1977. *Oregon State University is an Affirmative Action/Equal Opportunity Employer and encourages applications from females and minorities.* Address: **Office of the President, Oregon State University, Corvallis, Oregon 97331.**

## POSITIONS OPEN

### CHAIRPERSON—DEPARTMENT OF ANATOMY.

The University of South Dakota School of Medicine is seeking a professor and chairperson for its Department of Anatomy. Requirements: Ph.D. in anatomy (or M.D. whose major competence is in anatomy). Demonstrated excellence in teaching, research, and ability to develop a strong graduate program. Competitive salary. Closing date for applications: 1 December 1977. Letters of application or nomination, with accompanying curriculum vitae and several references, should be sent to: **Finley D. Marshall, Chairman, Search Committee, Division of Biochemistry, Physiology and Pharmacology, The University of South Dakota School of Medicine, Vermillion, South Dakota 57069. The University of South Dakota is an Equal Opportunity/Affirmative Action Employer.**

### CLINICAL IMMUNOLOGIST

With strong research interests in transplantation and/or cancer immunology sought to develop a clinical immunology service for our university and affiliated hospitals, particularly to support an active renal transplantation program. Candidate should be interested in interaction with colleagues involved in tumor immunology studies. Faculty appointment and salary commensurate with qualifications and experience. Forward curriculum vitae and list of references to **Dr. D. M. Goldenberg, Department of Pathology, University of Kentucky Medical Center, Lexington, Kentucky 40506, before 1 October 1977. Equal Opportunity/Affirmative Action Employer.**

**CROP LOSSES; PROGRAM COORDINATOR AND RESEARCH SCIENTIST.** Academic rank and salary negotiable. Tenure-track position. Ph.D. plus field experience required. Closing date: 15 October 1977. For further information and application forms contact:

**Crop Losses Position  
Department of Plant and Soil Sciences  
University of Idaho  
Moscow, Idaho 83843  
Telephone: 208-885-6276**

*Affirmative Action/Equal Opportunity Employer and Educational Institution.*

**DEAN.** College of Pharmacy and Allied Health Professions, Northeastern University. The university is the largest cooperative education institution in the United States with broad academic offerings and extensive research and community oriented programs. The college offers both undergraduate and graduate degrees in accredited health-related programs. Candidates should have an earned doctorate or its equivalent, an appreciation of clinical health programs, and an established scholarly background to qualify for a professorial appointment. Administrative and teaching experience in an academic setting is preferred. Applications and nominations, including a detailed résumé, should be sent to: **Dr. A. H. Taubman, Room 113 Mugar (F), Northeastern University, 360 Huntington Avenue, Boston, Mass. 02115, by 15 November 1977.**

*Northeastern is an Equal Opportunity/Affirmative Action/Title IX Employer.*

### EDITOR

For staff of multidiscipline monthly scientific journal. Ph.D. or equivalent in some field of molecular or cell biology (or closely related subject) and at least 2 years of independent research experience required. Some editorial experience preferred. Excellent command of English essential. Send curriculum vitae to: **Dr. B. K. Forscher, Managing Editor, Proceedings Office, National Academy of Sciences, 2101 Constitution Ave., NW, Washington, D.C. 20418. An Equal Opportunity Employer.**

The Harvard School of Public Health (*An Equal Opportunity/Affirmative Action Employer*) invites applications for a **JUNIOR FACULTY POSITION in EPIDEMIOLOGY or BIostatISTICS** to begin summer/fall 1978. Preference given to those with M.D. and advanced training in epidemiology and biostatistics, with consideration also of those with Ph.D. in either discipline. Position requires demonstrated research accomplishment and teaching experience, allowing half time for research in health care in a multidisciplinary research group, the remainder for the development and presentation of courses in quantitative analytic methods in the Schools of Public Health and Medicine. Send curriculum vitae, bibliography, and the names of four referees to: **Dr. Howard Frazier, Director, Center for the Analysis of Health Practices, Harvard School of Public Health, 677 Huntington Avenue, Boston, Mass. 02115.**

## POSITIONS OPEN

### ELECTRON DIFFRACTIONIST

Ph.D. Research in electron diffraction of hydrated protein crystals. EM, electron (or x-ray) diffraction, electron scattering theory, inelastic and dynamic scattering theory, programming experience essential. Salary \$13,404 (3.5 percent annual increments). Send curriculum vitae and three references to **Dr. D. F. Parsons, Electron Optics Laboratory, Division of Laboratories and Research, New York State Department of Health, Empire State Plaza, Albany, N.Y. 12201.**

### ELECTRON MICROSCOPIST/ CELL BIOLOGIST

The National Cancer Institute has a career Civil Service position for an electron microscopist/cell biologist to lead a group in the field of membrane biology at the Laboratory of Pathophysiology (GS-14, \$28,725). Applicants must have broad knowledge and experience in animal and plant cell biology and have a minimum of 5 years of postdoctoral experience or the equivalent in the use of freeze-etch techniques to study the structure of biological and artificial membranes. Submit application by 16 September 1977, to: **Carolyn Johnson, National Cancer Institute Personnel Office, National Institutes of Health, Public Health Service, Room 3A19, 9000 Rockville Pike, Bethesda, Md. 20014. An Equal Opportunity Employer, M/F.**

**FACULTY POSITION IN BIOLOGY.** Preferred doctorate in a biological science. Must have interest in quality undergraduate teaching and research. Principal teaching responsibilities will include general zoology, general biological science, and/or general physical science. Send résumé, transcripts, and three letters of reference or names and addresses of references by 30 September 1977, to: **Everett M. Grigsby, Chairman, Division of Natural Science and Mathematics, Northeastern Oklahoma State University, Tahlequah, Oklahoma 74464. Northeastern Oklahoma State University is an Equal Opportunity/Affirmative Action Employer.**

**FACULTY POSITION.** The University of North Carolina at Chapel Hill invites applications for a tenure-track faculty position in x-ray and electron diffraction. Research plans in membrane biology preferred. Appointment requires teaching a graduate level course in ultrastructure of membranes and membrane components as revealed by x-ray and electron diffraction methods. Postdoctoral experience required. Send curriculum vitae, a brief description of current research interests, and names of three references to: **Dr. Charles R. Hackenbrock, Chairman, Department of Anatomy, School of Medicine, University of North Carolina at Chapel Hill, 111 Swing Building 217H, Chapel Hill, N.C. 27514.**

**NEUROBIOLOGIST.** The University of North Carolina at Chapel Hill invites applicants for a tenure-track assistant professorship in cellular neurobiology. Appointment requires teaching of neuroanatomy to medical and graduate students and development of a research program in cellular neurobiology. Postdoctoral experience preferred. Send curriculum vitae, a brief description of current research interests, and names of three references to: **Dr. Charles R. Hackenbrock, Chairman, Department of Anatomy, School of Medicine, University of North Carolina at Chapel Hill, 111 Swing Building 217H, Chapel Hill, N.C. 27514.**

**POSTDOCTORAL POSITIONS** in membrane biology to study enzyme distribution, diffusion and interaction related to metabolic activity in natural and reconstituted membranes using combined biochemical and ultrastructural techniques. Send curriculum vitae, a brief description of current research interests, and names of three references to: **Dr. Charles R. Hackenbrock, Chairman, Department of Anatomy, Laboratories for Cell Biology, School of Medicine, University of North Carolina at Chapel Hill, 111 Swing Building 217H, Chapel Hill, N.C. 27514.**

THE INTERNATIONAL CENTRE OF  
INSECT PHYSIOLOGY AND ECOLOGY  
P.O. BOX 30772, NAIROBI, KENYA

VACANCIES

Applications are invited from suitably qualified candidates for the following vacancies, to be filled immediately:

1) **RESEARCH SCIENTIST OR SENIOR RESEARCH SCIENTIST (MOSQUITO ECOLOGY)**

(REF: SC1/77/3)

**QUALIFICATIONS:** Candidates must be scientists who are internationally recognised in the field of mosquito ecology, and in possession of at least 5 years of postdoctoral experience. Evidence for leadership of research groups or projects will be an advantage.

**RESPONSIBILITIES:** The successful candidate will undertake research on mosquito ecology, especially in relation to malaria. He/she will collaborate with other research scientists in the mosquito programme of which he/she will be a leading member.

2) **RESEARCH SCIENTIST OR POSTDOCTORAL RESEARCH FELLOW (TSETSE POPULATION DIVERSITY PROGRAMME)**

(REF: SC1/77/4)

**QUALIFICATIONS:** Ph.D. with five or more years postdoctoral experience in biological sciences and a demonstrable experience in ecological or eco-genetic research with arthropods. High quality research for Ph.D. and evidence for excellence since doctorate will be a distinct advantage.

**RESPONSIBILITIES:** The successful candidate will carry out research in the field of tsetse population dynamics.

3) **RESEARCH SCIENTIST OR SENIOR RESEARCH SCIENTIST (FINE STRUCTURE RESEARCH UNIT)**

(REF: SC1/77/5)

**QUALIFICATIONS:** Ph.D. in a biological science with considerable training and technical expertise in electron microscopical and associated techniques.

**RESPONSIBILITIES:** The successful candidate will be responsible for the organisation of the work of the Fine Structure Research Unit. He/she will also be able to pursue his/her own research in insect fine structure, including cytochemistry and autoradiography, and to assist other scientists with their work involving electron microscope techniques. The position is a very responsible one, and requires a senior, mature, and experienced electron microscopist with wide organisational ability and enormous technical expertise.

4) **RESEARCH SCIENTIST OR POSTDOCTORAL RESEARCH FELLOW (SALIVARY GLAND PHYSIOLOGY PROGRAMME)**

(REF: SC1/77/6)

**QUALIFICATIONS:** Ph.D. degree in biochemistry, immunology, or physiology. Experience with investigations in insect science would be an advantage. This position is open to young postdoctoral scientists who have interest in immunology, enzyme biochemistry, or immunochemistry.

**RESPONSIBILITIES:** The successful candidate will be required to collaborate in the investigation of the tsetse salivary gland physiology and its relationship to the immunology of resident trypanosomes.

5) **RESEARCH SCIENTIST OR POSTDOCTORAL RESEARCH FELLOW (CHEMISTRY RESEARCH UNIT)**

(REF: SC1/77/7)

**QUALIFICATIONS:** Ph.D. in organic chemistry with considerable experience in natural products chemistry, and the isolation and structural elucidation of physiologically active substances from plants and other biological sources.

**RESPONSIBILITIES:** The successful candidate will be required to work in the area of phytochemistry, particularly where vital to plant/insect relationships. The overall objective of this research is to discover novel materials for insect control. Willingness to collaborate with colleagues in other disciplines, especially in the biological sciences, is of paramount importance.

**SALARY:**

(a) **SENIOR RESEARCH SCIENTIST:**

Basic salary according to qualifications and experience but, in any case, will not be less than K.Shs.100,000 per annum.

(b) **RESEARCH SCIENTIST:**

Basic salary according to qualifications and experience but, in any case, will not be less than K.Shs.72,000 per annum.

(c) **POSTDOCTORAL RESEARCH FELLOW:**

Basic salary according to qualifications and experience but, in any case, will not be less than K.Shs.54,000 per annum.

(d) **SCIENTIFIC/ASSOCIATE SCIENTIFIC OFFICER**

Basic salary according to qualifications and experience but, in any case, will not be less than K.Shs.40,000 per annum.

**OTHER BENEFITS**

Other benefits include gratuity, housing allowance, group medical scheme, and passages for the appointee and his/her family.

Applications, in sextuple, giving detailed information on general education, professional qualifications, experience, marital status, age, present terms of employment (including salary), names and addresses of four referees (including one personal referee), and photostat copies of relevant transcripts, thesis abstracts, and reprints of publications or copies of the most recent publications, should be addressed to:

The Administrative Manager  
I.C.I.P.E.  
P.O. Box 30772  
Nairobi  
Kenya

to reach him not later than 30 September 1977.



Open to both  
men and women

Health and Welfare Canada

Health Protection Branch

Bureau of Drugs, Ottawa, Ontario.

**MEDICAL OFFICER**

**Salary: \$30,917 - \$38,978**

**Ref. No: 77-PSTP-18-130**

**Duties**

The successful candidate will assess and evaluate drug research data including clinical trials and other information concerning the safety, efficacy and medical use of central nervous system drugs.

**Qualifications**

A physician with psychiatric qualifications and an acceptable combination of training and experience in clinical psychopharmacology or a physician with post-graduate training and acceptable experience in clinical pharmacology is required. Graduation from a recognized school of medicine and eligibility to practise medicine in a province of Canada are necessary. Knowledge of English is essential.

**Language Requirements**

Unilingual persons may apply for bilingual positions; they must indicate in writing their willingness to undertake up to twelve months' continuous language training as determined, and at locations specified by the Public Service Commission. The Commission will assess the likely capacity of candidates to become bilingual. Appointment is conditional upon successful completion of training.

**How to Apply**

Forward completed "Application for Employment" (Form PSC 367-4110) available at Post Offices, Canada Manpower Centres or offices of the Public Service Commission of Canada, to:

Professional, Scientific and Technical Program  
Public Service Commission of Canada  
300 Laurier Avenue West  
Ottawa, Ontario K1A 0M7

**Closing Date: September 23, 1977**

Please quote the applicable reference number at all times.



## POSITIONS OPEN

### FACULTY POSITION IN NEUROANATOMY

The Department of Cell Biology is seeking a junior-level faculty member with either the M.D. or Ph.D. degree. Formal teaching duties include teaching of neuroanatomy in a neurosciences medical school course. The individual sought will be expected to establish an independent research program in an active research environment. Nominations or curriculum vitae, including a list of publications and names of references should be sent to:

**Dr. D. J. Woodward**  
Faculty Search Committee  
University of Texas Health Science Center at Dallas  
Southwestern Medical School  
5323 Harry Hines Boulevard  
Dallas, Texas 75235

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

### IMMUNOGENETICIST or CELLULAR IMMUNOLOGIST

With strong research interest in cancer and membranology, sought for academic position in cancer immunology program of Division of Experimental Pathology. Candidate should have demonstrated ability to secure research grant funds and should be interested in collaborative studies. Faculty appointment and salary commensurate with qualifications and experience. Forward curriculum vitae and list of references to **Dr. D. M. Goldenberg, Department of Pathology, University of Kentucky Medical Center, Lexington, Kentucky 40506**, before 1 October 1977. *Equal Opportunity/Affirmative Action Employer.*

**IMMUNOLOGIST-IMMUNOPATHOLOGIST.** A position at the assistant or associate professor level for an individual with the Ph.D. degree or equivalent and training and research experience in the area of host-defense mechanisms. Applicants holding the D.V.M. degree are preferred. Primary responsibilities involve development of a research program in the area of mechanisms of host-defense in spontaneous and experimental animal diseases. Participation in ongoing research projects, teaching, and advising M.Sc. and Ph.D. students in veterinary science is encouraged. Salary negotiable. Send curriculum vitae, selected reprints, and three names of references to: **Dr. David M. Young, Department of Veterinary Science, Veterinary Research Laboratory, Montana State University, Bozeman, Montana 59717**. *An Equal Opportunity/Affirmative Action Employer.*

Two faculty positions available, both at assistant professor level. Ph.D. required. **INSECT PHYSIOLOGIST/BEHAVIORIST**—2/3 teaching, 1/3 research. **INSECT ECOLOGIST**—1/3 teaching, 2/3 research. Both positions require teaching at graduate and undergraduate level plus developing a strong research program. Closing date: 7 October 1977. Address inquiries or application to: **Dr. Fred C. Swift, Chairman of the Search Committee, Department of Entomology and Economic Zoology, P.O. Box 231, Cook College, Rutgers University, New Brunswick, New Jersey 08903**. *Equal Opportunity/Affirmative Action Employer.*

### THE UNIVERSITY OF MICHIGAN Department of Psychiatry Instructor or Assistant Professor

Two faculty positions available for dynamically oriented general or child psychiatrist, interested and experienced in working with severely disturbed adolescents in an inpatient and day treatment setting. Strong academic and research interests needed. Must be at least Board-eligible. Duties also include teaching medical students, house officers, and other trainees. Send résumé to: **Box 337, SCIENCE**. Code 1100GO, 1300HO. A *Nondiscriminatory, Affirmative Action Employer.*

**INTERNAL MEDICINE POSITIONS**—Medical school-affiliated Veterans Administration Hospital, Illinois—are available in scenic southern Illinois. Internists with subspecialty in pulmonary disease or gastroenterology are sought. Faculty appointment in the Southern Illinois University—Carbondale School of Medicine is possible. Competitive salary arrangements. Write or call **Charles E. Richardson, Associate Dean for Carbondale**, telephone 618-536-5511 or **R. H. Robertson, Jr., M.D., Chief of Staff**, telephone 618-993-2151. Written correspondence should be addressed to: **School of Medicine, Southern Illinois University, Carbondale, Illinois 62901**. Communications should be received prior to 1 November 1977.

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

### LECTURER IN MEDICINAL CHEMISTRY

The School of Pharmacy is seeking a person holding a Ph.D. degree to teach undergraduate medicinal chemistry to pharmacy students, beginning in the 1977-78 academic year. The appointment, on a 12-month basis includes a summer session teaching commitment. The person either should have a bachelor's degree in pharmacy and/or graduate training in medicinal chemistry. The appointment will be for 2 to 4 years at a salary level commensurate with university lectureship positions. Opportunity for conducting postdoctoral research with School of Pharmacy faculty also will be available. Send résumé and have two letters of recommendation sent to: **Professor C. R. Hutchinson, School of Pharmacy, 425 North Charter Street, Madison, Wisconsin 53706**. *The University is an Equal Opportunity/Affirmative Action Employer.*

### MEDIATOR OFFICE OF ENVIRONMENTAL MEDIATION UNIVERSITY OF WASHINGTON

The Office of Environmental Mediation, established with funds from the Ford and Rockefeller Foundations to offer mediation services in environmental conflicts, is seeking a person to serve on a mediation team which seeks resolution to a variety of environmental disputes. The applicant should have a strong background in the private or governmental sector and broad contact and acceptance with the various groups and interests involved in environmental conflict. A working knowledge of economic and environmental issues and experience with the political structure in the western United States is essential.

Applications, which should include a résumé and three personal references, must be received by 15 October 1977. For additional information, contact:

**Leah K. Patton**  
Office of Environmental Mediation  
Institute for Environmental Studies, FM-12  
University of Washington  
Seattle, Washington 98195  
Telephone: 206-543-6713

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

### MOLECULAR BIOLOGY TECHNICIAN

M.S. or B.S. with biochemical experience in a research laboratory, to participate in molecular genetics program on protein-DNA interactions and microbial plasmids. Knowledge of enzyme and nucleic acid purification, gel electrophoresis, and ultracentrifugation techniques desirable.

Qualified candidate should submit résumé with three references to:

**M. L. Knill—Recruitment  
Position #578  
FREDERICK CANCER  
RESEARCH CENTER  
Litton Bionetics, Inc.  
P.O. Box B  
Frederick, Md. 21701**

*An Equal Opportunity Employer, M/F*

**ORNAMENTAL HORTICULTURIST**—University of Idaho, Moscow. Teaching (80 percent); research (20 percent); assistant professor. Ph.D. (or near completion) required. Position available after 1 January 1978. Closing date for applications: 1 November 1977. For further information and application forms, telephone 208-885-6276, or write:

**Ornamental Horticulture Position  
Department of Plant and Soil Sciences  
University of Idaho  
Moscow, Idaho 83843**

*Affirmative Action/Equal Opportunity Employer and Educational Institution*

### PLANT BIOLOGIST KENYON COLLEGE

The Department of Biology is seeking a person trained in the botanical sciences to teach a portion of the introductory biology lecture course and courses in plant biology, plant physiology, and teach or direct research in molecular biology. Ph.D. required. Research opportunities available. Rank open, salary dependent on qualifications. Send letter of application, curriculum vitae, transcripts, and three letters of recommendation to: **Search Committee, Department of Biology, Kenyon College, Gambier, Ohio 43022** before the 30 November 1977 closing date. *An Equal Opportunity Employer.*

## POSITIONS OPEN

### PATHOLOGIST/ANATOMIST/CELL BIOLOGIST DEPARTMENT OF PATHOLOGY UNIVERSITY OF ARKANSAS COLLEGE OF MEDICINE

Ph.D. required. There is one position open to serve as director/coordinator of the tissue processing facilities of the department. This includes electron microscopy, the bone laboratory, routine histology, and special techniques (histochemistry, special stains, and so forth). The successful candidate should have an interest in developing his own ongoing research project, though collaboration with other members of the department is not excluded. Must have the ability to supervise the technology involved and collaborate with the other investigators in the department. Teaching of graduate-level courses will be required. Salary and rank commensurate with experience and training.

Send curriculum vitae and at least three references to:

**Sanford I. Roth, M.D.**  
Chairman, Department of Pathology  
University of Arkansas for Medical Sciences Campus  
4301 West Markham Street  
Little Rock, Arkansas 72201  
*An Equal Opportunity Employer*

### UNIVERSITY OF OKLAHOMA College of Medicine

Applications are solicited for faculty positions in the following departments: **PATHOLOGY**: (#31) **Assistant Professor**—requires research and teaching skills in diagnostic electron microscopy, immunopathology and histochemistry; (#32) **Assistant-Associate Professor**—M.D. for assistant director of clinical laboratories, University Hospital and Clinics and Veterans Administration Hospital. **RADIOLOGICAL SCIENCES**: (#23) **Instructor-Assistant Professor**—medical radiation physicist, adept at computer programming, some teaching responsibilities.

Applicants should send curriculum vitae identifying vacancy number for which they are applying to: **Dr. Thomas N. Lynn, Dean, College of Medicine, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Oklahoma 73190**. *We are an Equal Opportunity Employer.*

**PHARMACOLOGIST.** Applications are invited for a faculty position (assistant or associate professor) at Emory University. Candidates must have doctoral degree, postdoctoral research experience, and be able to develop independent research program in biochemical/molecular pharmacology. Orientation to autonomic nervous and/or cardiovascular systems preferred. Send curriculum vitae, brief description of proposed research, and names of three references to: **Dr. Neil C. Moran, Chairman, Department of Pharmacology, Emory University, Atlanta, Ga. 30322**. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION IN NEUROPHARMACOLOGY** immediately available. Recent Ph.D. (pharmacology or biochemistry) to work on 2-year project on the neuropharmacology of adenosine and cyclic nucleotides in brain, interdisciplinary neuroscience environment with clinical correlation. Opportunities for teaching and faculty appointments. Send curriculum vitae and names of three references to: **Dr. Albert Sattin, Institute of Psychiatric Research, Indiana University School of Medicine, 1100 West Michigan Street, Indianapolis, Indiana 46202**.

**POSTDOCTORAL RESEARCH ASSOCIATE.** A position is available beginning 1 September 1977 for research in regulation of hepatic lipid metabolism and plasma lipoproteins. Candidates should have a Ph.D. in a biomedical science or an M.D. and should expect to spend 2 to 3 years in our laboratory. Send curriculum vitae and names of three references to: **Dr. Murray Hiemberg, Department of Pharmacology, University of Missouri, School of Medicine, Columbia, Missouri 65201**.

*An Affirmative Action/Equal Opportunity Employer*

**POSTDOCTORAL RESEARCH ASSOCIATE.** Position available immediately. Appointment for 2 or 3 years. The research involves an investigation of the biosynthesis of mammalian cell membrane glycoproteins. Send curriculum vitae and arrange for three letters of recommendation to be sent to: **Dr. John Schutzbach, Department of Microbiology, University of Alabama in Birmingham, University Station, DSB Box 78, Birmingham, Alabama 35294**. *Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**PHYSIOLOGIST**, Ph.D. or M.D. Tenurable faculty position available 1 January 1978. Medical school teaching experience required (preferably in renal or gastrointestinal physiology) with record of productive, funded research. Graduate teaching experience and interest in cooperative, interdisciplinary research projects preferred. Apply before 1 November with full curriculum vitae to: **Dr. M. D. Rayner, Department of Physiology, John A. Burns School of Medicine, Honolulu, Hawaii 96822.**

**POSTDOCTORAL POSITION** in molecular endocrinology: position available immediately for a recent Ph.D. to study hormonal regulation of enzyme synthesis. Strong background in molecular biology desirable. Send curriculum vitae, statement of research interests, and two letters of reference to: **Dr. A. G. Goodridge, Department of Pharmacology, Case Western Reserve University, Cleveland, Ohio 44106.**

**POSTDOCTORAL POSITION—IMMUNOLOGY.** Position available in research dealing with membrane phenomena in immunology. Send curriculum vitae to: **Dr. A. Froese, Department of Immunology, University of Manitoba, Winnipeg, Manitoba, Canada R3E 0W3.**

### POSTDOCTORAL POSITIONS ENVIRONMENTAL CARCINOGENESIS PROGRAM

Immediate openings for research associates with strong background in molecular biology, biochemistry, microbiology, or biophysics to study the relationship between DNA repair, mutagenesis, and oncogenic transformation of human cells in culture by physical, chemical, and viral carcinogenic agents. Send application, including curriculum vitae, reprints, and letters of recommendation to:

**Dr. Veronica M. Maher or Dr. J. Justin McCormick**  
Co-Directors, Carcinogenesis Laboratory  
B614 Fee Hall-COM  
Michigan State University  
East Lansing, Michigan 48824

**POSTDOCTORAL POSITION.** Available immediately for studies of the metabolism, nucleic acid binding, and mutagenicity of malondialdehyde. Experience in nucleic acid biochemistry, lipid metabolism, or chemical carcinogenesis is desirable. Salary competitive. Send curriculum vitae with the names of three references to: **Dr. L. J. Marnett, Department of Chemistry, Wayne State University, Detroit, Mich. 48202.** *Wayne State University is an Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL POSITIONS

The Biochemistry Division at the Eunice Kennedy Shriver Center for Mental Retardation has several positions open for persons interested in **NEUROCHEMISTRY**. The Shriver Center is located in the suburban Boston area and offers a stimulating intellectual environment. Postdoctoral-level positions are available for candidates with experience in the following areas: (i) **ENZYMOLGY**, to study the mechanism of assembly of myelin membranes and the regulation of brain lipid synthesis. Applications should be directed to Dr. F. Jungalwala. (ii) **PROTEIN PURIFICATION AND SEQUENCING**, to study the proteolipid protein from brain myelin. Academic appointments possible. Applications should be directed to Dr. M. Lees.

**Eunice Kennedy Shriver Center**  
200 Trapelo Road  
Waltham, Massachusetts 02154  
*An Equal Opportunity Employer, M/F*

### POSTDOCTORAL RESEARCH ASSOCIATE

NIH grant available immediately for Ph.D. with expertise in virology, tissue culture and organ culture techniques, basic immunology. Work involves in vivo and in vitro study of active and latent ocular Herpes infections and new chemotherapeutic agents. Opportunity to obtain own grant later. Please submit curriculum vitae to: **Deborah Pavan Langston, M.D., Harvard Medical School, Eye Research Institute of Retina Foundation, 20 Stanford Street, Boston, Mass. 02114.**

# SCIENTIFIC DIRECTOR

## National Institute of Environmental Health Sciences

## NATIONAL INSTITUTES OF HEALTH

### Public Health Service

### Research Triangle Park, North Carolina

The National Institute of Environmental Health Sciences, (NIEHS), Research Triangle Park, North Carolina, seeks qualified applicants for the position of Scientific Director.

NIEHS is responsible for conducting and supporting basic and applied research on the biological and public health aspects of chemical, physical and biological substances in the environment in order to develop understanding of the mechanisms of action of such substances, provide the scientific knowledge for evaluating their extent and severity on a national scale, and to define and develop methods for the prevention, diagnosis and treatment of environmentally induced disease and disorder in man.

The Scientific Director is responsible for direction of the Institute's Intramural Research Program. The Scientific Director provides leadership and guidance to the Intramural staff and is responsible for recruitment of senior level scientific staff, review of the quality of research conducted by the Intramural staff, planning of laboratory research programs, and the allocation of necessary resources, personnel, money, and space to accomplish these programs. The Scientific Director collaborates closely with the Director and his staff in the planning and implementation of the overall NIEHS program effort.

The NIEHS Intramural Research Program consists of a staff of 50 professional (doctorate level) and 75 supporting staff. The program's budget is approximately \$10 million annually. Scientific efforts are multidisciplinary in nature and highly collaborative and interactive. Scientific specialties include: pharmacology and pharmacokinetics, toxicology, embryology, human and plant genetics, biophysics and radiation, biometry, epidemiology, physiology and pathology. The major research effort is basic and animal oriented although clinical opportunities exist in collaboration with neighboring academic medical centers.

NIEHS expects the Intramural Program to grow significantly between now and 1982. In 1980, NIEHS will occupy a new permanent facility at Research Triangle Park, currently under construction. This facility will provide an additional 130,000 square feet of laboratory space. The Intramural staff is expected to increase to 400 by 1980.

This position requires an M.D. or Ph.D. in biological or medical sciences with most direct applications to study of health effects of environmental factors. The incumbent must have extensive experience in managing medium and/or large-sized multidisciplinary research efforts with skills in dealing with competing demands and people, decision-making and planning in support of broadly-based research programs in all their aspects (budget, personnel allocations, resources, etc.). Experience in governmental, especially NIH procedures, is desirable, but not essential. National and international recognition for achievements in research, extensive involvement in professional activities, skill in presenting (orally and in writing) programs and needs to variety of scientific and non-scientific audiences, and ability to deal with short deadlines are essential. Incumbent must interact with leaders in other related research activities in NIH Institutes and related Federal agencies, and outside of government. Travel to meet with others about programs and to meetings at NIH is frequent. The position will be filled through career Civil Service and salary and qualifications of the proposed incumbent are subject to approval by the U.S. Civil Service Commission. Salary will range from \$39,000 to \$47,500 per annum, depending on qualifications. Letters of application, curriculum vitae, and bibliography should be mailed by Sept. 23, 1977, to:

**Executive Secretary  
Scientific Director Search Committee  
Building 1, Room 111**

## National Institute of Environmental Health Sciences

**P.O. Box 12233  
Research Triangle Park, NC 27709**

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## POSITIONS OPEN

### PRINCETON UNIVERSITY PHYSICAL OCEANOGRAPHY

The Department of Geological and Geophysical Sciences seeks to make a faculty appointment in physical oceanography. The position is in support of the department's Program in Geophysical Fluid Dynamics. This program is a Ph.D.-granting program at Princeton University carried on in cooperation with the Geophysical Fluid Dynamics Laboratory of the National Oceanographic and Atmospheric Administration at Princeton University. Rank and salary open. Interested persons may obtain more information from or send curriculum vitae to

**Professor Robert Phinney**  
Department of Geological and Geophysical Sciences  
Princeton University  
Princeton, New Jersey 08540  
*Princeton University is an Equal Opportunity Employer.*

### PRE- AND POSTDOCTORAL

Positions are available for studies on the protein synthesizing system with special emphasis on ribosomes—topography, biogenesis, and function under various conditions of growth and development. Teaching opportunities available.

Reply with résumé to: **Professor Bruce H. Sells, Laboratories of Molecular Biology, Faculty of Medicine, Memorial University of Newfoundland, St. John's, Newfoundland, Canada A1C 5S7.**

**RESEARCH ASSOCIATE** with graduate training in epidemiology or human genetics for position involving data analysis and research design for studies of genetic predisposition to cancer and other common diseases. Send curriculum vitae and names of three references to: **Dr. Michael Swift, Biological Sciences Research Center 220H, University of North Carolina, Chapel Hill, N.C. 27514. Affirmative Action/Equal Opportunity Employer.**

### RESEARCH SPECIALIST

New Ph.D. in physiology to conduct studies in coronary physiology with special interest in oxygen transport to heart. Strong background in cardiovascular physiology.

Please send résumé to:

**Personnel Department  
COLLEGE OF MEDICINE AND  
DENTISTRY OF NEW JERSEY  
Rutgers Medical School  
P.O. Box 101  
Piscataway, New Jersey 08854**  
*An Equal Opportunity/Affirmative Action Employer*

### RESEARCH SPECIALIST

Ph.D. in biochemistry to conduct experiments relating to the regulation of sterol and fatty acid synthesis in cultured fibroblasts in diabetes and hereditary hyperlipidemias. Experience in lipid chemistry and receptors desirable.

Please send résumé to:

**Personnel Department  
COLLEGE OF MEDICINE AND  
DENTISTRY OF NEW JERSEY  
Rutgers Medical School  
P.O. Box 101  
Piscataway, New Jersey 08854**  
*An Equal Opportunity/Affirmative Action Employer*

**VIROLOGIST.** Ph.D. A senior position is available for an established investigator in the area of mammalian virology. Responsibilities include maintaining of viable research programs, graduate student training, and participation in medical student education. Salary and rank commensurate with experience and qualifications. Send résumé to: **Titus H. J. Huisman, Chairman, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, Ga. 30902. An Equal Opportunity Employer.**

## FELLOWSHIPS

**IMMUNOLOGIST.** Ph.D. Postdoctoral fellowship in tumor immunology beginning 1 October 1977 for a 2- to 3-year period. Applicants to have Ph.D. in immunology or to have relevant research experience. Stipends from \$10,000 to \$13,000 per year depending upon experience. Send résumé and pertinent publications to: **Dr. H. Terry Wepsic, Department of Pathology, VA Hospital, 3350 La Jolla Village Drive, San Diego, Calif. 92161.**

## FELLOWSHIPS

Two-year **POSTDOCTORAL FELLOWSHIP** in retinal cell biology available 1 January 1978 at the Jules Stein Eye Institute, University of California at Los Angeles. Eligibility limited to U.S. citizens and permanent residents. The position should attract someone wishing to work on problems dealing with the structure and molecular biology of photoreceptors. Send curriculum vitae and statement of research interest to: **Dr. Dean Bok, Jules Stein Eye Institute, UCLA Center for Health Sciences, Los Angeles, Calif. 90024. An Equal Opportunity/Affirmative Action Employer.**

### JOINT INSTITUTE FOR LABORATORY ASTROPHYSICS (JILA)

Applications are invited for **research associateships** (recent Ph.D.'s) and **visiting fellowships** (senior scientists). JILA (jointly run by the U.S. National Bureau of Standards and the University of Colorado) is devoted to research, study, and teaching in low-energy atomic and molecular physics, theoretical astrophysics, and other closely related areas. Applications for research associateships can be accepted anytime throughout the year, but completed applications for visiting fellowships must be received by 13 January 1978. Further information can be obtained from: **the Secretary, Visiting Scientists Program, JILA, University of Colorado, Boulder, Colorado 80309.**

### HEISER FELLOWSHIP PROGRAM FOR RESEARCH IN LEPROSY

**[POSTDOCTORAL RESEARCH FELLOWSHIPS]** Fellowships available to support beginning biomedical research training in leprosy. Applicants should have M.D., Ph.D., or equivalent degree and be at early stage of postdoctoral training. Applications by 1 February for fellowships to be activated June to December 1978. For information: **Heiser Fellowship Program for Research in Leprosy, 1230 York Avenue, New York, New York 10021.**

### TARBOX POSTDOCTORAL FELLOWSHIPS IN NEUROSCIENCE TEXAS TECH UNIVERSITY SCHOOL OF MEDICINE

Tarbox postdoctoral fellowships in neuroscience are available from the Tarbox Parkinson's Disease Institute at the Texas Tech University School of Medicine in Lubbock for postdoctoral research training in areas of neuroscience broadly related to Parkinson's disease. Appointments will be for a 12-month period starting on or after 1 November 1977, with the possibility of renewal. The Tarbox Fellow will receive each year \$12,000 in salary, \$12,000 for research supplies and equipment, and \$1,000 for travel. Priority will be given to those seeking training within 3 years of doctoral degree but applications from more senior investigators will be considered. Applicants should possess the Ph.D., M.D., D.V.M., or equivalent degree and submit an application prior to 1 October 1977. For application details write to: **Dr. Alexander D. Kenny, Tarbox Parkinson's Disease Institute, Department of Pharmacology and Therapeutics, Texas Tech University School of Medicine, Lubbock, Texas 79409.**

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### POSTDOCTORAL FELLOWSHIP

Applications are invited for a NRSA postdoctoral fellowship in association with a multidisciplinary Hematology Training Program at the Sloan-Kettering Institute for Cancer Research. The primary goals of the program are to train and conduct research in the following areas: (i) identification and characterization of erythropoietin-responsive cells, (ii) refinement of clinical bone marrow transplantation, (iii) genetic disorders in red cell enzymes, (iv) interaction of leukocytes with other hematopoietic elements, and (v) fundamental research of HLA. Training methods will include an individualized research program under a qualified mentor, plus lectures, seminars, clinical rounds, and conferences focusing on hematology and oncology. The awards, for 1 year with the possibility of renewal, are open to U.S. citizens or permanent residents who have an M.D., Ph.D., or equivalent degree and who have had no more than 3 years' postdoctoral experience. Please submit curriculum vitae and at least three letters of reference to:

**Dr. Martin J. Murphy, Jr., Director  
Hematology Training Program  
Sloan-Kettering Institute for Cancer Research  
1250 First Avenue  
New York, New York 10021**

*An Equal Opportunity/Affirmative Action Employer*

## FELLOWSHIPS

### POSTDOCTORAL RESEARCH FELLOWSHIP IN VISUAL SCIENCES

Two positions are available for postdoctoral research training in cell biology (including transmission, scanning, and freeze-etch EM), biochemistry and physiology of the eye, with emphasis on ultrastructure, function, growth and differentiation, wound healing, and degenerative diseases of ocular tissues. Recent Ph.D.'s or M.D.'s who are U.S. citizens or permanent residents are invited to apply. Initial appointment is for 1 year, renewable for 2 years. Stipends under currently funded National Research Service Awards range from \$10,000 to \$14,000 per year depending on previous relevant experience. Send curriculum vitae with a statement of research interests, career goals, and names and addresses of two or three references to: **Dr. Clifford Harding, Director of Research, Kresge Eye Institute, Wayne State University, School of Medicine, 540 East Canfield, Detroit, Michigan 48201. An Equal Opportunity Employer.**

**POSTDOCTORAL FELLOWSHIP** available immediately in multidisciplinary training program in cardiopulmonary physiology. This appointment emphasizes training and interest in biochemical studies of cardiopulmonary adaptation to endurance exercise training. Applicants must be U.S. citizens and have the M.D. or Ph.D. degree. Individuals with experience relevant to physiological biochemistry are preferred. Send curriculum vitae and names of two references to: **Colin M. Bloor, M.D., Cochairman, Department of Pathology, University of California, San Diego, School of Medicine, La Jolla, California 92093.**

### MUTAGENESIS AND TRANSFORMATION FELLOWSHIP

Postdoctoral research associate is required for the area of in vitro chemical transformation of cultured mammalian cells. Experience in cell culture and malignant transformation is desired. Salary range of \$11,000 to \$13,000. Apply to:

**Anne H. Rainey, Employment Manager  
Litton Bionetics, Inc.  
5516 Nicholson Lane  
Kensington, Maryland 20795**  
*Equal Opportunity Employer, M/F*

## SCIENTIFIC EXCHANGES

### SCIENTIFIC EXCHANGES WITH USSR AND EASTERN EUROPE

**Commission on International Relations (USSR/EE)  
National Academy of Sciences  
2101 Constitution Avenue, Washington, D.C. 20418**

Applications are invited from American scientists interested in professional visits (1 to 12 months) between September 1978 and August 1979 in the USSR, Bulgaria, Czechoslovakia, Hungary, Poland, Romania, Yugoslavia, and possibly the German Democratic Republic. Applicants must be United States citizens and have a doctoral degree in the natural or social and behavioral sciences. Deadline for completed applications is 18 November 1977.

## MARKET PLACE

**FOR SALE—SOLID PHASE SEQUENCER—SEQUEMAT MODEL 12.** In perfect working condition; 2½ years old. \$12,500 or best offer. Write: **Dr. J. D. Capra, University of Texas Health Science Center at Dallas, Microbiology Department, 5323 Harry Hines Boulevard, Dallas, Texas 75235.**

## AUTHORS WANTED BY NEW YORK PUBLISHER

Your book can be published, promoted, distributed by a reliable company on a subsidized basis. Fiction, non-fiction, poetry, scholarly, scientific and even controversial manuscripts welcomed. For free booklet, write: **Vantage Press, Dept. SC, 516 W. 34 St., New York 10001.**

## HEAD, DEVELOPMENT BIOCHEMISTRY SECTION

This is a top Civil Service position at the GS-16 level, with a salary range of \$39,629 to \$47,500 per annum. Ph.D. with major study in an appropriate discipline or field of the biological and/or physical sciences to administer and coordinate a broad program of biochemistry research. Extensive experience as a research laboratory investigator in nucleic acid biochemistry and with a substantial body of publications in this field is required.

Candidates will be rated on qualification requirements, experience, recognized leadership, and scientific administration. Closing date for the receipt of application is Sept. 30, 1977. Application will consist of an SF-171, curriculum vitae, bibliography, and a copy of latest performance evaluation (if available). The classification of this position and the final approval of the selected candidate rests with the U.S. Civil Service Commission.

For more information, contact Mr. Fred Denecke, (301) 496-6862.

National Cancer Institute  
Personnel Office

## NATIONAL INSTITUTES OF HEALTH

Public Health Service

Bldg. 31, Rm 3A19  
9000 Rockville Pike  
Bethesda, Md. 20014

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## DIRECTOR

### Energy and Environment Division Lawrence Berkeley Laboratory University of California

Applications and nominations are invited for Head of the Energy and Environment Division of the Lawrence Berkeley Laboratory. The Division is primarily funded by the Energy Research and Development Agency and has programs in:

Conservation, combustion research, solar energy development, environmental research and instrumentation, chemical process development, regional studies and energy policy analysis.

Candidates should have a record of distinguished achievement in energy-related or environmental research and the ability to give scientific and administrative leadership to a large and diverse division of a multi-purpose laboratory.

Applications or nominations should be submitted by October 1, 1977, to:

The Energy and Environment Search Committee  
Director's Office  
Lawrence Berkeley Laboratory  
1 Cyclotron Road  
Berkeley, California 94720

### LAWRENCE BERKELEY LABORATORY

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### ASSOCIATE DIRECTOR FOR RESEARCH

The International Fertility Research Program is seeking nominations and applications for the position of Associate Director for Research, available immediately.

The IFRP identifies and evaluates promising new methods of fertility regulation. Data collected in international field trials are computer processed for rapid analysis and research findings on safer, more effective methods and delivery systems are broadly disseminated to encourage their use in family planning programs. The Research Department is comprised of 30-50 staff members including research professionals, an editorial staff, and support personnel.

Candidates should possess academic and professional credentials demonstrating expertise in clinical research, maternal and child health, epidemiology, family planning/population control, or related fields; experience indicating the ability to develop research policy and to administer its successful implementation; commitment and exposure to international public health research; and the ability to prepare and review research materials for publication. Submit nominations or send curriculum vitae and samples of published research to: Ms. Lisa Schultz, Head, Personnel Services Division, International Fertility Research Program, Research Triangle Park, N.C. 27709.

INTERNATIONAL FERTILITY  
RESEARCH PROGRAM

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## department head cardiovascular biology

As a major ethical pharmaceutical manufacturer, Lederle Laboratories wishes to present a challenging opportunity to apply new ideas and approaches to the search for better drugs.

We presently need an experienced cardiovascular pharmacologist to coordinate the screening, evaluation, drug development and research activities of our department of Cardiovascular Biology. A scientifically-mature individual, as department head, will have the opportunity to fill current openings and to assume administrative responsibility for 25-30 scientists. Interaction with a Central Nervous System group will be common, as anti-hypertensive, diuretic and cerebral vascular research is pursued.

Professional recognition and compensation are offered, supplemented by comprehensive benefits. Our facility is located 30 miles from NYC in a rural suburban community. Send resume and salary requirements to G. J. Stein,



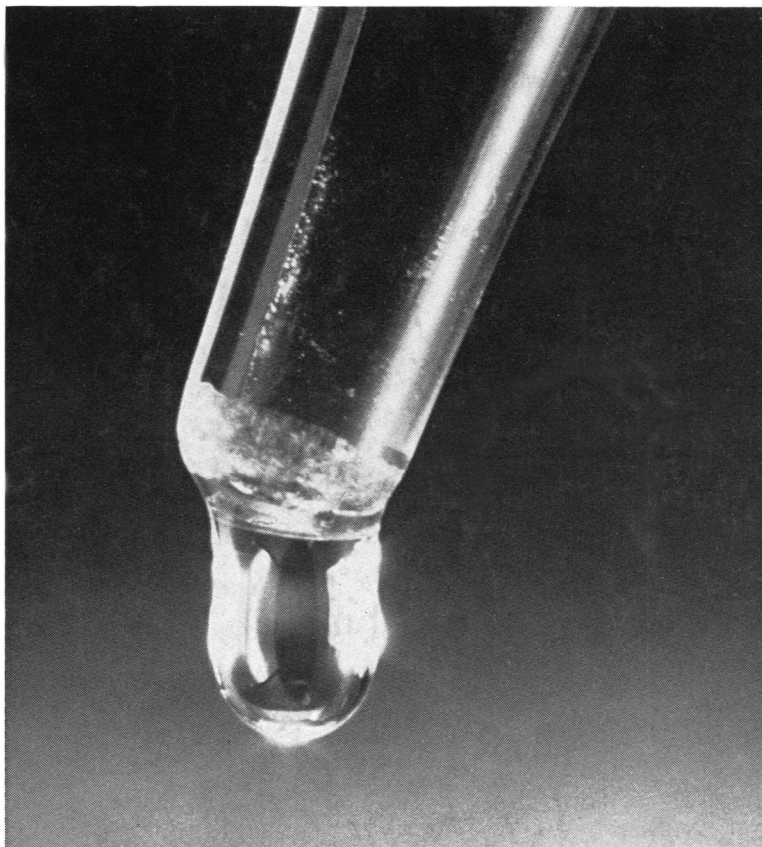
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Pearl River, New York 10965

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**Sure surprised us.**

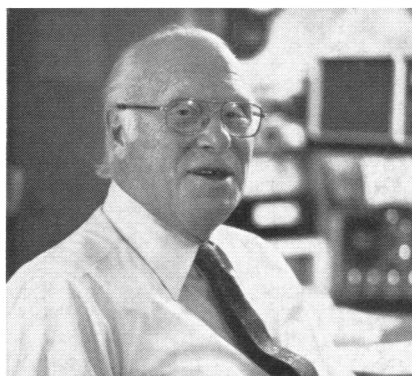


It is photo resist, which is better than a jackknife for carving out 10,000 transistors and diodes on a 1 cm chip of silicon when you have orders for 10,000—or is it 50,000?—such chips a day to serve as microprocessors. Light or other radiation does the work. A drawing used to be considered a representation of reality. With photo resist followed by etching, what the computer generates *becomes* the reality. The radiation produces a difference, plus or minus as desired, in the solubility of the polymer in the developer. A half-micrometer thickness of the undissolved polymer must stand up to powerful etchants, then be washed away cleanly and quickly by other solvents. No graininess allowed.

The first beginnings of photography around 1822 employed bitumen of Judea, a photo resist subsequently eclipsed by M. Daguerre's success with silver iodide. When photography boomed, photo resists returned with the need to reproduce photographs by inked metal on printing presses. The hardening effect of arc light on bichromated glues served that need until polymers became a subject worthy of scientific study.

At the Kodak Research Laboratories around 1945, L. M. "Red" Minsk synthesized polyvinyl cinnamate. In testing

it, he and friends dyed it for convenience and discovered that their dye



L. M. Minsk in retirement

was making it highly sensitive to photopolymerization. Their bosses' bosses foresaw a huge market in the photo-engraving trade. An ad couched something like this one was published about it.

Some chaps read the ad and wondered how Kodak photo resist would work out for etching semiconductors instead of metal. We date the microelectronics age from the day they found it worked. Out went our whole marketing concept for Kodak photo resists.

Now, 20 years or more later, we can send you data sheets on photo resists designed for microelectronics, not graphic arts, and very different from Mr. Minsk's polyvinyl cinnamate. We can send them to you even if you are not in the microelectronics trade, just

as certain readers of that earlier ad were not in the graphic arts trade.

But if you *are* in the microelectronics trade and would like an invitation to the Kodak Microelectronics Seminars that we put on annually for users of Kodak micro resists, talk it over with Jerry Coder at 716-724-4544. He also supplies the data sheets. His address is Kodak, Graphics Markets Division, Rochester, N.Y. 14650.

The name of that division shows that we have not been wholly diverted from our original marketing intent for photo resists—not when we compare the total acreage of newspaper pages prepared for press each day with the number of square meters of teeny-weeny microprocessors the world produces that same day.

As a matter of fact, in May, 1977 we announced KODAK MX-929 Resist, for use in an arrangement for translating a paste-up of a newspaper page to metal by scanning with a He-Ne laser and modulating an argon ion laser to expose the resist. Since the 515 and 488 nm lines of the argon ion laser are more economical to use than its ultraviolet emission, our new resist has been given the appropriate spectral sensitivity.

