

try, it requires a background in physics and mathematics at the graduate school level.

A reader not previously exposed to a description of the status and evolution of temperature scales might find it advisable to skip chapter 2 in the first reading. The chapter is heavily laden with symbols with long subscripts, acronyms, and concepts that are only explained in later chapters. It can be heavy reading even for the aficionado. As a service to the reader, Quinn might have put a greater portion of this chapter in an appendix.

Perhaps the only topic not treated completely in the book is that of liquid-in-glass thermometers. The author argues that these thermometers are gradually being supplanted by other types treated in the book. Given that many more laboratories still use liquid-in-glass thermometers (covered in chapter 8) than use optical pyrometers (covered in chapter 7), it is hard to accept that the former are treated in 10 pages whereas the latter are treated in 83 pages.

These minor comments notwithstanding, the reader of this book can obtain an up-to-date account of the status of temperature scales as well as some historical perspective. The physical laws used in thermometry are generally very well described. The book, with its emphasis on the principles rather than the practice of thermometry, provides the background for books on thermometry that deal with its practice.

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Plant Viruses

Plant Infectious Agents. Viruses, Viroids, Virusoids, and Satellites. HUGH D. ROBERTSON, STEPHEN H. HOWELL, MILTON ZAITLIN, and RUSSELL L. MALMBERG, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1983. x, 230 pp., illus. Paper, \$23. Current Communications in Molecular Biology. From a conference, Feb. 1983.

Traditionally, few biochemists and molecular biologists have investigated plant viruses. The number who do has increased during the past decade, however, because of the discoveries of new and unusual viruses, unsuspected properties of well-known viruses, and viroids, which are smaller than viruses. This book of summaries of reports given at a meeting contains many ideas, some results, and a little history and method-

ology. The ideas and results are current, and some of them have not been published elsewhere. The emphasis is on the molecular biology of plant viruses, and most work on this aspect of the subject is included. Other aspects, such as pathology, epidemiology, and control, are not covered. There is some repetition among reports, and there are a few errors, but neither are serious drawbacks.

Among the pathogens of most interest to molecular biologists are the viroids, which are small infectious RNA's about 250 to 400 nucleotides long. Viroids cause serious plant diseases, such as potato spindle tuber, citrus exocortis, and cadang cadang of coconut. There are no cures, and prevention is the only known control. Similar disease agents have not yet been found in animals. Viroids apparently do not code for proteins or polypeptides. The mechanism by which they cause disease is unknown, though it has been postulated that they interfere with messenger RNA splicing or some regulatory process. Multimeric forms, possibly replicative intermediates, have been found in infected cells, and DNA polymerase II has been implicated in their replication. The demonstration by Diener and his colleagues that cloned complementary DNA dimer of potato spindle tuber viroid is infectious opens the way for studying the effect of directed base changes on their function.

Virusoids are small RNA's with a structure similar to that of viroids, but they are always associated with a larger viral RNA. Three of the four known virusoids are reported to be necessary for the replication of the larger RNA and to be a part of the virus genome. The fourth virusoid appears to be more like a satellite, that is, an extra RNA associated with a virus that is only able to replicate in cells infected by the virus. Virusoids have only been known for a few years and have been found only in Australasia. They have already been sequenced by Symons and colleagues, but information on their biological activity is incomplete.

DNA-containing plant viruses were not discovered until the late 1960's, and only a few of them have been described. Along with the Ti plasmid of *Agrobacterium tumefaciens*, they are considered as possible vectors for introducing DNA into plants. Cauliflower mosaic virus is representative of the single group with a double-stranded DNA genome. It has circular double-stranded DNA with one gap in one DNA strand and two gaps in the other. However, a supercoiled form in a minichromosome-like structure

found in infected cells has no gaps and serves as the template for transcription of four RNA's. One of these RNA's is genomic-sized and may be a replicative intermediate. Cauliflower mosaic virus thus has similarities to the animal retroviruses and possibly to hepatitis in having both RNA and DNA stages in the replication of its genome. Absence of a DNA replication origin will limit its usefulness in recombinant DNA technology.

The single-stranded DNA plant viruses are the gemini viruses. They have two genomic DNA's of similar size, except those from Australia, which have only one. Perhaps the Australian tradition for unusual flora and fauna extends to viruses.

This book also contains research reports on some of the better-known plant viruses. Notable is the recent progress in the purification of template-dependent, virus-specific RNA-dependent RNA replicases from plants infected with brome mosaic and cowpea mosaic viruses, the confirmation of mutations induced in maize by barley stripe mosaic virus, and encapsidation of chloroplast RNA transcripts in pseudovirions of tobacco mosaic virus. As many as nine subgenomic RNA's of tobacco mosaic virus have been reported, but published evidence for some is scanty, and Zaitlin and co-workers suggest that six may be artifacts. These and other observations promise progress in studies of interactions of plant viruses and their hosts.

An appendix contains 15 base sequences of plant viruses, viroids, virusoids, and satellites.

This is not the book to go to for exhaustive coverage or detailed experimental protocol, but it is excellent for a concise version of recent developments in the molecular biology of plant viruses.

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Reprints of Books Previously Reviewed

Animal Architecture. Karl von Frisch, with the collaboration of Otto von Frisch. Van Nostrand Reinhold, New York, 1983. Paper, \$10.25. *Reviewed* 188, 845 (1975).

Betrayers of the Truth. William Broad and Nicholas Wade. Simon and Schuster, New York, 1983. Paper, \$6.95. A Touchstone Book. *Reviewed* 219, 1417 (1983).

La Matière Mal Condensée. III-Condensed Matter. Roger Balian, Roger Maynard, and Gerard Toulouse, Eds. North-Holland, Amsterdam, and World Scientific, Singapore, 1983 (U.S. distributor, Heyden, Philadelphia). Paper, \$28. *Reviewed* 208, 1025 (1980).

Risk and Culture. An Essay on the Selection of Technical and Environmental Dangers. Mary Douglas and Aaron Wildavsky. University of California Press, Berkeley, 1983. Paper, \$6.95. *Reviewed* 219, 1211 (1983).

Personnel Placement

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POSITIONS WANTED

Scottist Anatomist/Histologist, medically qualified. Currently working in Texas, seeks position for year from summer 1984. Author of books. Publications. Dedicated teacher. Excellent personal relations. West/South preferred. Box 3, SCIENCE. X

Biochemist, M.S. Six years of experience including analytical biochemistry, nutrition, cell culture, assay development, metabolic studies, GC-MS, and clinical pharmacology of prostaglandins and aspirin. No geographical preference. Box 4, SCIENCE. X

Biotechnology: M.S. microbiology/biochemistry. Experience in marketing of biotechnology research products and diagnostics. Have performed equivalence studies and written 510(k). Experience also includes pharmaceuticals and capital financing of developmental company. Box 5, SCIENCE. X

Consultant, Ph.D. Retired plant breeder-cytologist seeks contracts to study plant meiosis in own private laboratory. Harold J. Kidd, 1617 Dallas, Plainview, Texas 79072. Telephone: 806-296-7878. 1/6, 13

Environmental Chemist. Strong agroanalytical background. Pesticide residue analysis. Adsorption and leachate study of farm wastes. Postdoctoral experience. Ph.D. (agronomy) and M.S. (chemistry). Box 339, SCIENCE. 1/6, 20; 2/3, 17; 3/2

Interdisciplinary Scientist/Engineer seeks academic administration position. Currently at EPA managing large programs. Ph.D. Formerly professor (physical chemistry, biophysics, neurophysiology, environmental engineering) with 100-plus research publications. Box 1, SCIENCE. X

M.D.; in surgical residency, desires research fellowship for two or more years (may consider training towards Ph.D.) in vestibular physiology or temporal bone study related research. Excellent references. Available July 1984. Box 348, SCIENCE. 1/6, 13

POSITIONS WANTED

Reproductive Biologist. B.V.Sc., Ph.D.; 7 years of experience in andrology and IVF; 3 years of postdoctoral and 2 years of university teaching experience. Seeking research/supervisory position, preferably as assistant professor in medical or veterinary field. Box 2, SCIENCE. X

POSITIONS OPEN

ANATOMY/HISTOLOGY; ASSISTANT PROFESSOR and ONE LECTURER OPENING

The Department of Biology at the University of Michigan-Flint invites applications for the following positions to begin the fall of 1984:

1) Full-time tenure-track position at assistant professor level with primary teaching responsibilities in human gross anatomy, histology, and neuroanatomy/physiology. Requirements: Ph.D., demonstrated teaching ability, active research record, and broad training in biology.

2) One full-time lecturer with primary responsibilities for laboratory instruction in the areas of human gross anatomy and histology. Requirements: master's or equivalent, demonstrated teaching ability and broad training in biology essential. Ph.D.'s will not be considered for lecturer position. This position is contingent on funding.

Send résumé including teaching areas, copies of representative recent publications, and a list of at least three references by 1 February 1984 to: **Dr. Eugene H. Studier, Chairman, Professor of Biology, Department of Biology, University of Michigan-Flint, Flint, Michigan 48502-2186.**

The University of Michigan-Flint, established in 1956, is an urban regional unit of the University of Michigan, located on a new campus which is being built in the city. Enrollment is approximately 5700 students in the College of Arts and Sciences, School of Management, and Program in Nursing, another 1000 in extension or graduate classes.

The University of Michigan-Flint is a nondiscriminatory, Affirmative Action Employer.

MASSACHUSETTS PUBLIC HEALTH BIOLOGIC LABORATORIES

Applications are invited for two positions in a state-funded laboratory involved in the production of bacterial vaccines and plasma derivatives.

ASSISTANT DIRECTOR SECTION OF BACTERIAL VACCINES AND TOXOIDS

Will supervise a staff of six in the production of diphtheria, tetanus, and pertussis vaccines, and direct an active research program focused on the development of an acellular pertussis vaccine. University appointment and teaching opportunities available. Applicants should have a Ph.D. degree, postdoctoral training in microbiology, and experience in bacterial genetics and/or bacterial toxins.

BIOCHEMIST/IMMUNOCHEMIST SECTION OF QUALITY CONTROL

Will supervise a staff of five responsible for the QC of bacterial vaccine and plasma products, including environmental and reagent certification. Research opportunities available. Applicants should have a Ph.D. or M.S. degree in biochemistry, immunology, or immunology.

Send curriculum vitae and names of three references to:

Director
MASSACHUSETTS PUBLIC HEALTH BIOLOGIC LABORATORIES
305 South Street
Boston, Massachusetts 02130

ASSISTANT PROFESSOR

University of California, Irvine, Department of Pathology is recruiting for a faculty position at the assistant professor level. Required: M.D., must be Board-certified or eligible in anatomic pathology and eligible for licensure in California. Duties: will be in charge of the Cytology Laboratory, assist in organizing the Residency Training Program, instruct medical students and residents in anatomic pathology, and present conferences to the clinical staff and the community. Experience in cytology required; research experience desirable. Send curriculum vitae and references to: **Louis Reher, M.D., University of California, Irvine, Department of Pathology, 101 City Drive South, Orange, Calif. 92668**, by 13 February 1984. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR

The Department of Laboratory Medicine and Pathology, University of Minnesota Medical School, announces an open position at the level of assistant professor in the Divisions of Clinical Chemistry and of Medical Technology. Candidates must have a Ph.D. degree, 2 years of experience in a clinical laboratory, and certification or eligibility with ABCC or NRCC. Teaching experience is necessary. Responsibilities include teaching clinical chemistry, assisting in the service activities of the clinical chemistry laboratory, and establishing an independent research program. Applications consisting of curriculum vitae and three letters of recommendation will be received until 15 February 1984 and may be addressed to: **Karen Karni, Ph.D., Department of Laboratory Medicine and Pathology, Box 198 Mayo Memorial Building, University of Minnesota, Minneapolis, Minn. 55455.** *The University of Minnesota is an Affirmative Action Employer and specifically invites and encourages applications from women and minorities.*

ASSISTANT PROFESSORSHIPS/REED COLLEGE. The Chemistry Department of Reed College invites applications for two tenure-track assistant professorships. The positions are, respectively, in biochemistry and organic chemistry. The candidates will be expected to have active research interests appropriate for undergraduates in the senior thesis program. Submit curriculum vitae, transcripts of academic record, and outline of research interests, and arrange to have three letters of recommendation sent to: **Professor Thomas G. Dunne, Chair, Department of Chemistry, Reed College, Portland, Oregon 97202.** The application should also indicate the position for which you wish to be considered, and should be sent by 3 February 1984. *Affirmative Action/Equal Opportunity Employer.*

Three tenure-track positions (**ASSISTANT OR ASSOCIATE**) for candidates with at least 2 years of postdoctoral experience are available for 1 July 1984. Persons with research interests in cardiovascular physiology (emphasis on blood flow to reproductive tissues), smooth muscle physiology (emphasis on cellular basis of uterine contractility), and neurophysiology (hypothalamic/pituitary development) are preferred. Responsibilities include participation in medical and graduate teaching commitments of the department. Salaries competitive.

Send inquiries along with curriculum vitae and names of three references to: **Dr. Gerald J. Pepe, Department of Physiology, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, Va. 23501.**

Eastern Virginia Medical School is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR—The Department of Physiology and Biochemistry is seeking an individual with an interest in lithoprotein and atherosclerosis research to join our group. Preference will be given to a person with a background in endocrinology or molecular biology. Those interested should send us curriculum vitae and the names of references. The appointment is of the regular tenure-track variety and is scheduled to begin 1 July 1984, but earlier or later dates are possible. Replies should be addressed to: **Dr. Julian B. Marsh, The Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pa. 19129.** *Equal Opportunity Employer, M/F.*

ASSISTANT PROFESSOR OF BIOCHEMISTRY TENURE TRACK

Assistant professor of biochemistry with research experience in any biochemical problem wherein recombinant DNA technology is used as an investigative tool. A strong record of research achievement and the ability to develop an independent research program and funding are required. The department has a medical, dental, and graduate school teaching program. The individual selected should also be qualified to teach biochemistry in areas outside of molecular biology. Qualified individuals should send their curriculum vitae, a statement of research plans and of teaching interest, and three letters of reference by 1 March 1984 to:

Dr. Gary Brooker
Chairman
Department of Biochemistry
Schools of Medicine and Dentistry
Georgetown University Medical Center
3900 Reservoir Road, NW
Washington, D.C. 20007

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR OF ANATOMY

The Department of Anatomy, University of Florida College of Medicine, is seeking exceptional candidates to fill a full-time tenure-track position commencing 1 September 1984, or earlier. Applicants should have either a Ph.D., M.D., or equivalent degree and a minimum of 2 years of postdoctoral experience. The successful candidate must have a strong record of research training and the ability to develop an independent research program. Responsibilities include participation in teaching human gross anatomy to medical or dental students as well as participation in a graduate program offered by the department. Curriculum vitae, brief description of research interests, and names and addresses of at least three references should be sent by 15 March 1984 to: **Dr. Lynn Larkin, Chairman, Search Committee, Department of Anatomy, Box J-235 JHMC, University of Florida, Gainesville, Fla. 32610. Equal Opportunity/Affirmative Action Employer.**

ASSISTANT/ASSOCIATE PROFESSOR OF ANATOMY—The Department of Anatomy, Upstate Medical Center, State University of New York, Syracuse, is seeking an exceptional candidate to fill a tenure-track position. The successful candidate will be expected to pursue a vigorous research program capable of attracting extramural funding and to participate in teaching gross anatomy or histology/cell biology. While the specific area of research is not as important as excellence, preference will be given to candidates who use modern methods to analyze cell structure, function, or differentiation. Interested individuals should send a copy of their curriculum vitae, recent reprints, and the names of three references by 15 April 1984 to: **Dr. Larry F. Lemanski, Chairman, Department of Anatomy, Upstate Medical Center, State University of New York, 766 Irving Avenue, Syracuse, New York 13210. An Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSORSHIP—BIOINORGANIC CHEMISTRY, LOYOLA UNIVERSITY OF CHICAGO. The Department of Chemistry invites applications for an anticipated tenure-track faculty position effective fall 1984. Candidates are expected to be effective at teaching undergraduate and graduate courses, and have research abilities commensurate with a Ph.D. granting department. Exceptional applicants with established research programs may be considered for a higher level appointment. Applicants should submit curriculum vitae, including transcripts, a list of publications, a concise statement of their research plans, and three letters of recommendation before 1 March 1984 to: **Dr. Stephen F. Pavkovic, Department of Chemistry, Loyola University of Chicago, Chicago, Ill. 60626. Equal Opportunity/Affirmative Action Employer.**

Position open: **ASSISTANT OR ASSOCIATE PROFESSOR/GENETICS IN ENTOMOLOGY.** The Department of Entomology, College of Agriculture, Louisiana State University, invites applicants for an anticipated tenure-track, 12-month position. Applicants should have a Ph.D. in genetics with emphasis in population genetics. Duties include 70 percent research and 30 percent teaching. Individual expected to work cooperatively with entomology faculty on projects of mutual interest and conduct basic research on population genetics, with emphasis on speciation and polymorphism. This position is anticipated to be available 1 July 1984. Applicants should submit by 1 March 1984 curriculum vitae, and transcripts, and have three letters of reference sent to: **Dr. Abner M. Hammond, Chairman, Search Committee, Department of Entomology, Louisiana State University, Baton Rouge, La. 70803; telephone: 504-388-1634. Louisiana State University is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR DEPARTMENT OF GENETICS STANFORD UNIVERSITY

Having scientific interests in areas of human genetics (for example, cytogenetics, human biochemical genetics), cellular genetics (particularly chromosome structure and function) or molecular genetics of higher eukaryotes, especially mammalian organisms. Full-time, tenure-track position that involves teaching and independent research. Send curriculum vitae, bibliography, and names of three referees to: **Dr. Stanley N. Cohen, Chairman, Department of Genetics, Stanford University Medical Center, Stanford, Calif. 94305. Stanford University is an Affirmative Action Employer and welcomes nominations of women and minority group members and applications from them.**

POSITIONS OPEN

Gallaudet College, a small liberal arts college for deaf and hearing impaired students, has an opening for a full-time, tenure-track **ASSISTANT PROFESSOR IN BIOLOGY** (dependent on funding).

Required: M.A. or equivalent in a biological science.

Preferred:

- Ph.D., competency to teach general biology, general zoology, and human anatomy and physiology.
- Ability to develop an introductory and upper level course in candidate's field or specialty, and
- Experience teaching hearing-impaired students.

Salary: negotiable.

Course load: 12 to 14 contact hours.

Because of Gallaudet's mission of serving deaf students, individuals who already possess sign language skills or who are hearing-impaired are encouraged to apply. Qualified individuals without these skills must be willing to attend an 8-week paid orientation program for training in sign language.

Applicants should send a letter of interest, curriculum vitae, and references to:

**Dr. Evelyn B. Lloyd
Chairperson, Department of Biology
Gallaudet College
Washington, D.C. 20002**

Deadline for submitting applications: 1 March 1984. *Gallaudet is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF GENETICS with interests and training in immunogenetics, and **PROFESSOR OF GENETICS** with interests and extensive research experience in evolutionary genetics. Full-time tenure-track positions. Available 1 July 1984. Write to: **Dr. Geoffrey Ashton, Department of Genetics, University of Hawaii, Honolulu, Hawaii 96822**, for full details. Closing date: 15 February 1984. *Equal Opportunity/Affirmative Action Employer.*

The Department of Neurology (Movement Disorder Center), University of Miami, invites applications for a faculty appointment at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. Candidates must have a Ph.D. and at least 2 years of postdoctoral experience. Applicants should have expertise with receptor binding assays, HPLC catecholamines, neurotoxin lesioning, and animal behavior assessments. Applicants should forward curriculum vitae, statement of research interests, and names of three references by 1 February 1984 to:

**William J. Weiner, M.D.
Department of Neurology (D4-5)
University of Miami School of Medicine
P.O. Box 016960
Miami, Florida 33136**

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

The Department of Neuroscience seeks several investigators at the **ASSISTANT PROFESSOR** level with interests in cellular and molecular neurobiology. These individuals will be expected to carry out their own research programs, but members of the department have often engaged in collaborative work involving the differing expertise of the participants. Applicants should contact: **Michael V. L. Bennett, Chairman of the Department of Neuroscience, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, N.Y. 10461. An Equal Opportunity Employer.**

BIOLOGY FACULTY POSITION

The Biology Department of Seattle University is seeking applications for a full-time, tenure-track position at the assistant/associate professor level beginning in September 1984. Our department has a strong general biology focus. We are looking for an individual with a Ph.D. in a biological science with emphasis in cellular/molecular biology, proven teaching ability, and a strong commitment to undergraduate education. The teaching focus will be cell physiology and genetics but will also include biology for nonmajors and participation in team-taught general biology. Applications, including résumé, transcripts, and three letters of reference should be sent to: **Dr. David C. Brubaker, Chairman, Department of Biology, Seattle University, Seattle, Wash. 98122.** The deadline for receipt of applications is 31 January 1984. *Seattle University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

UNIVERSITY OF PITTSBURGH ASSISTANT PROFESSOR OF PHYSICS

A tenure-track position as assistant professor in experimental atomic physics will be available starting either in September 1984 or September 1985. Current activities in this area here at the present time include atomic collisions with emphasis on excitation transfer (M. A. Biondi, R. Johnsen), the study of Rydberg atoms and multiphoton effects in atoms (J. E. Bayfield), and the study of stratospheric processes with laboratory measurements of related cross-sections (E. C. Zipf). There is theoretical work on collisions (J. N. Bardsley), high-energy radiative processes (R. H. Pratt), and multiphoton processes (P. Stehle). Preference will be given to candidates whose work would relate to the activities mentioned or to space physics or astrophysics. Credentials should indicate a high promise of establishing a strong research program in atomic physics.

Letters of application, résumés, statements of research interests, and the names of three professional references should be sent to: **The Chairman, Department of Physics and Astronomy, University of Pittsburgh, Pittsburgh, Pa. 15260. The University is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR PHYSIOLOGY

The Department of Physiology at the University of Minnesota invites applications for two tenure-track appointments at the assistant professor level beginning about 1 July 1984. Selection will be based primarily on demonstrated research excellence. Applicants must have at least 1 year of postdoctoral experience and be prepared to carry out independent research. The research may involve any system or tissue but preference will be given to applicants who utilize the methods of cell biology to examine physiological problems. Areas of particular interest include: membrane transport, intracellular concentration measurements, single channel studies, quantitative biology of excitable membranes, membrane reconstitution of transport proteins, and tissue culture. The applicant will be expected to participate in the graduate and undergraduate teaching programs of the department. Send curriculum vitae, including undergraduate and graduate transcripts, a summary of planned research, and the names and telephone numbers of three references to: **Search Committee, Department of Physiology, 6-255 Millard Hall, 435 Delaware Street, SE, University of Minnesota, Minneapolis, Minnesota 55455.**

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

ASSISTANT OR ASSOCIATE PROFESSOR VETERINARY RADIATION ONCOLOGY

The Comparative Oncology Unit at Colorado State University offers a regular faculty position. Minimum requirements: D.V.M. plus certification by American College of Veterinary Radiology or Ph.D. in radiation biology or related field. Duties include experimental and therapeutic radiation oncology, teaching and development of individual research. Salary and rank commensurate with training and experience. Position available 1 July 1984. Applicants should submit curriculum vitae with three letters of reference to: **Edward L. Gillette, D.V.M., Ph.D., Director, Comparative Oncology Unit, Veterinary Teaching Hospital, Colorado State University, Fort Collins, Colorado 80523.**

Colorado State University is an Equal Opportunity/Affirmative Action Institution and complies with all federal and Colorado state laws, regulations and executive orders regarding affirmative action requirements in all programs. The Office of Equal Opportunity is located in Room 314, Student Services Building. In order to assist Colorado State University in meeting its Affirmative Action responsibilities, ethnic minorities, women and other protected class members are encouraged to apply and to so identify themselves. Applications should be received by 1 March 1984.

ASSISTANT PROFESSOR, Wildlife Ecology. Twelve-month, tenure-track, beginning July or August 1984. Ph.D. in wildlife science or related discipline, background in population analysis and computer applications to wildlife ecology or management, and interest in regional wildlife research problems are required. Submit application, including curriculum vitae and names of three references, by 1 March 1984 to: **Dr. Bruce Menzel, Department of Animal Ecology, 124 Science Building II, Iowa State University, Ames, Iowa 50011. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

ASSOCIATE DEAN FOR ADMINISTRATION. The University of North Carolina (UNC) School of Medicine at Chapel Hill is seeking a person to be responsible for the business affairs of the School of Medicine. Selection criteria include: Experience with design and operation of administrative systems in a modern university-based school of medicine; ability to identify institutional problems and challenges and to assume responsibility for coordinating faculty and institutional resources in addressing these problems and challenges; ability to work effectively and constructively with faculty and staff; competence in current systems of financial management; and exceptional ability in written and spoken communication.

Applications should be accompanied by curriculum vitae or résumé and should be sent to: **William D. Huffines, M.D., Associate Dean for Basic Sciences, UNC School of Medicine, 125 MacNider Building, 202H, Chapel Hill, N.C. 27514**, before 15 February 1984. *Applications are particularly solicited from women and minorities. The University of North Carolina is an Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE DEAN FOR RESEARCH

The University of Texas Health Science Center at Dallas invites nominations and applications for the position of **associate dean for research**. The associate dean for research will be responsible for the administration of the institution's research grants (currently numbering over 300 and totaling over \$30 million per year), while relating closely to the faculty as a facilitator of their research. The associate dean for research will also be responsible for the administration of the Institutional Review Board, which approves and monitors all research involving human subjects.

Candidates must have a doctorate in medicine or in a biomedical science, and a record of accomplishment in laboratory research. Significant experience in the administration of research grants and evidence of exceptional managerial skill is essential.

Salary and academic rank will be commensurate with qualifications and experience. The position is available on or before 1 July 1984.

Nominations and applications must be received by 1 February 1984. Applications should include a covering letter, curriculum vitae, and names and addresses of references. These should be sent to:

**Search for Associate Dean for Research
B11.400**

**The University of Texas Health Science Center at Dallas
5323 Harry Hines Boulevard
Dallas, Texas 75235**

The University of Texas Health Science Center at Dallas is an Equal Opportunity/Affirmative Action Employer.

BIOCHEMIST—Tenure-track position, assistant professor level to be filled by 20 August 1984. Candidate must have postdoctoral experience, potential for developing strong research program in nucleic acid biochemistry or plant molecular biology. Send résumé, graduate transcripts, research plans, representative reprints, and three letters of reference by 28 February 1984 to: **Dr. James H. Hageman, Department of Chemistry, Box 3C, New Mexico State University, Las Cruces, New Mexico 88003**. *An Equal Opportunity/Affirmative Action Employer. Telephone inquiries: 505-646-2505.*

BIOCHEMISTRY/MOLECULAR BIOLOGY

The Department of Biological Sciences, Clemson University, invites applications for a tenure-track position at the assistant or associate professor level. Candidates must have postdoctoral experience and an excellent record of research productivity. The successful candidate will be expected to establish an externally funded research program in some biochemical aspect of molecular biology, preferably in plant systems. Candidates with expertise in other eukaryotic systems will not be excluded. Teaching responsibilities will include both undergraduate and graduate biochemistry courses. The appointment will begin August 1984. Deadline for receipt of application is 15 February 1984. Send complete curriculum vitae and a brief statement of research interests and have three letters of recommendation sent to: **Biochemistry Search Committee, attention: Dr. C. W. Helms, Head, Department of Biological Sciences, Clemson University, Clemson, S.C. 29631**. *Clemson University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSOCIATE/FULL PROFESSOR: COGNITIVE DEVELOPMENT—College of Education, University of Washington, Seattle. Tenured research, teaching, and leadership position in educational psychology. We are seeking a nationally recognized scholar/researcher with a sustained record of outstanding accomplishment as a programmatic investigator of the development of human cognition to: (i) continue her/his research program, (ii) teach advanced doctoral level seminars and other graduate courses, and (iii) help to create a premier graduate training program in human development. Preference will be given to individuals whose records qualify them for professorial rank, but outstanding candidates qualified at the level of associate professor will be considered. Salary negotiable. Position open 16 September 1984. Applicants may indicate their interest by forwarding: (i) a complete résumé, (ii) a letter highlighting their qualifications, (iii) one copy each of three journal publications reporting research results and two review/theoretical articles or chapters, and (iv) the names, addresses, and telephone numbers of at least four persons to write letters of recommendation upon our request to: **Earl C. Butterfield, Chairperson, Cognitive Development Search Committee, GS-27, University of Washington, Seattle, Wash. 98195**. *The University of Washington is an Equal Opportunity Employer.*

GOETHE UNIVERSITY FRANKFURT (West Germany)

The Department of Chemistry invites applications for the position of an

ASSOCIATE PROFESSOR OF ORGANIC CHEMISTRY

Qualifications: an established scientist in the field either of isolation, identification, biosynthesis of new natural products or chemical and enzymatical synthesis of polynucleotides. Teaching obligation includes instruction of students of biology in organic chemistry. Applicants should send their applications to: **Präsident der Universität, Senckenberganlage 31, D-6000 Frankfurt/Main 1, West Germany**, not later than 1 February 1984.

AVIAN BIOLOGIST INDIANA UNIVERSITY—BLOOMINGTON FALL 1984

Indiana University has a tenure-track position at the assistant/associate professor level for an ecologist/evolutionary biologist whose research is on birds. The appointee will be expected to continue a tradition of long-term field studies of avian populations and to emphasize the behavioral and physiological characteristics of individuals and the relationship of such variation to population structure and dynamics and to life history patterns. The successful candidate will also be expected to contribute to teaching in the undergraduate program, to develop a graduate course of his/her choosing, and to maintain a vigorous research program. Preference will be shown for candidates who have postdoctoral research and teaching experience and have demonstrated an ability to attract funding for their research. Applicants must submit curriculum vitae, a statement of research interests, and a set of recent publications, and arrange for at least three letters of reference to be sent directly to: **Rollin C. Richmond, Chairman, Department of Biology, Indiana University, Bloomington, Ind. 47405**. The deadline for completed applications is 6 February 1984. *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

BIOLOGY: Assistant professor with specialty in plant science, beginning August 1984. Tenure-track position. Ph.D. required. Responsibilities include teaching plant science, nonmajors introductory biology, and electives in specialty area. Individuals with a field orientation preferred. Send letter of application, résumé, transcripts, and three letters of reference to: **Dr. R. B. Angstadt, Chairman, Department of Biology, Lycoming College, Williamsport, Pa. 17701**. Applications invited through 15 February 1984 or until a successful candidate is identified. *Lycoming College is an Equal Opportunity Employer.*

BIOLOGIST. Assistant professor position for fall 1984. Commitment to quality undergraduate teaching is essential. Teaching responsibilities: developmental biology, invertebrate zoology, and introductory biology. Candidate must also be willing to develop an undergraduate research program. Tenure-track position. Salary competitive. Send curriculum vitae, transcripts, statement of teaching and research interests, reprints, and three letters of reference by 1 February 1984 to: **Dr. George Jackson, Chair, Science and Mathematics Division, University of Tampa, Tampa, Fla. 33606-1490**.

Pediatric Vision/ Eye Movement Laboratory

Wills Eye Hospital is seeking an investigator to participate in the establishment and directorship of an endowed Pediatric Eye Research Center to study vision and eye movements in infants and children with visual disorders.

Proposals for the development of such a center are requested. For more information, call (215) 928-3245.

Wills Eye Hospital

Ninth and Walnut Sts.
Philadelphia, PA 19107

Autoradiography in Electron Microscopy

April 23-28, 1984

a laboratory course at the

University of Cincinnati

Principal faculty:

Mike Williams

John Baker

Robert Gould

Jean Wrathall

Attendance limited to 18

For more information contact:



**Woods Hole
Educational
Associates**

Box EM, Woods Hole, MA 02543
(617) 540-5594

POSITIONS OPEN

BIOCHEMISTRY FACULTY POSITION

The School of Chemistry, Georgia Institute of Technology, invites applications for a tenure-track position at the assistant-associate professor level. Candidates with research interests in genetic engineering or related areas of molecular biology are especially encouraged to apply but outstanding candidates with research interests in other areas of biochemistry will be considered. Send curriculum vitae, description of proposed research program, and three letters of recommendation to: **Professor Robert A. Pierotti, Director, School of Chemistry, Georgia Institute of Technology, Atlanta, Ga. 30332.** Georgia Tech is an Equal Opportunity/Affirmative Action Employer.

TWO BIOLOGY FACULTY POSITIONS—Lenoir-Rhyne College invites applications for the following positions in biology. (i) A 1-year appointment, which may become a tenured track. The successful candidate will be expected to teach animal physiology as well as introductory biology courses to majors and nonmajors. The applicant should possess a Ph.D. or be A.B.D. (ii) A one-semester appointment (for 1984 fall semester). The applicant will be expected to teach general genetics, an introductory course to nonmajors and environmental science. At least a master's degree required. Salary dependent upon qualifications. Lenoir-Rhyne College is a 4-year liberal arts institution of the Lutheran Church in America. Lenoir-Rhyne is an Equal Opportunity Employer. Send curriculum vitae and the names and addresses of three references by 15 February 1984 to: **Dr. Robert L. Spuller, Academic Dean, Lenoir-Rhyne College, Hickory, North Carolina 28603.**

BIOLOGIST. Assistant professor. Tenure track. Environmental scientist with broad background. Teach ecology, microbiology, interdisciplinary courses, general biology (majors and nonmajors), and student research. Some expertise in botany related courses desirable. Ph.D. required. Biology Department prepares students to teach and enter graduate and professional schools. Send curriculum vitae, transcripts, and three letters of recommendation by 1 March to: **Vishnu Saksena, Chair, Biology Department, Muskingum College, New Concord, Ohio 43762.** Affirmative Action/Equal Opportunity Employer.

BIOLOGY: Ecologist with continuing research interest in marine area. Ph.D., tenure track, probably at assistant professor level; start September 1984 replacing Professor George K. Reid, retiring. Teach general ecology, various advanced marine topics, possibly select general biology course. Broad interest in biology, willing to contribute to general education program and fill periodic needs arising from hexennial leaves. Send curriculum vitae, transcripts, and three recommendation letters by 15 February 1984 to: **Dr. John Ferguson, Eckerd College, St. Petersburg, Florida 33733.** Equal Opportunity Employer.

CELL or MOLECULAR BIOLOGIST. Applications are invited for a tenure-track teaching position in biology to begin 1 July 1984. The candidate should have expertise in one or more of the following areas: cell biology, genetics, molecular biology, and microbiology. Send letter of application, curriculum vitae, transcripts, and three letters of reference by 15 February 1984 to: **Dr. Elizabeth Sherman, Biology Search Committee, Bennington College, Bennington, Vt. 05201.** An Equal Opportunity/Affirmative Action Employer.

CELLULAR NEUROBIOLOGY/MOLECULAR PATTERN DEVELOPMENT/MOLECULAR EVOLUTION. The Department of Biological Sciences at the University of Denver is seeking applications for an anticipated tenure-track position at the rank of assistant professor in the general areas of cellular neurobiology, molecular pattern development, or molecular evolution. The successful candidate will be housed in a recently completed research building and will be expected to maintain research productivity, to actively pursue extramural support, and to direct graduate students at the Ph.D. level. Teaching responsibilities will depend in part upon research interests and will be consistent with a strong research program. Preference will be given to applicants with postdoctoral experience. Applicants should forward curriculum vitae, including a statement of research plans, and names of three references to: **Dr. James Fogleman, Search Committee, Department of Biological Sciences, University of Denver, Denver, Colo. 80208.** Evaluation of applicants will begin on 6 February 1984. An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

BIOPSYCHOLOGY/NEUROENDOCRINOLOGY

Postdoctoral position to study neural, endocrine, and seasonal/environmental influences on obesity in rodents. Background in physiological psychology, neuroendocrinology, nutrition, or related field preferred. Salary and benefits competitive. Send curriculum vitae and three letters of reference to: **Dr. George N. Wade, Division of Neuroscience and Behavior, Department of Psychology, University of Massachusetts, Amherst, Mass. 01003; telephone: 413-545-0772.** Deadline for submission of application: 1 February 1984. An Affirmative Action/Equal Opportunity Employer.

CELL BIOLOGIST DEPARTMENT OF ANATOMY UNIVERSITY OF MINNESOTA

The Department of Anatomy at the University of Minnesota Medical School in Minneapolis announces a cell biologist position to begin as early as 1 September 1984. Appointment may be either at the **assistant professor** (tenure track) or **associate professor** (tenured) level, depending on the qualifications of the successful candidate. Applicants must have postdoctoral or equivalent research experience, and must have demonstrated the ability to pursue an active, productive research program in an area of cell biology. A multidisciplinary approach with a morphological component is much desired. Teaching responsibilities will include joint participation in histology and graduate teaching in an area of specialty. Curriculum vitae, brief statement of research interests and goals, reprints of publications, and names of three references must be received by 1 March 1984, addressed to: **Search Committee, Department of Anatomy, University of Minnesota, 4-135 Jackson Hall, 321 Church Street, SE, Minneapolis, Minn. 55455.** The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

CELL BIOLOGIST

The Department of Physiology of the University of California, San Francisco, seeks to fill a tenure-track faculty position at the rank of assistant professor. Individuals should have a research program in mammalian cell biology and be able to relate to members of the department as well as participate in a new Interdepartmental Program in Cell Biology. Send curriculum vitae, a brief statement of research interests, and three letters of reference to:

**Dr. John A. Williams
Department of Physiology
University of California, San Francisco
San Francisco, Calif. 94143**

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

CHAIRMAN POSITION (Tenure Track) BASIC PHARMACEUTICAL SCIENCES DEPARTMENT UNIVERSITY OF SOUTH CAROLINA COLLEGE OF PHARMACY

Applicant qualifications: Research experience in either pharmaceuticals, medicinal chemistry, or pharmacology and an outstanding record in research and grant awards. **Position requirements:** Conduct research, assist in faculty grant requests, supervise graduate students, teach and administer the department. **Application procedures:** Send curriculum vitae, recent reprints, and three references by 1 March 1984 to: **Dr. J. W. Kosh, Search Committee Chairman, College of Pharmacy, University of South Carolina, Columbia, S.C. 29208.** Affirmative Action/Equal Opportunity Employer.

CURATORIAL POSITION IN MAMMALOLOGY

Applications are solicited for a curatorial position in mammalogy in the Natural History Museum of Los Angeles County. Responsibilities consist of the conduct of collection-oriented research on the systematics of nonmarine mammals, active participation in collection management, and participation in public programs of the Museum. Applicants must possess a doctorate or provide certification that it will be granted within a short time. Position will be filled at the level of the best-qualified candidate. Starting curatorial salaries: assistant, \$20,176; associate, \$23,794; full, \$30,276. Applications including names of three references should be sent before 1 March 1984 to: **Daniel M. Cohen, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, Calif. 90007; telephone: 213-744-3367.** An Equal Opportunity Employer.

POSITIONS OPEN

THE UNIVERSITY OF SYDNEY

CHAIR OF MICROBIOLOGY

Applications are invited for the chair of microbiology which will become vacant at the end of 1983 following the retirement of Professor Y.-T. Tchan. Salary will be at the rate of A\$48,977 per annum.

Applications close on 27 January 1984 with: **The Registrar, University of Sydney, N.S.W. 2006, Australia,** from whom further information should be obtained.

The University reserves the right not to proceed with any appointment for financial or other reasons. *Equal Employment Opportunity is University policy.*

CHAIRPERSON, CHEMISTRY DEPARTMENT:

Nominations or applications by 29 February deadline. Person with outstanding record. Applications should include applicant's résumé, transcripts, and names, addresses, and telephone numbers of three references. Send nominations or applications to: **A. G. Pinkus, Department of Chemistry, Baylor University, Waco, Texas 76798.**

Equal Opportunity Employer

To make a strong commitment to the area of natural resource economics, The University of Michigan, School of Natural Resources, is seeking applicants to fill **TWO** full-time, 9-month, tenure or tenure-track positions at a level commensurate with qualifications. One is for an endowed **CHAIR IN FOREST RESOURCE ECONOMICS**; the other for a **POSITION IN NATURAL RESOURCE ECONOMICS**. Interest and ability in international economics and environmental economics or related specialties are encouraged. Each may be a partial appointment with the Economics Department. The former is primarily directed toward the management of forest and forest-related resources, while the latter is directed toward renewable resource management. Each position will require a strong research and teaching component. It is expected that the positions will be filled successfully, beginning 1 September 1984.

Applicants should submit curriculum vitae, list of publications, transcripts of college work and names and addresses of three persons able to evaluate teaching and research skills. 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: 31 January 1984 or until suitable candidate is found. Applications will be welcomed until the position is filled.

A nondiscriminatory, Affirmative Action Employer.

UNIVERSITY OF OTTAWA, CHAIR OF PHARMACOLOGY. Applications are invited for the position of **professor and chairman** of the Department of Pharmacology at the University of Ottawa School of Medicine. The successful candidate will have the responsibility of: (i) organizing and directing the teaching of students enrolled in the School of Medicine and the School of Nursing; (ii) reorganizing education at the graduate level; (iii) collaborating in the training of residents and interns at the affiliated teaching hospitals; and (iv) conducting a strong research program in any one area of the discipline and acting as a resource person for other researchers. The department is at a crucial stage in its development and a general redirection of its academic activity is expected from the successful candidate. Suitable candidates should hold an M.D. and/or Ph.D. degree, have at least 5 years of teaching experience, and a research record of high quality. *In accordance with Canadian Immigration requirements this advertisement is directed toward Canadian citizens and permanent residents of Canada.* An application, including curriculum vitae and appropriate references, should be forwarded **prior to 15 March 1984** to: **Gilles D. Hurteau, M.D., Dean, Faculty of Health Sciences, University of Ottawa, Ottawa, Ontario, Canada K1H 8M5.**

The University of Michigan Medical School, Department of Internal Medicine, has a position available for the **CHIEF OF NEPHROLOGY** at the Veterans Administration Hospital. Physician must be Board-certified in nephrology and internal medicine, must have a strong record of research accomplishments, and must meet senior faculty level requirements of the department. Send inquiries, along with curriculum vitae, to: **H. David Humes, M.D. Acting Chief, Medical Service, VA Medical Center, Ann Arbor, Michigan 48105.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 154FO.

PHARMACOLOGISTS Pharmaceuticals R&D

U.S. subsidiary of ICI (England) who introduced the first beta blocker, clofibrate, halothane, tamoxifen citrate and chlorhexidine. Expanded program activity in these laboratories has established the following openings.

- **Renal** - Ph.D. in renal pharmacology or physiology with experience in renal techniques in large animals, with special emphasis on the regulation and control of renal hemodynamics. Training in microsphere and micro-puncture techniques is highly desirable.
- **Pulmonary** - BS/MS in Biological Sciences (or related discipline). Ability and desire to aid in development and utilization of animal models of pulmonary disease. Some experience with biochemical techniques is highly desirable.
- **Autonomic** - BS/MS in Biology to assist in the development of in-vitro tests utilizing isolated tissue preparation for characterization of pharmacological activity. Familiarity with receptor pharmacology preferred.
- **CNS** - BS/MS in Life Sciences to perform routine to complex tests on small animals, including primates. Experience should demonstrate competence in operant behavioral technique.

Modern laboratories in suburban campus setting 25 miles south of Philadelphia. Competitive salaries/benefits include tax-sheltered investment program. Please submit full CV. Principals only.

C. T. BRODIGAN
Employee Relations



STUART PHARMACEUTICALS

Division of ICI Americas Inc.
Wilmington, DE 19897

An Equal Opportunity Employer M/F

In keeping with our historic interest in reproductive biology and our strong commitment to cell biology, the Worcester Foundation is seeking faculty candidates at all levels with expertise in

Cellular and Molecular Aspects of Reproduction

The Worcester Foundation offers excellent facilities and a highly interdisciplinary and interactive environment for independent researchers. The Foundation's campus is located in the pleasant New England town of Shrewsbury, Massachusetts, 38 miles west of Boston. Interested candidates should send a curriculum vitae with statement of research interests and names of three references to: **David E. Wolf, PH.D., C/O PERSONNEL OFFICE, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Massachusetts 01545, USA**

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER M/F/H



**WORCESTER FOUNDATION
FOR EXPERIMENTAL BIOLOGY**

Director, Toxicology Research and Testing Program

The National Institute of Environmental Health Sciences (NIEHS) invites nominations and applications for the position of Director, Toxicology Research and Testing Program (TRTP). TRTP is one of four program areas within the Institute and functions as an integral part of the National Toxicology Program (NTP). The Director, TRTP reports to the Director, NIEHS who also serves as Director, NTP. The candidate must be internationally recognized within the scientific community as an authority in toxicology/carcinogenesis. In addition, the candidate should demonstrate an interest and a commitment to environmental health issues. This Institute conducts, fosters, and coordinates (in its own laboratories and through contracts, grants, and support of Environmental Health Science Centers) research and research training on the biological effects of chemical, physical, and biological substances in the environment to: develop understanding of the mechanism of action of such substances; provide the scientific basis for evaluating their extent and severity on a national scale; establish the toxicity of chemical substances of significant public health concern; define and develop methods for diagnosis and treatment of environmentally induced illnesses; collect and disseminate information in furtherance of program.

The Director serves as the primary official with responsibility for planning and executing the Institute's program in toxicologic testing and test methods development, including: applied research to develop, validate and evaluate methods for testing the toxicity of chemical compounds and other environmental agents; a program of chemical testing including short-term screening and long-term carcinogenesis and chronic toxicity testing; collaboration with chemical toxicology test development and testing programs in other government agencies; and dissemination of test results and test development and validation efforts to interested members of the scientific community, Federal regulatory agencies, the academic community and the general public.

This is a Civil Service position in the Senior Executive Service (SES)

with a salary range from \$56,945 to \$63,800 per annum, depending on qualifications. Currently the payable salary is limited to \$63,800. Physicians may be eligible for an additional comparability allowance of up to \$10,000 per year. (Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service). Mandatory professional/technical qualifications are a medical degree, or Ph.D. degree in a health or health related science (or equivalent), appropriate board certification and research program administration experience in toxicology/chemical testing. Further information on these qualifications is available by contacting Ms. Lou Rozier, Personnel Management Specialist, National Institute of Environmental Health Sciences, (919) 541-7513.

Mandatory managerial/executive qualifications include evidence of management of a basic or clinical research program, demonstrating ability to assume leadership responsibilities in developing program goals; representing the program to outside groups; directing program planning, execution, and evaluation; and conducting a fair and equitable employment program, including the attainment of EEO objectives.

Candidates who meet the mandatory qualifications will be further evaluated by the Search Committee on the degree to which they exceed the mandatory managerial/executive qualifications, and on the following desirable qualifications: scientific reputation/peer recognition, training and education, leadership of a basic or clinical research or research administration program, and honors and awards.

APPLICATIONS (PERSONAL QUALIFICATIONS STATEMENT SF-171) should be postmarked no later than February 29, 1984 and sent to Ms. Lou Rozier, Personnel Coordinator, Qualifications Review Board for Director, TRTP, Personnel Office (1-01), National Institute of Environmental Health Sciences, P.O. Box 12233, Research Triangle Park, N.C. 27709.

AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN

CHAIRMANSHIP POSITION

The University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, invites applications for the position of professor and chairman of the Department of Genetics. Applicants should have an outstanding record of accomplishments in molecular genetics and an interest in expanding the current department by recruiting faculty in the area of molecular biology. New facilities for the department will be available in the near future. Applicants should send a letter outlining their research interests, their résumé, and five letters of reference from individuals familiar with their work to: **Dr. William J. Lennarz, Chairman of the Genetics Chair Search Committee, Department of Biochemistry and Molecular Biology, MDAH-Box 117, The University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, Texas 77030.** Deadline for applications is 1 March 1984. *An Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON Computer Science Department Stanford University

Applications are invited for the position of professor and chairperson, Computer Science Department, Stanford University. Qualifications for the position include outstanding achievements both in scholarship and in organizational administration. A distinguished record of research and teaching, suitable for a tenured appointment at the rank of professor, should be coupled with interpersonal skills suitable for effective departmental leadership. The appointment will start in September 1984; it is expected that the individual appointed would serve as chairperson for at least ten consecutive years (exclusive of sabbatical leave).

Applicants should send a letter to: **Professor Donald E. Knuth, Chairperson Search Committee, Computer Science Department, Stanford University, Stanford Calif. 94305,** including a résumé and the names of at least six references. All applications will be held in confidence. After an initial screening period, leading candidates will be invited to the campus for interviews. *Stanford University is an Equal Opportunity Employer, aggressively seeking qualified minority and Affirmative Action candidates.*

CHORDATE MORPHOLOGIST—Middlebury College. Leave replacement September 1984 to December 1984. Responsible for comparative morphology lecture and laboratory. Salary will be at the beginning assistant professor level. Completed application, including curriculum vitae, statement of teaching interests and experience, and three recent letters of recommendation, must be postmarked by 15 February 1984. The department will consider other relevant documents that the applicant might wish to send as part of an application. Letters of recommendation should be sent directly to: **C. R. Landgren, Chairman, Department of Biology, Middlebury College, Middlebury, Vt. 05753 (telephone: 802-388-3711, extension 5435).**

DEAN FOR THE COLLEGE OF SCIENCE

Southern Illinois University of Carbondale invites applications or nominations for the position of Dean of the College of Science. Candidates should qualify for a tenured appointment at the rank of professor in one of the departments of the college (Botany, Chemistry and Biochemistry, Geology, Microbiology, Physics and Astronomy, or Zoology), demonstrate academic leadership potential, and provide evidence of scholarly achievements in teaching and research. Previous administrative experience is desirable. The appointment will be effective 1 July 1984.

The college has approximately 100 faculty, more than 1000 undergraduate students, and 340 graduate students, and offers both master's and doctoral degrees. It is part of a comprehensive state university enrolling 23,000 students. Applicants should submit a cover letter of personal philosophy and a complete résumé, and have three letters of reference sent to:

**Donald Ugent, Chair
College of Science Dean Search Committee
Office of the Vice President for
Academic Affairs and Research
Southern Illinois University at Carbondale
Carbondale, Ill. 62901**

Completed applications should be received by 1 March 1984.

Southern Illinois University at Carbondale is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

COORDINATOR OF FISHERIES AND WILDLIFE PROGRAM is sought to lead an interdepartmental academic and research program, to interact with extension programs and off-campus agencies, and to maintain a strong research and graduate training program. Applicants must hold a Ph.D. in fisheries, wildlife, or a related field and have experience managing programs in a university setting. The selected candidate should qualify at the associate professor or professor level. Applicants should send curriculum vitae and three letters of recommendation by 15 February 1984 to: **Dr. John G. Vandenbergh, Department of Zoology, North Carolina State University, Raleigh, N.C. 27650.** *An Equal Opportunity/Affirmative Action Employer.*

DERMATOPATHOLOGIST—Faculty level of assistant professor. Should be Board-certified in pathologic anatomy and dermatopathology. Expected duties include diagnostic service, teaching, and a research program. Send curriculum vitae and references to: **Alvin J. Cox, M.D., Chairman, Search Committee, Department of Dermatology, Stanford University School of Medicine, 300 Pasteur Drive, Stanford, Calif. 94305.**

Stanford University is an Equal Opportunity Employer and welcomes nominations of women and minority group members and applications from them.

DIRECTOR—ENVIRONMENTAL STUDIES PROGRAM

Sweet Briar College is seeking an experienced environmentalist to direct and develop a coordinate program in environmental studies. Duties include coordination of a team-taught introductory course including faculty from eight departments, teaching other environmentally related courses, and expanding programs with local industry.

Sweet Briar is a woman's college of about 700 students with a campus of 3400 acres, including two lakes, a nature sanctuary of 500 acres established in 1934, and an operating dairy farm. The environmental studies program is 10 years old.

A Ph.D. in a relevant academic discipline, strong interest in environmental issues, some teaching and administrative experience, as well as the ability to work with colleagues in a variety of disciplines are required.

This is a full-time, tenure-track position. Interested candidates should submit a résumé and names and telephone numbers of three references by 20 January 1984 to: **Environmental Studies Program, Sweet Briar College, Sweet Briar, Virginia 24595.** *Sweet Briar College is an Affirmative Action/Equal Opportunity Employer.*

ECOLOGIST

The Department of Biological Sciences, Dartmouth College, invites applications for a tenure-track position at the assistant professor level to begin fall 1984. We seek a field ecologist who employs experimental and theoretical approaches in the study of populations and/or communities, either in **freshwater systems** or with **terrestrial plants**. The successful applicant will be expected to participate in departmental teaching at the undergraduate and graduate levels and to develop an active independent research program. Teaching or research experience at the post-doctoral level is required. Applicants should submit curriculum vitae, statements of research and teaching interests, and at least three letters of recommendation by 15 February 1984 to: **Ecology Search Committee, Department of Biological Sciences, Dartmouth College, Hanover, N.H. 03755.** *Affirmative Action/Equal Opportunity Employer.*

MOLECULAR BIOLOGY

The Department of Biological Sciences at Dartmouth College seeks candidates for a senior faculty position in the area of molecular biology. The person selected will be expected to pursue an active research program, participate in departmental courses in his or her area of biological interest, and on behalf of the department take the lead in developing an interdepartmental, institution-wide program in molecular genetics. A tenure appointment will be made at the level of professor to begin 1 July 1984. We urge all who wish to be considered for the position to submit a current résumé, copies of their most important publications, and names of four references. The search committee will begin reviewing the applicant pool on 15 February 1984. **Secretary, Search Committee, Department of Biological Sciences, Dartmouth College, Hanover, N.H. 03755.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

DEAN OF GRADUATE STUDIES AND RESEARCH—Appointment effective 1 August 1984. Responsible for furthering the development of graduate programs and policies, and the promotion of research efforts that fit the mission of the college as well as those that speak directly to the multicultural, multiethnic needs of the area. Reports directly to the vice president for academic affairs. Doctorate and a record of demonstrated scholarship and teaching required. Experience in administering graduate programs desirable; \$42,141 to \$50,956 (12-month assignment). By the deadline date of 31 March 1984, a letter of application, a complete résumé of education, experience, and qualifications, and confidential papers (including the names and addresses of at least three references) must be sent to: **Search and Nomination Committee, Dean of Graduate Studies and Research, c/o Dr. Tomas A. Arciniega, Office of the President, California State College, Bakersfield, 9001 Stockdale Highway, Bakersfield, Calif. 93311.** Telephone: 805-833-2241. *An Equal Opportunity/Affirmative Action Employer.*

DIRECTOR, CLINICAL PHARMACOLOGY PROGRAM

Director, Clinical Pharmacology Program, in Comprehensive Cancer Center and Department of Pharmacology at the University of Alabama in Birmingham. The program will initially include a chair in clinical pharmacology and two additional faculty positions. Candidate must have an M.D. degree, several years of pharmacology research experience (laboratory or clinical), and a research effort in oncology. Send curriculum vitae to: **Albert F. LoBuglio, M.D., Director, Comprehensive Cancer Center, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294.** *An Equal Opportunity/Affirmative Action Employer.*

DIRECTOR OF RESEARCH, UNIVERSITY OF RHODE ISLAND. Applications and nominations invited for the position of director of research. Provide University-wide leadership in the development of externally funded grants and contracts. Provide liaison between the University and funding agencies, disseminate funding opportunity information, conduct workshops and training sessions on proposal preparation. Process and expedite external funding, ensure institutional compliance with appropriate federal regulations, and assume general responsibility for the welfare, quality, and future development of the University's research programs and policies. The director reports to the vice president of academic affairs. Qualifications include experience with federal agencies, 3 years of successful administrative experience in a University, or experience with a funding agency/foundation or corporate grants/contracts office. Excellent writing and speaking skills, ability to manage staff and work effectively with faculty for a wide variety of disciplines required. Doctorate preferred, master's required. Salary is competitive. Applications, curriculum vitae, and three letters of reference will be accepted until 29 February 1984 or until a suitable candidate is selected. Materials should be sent to: **Dr. James J. Griffin, Chairman, Search Committee, Director of Research, P.O. Box 357, University of Rhode Island, Kingston, Rhode Island 02881-0357.** *An Affirmative Action/Equal Opportunity Employer, M/F.*

EXECUTIVE DIRECTOR AMERICAN SOCIETY FOR MICROBIOLOGY

The position of Executive Director will become available on 1 July 1984. The appointee will be ultimately responsible for directing the Society's Washington headquarters, for insuring that the policies developed by the elected officers and the council policy committee of the Society are implemented, and for advancing the interests of the Society and its members.

The Society has over 30,000 members and a staff of approximately 70 reporting to directors who represent each of the major functions of the Society, and, in turn, report directly to the executive director.

Applicants should have extensive administrative experience in an organization concerned with the sciences. A doctorate in the biological sciences is desirable. Salary will be competitive and determined according to experience and qualifications. Applications with curriculum vitae and names of three references should be submitted by 5 February 1984 to: **Dr. J. Mehens Joseph, Secretary, American Society for Microbiology, Laboratories Administration, Maryland State Department of Health and Mental Hygiene, P.O. Box 2355, Baltimore, Maryland 21203.** *The American Society for Microbiology is an Equal Opportunity/Affirmative Action Employer.*

microbiologist

research microbiologist

FMC Corporation has a senior level technical position for a research microbiologist at its Chemical R&D Center in Princeton, NJ.

The position requires a PhD in Microbiology with a background in biochemistry and a minimum of 5 years experience in laboratory research. Equal consideration will be given to individuals with publications in the field of secondary metabolites and/or biotransformations.

We offer a comprehensive benefits package including dental and a salary commensurate with your experience. Interested applicants should send their resume, with salary history/requirements to: **Mr. Richard Schellinger, Employment, Dept. SC-01, FMC CORPORATION, Chemical R&D Center, U.S. Route 1, Box 8, Princeton, NJ 08540.** An equal opportunity employer, m/f.

FMC



AGRIGENETICS CORPORATION™ seeks applications from

ECOLOGISTS

for a stimulating career position
applying novel genetic technologies to crop agriculture.

Articulate candidates of high intellectual calibre should hold a recognized graduate degree demonstrating scientific skill in a biologically based ecological discipline, and be informed on a broad range of environmental policy affairs, including regulatory issues.

Familiarity with matters relating to genetic diversity and gene resource conservation is essential, as is the ability to contribute in the design of longitudinal studies for such ecological factors as succession and stability of biota, niche dominance, horizontal and/or vertical transmission of novel inherited traits, as well as quantitative risk/reward analyses contrasting genetic and chemical strategies towards pest control.

The successful candidate must have outstanding skills at interpersonal communication, and a superior ability to write clearly and expressively in administrative, scientific, and journalistic media.

Salary will be commensurate with qualifications and experience. Applicants should submit, in confidence, their resumes, a list of references, and a brief statement of their professional interests and career expectations to the **Personnel Department of Agrigenetics Corporation, 3375 Mitchell Lane, Boulder, Colorado, 80301.**

Reviews Editor

The MIT Press seeks an Editor to manage all reviews for **Cell**, a monthly biology journal, including mini-reviews, major reviews, and book reviews. A qualified applicant for this new position would take responsibility for commissioning reviews as well as undertaking editorial works on reviews and other articles.

Requires a Ph.D. in a relevant scientific area. Editorial or publishing experience is useful.

Submit two copies of resume, referencing Job No. AC11 to: MIT Personnel Office, E19-239, 77 Massachusetts Avenue, Cambridge, MA 02139. MIT is an equal opportunity/affirmative action employer.

MIT

KING SAUD UNIVERSITY (formerly University of Riyadh) RIYADH, SAUDI ARABIA

The College of Science, King Saud University, has vacant faculty positions (Professor, Associate Professor, Assistant Professor) for Ph.D. holders and/or holders of academic titles earned at accredited universities who would be employed on contract basis as of commencement of the academic year 1984-85, which begins on August 11, 1984.

The language of instruction at the college is ENGLISH.

The college has the following departments:

CHEMISTRY
PHYSICS
ZOOLOGY
MATHEMATICS
COMPUTER SCIENCE

BIOCHEMISTRY
ASTRONOMY
GEOLOGY
STATISTICS

NOTEWORTHY BENEFITS:

Free return air tickets annually for faculty member and family
Furnished accommodation or housing and furnishing allowances
Monthly transport allowance
Relocation allowance
End-of-service gratuity
Free medical and dental care covering family
Contribution by University to tuition fees of non-Arabic-speaking children

Interested academicians are kindly requested to send non-returnable photocopies of their academic diplomas and specialized experience certificates together with their resumes (including lists of their publications and references) and written applications indicating the position applied for and the subjects the applicant is qualified to teach to:



KING SAUD UNIVERSITY
P. O. BOX 2455
RIYADH, SAUDI ARABIA

His/her address and telephone number (if available) should also be included so that he/she could be contacted if selected for interview.

POSITIONS OPEN

DIRECTOR, Microelectronic and Information Sciences (MEIS) Center, University of Minnesota.

The MEIS Center is seeking a research scientist of proven managerial ability to serve as its director. This person will be responsible for technical and administrative leadership in multidisciplinary and collaborative industry-university programs in the microelectronic and information sciences, programs having research, education, and technology-transfer components. The MEIS Center coordinates research funded by 3M, Control Data Corporation, Honeywell, Sperry, the University of Minnesota, the state of Minnesota, and national research agencies. The director will build upon current funding to expand participation in the Center. Applicants must have an earned doctorate and managerial experience in a discipline central to the microelectronic and information sciences. Candidates must have international stature, must have demonstrated strong intellectual leadership and an ability to promote collaborative efforts in both basic and applied research, and must have qualifications commensurate with those of a full professor at a major research university. Salary will be based upon qualifications, experience, and the significant responsibilities of this position.

Applications with three suggested references or nominations are solicited before 1 March 1984 and should be sent to: **Dr. Ray Warner, Chairman of Search Committee for MEIS Director (telephone: 612-376-9122), MEIS Center, 227 Lind Hall, 207 Church Street, SE, Minneapolis, Minn. 55455.**

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

ELECTRON MICROSCOPIST—Postdoctoral position for 3 years available immediately. Ultrastructural research in developing brain and retina. Candidate should be experienced in all phases of EM, able to work independently, \$20,000 plus according to experience. Send résumé and references to:

**Personnel
Attention: Dr. Sturman
New York State Institute for Basic Research
1050 Forest Hill Road
Staten Island, New York 10314**

FACULTY RESEARCH POSITIONS

The University of Maryland Institute for Physical Science and Technology (IPST) is a research institute with open professorial positions at all ranks in several areas. These areas include atomic and molecular spectroscopy and structure, VUV physics, laser plasmas, laser-matter interactions, laser light scattering, nonlinear optics of gases, condensed matter physics, statistical physics, atmospheric optics and spectroscopy, lidar probing for meteorology and air pollution, theoretical and experimental space physics, electron-molecule scattering, applied mathematics, numerical analysis, dynamical systems and chaos, and the history of science and technology. It is anticipated that one or more faculty appointments, either joint with an academic department or entirely within the Institute, will be made in the coming year in the above or closely related areas. Please direct applications and/or inquiries to: **Professor J. R. Dorfman, Director, IPST, University of Maryland, College Park, Md. 20742.**

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

FACULTY POSITION IN PLANT MOLECULAR BIOLOGY

The University of California at Berkeley announces a faculty appointment in the Division of Molecular Plant Biology. Candidates should have a Ph.D. and postdoctoral experience in an appropriate field, demonstrated excellence, originality, and productivity in the general area of the molecular biology of plants in addition to a strong commitment to undergraduate and graduate teaching. Areas of research interest include the molecular genetics and molecular biology of photosynthetic systems, especially in eukaryotes. Appointment may be made at either the tenured or nontenured level. Position available 1 July 1984.

Applicants should submit curriculum vitae, a bibliography, a two-page outline of research objectives and teaching interests, and the names of three references by 1 March 1984 to: **B. B. Buchanan, Division of Molecular Plant Biology, University of California, Berkeley, Calif. 94720. The University of California is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

SREL RESEARCH MANAGERS (ECOLOGICAL RESEARCH MANAGERS)

Three permanent full-time science administration positions are available at the Savannah River Ecology Laboratory (SREL) of the University of Georgia. Each individual will be responsible for the daily management of a large multidisciplinary research program, including project coordination and report preparation. Each research manager will work with a particular research division head in the preparation of proposals and in the allocation of resources to achieve program goals. There will be frequent interaction with SREL research faculty and with university, state, and federal personnel. Candidates must be U.S. citizens and have Ph.D. degrees and training in ecology or environmental science. Knowledge of federal and state environmental regulations and experience in research project management are desirable. Supervisory and communication skills will be weighed heavily in evaluating candidates. Salaries are commensurate with qualifications and experience depending on the professional record of the applicants. Applicants should send their résumés, reprints, and the names, addresses, and telephone numbers of four individuals who may be contacted as references to:

**Dr. D. C. Adriano
Chairman, Search Committee
Savannah River Ecology Laboratory
Drawer "E"
Aiken, South Carolina 29801**

Applications will be accepted until 1 February 1984. *The University of Georgia is an Equal Opportunity/Affirmative Action Institution.*

FACULTY POSITIONS GENETICIST BOTANIST

The Department of Biology, St. Francis Xavier University, invites applications from Ph.D.'s or equivalent for two tenure-track positions, both effective 1 September 1984.

GENETICIST. Preference will be given to candidates with strong research programs in population genetics or molecular genetics of marine invertebrates or vertebrates. Teaching responsibilities will include introductory genetics and one or more other courses.

BOTANIST. Preference will be given to candidates with strong research programs in the physiology of marine plants. Teaching responsibilities will include introductory botany and plant physiology.

To facilitate development of a strong research and teaching program, the teaching load for both positions will be reduced in the first year. These positions are subject to senate approval. Candidates should indicate the position applied for and submit curriculum vitae, and the names and addresses of three references to:

**Dr. M. Weisbart, Chairman
Department of Biology
St. Francis Xavier University
Antigonish, Nova Scotia, Canada B2G 1C0**

In compliance with Canadian immigration regulations, this advertisement is directed to Canadian citizens and permanent residents.

FISH ENDOCRINOLOGIST

Postdoctoral research associate position available immediately for studies on corticosteroid dynamics and physiology in salmonids. A Ph.D. with experience in catheterization, RIA, HPLC, or steroid receptor biochemistry preferred. Salary: \$16,500. Curriculum vitae and three letters of recommendation should be sent to:

**Dr. Melvin Weisbart, Chairman
Department of Biology
St. Francis Xavier University
Antigonish, Nova Scotia, Canada B2G 1C0**

IMMUNOLOGIST. Applications are invited for a tenure-track position at the assistant or associate professor rank from individuals with ability to establish an independent research program in molecular and/or cellular immunology. Teaching responsibilities are in both professional and graduate programs. A Ph.D. and/or M.D. and at least 2 years of postdoctoral experience are required. Send, by 15 February 1984, curriculum vitae, three letters of recommendation, and a description of research plans to: **D. C. Bauer, Chairman, Department of Microbiology and Immunology, Indiana University School of Medicine, 635 Barnhill Drive, Indianapolis, Ind. 46223. Indiana University is an Equal Opportunity Employer.**

POSITIONS OPEN

FACULTY POSITION IN MOLECULAR IMMUNOLOGY

The Department of Biology and the Rosenstiel Center of Brandeis University invite applications for a tenure-track position at the assistant or associate professor level for an immunologist, preferably with a strong background in molecular genetics. The level of the appointment will depend on the background and experience of the candidate and excellence of research, both accomplished and planned. Excellence in teaching is also expected. Send curriculum vitae and a short description of accomplished and planned research and names of three references to: **Dr. Alfred Nisonoff, Rosenstiel Center, Brandeis University, Waltham, Mass. 02254. Deadline for application is 15 February 1984. We are an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITION IN BIOCHEMISTRY

The Department of Biochemistry and Biophysics at Texas A & M University invites applications for a 12-month, tenure-track position. Academic rank and salary will be commensurate with experience. Applicants should have a terminal doctorate, postdoctoral experience, and the demonstrated ability to either continue or establish an independent research program in collaboration with biochemists and molecular biologists who have similar interests. Particular interest is expressed in biochemists with experience in the molecular biology of plant systems; however, exceptionally qualified individuals with interests in other areas of biochemistry will be considered. Responsibilities will include research, teaching at the graduate level and participation in the undergraduate teaching program.

Applicants should send complete curriculum vitae, a list of publications, a summary of future research plans, and the names of three references to: **Dr. E. G. Sander, Head, Department of Biochemistry and Biophysics, Texas A & M University, College Station, Texas 77843; telephone: 409-845-5032. Closing date for receipt of applications is 1 March 1984 or until a suitable applicant is found. Texas A & M University is an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITION—DIVISION OF INFECTIOUS DISEASES. The Department of Medicine of the University of North Carolina at Chapel Hill School of Medicine is seeking applications for a tenure-track position at the level of assistant or associate professor. Candidates should be Board-eligible or Board-certified in infectious diseases, and should have demonstrated potential for developing a strong, independent research program. Research interests in clinical or basic virology are strongly preferred. *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to identify themselves voluntarily.* Interested individuals should reply with curriculum vitae to: **Stanley M. Lemon, M.D., Chief, Division of Infectious Diseases, Department of Medicine, University of North Carolina at Chapel Hill, School of Medicine, 547 Burnett-Womack Building 229H, Chapel Hill, North Carolina 27514.**

FACULTY POSITIONS, DEPARTMENT OF MICROBIOLOGY, UNIVERSITY OF MARYLAND. Available fall 1984. Seeking two individuals to complement the developing biotechnology program of the University; academic rank is open. **MOLECULAR BIOLOGIST**—Background in microbiology with expertise in expression of eukaryotic genes. **IMMUNOLOGIST**—To develop a research program in immunochemistry or cellular immunology. Candidates should send curriculum vitae, summary of research goals, and names of three references to: **Dr. Frank M. Hetrick, Search Committee Chairperson, Department of Microbiology, University of Maryland, College Park, Md. 20742, by 1 April 1984. The University of Maryland is a nondiscriminatory, Affirmative Action Employer and encourages applications from women and minority candidates.**

MICROBIOLOGIST: Assistant professor, tenure-track, to teach introductory microbiology, medical microbiology, and other selected courses related to the health sciences. Ph.D. required. Candidates should have a commitment to teaching. Available September 1984; \$20,149 to \$24,224. Send curriculum vitae, copies of transcripts, and the names (addresses and telephone numbers) of three references to: **David H. Ost, Department of Biology, California State College, Bakersfield, 9001 Stockdale Highway, Bakersfield, Calif. 93311, on or before 13 February 1984. An Affirmative Action/Equal Opportunity Employer.**

**CLARKSON COLLEGE
DEPARTMENT OF BIOLOGY**

Announces the

BAYARD D. AND VIRGINIA C. CLARKSON CHAIR

and an

Opening for a Second Faculty Position

The Clarkson College Department of Biology invites applications and nominations for this newly endowed Chair and for a second faculty position.

Clarkson has well-established Ph.D. programs in Chemistry, Physics, Mathematics and Engineering, and a young undergraduate program in Biology. The Bayard D. and Virginia C. Clarkson Professor will be expected to play the leading role in developing Biology's contribution to an interdisciplinary graduate program in Chemical and Physical Biology, culminating in the offering of a Ph.D. degree in Biology. The candidate may be considered for the position of Chairperson of the Biology Department, if desired. A new research facility will be occupied late in 1984. Several additional appointments will be made during the next few years in addition to the positions advertised here.

The candidate for the Clarkson Chair must be a distinguished research scientist. The candidate for the second position for which the rank is open must be capable of developing or maintaining a vigorous, quality research program. The research areas are open although preference will be given to Biochemistry, Cell Biology, Microbiology, Biophysics, Mathematical Biology, Bioengineering and other areas which could interface with existing programs in Chemistry, Physics, Mathematics and Engineering. Excellence in teaching is essential.

Please send CV and the names of three references to:

**Department of Biology Search Committee
Clarkson College
Potsdam, New York 13676**

to arrive not later than February 15, 1984. Please specify which position is sought. Equal Opportunity Employer.

**SALES
REPRESENTATIVE**

Biological Research Products

Representative for industry leader in the field of biotechnology. Direct sales of a wide variety of disposable and durable products used in molecular biology, protein chemistry and cell biology. A unique opportunity for the right individual to earn superior compensation and to advance in one of the fastest-growing companies in this industry.

**Territories now available in
Southern California & Seattle, WA.**
Other territories available in 1984.

Minimum B.S. degree in biochemistry or allied field with relevant laboratory experience. Sales experience in research products recommended but not required.

Please send resume to:

BRL Mr. Wayne E. Fowler
Personnel Director
Bethesda Research
Laboratories, Inc.
Box 6009, 8717 Grovemont Circle
Gaithersburg, MD 20877

An Equal Opportunity Employer

SCIENTIST OR SENIOR SCIENTIST

S. C. JOHNSON & SON, INC. has an opening in Pharmaceutical Formulation and Development for a Scientist or Senior Scientist.

The person selected will join a small group responsible for providing scientific support of our newly formed OTC subsidiary. To be considered, the candidate should have an advanced degree (Ph.D./MS) in a chemical or pharmaceutical discipline, at least three years experience in the pharmaceutical industry, and knowledge of one or more of the following: preformulation/formulation of liquid or solid dosage forms, GLP/GMP, pharmaceutical analysis, biopharmaceutics. A high degree of independence and energy is essential.

This position offers the opportunity to significantly affect the development of a new pharmaceutical company, a competitive salary, and an excellent benefits program including cash and deferred profit sharing programs.

For confidential consideration forward detailed resume to Mr. R. H. Kastler, Personnel Manager -Racine, S. C. JOHNSON & SON, INC., 1525 Howe Street, Racine, WI 53403.

Johnson wax

An Equal Opportunity Employer M/F



**AGRICULTURAL
BIOTECHNOLOGY**

Shell Development Company is seeking scientists with significant records of achievement who are interested in applying their skills to agronomic research.

Positions are available for outstanding Ph.D.-level scientists with training in one of the following:

- Agricultural Microbiology
- Plant Molecular Biology
- Plant/Invertebrate Pathology
- Plant Cell and Tissue Culture

Shell Development Company at Modesto, California offers an outstanding research environment, a reasonable cost of living,

and attractive salaries and benefits. Modesto is close to the San Francisco Bay Area and the Sierra Nevada Mountains. Shell's current staff includes a strong team of innovative scientists with a record of technical accomplishment and commercial success in agrochemicals research.

Applicants should be U. S. Citizens or have permanent resident visa. Interested applicants should send a résumé, in confidence, to: Manager, Employee Relations, Shell Development Company, Biological Sciences Research Center, P.O. Box 4248, Modesto, CA 95352.

Shell Development Company

An Equal Opportunity Employer M/F

POSITIONS OPEN

FACULTY POSITION IN PROTEIN STRUCTURAL STUDIES

St. Jude Children's Research Hospital invites applications for a new faculty position in the area of protein structure. Candidates must have a Ph.D. and an established research program in the area of protein/peptide structure that includes protein/peptide sequencing. Part of the duties associated with the position will be to develop and oversee a newly established Protein Structure Facility. The candidate will be expected to develop his/her own research program for which initial support will be available. The level of appointment will depend on the qualifications and experience of the successful candidate. Applications should include curriculum vitae and the names and addresses of three references and should be sent to: **Dr. Raymond L. Blakley, Division of Pharmacology, 322 North Lauderdale, Memphis, Tenn. 38101.**

HEAD DIVISION OF LABORATORY MEDICINE

The Department of Pathology and Laboratory Medicine of the University of Pennsylvania is seeking applications for the position of head of the Division of Laboratory Medicine/director of the William Pepper Laboratories at the Hospital of the University of Pennsylvania. Applicants must be Board-certified or -eligible in clinical pathology and have proven administrative abilities and academic credentials. Appointment will be at the associate or full professor level depending on the qualification of the candidate.

Applications, including curriculum vitae and names of three references, should be sent to:

Dr. Leonard Jarrett, Chairman
Department of Pathology and Laboratory Medicine
University of Pennsylvania School of Medicine
36th and Hamilton Walk
Philadelphia, Pa. 19104

Equal Opportunity/Affirmative Action Employer

IGNEOUS/METAMORPHIC PETROLOGIST—This is a new faculty position, 12-month appointment, tenure track. Candidate is expected to develop a strong research program, applying theoretical, experimental, and/or latest analytical methods to petrological problems, particularly those related to the origin and evolution of oceanic crust, islands, and/or volcanic arcs. Research experience with one of the following is desirable: XRF, XRD, stable isotopes (O, N, S), solid source mass spectrometry (Sr, Pb, Nd). Rank is assistant/associate professor. Salary is \$27,000 to \$43,000, commensurate with experience. Send résumé and names of three references by 1 March 1984 to:

G. Ross Heath, Dean
College of Oceanography
Oregon State University
Corvallis, Oregon 97331

Oregon State University, an Affirmative Action/Equal Opportunity Employer, complies with section 504 of the Rehabilitation Act of 1973.

MICROBIOLOGIST

Assistant professor, microbiology—Ph.D. tenure-track position available August 1984. Teaching responsibilities include courses in general microbiology, medical microbiology, and general biology. Salary: \$21,000. Send curriculum vitae, statement of teaching experience and philosophy, transcripts, and three letters of reference by 1 March 1984 to: **Dr. Jerry Carpenter, Chairman, Department of Biological Sciences, Northern Kentucky University, Highland Heights, Ky. 41076.** *Northern Kentucky University is an Affirmative Action/Equal Opportunity Employer and actively seeks the candidacy of minorities and women.*

MOLECULAR AND CELLULAR BIOLOGIST. A tenure-track position for an individual with postdoctoral experience in molecular and cellular biology. Must have a strong interest in teaching and research at the undergraduate and early postgraduate levels. Responsibilities include teaching molecular and cellular biology, and modern molecular biology technologies to support our programs. The candidate will be expected to have an active, fundable research program. Appointment date: 1 September 1984. Send curriculum vitae, reprints, statement of research goals, and three letters of recommendation to: **Search Committee, Department of Biological Sciences, Box 246, State University of New York, Plattsburgh, N.Y. 12901.** Deadline: 15 February 1984. Incomplete applications will not be considered. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

The Department of Biology of Eastern Michigan University announces two tenure-track positions, beginning September 1984, for: (i) **MICROBIOLOGIST** able to teach general microbiology, microbial genetics, and microbial physiology with research interest in molecular biology of bacteria and viruses; and (ii) **ECOLOGIST** with a strong background in physiological ecology or biogeochemical cycling, to teach general ecology course and advanced courses. Appointments as assistant professor require Ph.D., teaching experience, ability to teach in introductory biology courses, and publication. Applications available from, and must be returned by 2 March 1984, to:

Eastern Michigan University
Personnel Office
310 King Hall
Ypsilanti, Michigan 48197
Telephone 313-487-3430

Address curriculum vitae with names of three references, and requests for information to: **Dr. Herbert H. Caswell, Jr., Head, Biology Department, Eastern Michigan University, Ypsilanti, Michigan 48197.**

An Affirmative Action/Equal Opportunity Employer and Educational Institution

MOLECULAR BIOLOGIST/CONNECTIVE TISSUES. Assistant professorship, Harvard Medical School at The Children's Hospital Medical Center, available from April 1984 to establish a research program on the genetic expression of collagen and other proteins of the extracellular matrix. Experience in the cloning of collagen genes is desirable. Apply with curriculum vitae and names of three referees to: **Dr. Melvin J. Glimcher, Laboratory for the Study of Skeletal Disorders and Rehabilitation, The Children's Hospital Medical Center, 300 Longwood Avenue, Boston, Mass. 02115.** *Applications from women and minority candidates are encouraged. An Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGIST

Applications are invited for a tenure-track appointment at the assistant or associate professor level in the Department of Oral Biology, University of Connecticut Health Center. We are searching for applicants interested in gene regulation during differentiation and development in eukaryotic systems. Applicants should have a doctoral degree, postdoctoral experience, and proven ability for independent research. The appointed candidate will join an active graduate program and is expected to develop a strong independent research program.

Please forward curriculum vitae, a research proposal, and three references to: **Dr. Gideon A. Rodan, Professor and Head, Department of Oral Biology, University of Connecticut Health Center, Farmington, Conn. 06032.** Inquiries should be received by 15 February 1984 for a position available 1 July 1984. *Affirmative Action/Equal Opportunity Employer, M/F/H.*

MOLECULAR BIOLOGY—BIOCHEMISTRY

Applications are invited for a tenure-track position at the rank of assistant professor in the Department of Biology. This position is considered a core appointment in a developing program in molecular biology and biochemistry. The appointee will be expected to maintain a research program and to contribute to graduate and undergraduate education. The candidate's particular interests should be in eukaryotic gene expression and regulation. All candidates are expected to have postdoctoral experience. Interested candidates should send a résumé, a statement of research plans, and the names of three references to:

Michael I. Mote, Chairman
Biology Department
Temple University
Philadelphia, Pa. 19122

Deadline: 1 March 1984. *The University is an Equal Opportunity/Affirmative Action Employer.*

California Biotechnology Inc. is seeking candidates at the B.S./M.S. level to fill a primary role in our **OLIGONUCLEOTIDE SYNTHESIS FACILITY.** The successful candidate will have experience in gel electrophoresis techniques and general laboratory experience. Familiarity with DNA sequencing will be helpful. This position offers a unique opportunity to participate in virtually all of the company's projects. Submit résumé and names of at least two professional references to: **SAM Facility Director, California Biotechnology Inc., 2450 Bayshore Frontage Road, Mountain View, Calif. 94043.**

POSITIONS OPEN

NUCLEAR MEDICINE PHYSICIST

The Andre Meyer Department of Physics-Nuclear Medicine of the Mount Sinai Medical Center, New York, is seeking a physicist with a doctoral degree, at least 3 to 5 years of experience in nuclear medicine physics and demonstrated skills as a teacher and investigator. Departmental areas of interest include organ modeling (digital image analysis, radiopharmacokinetics, and dosimetry). A program is being developed for a positron imaging facility. Faculty appointment and salary available appropriate to experience level. Interested qualified candidates should send curriculum vitae and letter outlining interests and goals to: **Stanley J. Goldsmith, M.D., Director, Andre Meyer Department of Physics-Nuclear Medicine, THE MOUNT SINAI MEDICAL CENTER, One Gustave L. Levy Place, New York, N.Y. 10029.** *An Equal Opportunity Employer.*

OCEANOGRAPHY

Two openings in undergraduate program *Sea Semester* for Ph.D. to teach introduction to oceanography. Each semester entails 6 weeks of intensive classroom instruction followed by 6 weeks of teaching and research at sea on board R/V *Westward*. Nine months of employment includes two of the above cycles and administration ashore. Total sea time: 15 weeks per year. Caribbean to Newfoundland. Position one: initial 1-year contract with renewal for indefinite period. Position two: initial 1-year contract with renewal for second year. Positions to be filled by Autumn 1984. Salary appropriate to qualifications and experience. Résumé and three references by 6 February 1984 to: **Dean of Sea Semester, Sea Education Association, Box 6, Woods Hole, Mass. 02543.**

The Department of Oral Biology at the University of Washington School of Dentistry, through its Division of Oral Pathology, serves the School by providing undergraduate and graduate instruction, conducting research, and offering service to the profession. The department currently seeks candidates for a tenure-track position open for a Board-certified or Board-eligible **ORAL PATHOLOGIST.** Candidates should have some teaching experience, have the ability to develop a strong research program in oral pathology, and have qualifications for membership in the graduate faculty of the University of Washington in order to participate in the department's M.S. and Ph.D. programs. Opportunity exists for a joint appointment in the Department of Pathology in the School of Medicine. All applications received before 1 March will receive thorough consideration. Please send curriculum vitae, bibliography, names and addresses of four references to: **Murray R. Robnovitch, Search Committee Chairman, Department of Oral Biology, SB-22, School of Dentistry, University of Washington, Seattle, Washington 98195.**

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

PARASITOLOGIST to develop strong research program with emphasis in evolutionary biology. Tenure-track assistant or associate professor. Undergraduate and graduate teaching in parasitology and related areas. Send letter of application, curriculum vitae, and names, addresses, and telephone numbers of three references to: **George A. Clark, Jr., Head, Systematic and Evolutionary Biology Section, Biological Sciences Group, UNIVERSITY OF CONNECTICUT, Box U-43, Storrs, Conn. 06268.** Screening date: 20 January 1984. *Affirmative Action/Equal Opportunity Employer (Search 4A27).*

PHYSIOLOGIST to teach introductory biology, human anatomy, comparative vertebrate physiology, and direct undergraduate research projects. Assistant professorship; Ph.D. required. Position available September 1984; contract renewable for several years.

Send curriculum vitae by 15 February to: **Dr. Robert Naylor, Chairman, Maryville College, Maryville, Tenn. 37801.** *An Equal Opportunity Employer.*

PLANT PHYSIOLOGIST, Ph.D. tenure-track assistant professor starting 15 August 1984. Teaching plant physiology, botany, general biology. Research area open, prefer lower plants. University of 6000, master's program, 13 biology faculty. Applications should include curriculum vitae, three letters of recommendation, and statement of teaching philosophy. Send to: **Dr. Robert Wright, Chairman, Department of Biology, University of Central Arkansas, Conway, Ark. 72032.** Closing date: 1 March 1984. *Affirmative Action/Equal Opportunity Employer.*

Tenure-Track Positions/Cell and Molecular Biology

The College of Sciences, San Diego State University, has five tenure-track openings in the Department of Biology at the assistant, associate, or full professor level. Postdoctoral training is required. Applicants must be capable of establishing active and innovative research programs. The successful candidates will have the opportunity to join an interactive group of cell and molecular biologists committed to excellence in research and instruction. Instructional responsibilities include participation in graduate/undergraduate programs. All positions are available in September 1984.

- **Cardiovascular Physiologist:** a Ph.D. or M.D. Research interests preferred: mammalian cardiology, animal models for CV disease, or assessment of cardiac performance at organ, tissue, cellular, or subcellular level. Opportunities exist for collaboration with other physiologists.
- **Cellular/Molecular Immunologist:** a Ph.D. with a strong background in molecular biology/microbiology. Applicants using hybridoma or recombinant DNA technology in their research are preferred.
- **Molecular Geneticist:** a Ph.D. with a strong background in molecular biology/microbiology. We prefer that the applicants utilize recombinant DNA techniques to study a bacterial, viral, or protist system.
- **Medical Microbiologist:** a Ph.D. or M.D. Research interests preferred: mechanisms of pathogenesis, host-parasite interactions, or diagnostic microbiology procedures. The candidate will facilitate our active involvement in clinical microbiology and will participate in instructional programs of medical technology and public health microbiology.
- **Electron Microscopist:** a Ph.D. with outstanding talents and expertise in a wide range of techniques involving tissues/cells. Facilities for personal research include a Philips 410 TEM, a Hitachi S-500 SEM, and other support equipment.

Applicants should send curriculum vitae, names of three references, three representative publications, in-press manuscripts, and a statement of research goals by February 15, 1984 to: Chair, appropriate search committee, College of Sciences, San Diego State University, San Diego, CA 92182.

San Diego State University is an Affirmative Action/Equal Opportunity Title IX employer and does not discriminate against handicapped persons:

SDSU

NATIONAL INSTITUTE OF
ARTHRITIS, DIABETES, AND
DIGESTIVE AND KIDNEY DISEASES
OFFICE OF THE DIRECTOR

ASSOCIATE DIRECTOR FOR NUTRITION

Incumbent must be a recognized and respected leader in the field who plans, develops, and implements a high quality research program in nutrition. This involves identifying research needs and opportunities; working with other leaders in individual/specialized fields of nutrition; reviewing existing training programs to evaluate their effectiveness and identifies new training that might advance the field; and plans and develops conferences, workshops, and/or seminars in those areas that might be most productive.

Salary Range — \$56,945 to \$63,800 per annum

Position information and qualifications requirements may be obtained by contacting:

Mr. Clifford Moss, Executive Secretary,
Search Committee for Associate Director for Nutrition
Building 31, Room 9A34, National Institutes of Health
Bethesda, Maryland 20205 (301) 496-4231

Applications (SF-171, CV and Bibliography) must be submitted to above address and postmarked not later than January 31, 1984.

AN EQUAL OPPORTUNITY EMPLOYER

Head of Drug Metabolism Bombay

The Boots Company (India) Ltd., is seeking for its recently established Research Centre in Bombay, a Biochemist who will be in charge of the Drug Metabolism laboratory.

The successful candidate will be involved in the establishment of the unit and will be responsible for designing and conducting drug metabolism and pharmacokinetic studies.

Candidates must have a PhD in Biochemistry with at least five years of postdoctoral/industrial experience in drug metabolism, pharmacokinetics and bioavailability studies. Preference will be given to candidates with experience in:

- * instrumental methods of analysis including HPLC
- * handling radiolabelled compounds
- * dealing with regulatory issues related to all aspects of human studies of drug development and pharmacokinetics.

The position offers an attractive remuneration, support for relocation and good future prospects.

A curriculum vitae along with the names of three referees should be sent to: T. W. Flower, Employment Manager (Technical), The Boots Company PLC, Station Street, Nottingham, NG2 3AA, England.



The Boots Company PLC

POSITIONS OPEN

POSTDOCTORAL—VISION RESEARCH

Position immediately available for cell biologist to study the molecular mechanisms of corneal infection including surface receptors. Experience in electron microscopic immunocytochemistry is necessary. Knowledge of ancillary topics such as biochemistry, immunology, and tissue culture is preferred. This is a joint study with an anatomist. Send curriculum vitae and three letters of recommendation to: **Dr. Richard S. Berk, Immunology/Microbiology, Wayne State University School of Medicine, Detroit, Michigan 48201.** Salary range of \$16,000 to \$19,000. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL—NEUROVASCULAR PHYSIOLOGY position available to study the interaction of sympathetic nerves and blood vessels during physiologic and pathologic states in animals and humans. Ph.D. or M.D. U.S. citizenship required. Send curriculum vitae, statement of research interests, and two references to: **Dr. Shirley Mueller, Departments of Neurology and Physiology, Indiana University, 1001 West 10 Street, Indianapolis, Ind. 46202.**

POSTDOCTORAL FELLOW. The Ecosystems Center of the Marine Biological Laboratory (MBL) announces the availability of a 1-year postdoctoral appointment for work in terrestrial or aquatic ecology. Applicants should have completed the requirements for the Ph.D. prior to the start of the appointment and should expect to join in some aspect of the Center's continuing research. Major programs at present are on the biogeochemical cycling of nutrient elements including carbon, nitrogen, and sulfur. The position is available starting 1 July 1984 and is renewable for a second year. Curriculum vitae, statement of objectives, and names of three references should be sent by 1 March to: **Dr. G. M. Woodwell, Director, Ecosystems Center, MBL, Woods Hole, Mass. 02543.**

The MBL is an Affirmative Action/Equal Opportunity Institution.

POSTDOCTORAL FELLOW. Position available in June 1984 for an M.D. or Ph.D. to investigate the neurochemistry of catecholamines. Current studies include cardiovascular and psychiatric disorders, and in vitro biochemical studies of the enzymes involved in catecholamine metabolism. Send curriculum vitae and the names of references to: **Michael Ziegler, M.D., University of California, San Diego, Medical Center H-781-B, 225 Dickinson Street, San Diego, Calif. 92103.**

Position immediately available for **POSTDOCTORAL FELLOW.** Studies involve cell biology of pulmonary type II cells, P450 isozyme studies. Position may lead to full-time, tenure-track position in the department. Send curriculum vitae to:

**Yutaka Kikkaw, M.D.
Professor and Chairman
Department of Pathology
New York Medical College
Basic Science Building
Valhalla, New York 10595**

POSTDOCTORAL FELLOW MEMBRANE TRANSPORT

Postdoctoral position available immediately to collaborate on studies of ion transport by epithelial cells. Current interests are the mechanisms and regulation of membrane conductance and ion channel kinetics. Work in progress utilizes macroscopic and single-channel techniques to study flat sheets, isolated cells, and cultured cell lines. Applicants should forward curriculum vitae and the names of two references to: **David C. Dawson, Ph.D., Department of Physiology, University of Michigan Medical School, 6811 Medical Science II, Ann Arbor, Mich. 48109.**

POSTDOCTORAL POSITION in diabetes research program presently available with group investigating pancreatic islet cell biochemistry, physiology, and morphology. Involves extensive use of tissue culture techniques. Applicants must possess M.D. or Ph.D. degree with background in biochemistry, physiology, or cell biology. Stipend is competitive. Send curriculum vitae, description of current research interests and objectives, and three letters of reference to: **Postdoctoral Search Committee, Department of Biochemistry, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, Mass. 01605.**

The University of Massachusetts Medical School is an Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL FELLOW or RESEARCH ASSOCIATE position available to study hormonal and social basis of the development of sex differences in behavior. Work will involve spending periods of time at monkey colony in the Caribbean.

Candidates should have background in behavior observation methods and basic biochemistry. Have curriculum vitae, transcripts, and three letters of recommendation sent to: **Dr. Jane Stewart, Center for Studies in Behavioral Neurobiology, Department of Psychology, Concordia University, 1455 de Maisonneuve Boulevard, Montreal, Quebec, Canada H3G 1M8.**

POSTDOCTORAL FELLOW or RESEARCH ASSOCIATE position available to study conditioning of drug effects and their biochemical basis. Candidates should have background in animal psychopharmacology and physiological and biochemical methods. Have curriculum vitae, transcripts, and three letters of recommendation sent to: **Dr. Jane Stewart, Center for Studies in Behavioral Neurobiology, Department of Psychology, Concordia University, 1455 de Maisonneuve Boulevard, Montreal, Quebec, Canada H3G 1M8.**

POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE position available to study human T and B cell activation and differentiation. Emphasis on flow cytometry and cell cloning technologies. Salary: \$20,000 to \$25,000. Interested applicants submit résumé, thesis abstract, and three references to: **Marvin R. Garovoy, M.D., Immunogenetics and Transplantation Laboratory, 520 HSE, University of California, San Francisco, San Francisco, Calif. 94143.**

POSTDOCTORAL POSITION— TREE CELL CULTURE

The Department of Pomology, University of California at Davis, invites applications for a postdoctoral position for research on cell culture of Douglas fir and sugar pine. Available 1 June 1984. The salary is consistent with level of experience and current university rates for the postgraduate research pomologist series. The appointee will be located in Davis. A Ph.D. is required with training in plant physiology, biochemistry, and horticulture.

Submit curriculum vitae, official undergraduate and graduate transcripts, list of publications, and names and addresses of three referees to: **Dr. D. J. Durzan, Department of Pomology, University of California, Davis, California 95616; telephone: 916-752-0123.** Applications must be received by 1 March 1984.

In compliance with federal and state laws and University policy, the University of California does not discriminate on the basis of race, color, national origin, religion, sex, handicap, age, or against disabled veterans of the Vietnam era. The University of California is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately for Ph.D. biochemist or molecular pharmacologist to study aspects of drug transport in isolated brain capillary endothelial cells. Salary: \$14,000 to \$15,000 per year. Send curriculum vitae and names of three references to: **Dr. Ronald T. Borchardt, Department of Pharmaceutical Chemistry, 3006 Mallott Hall, The University of Kansas, Lawrence, Kans. 66045.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately for Ph.D. biochemist or molecular pharmacologist to study aspects of epinephrine metabolism in the CNS with emphasis on the biosynthetic pathway. Salary: \$14,000 to \$15,000 per year. Send curriculum vitae and names of three references to: **Dr. Ronald T. Borchardt, Center for Biomedical Research, 2099 Constant Avenue, The University of Kansas, Lawrence, Kans. 66044.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available 1 April 1984 for 1 or 2 years in membrane transport physiology. The project will involve studies of single ion channels by patch clamp techniques in isolated renal tubule preparations. Candidate should have a strong background in electrophysiological techniques. Applicants should send curriculum vitae along with two references to: **Dr. Gerhard Giebisch, Department of Physiology, Yale University School of Medicine, 333 Cedar Street, P.O. Box 3333, New Haven, Conn. 06510.**

Yale University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION IN MONTREAL. To study regulation of nitrogen fixation with a view to inducing ammonia excretion by a photosynthetic autotroph (*J. Bact.* 152:706). Candidate might be: (i) experienced in nitrogen fixation and bacterial genetics, or (ii) interested in this but experienced in recombinant DNA work and able to advise on other studies in this laboratory. For 2 years, starting between January and September 1984. Send curriculum vitae and names of two references to: **E. Newman, Biology Department, Concordia University, Montreal, Quebec, Canada H3G 1M8.**

POSTDOCTORAL POSITIONS in neuroscience, developmental biology, and cell biology available for training with **J. F. ASH** (cell membranes), **F. D. COLLINS** (neurite growth), **K. A. CRUTCHER** (neuronal plasticity), **M. JACOBSON** (clonal analysis), **A. G. LEVENTHAL** (visual system), **R. J. MULLEN** (mammalian neurogenetics), **T. N. PARKS** (auditory system), and **G. C. SCHOENWOLF** (neurulation). Trainees must be U.S. citizens or permanent residents. Send curriculum vitae to one of the above or, for additional information, to: **Postdoctoral Program, Department of Anatomy, University of Utah School of Medicine, Salt Lake City, Utah 84132.**

POSTDOCTORAL POSITION—NEUROCHEMISTRY available immediately. Biochemical and immunological studies of brain phospholipases and related inhibitory proteins in vivo and in primary cell culture. Experience in protein chemistry is required. Send curriculum vitae and three references to: **Dr. Pak H. Chan, Department of Neurology, 794-M, University of California, School of Medicine, San Francisco, Calif. 94143.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION in membrane pharmacology available in March 1984, to study effect of CNS depressant drugs (especially ethanol) on physical properties and chemical composition of cell membranes. Applicants should have training in physical-chemical techniques and experience with preparation and analysis of biomembranes. Projects include examination of human erythrocyte membranes, measurement of partition coefficients of drugs in brain membranes, and assay of lipids in animals chronically treated with drugs. Send curriculum vitae and names of three references to: **Dora B. Goldstein, M.D., Department of Pharmacology, Stanford Medical Center, Stanford, Calif. 94305.**

POSTDOCTORAL POSITION available for biochemist to study structure and biogenesis of brain proteins related to Alzheimer's disease. Experience in HPLC, protein purification, and microsequencing desired. Send inquiries to:

**David L. Miller
Attention: Personnel
New York State Institute for Basic Research
1050 Forest Hill Road
Staten Island, N.Y. 10314**

POSTDOCTORAL POSITIONS

Postdoctoral training in cardiovascular studies for medical scientists and clinical investigators is available for 2-year periods. The training programs emphasize laboratory research, coupled with course work where desired, in the physical sciences, instrumentation, computer science, systems analysis, physiology, and so forth. The research programs are in cardiovascular mass transport, blood-tissue exchange, muscle mechanics and metabolism, biomaterials, peripheral and coronary blood flows, imaging via ultrasound, NMR and radionuclide techniques, and bioinstrumentation. This is a National Research Service Award program open to U.S. citizens and landed immigrants, with stipends from \$14,040 to \$19,716. For information or application forms, write: **J. B. Bassingthwaite, M.D., Ph.D., Cardiovascular Bioengineering Training Program, WD-12, University of Washington, Seattle, Wash. 98195.**

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

POSTDOCTORAL POSITION available to study: (i) molecular cloning and characterization of glycogen synthase genes and their regulation by insulin and diabetes; and (ii) molecular properties of nerve growth factor receptors and their signaling mechanism in neuronal differentiation. Experience in recombinant DNA or protein chemistry helpful, but interest and enthusiasm more important. Send curriculum vitae and names of three references to: **Dr. Gary L. Johnson, Department of Biochemistry, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, Mass. 01605.**

**UNIVERSITY OF ALBERTA
HOSPITALS
MEDICAL MICROBIOLOGIST**

THE POSITION: Responsible for operation of the diagnostic Microbiology Department through the Director of Diagnostic Microbiology in the assessment and development of diagnostic methodologies, reagents and the techniques required for the development of a progressive microbiology department.

Responsibilities include assistance in consultation and laboratory operations, teaching of residents and laboratory technologists as well as teaching interaction with the University of Alberta, Department of Medical Microbiology.

THE CANDIDATE: An M.D. preferred with appropriate clinical qualifications in Laboratory Medicine at a specialist level acceptable to the Royal College of Physicians and Surgeons of Canada with emphasis in the area of Diagnostic Microbiology, or a Ph.D. with appropriate training and clinical experience. Additional specialized skills in the area of laboratory computerization, clinical diagnostic virology, mycoplasma or chlamydia would be an asset. Proven ability to originate, develop and seek funding for independent academic research programs would be an asset. Also experience in hospital infection epidemiology would be of value.

THE HOSPITAL: The University of Alberta Hospitals is a 1400 bed acute care teaching facility and the major specialty care referral centre for Northern Alberta and the Territories. Patient care, health education and clinical research activities will soon be centered in its major new complex, the Walter C. Mackenzie Health Sciences Centre.

Canadian residents and permanent citizens will be given preference.

APPLY TO:

**Manager—Employment
University of Alberta Hospitals
8440—112th Street
EDMONTON, Alberta
CANADA
T6G 2B7**

CLOSING DEADLINE FOR APPLICATIONS: JANUARY 31, 1984

Division of Cancer Cause and Prevention
National Cancer Institute
National Institutes of Health
Public Health Service
Department of Health and Human Services

**ASSOCIATE DIRECTOR
FOR BIOLOGICAL CARCINOGENESIS**

The National Cancer Institute (NCI) develops the overall national strategy against cancer, coordinates Federal Government and non-Federal Government cancer programs, and supports international programs of cancer research. The Division of Cancer Cause and Prevention directs the NCI's major research effort related to determining the cause of cancer as well as basic research on possible means of cancer prevention. The Associate Director for Biological Carcinogenesis plans, directs, and conducts a basic research program in which the role of biological agents, genetic sequences, viral genes, and combinations of viral and cellular genes in carcinogenesis is investigated. This research, which emphasizes molecular biology, includes isolation and analysis of proteins responsible for transformation and identification of the genetic sequences that code the proteins, in addition to the role of RNA- and DNA-containing viruses in certain forms of cancer. The incumbent will be responsible for management of five intramural laboratories and an extramural component which administers a \$51 million a year grant and contract program comprising the biological carcinogenesis activities of the DCCP. These activities are supported by a budget of approximately \$70 million and approximately 181 full-time equivalent positions.

This is a Civil Service position in the Senior Executive Service (SES) with a salary range from \$56,945 to \$63,800 per annum. In addition, M.D. candidates may be eligible for a Physicians' Comparability Allowance up to \$10,000 per year. (Alternately, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) The individual selected, if not presently in SES, must serve a one year probationary period.

Candidates must meet established mandatory professional/technical and managerial/executive requirements. Candidates will be further evaluated on the extent they exceed the minimum requirements and on additional factors including scientific reputation/peer recognition, training and education and honors and awards. A copy of the requirements may be obtained by contacting Ms. Patricia Rados, in the Personnel Management Branch, NCI on (301) 496-6864.

Applications (Personal Qualifications Statement SF-171) are to be sent to the above individual at: The National Cancer Institute, Building 31, Room 3A23, Bethesda, Maryland 20205, postmarked no later than February 29, 1984. A current curriculum vitae and bibliography must accompany all applications. Applications from women and/or minority group members are especially solicited.

The National Institutes of Health is an EQUAL OPPORTUNITY EMPLOYER.

Spring & Summer Courses at the MBL

June 10—August 25, 1984

Biology of Parasitism

John David, Harvard Medical School, Director

Biophysics of Neural Function*

Daniel Alkon, NINCDS/MBL, Director

Embryology:

A Modern Course in Developmental Biology

Bruce Brandhorst, McGill &

William R. Jeffery, Texas, Directors

Marine Ecology

Peter W. Frank, Oregon, Director

Microbiology:

Molecular Aspects of Cellular Diversity

Harlyn O. Halvorson, Brandeis, Director

Neural Systems and Behavior

Ronald Hoy, Cornell &

Eduardo Macagno, Columbia, Directors

Neurobiology

John Hildebrand, Columbia &

Thomas Reese, NINCDS, Directors

Physiology:

Cell and Molecular Biology

Robert D. Goldman, Northwestern, Director

***May 7—June 3, 1984.**

Financial aid is available from a variety of sources, including NIH training grants, other federal grants, and private scholarship funds.

Deadline, February 24, 1984.

For further information, write the Admissions Office, MBL, Woods Hole, MA 02543



POSITIONS OPEN

POSTDOCTORAL POSITION available immediately. Research area would be cytologic techniques on developing and regenerating components of the peripheral nervous system. Teaching experience in histology and gross anatomy required. A complete application requires résumé, transcripts, and three letters of recommendation sent to: **Dr. Bryce L. Munger, Professor and Chairman, Department of Anatomy, The Milton S. Hershey Medical Center, P.O. Box 850, Hershey, Pennsylvania 17033.** Deadline for applications is 15 February 1983.

POSTDOCTORAL POSITION AVAILABLE DEPARTMENT OF ANATOMY UNIVERSITY OF MINNESOTA

One or two postdoctoral positions to work on glycoproteins in fluids of the male reproductive tract and on sperm. Candidates should have a strong background either in protein isolation and purification (possibly with experience in amino acid analysis and sequencing), or in molecular aspects of gene expression. Curriculum vitae, reprints, and three references should be sent to: **Dr. David W. Hamilton, Professor and Head, Department of Anatomy, 4-135 Jackson Hall, 321 Church Street, SE, Minneapolis, Minnesota 55455.** The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

POSTDOCTORAL POSITION available immediately: neuroimmunology-biochemistry. Isolation and characterization of opiate receptors using antireceptor monoclonal antibodies. Salary commensurate with experience. Send résumé to: **Department of Biochemistry, University of Connecticut Health Center, Farmington, Conn. 06032.** An Affirmative Action/Equal Opportunity Employer, M/W/H.

POSTDOCTORAL POSITION in neural regeneration and transplantation in noradrenergic neurons in the CNS. Experience in neuroanatomical methods preferred. Work will include neurochemical, behavioral, and metabolic (2 DG) assessment of recovery after lesions and transplants in central noradrenergic pathways. Available immediately. Salary: \$14,000. Send curriculum vitae to: **Barry E. Levin, Neurology Service (127), VA Medical Center, East Orange, N.J. 07019.**

POSTDOCTORAL POSITION in the interrelationship between sympathetic nervous system function and thermogenesis in animal models of obesity. Experience in CNS stereotaxic work, obesity, and/or neuropharmacology of catecholamines and thermogenesis preferred. Salary: \$14,000. Send curriculum vitae to: **Barry E. Levin, Neurology Service (127), VA Medical Center, East Orange, N.J. 07019.**

POSTDOCTORAL POSITIONS IN MEDICAL MYCOLOGY AND MOLECULAR BIOLOGY OF FUNGI. A number of postdoctoral positions are available in the Medical Mycology Program at Washington and St. Louis University Schools of Medicine. Participating faculty and research interests are: **Gerald Medoff:** Molecular pharmacology of antifungal agents; biochemical and structural changes during morphogenesis of *Histoplasma capsulatum*; restriction endonuclease analysis of mitochondrial and ribosomal DNA of *H. capsulatum*; gene isolation and regulation of morphogenesis in *H. capsulatum*. **Alan M. Lambowitz:** Plasmids, gene isolation, genetic engineering procedures, mitochondrial RNA splicing in *Neurospora*. **J. Russ Little:** Cellular immunology, macrophage functions, macrophage secretory products antigen presentation, macrophage cultures, mechanism of adjuvant action, in vitro models of host parasite interactions—especially pathogenic fungi. **George S. Kobayashi:** Host-parasite interaction of medically important fungi; novel approaches to diagnosis and therapy of systemic mycoses: pharmacology of antifungal agents; and biochemical and physiological studies on fungal dimorphism. **David Schlessinger:** Mechanism of action of antifungal antibiotics; RNA processing and metabolism in bacteria and mammalian cells. **William E. Goldman:** Molecular basis of pathogenicity *Histoplasma capsulatum* and *Bordetella pertussis*; in vitro models of respiratory tract infections and toxin effects; biochemical analysis and genetic manipulation of virulence related phenotypes. Applicants should send curriculum vitae and names of three references directly to the individuals listed above or to: **Dr. George Kobayashi, Washington University School of Medicine, Infectious Diseases Division, Campus Box 8051, 660 South Euclid, St. Louis, Mo. 63110.**

POSITIONS OPEN

POSTDOCTORAL POSITION available to work on an NIH-funded project to study the molecular biology of papilloma viruses and their interactions with keratinocytes. Experience with RNA techniques and/or keratinocyte cultures preferred. Applicants should send curriculum vitae and description of research experience and have three letters of reference sent to: **Dr. Ann Roman, Department of Microbiology and Immunology, Indiana University School of Medicine, Indianapolis, Indiana 46223.**

POSTDOCTORAL POSITIONS available immediately in the following areas: (i) the effects of membrane environment on the properties of lens Na^+ , K^+ -ATPase, (ii) regulation of membrane permeability in mitochondria by phospholipid deacylation-reacylation cycles, (iii) bioenergetics of Ca^{2+} transport by mitochondria, and (iv) membrane interactions and cation transport by A23187 emphasizing fluorescence and fast reaction techniques. Annual stipend: \$16,400 minimum. Send curriculum vitae and three reference letters to: **Dr. Douglas R. Pfeiffer, The Hormel Institute, University of Minnesota, Austin, Minn. 55912. Telephone: 507-433-8804.** The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages women and minority applicants.

POSTDOCTORAL POSITION available to develop theory of liquid surface dynamics, with application to novel techniques in mass spectrometry. Experience in normal mode analysis, Rouse-Zimm dynamics of polymers, or molecular dynamics simulations of the internal motions of large and biological molecules would be helpful. The position, with Professors Ken A. Dill and A. L. Burlingame, is available for 1 year, with the possibility of extension. Salary range: \$16,890 to \$18,430, depending on qualifications and experience. Please send curriculum vitae and two letters of reference to: **Professor Ken A. Dill, Department of Pharmaceutical Chemistry, University of California, San Francisco, Calif. 94143.**

University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITIONS IN CELLULAR AND MOLECULAR ENDOCRINOLOGY. Three positions are available: (i) Structural basis of interaction of parathyroid hormone with its receptors; (ii) Internalization and processing of parathyroid hormone by cultured cells; and (iii) Regulation of proteolysis of the hormone and its receptor by ATP. Two to three-year positions; excellent salary and fringe benefits. Application and two letters of reference to: **J. E. Zull, Department of Biology, Case Western Reserve University, Cleveland, Ohio 44106.** Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE/BIOCHEMISTRY

To participate in research program concerning the biosynthesis and processing of secretory and membrane glycoproteins. Work may involve isolation and characterization of mRNA's and DNA cloning technology, in vitro protein synthesis, protein purification, immunological techniques, and cellular biology.

Send curriculum vitae and two letters of recommendation to: **Edward C. Heath, Biochemistry Department, University of Iowa, Iowa City, Iowa 52242.**

TWO POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS available immediately. The first position is for an individual trained in biochemistry and endocrinology; the second position is for an individual trained in light and electron microscopic morphological techniques. Research will focus in on two areas of GI physiology: (i) the stimulus secretion coupling mechanism involved in the release of GI peptides; and (ii) the contribution of surface lipids to the barrier functions of the stomach. Candidates send curriculum vitae with names and addresses of three references to: **Dr. Lenard M. Lichtenberger, Department of Physiology and Cell Biology, University of Texas Medical School, P.O. Box 20708, Houston, Texas 77225.** An Equal Opportunity Employer; women and minorities are encouraged to apply.

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately for studies of the origins and characterization of human breast cancers using monoclonal antibody technology, histopathology, and cell culture. Send curriculum vitae and names of three references to: **Dr. Jean Hager, Department of Cell Biology, AMC Cancer Research Center, 6401 West Colfax Avenue, Lakewood, Colo. 80214.** Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

Duke University Medical Center

A POSTDOCTORAL RESEARCH POSITION is now available to join a neurogenetic research group. Emphasis will be on developing RFLP haplotype from DNA probes linked to human neurological diseases in order to increase informative matings for linkage analyses and counseling. Experience in recombinant DNA techniques necessary. Applications, including curriculum vitae and references should be sent to: **Allen D. Roses, M.D., Professor and Chief, Division of Neurology, P.O. Box 2900 Duke University Medical Center, Durham, N.C. 27710.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH POSITIONS Holcomb Research Institute (HRI), Butler University

One or two postdoctoral positions are available in HRI's Biotic Resource Analysis Program, one in dendrochronology or environmental control of forest growth, and the other in air pollution pathology. Candidates should possess a Ph.D. in an appropriate discipline and have skills in field research design, statistical analysis, and publication. Available 1 April 1984 or later, appointments will be for 1 or 2 years, with continuing appointments possible.

Send letter, including statement of research interests and names for three reference letters, by 15 February 1984 to: **Dr. Orie L. Loucks, Director, Holcomb Research Institute, Butler University, 4600 Sunset Avenue, Indianapolis, Ind. 46208.**

Butler University is an Equal Opportunity Employer.

PROFESSOR OF GENETICS UNIVERSITÉ DE MONTRÉAL

Tenure-track, full-time position, Département des Sciences Biologiques.

Qualifications: Ph.D. or equivalent, preferably with postdoctoral experience.

Duties: Teaching in FRENCH to large classes a course in general genetics at first-year University level. Advanced and graduate courses in candidate's specialty. Research in biotechnology within an existing plant tissue culture group at Institut Botanique de Montréal.

Please send full curriculum vitae, summary of research interests, and names of three respondents to:

**Professor Pierre Couillard
Département de Sciences Biologiques
Université de Montréal
C.P. 6128, Succ. "A"
Montréal, Québec, Canada H3C 3J7**

UNIVERSITY OF ILLINOIS AT CHICAGO PROGRAM COORDINATOR OFFICE OF SPONSORED RESEARCH Natural Sciences, Mathematics, and Engineering

Applications are invited for the position of program coordinator in the Office of Sponsored Research. The objective of this position is development of external funding for research and educational activities in the natural sciences, mathematics, and engineering. The coordinator will provide support services to assist faculty in obtaining grants from agencies of federal and state government, professional and industrial associations, and foundations. Tasks include identifying grant opportunities, assisting in the development and submission of proposals, and maintaining relations with agencies.

Qualifications: preferably a doctorate in an area of the natural sciences, mathematics, or engineering; experience with sponsored research at the departmental, college, or university level or in a comparable technical setting at an institute or agency; excellent communication skills and an ability to relate well with faculty and administrators; and strong initiative and interest in work which emphasizes service to others.

Starting date: as soon as possible. Salary will be competitive and commensurate with experience. The deadline for applications is 31 January 1984. Send letter of application, curriculum vitae, and a list of at least three references to:

**Richard Buchanan
Associate Director, Sponsored Research
1527 University Hall
University of Illinois at Chicago
P.O. Box 4348
Chicago, Illinois 60680**

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

BREWING RESEARCH FOUNDATION

DEPUTY DIRECTOR

Applications are invited for this position, which falls vacant due to the pending retirement of Dr. J. R. Hudson.

Candidates should preferably have some experience of brewing or relevant fermentation processes but otherwise detailed requirements of academic background and experience are open. The person appointed will need to demonstrate a commitment to innovative research, good understanding and experience of modern methods of research management, and an ability to communicate effectively and persuasively to both scientists and managers at all levels in the industry.

It is anticipated that candidates will already hold a position of responsibility in industry, the university sector or a similar research organisation.

The Brewing Foundation is situated in attractive countryside in Surrey yet is within easy reach of London. It was established in 1950 to carry-out co-operative research on behalf of the brewing industry. It is supported primarily by Brewers' Society on behalf of the entire British brewing industry, but has an increasing number of overseas subscribers. The Foundation enjoys an international reputation and is an acknowledged centre of excellence in brewing and fermentation research.

In the first instance, informal enquiries should be made in confidence to:

Professor B. Atkinson, Director
Brewing Research Foundation
Nutfield, Surrey, UK
Telephone: 073-782-2413

Division of Cancer Cause and Prevention
National Cancer Institute
National Institutes of Health
Public Health Service
Department of Health and Human Services

ASSOCIATE DIRECTOR FOR CHEMICAL AND PHYSICAL CARCINOGENESIS

The National Cancer Institute (NCI) develops the overall national strategy against cancer, coordinates Federal Government and non-Federal Government cancer programs, and supports international programs of cancer research. The Division of Cancer Cause and Prevention directs the NCI's major research effort related to determining the cause of cancer as well as basic research on possible means of cancer prevention. The Associate Director for Chemical and Physical Carcinogenesis plans, directs, and conducts a basic and applied research program in which agents known or suspected to have carcinogenic and/or tumor promoting activity are evaluated from the standpoint of mechanism of action, metabolism, interactions with biologically important macromolecules, and related areas. The incumbent's responsibilities will also include basic research involving the development of effective agents to prevent or reverse the process of carcinogenesis. The Associate Director will be responsible for the management of both intramural and extramural research programs in chemical and physical carcinogenesis. The chemical and physical carcinogenesis program activities represent a budget of approximately \$70 million, eight in-house laboratories, approximately 189 full-time equivalent positions, as well as an extramural component which administers a \$49 million grant and contract program.

This is a Civil Service position in the Senior Executive Service (SES) with a salary range from \$56,945 to \$63,800 per annum. In addition, M.D. candidates may be eligible for a Physician's Comparability Allowance up to \$10,000 per year. (Alternately, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) The individual selected, if not presently in SES, must serve a one year probationary period.

Candidates must meet established mandatory professional/technical and managerial/executive requirements. Candidates will be further evaluated on the extent they exceed the minimum requirements and on additional factors including scientific reputation/peer recognition, training and education and honors and awards. A copy of the requirements may be obtained by contacting Mr. Sherman Hatchett, Personnel Management Branch NCI (301) 496-6864.

Applications (Personal Qualifications Statement SF-171) are to be sent to the above individual at: The National Cancer Institute, Building 31, Room 3A23, Bethesda, Maryland 20205, postmarked no later than February 29, 1984. A current curriculum vitae and bibliography must accompany all applications. Applications from women and/or minority group members are especially solicited.

The National Institutes of Health is an EQUAL OPPORTUNITY EMPLOYER.

INTRON, INC. a new company with interests in immunotherapeutics and biotechnology is currently expanding their research and production facilities. Applicants are invited for positions in management, production, research, and quality control.

CLINICAL MANAGER:

M.D.; with experience in dealing with the FDA, USDA and other regulatory agencies and with a background in immunology and pharmaceuticals will be responsible for managing clinical trials and other pilot studies for several diagnostic and therapeutic products.

PRODUCT MANAGER:

Ph.D.; with experience in biotechnology pilot plant design and operation and who has at least one engineering degree, will be responsible for production and quality control of new products that must be prepared first for clinical trials and subsequently for the general pharmaceutical and veterinary markets. Applicants should be familiar with the requirements for compliance with FDA, USDA, EPA and other agencies associated with therapeutics and diagnostic products.

IMMUNOCHEMIST:

Ph.D.; with experience in immunoassays, lymphokines and tissue culture will be responsible for quality control and applied research toward the development of new immunoassays.

BIOCHEMIST:

Ph.D.; with experience in purification of peptides and nucleic acids and in industrial sterile laboratory facilities, will be responsible for product purification and developmental research related to new bioproducts.

TECHNICIANS:

B.S., M.S.; with a background in organic chemistry, biochemistry, immunochemistry and/or cellular immunology are needed for product development and applied research.

POSTDOCTORALS:

Ph.D.; with experience in recombinant DNA technology, purification and structural analysis of peptides and nucleic acids, HPLC, tissue culture and immunoassays, and/or antibody purification techniques, will conduct basic research on lymphokines and in a nearly academic environment.

INTRON, INC. is located in beautiful, historic Charleston, South Carolina which provides an extraordinary cultural atmosphere and recreational opportunities without the hassles of the big city. **INTRON** maintains a close academic and scientific relationship with consultant faculty at the Medical University of South Carolina and offers competitive salaries, generous benefits and an excellent work environment. **INTRON** is seeking people with various levels of experience who can meet the challenge of being a dynamic member of a team committed to success in areas in the forefront of immunotherapy, immunodiagnostics, and recombinant DNA technology. Interested applicants should identify the position for which they are applying and send their complete resume, including publications and the names of three references to:

INTRON, INC.
Business & Technology Center
701 East Bay Street
Charleston, South Carolina 29403-5098

INTRON, INC. is an equal opportunity/affirmative action employer.

POSITIONS OPEN

QUANTITATIVE ECOLOGY/INSECT POPULATION DYNAMICS. Faculty, tenure track. Incumbent to develop program to complement pest management programs. Opportunity to teach. Salary and rank commensurate with education and experience. Application deadline: 15 March 1984 or until suitable candidate is found. Submit résumé and three letters of recommendation to: **Dr. Eldon E. Ortman, Head, Department of Entomology, Purdue University, West Lafayette, Ind. 47907.** Telephone: 317-494-4553. *An Equal Opportunity/Affirmative Action Employer.*

THE UNIVERSITY OF CALGARY RESEARCH IN BIOCHEMISTRY

The University Biochemistry Group which comprises members of the Faculties of Medicine and Science offers an interdisciplinary environment for graduate and postdoctoral research in biochemistry, molecular biology, and biotechnology. Highly qualified students with training in biochemistry, chemistry, biology, or related disciplines may be admitted to programs leading to the M.Sc. and Ph.D. degrees. Research/teaching assistantships (\$8,775 to \$11,700) are available from the University. Studentships (\$11,400 per year plus \$2,500 research allowance) and postdoctoral fellowships (\$20,760 per year plus \$5,000 research allowance) are available from the Alberta Heritage Foundation for Medical Research and may be applied for via The University of Calgary. Interested individuals should send curriculum vitae which includes courses taken and grades obtained and a statement of research interests to:

**Dr. Barry Lesser, Chairman
Graduate Studies Committee
University Biochemistry Group
The University of Calgary
2500 University Drive, NW
Calgary, Alberta, Canada T2N 1N4**

RESEARCH ANIMAL PHYSIOLOGIST with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS). Position located at Roman L. Hruska Meat Animal Research Center, Clay Center, Nebraska. Incumbent will be responsible for conducting fundamental research on the endocrine and other physiological responses of livestock to their environment and to management practices. Career Federal Service. GS-11/12/13; salary based on qualifications and experience. *An Equal Opportunity Employer.* Candidates must be U.S. citizens. For applications, contact: **Dr. Andrew G. Hashimoto, USDA-ARS-B79, Meat Animal Research Center, Box 166, Clay Center, Neb. 68933.** Telephone: 402-762-3241.

RESEARCH ANIMAL SCIENTIST/ANIMAL PHYSIOLOGIST with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS). Position located at Roman L. Hruska Meat Animal Research Center, Clay Center, Nebraska. Incumbent will be responsible for conducting critical research in the areas of ruminant animal nutrition, protein-energy metabolism, and factors controlling net tissue protein accretion. Career Federal Service. GS-12/13/14; salary based on qualifications and experience. *An Equal Opportunity Employer.* Candidates must be U.S. citizens. For applications, contact: **Dr. Wilson G. Pond, USDA-ARS-B82, Meat Animal Research Center, Box 166, Clay Center, Neb. 68933.** Telephone: 402-762-3241.

RESEARCH ASSOCIATE/POSTDOCTORAL POSITIONS to study intracellular and secretion of calcium-regulating hormones. Candidates should have experience in one of the following areas: recombinant DNA, molecular biology, peptide isolation, biochemical analysis, or cellular biology. New research group, University of Louisville Dental/Medical Schools. Send curriculum vitae, statement of research interests, and the names of two references to: **Dr. David V. Cohn, 1238 Wyncrest Court, Arden Hills, Minn. 55112.**

An Equal Opportunity/Affirmative Action Employer

THE MOUNT SINAI SCHOOL OF MEDICINE—RESEARCH ASSOCIATE. Department of Psychiatry. Ph.D. or master's degree graduate with biochemistry major and with experience in TCMS, HPLC helpful. The work is concerned primarily as a core support laboratory and will participate in a wide range of studies involved in the investigation of neuropsychiatric disorders. Please send résumé to: **Dr. Aurora V. Revuelta, Department of Psychiatry, THE MOUNT SINAI SCHOOL OF MEDICINE, Annenberg 22-73, One Gustave L. Levy Place, New York, N.Y. 10029.** *An Equal Opportunity Employer.*

POSITIONS OPEN

RESEARCH ASSOCIATE. Postdoctoral position is immediately available for a Ph.D. in organic chemistry or pharmacology to characterize the metabolites of antitumor Vinca Alkaloids (vincristine and vinblastine) and study their biology and toxicology. A strong background in physico-chemical analytical techniques is essential. Please send complete curriculum vitae and three references to: **Dr. V. Sagar Sethi, Oncology Research Center, Department of Medicine, Bowman Gray School of Medicine, Winston-Salem, N.C. 27103.** *An Equal Opportunity Employer.*

RESEARCH ASSOCIATE

Postdoctoral position is available immediately to a recently trained Ph.D. to work in the area of the neuroendocrine aspects of body temperature regulation in the laboratory of Dr. M. J. Katovich and Dr. J. W. Simpkins. Background in temperature regulation, CNS pharmacology, and/or assay of pituitary hormones preferred. Salary on NIH scale. Send curriculum vitae and names of three references to: **Dr. Michael J. Katovich, Box J-4, J. Hillis Miller Health Center, University of Florida, Gainesville, Fla. 32610.**

RESEARCH ASSOCIATE/POSTDOCTORATE. Position available for up to 3 years in a research group studying molecular mechanisms of *Mycoplasma pneumoniae* disease, with emphasis on the B-cell polyclonal mitogenic activity. Ph.D. degree required. Experience in cellular immunology desirable. Please send curriculum vitae and two letters of reference to: **Ping-chuan Hu, Ph.D. Division of Infectious Diseases, Department of Pediatrics, University of North Carolina School of Medicine, 535 Burnett-Womack Building 229H, Chapel Hill, N.C. 27514.** *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to voluntarily identify themselves.*

RESEARCH ASSOCIATE, biochemist or pharmacologist, at the postdoctoral level for work on the biochemical genetics of genetically hypertensive rats. Applicants must have a Ph.D. in biochemistry or pharmacology and be citizens or permanent residents of the United States. Send curriculum vitae to: **Dr. John Rapp, Department of Medicine, Medical College of Ohio, C.S. 10008, Toledo, Ohio 43699.** *An Equal Opportunity Employer, M/F.*

RESEARCH ASSOCIATE/ASSISTANT PROFESSOR. The Anesthesia Research Laboratory of the University of South Alabama is seeking a cellular neurophysiologist to join an ongoing grant-supported research program using hippocampal brain slice techniques in the study of drug-anesthesia interactions and the pharmacology of synaptic transmission. Postdoctoral experience with brain slice techniques is desirable but recent graduates with intracellular training will be seriously considered. Salary and academic rank are commensurate with qualifications. The position is available in September 1984. Send curriculum vitae and names of three references to: **Dr. James Parmentier, Anesthesia Research Laboratory, 284 Cancer Center/Clinical Building, University of South Alabama, Mobile, Alabama 36688.**

RESEARCH ASSOCIATE. Conduct research on the relationship of bacterial toxins (in particular, staphylococcal toxins) to immune modulators. Specifically, the role of staphylococcal isolates from patients with toxic shock syndrome in the pathogenesis and pathophysiology of toxic shock will be investigated. Requirements include Ph.D. in biology, 2 years of research experience, and strong background in biochemistry, immunohistochemistry, expertise in cellular morphology (light and electron microscopy). Salary: \$22,900 per year; 40 hours per week. Send résumé to: **Mr. Willis, Job Order Number 4121, Division of Employment Security, Hurley Building, Government Center, Boston, Mass. 02202.**

STAFF OFFICER PHYSICS

The Board on Physics and Astronomy of the National Research Council is seeking a staff officer to work on a Survey of Physics and other committee activities under the Board. Position requirements include a Ph.D. or equivalent in experimental or theoretical physics plus experience in preparing reports for a broad audience that addresses technical and policy issues. Résumé/curriculum vitae should be forwarded in confidence to: **D. Shapero, Board on Physics and Astronomy, National Research Council, 2101 Constitution Avenue, NW, Washington, D.C. 20418.** *An Equal Opportunity Employer.*

POSITIONS OPEN

RESEARCH HISTOLOGIST BONE METABOLISM (Ph.D.)

An individual is sought with demonstrated expertise in bone cell culture and quantitative histology of bone. Minimum requirement is a doctorate (Ph.D.) and 2 years of postdoctoral experience. This position involves expansion of an existing research team involved in a variety of projects concerning calcium metabolism and metabolic bone disease. Clinical research is conducted in collaboration with Brookhaven National Laboratory. Salary is competitive and funded by the Nassau Hospital. Nassau Hospital is a 533-bed teaching hospital of the State University of New York at Stony Brook. Please send curriculum vitae to: **John F. Aloia, M.D., Professor of Medicine, Chairman, Department of Medicine, Nassau Hospital, 259 First Street, Mineola, Long Island, N.Y. 11501.**

SMALL ANIMAL SURGEON. Tufts University School of Veterinary Medicine (TUSVM) invites applications for a faculty position in small animal surgery, based at The Angell Memorial Animal Hospital, commencing on or about 1 July 1984. The applicant for this appointment must have a D.V.M. degree or its equivalent and have completed a formal (phase II) small animal surgery residency program. Demonstrated competence and interest in orthopedics is required; however the successful applicant should expect to participate in other areas of small animal surgery service and teaching as necessary. The candidate will be encouraged to develop research programs. Applications (letter of intent, curriculum vitae, and names of at least three referees) should be submitted by 15 February 1984 to: **Dr. Paul C. Gambardella, TUSVM, 350 South Huntington Avenue, Boston, Mass. 02130.** Salary and rank will be commensurate with experience and qualifications. *Tufts University is an Equal Opportunity/Affirmative Action Employer.*

SUPERVISORY BIOLOGICAL SCIENTIST—BIOTECHNOLOGY CHEMICAL RESEARCH AND DEVELOPMENT CENTER

A challenging new position presently exists for a recognized leader to direct an actively growing program applying research in immunotoxicology and enzymatic detoxification into Army programs dealing with detection and decontamination. The selectee, who would function as chief, Biotechnology Section, would have responsibility for managing senior scientists operating in-house projects and directing contract operations, as well as establishing an aggressive state-of-the-art program in this area. Experience in research management and recognition for leadership in biotechnology are both requirements of this position. Maintenance of communication with related research centers and freedom to publish research results would be both opportunities and responsibilities for the position. The salary range is \$48,583 to \$63,115 (dependent on credentials). Details of this position are available from: **Arthur H. McCreesh, Ph.D., telephone: 301-671-3034.** The Chemical Research and Development Center is located at an area of Aberdeen Proving Ground, Maryland, on the shore of the upper Chesapeake Bay and is within easy driving distance of Baltimore, Washington, D.C., and Philadelphia. For applications (postmarked by 20 January), information, and formal position announcement write:

**Commander
Chemical Research and Development Center
U.S. Army Armament, Munitions and
Chemical Command
Attention: DRSMD-CLB-T(A)
Aberdeen Proving Ground, Maryland 21010**

TRANSPLANTATION IMMUNOLOGIST

Ph.D. immunologist experienced in human tissue typing procedures (HLA/MLC) wanted to supervise new Transplantation Immunology Laboratory Section in support of active bone marrow transplant service. Position entails both service responsibilities and research opportunities and is available January 1984.

Interested individuals should submit curriculum vitae, concise statement of research experience and future goals, and names of three references to: **Marvin J. Stone, M.D., Charles A. Sammons Cancer Center, Baylor University Medical Center, 3500 Gaston Avenue, Dallas, Texas 75246.** *Equal Opportunity Employer.*

POSITIONS OPEN

RESEARCH ECONOMIST. Econometric analysis of U.S. business cycles, to expand research on cycle theory. M.S. in economics required. Must write computer programs. Educational institution, Southern California, \$24,000 per year. Reply by 21 January 1984 to: **Box 6, SCIENCE.**

Institute of Genetics, University of Cologne. The Institute of Genetics in Cologne is offering positions for **SCIENTISTS** to head small independent research groups (roughly equivalent to junior faculty positions, or Friedrich Miescher Stellen in the Max-Planck-Society). We are looking for scientists who work in the general area of molecular biology and molecularly oriented cell biology. The subject areas of these new groups are less important than the qualities of the appointees. The Institute is equipped with up-to-date protein chemistry, nucleic acid synthesis, and cell sorting facilities. Funds for major new investments could also be made available (for example, electron microscope). These positions are open to scientists of all nationalities. Salaries will be equivalent to those of C2/C3 positions. Applications, including curriculum vitae, list of publications, and the names of two referees, should be submitted no later than 1 February 1984 to: **Anne Weber, Institut für Genetik, Universität zu Köln, Weyertal 121, D-5000 Köln 41, Federal Republic of Germany.**

SENIOR RESEARCH ASSOCIATE position for person with two or more years of post-Ph.D. experience, strong publication record, graduate teaching qualities, and laboratory management experience. Most critical is record of work on the following: mechanisms of growth control during multicellular morphogenesis; organ and cell culture; electron microscopy; chemistry of growth factors; and modeling of morphogenetic mechanisms, especially of branching organs. Position available June 1984; salary: \$28,000 to \$30,000. Send curriculum vitae and three letters of reference by 31 January to: **N. Wessells, Biological Sciences, Stanford University, Stanford, Calif. 94305.** *Stanford is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

SENIOR RESEARCH TECHNOLOGIST

Immediate position for top level research technologist to work in new protein structure facility. Must have superior knowledge of protein peptide sequencing, amino acid analysis, high performance liquid chromatography for the identification of PTH amino acids and the separation of peptides. Bachelor's degree required; master's preferred, in biochemistry, chemistry, or related science.

Competitive salary with excellent fringe benefits package, including 3 weeks of vacation the first year. Send résumé and academic transcripts to:

**Personnel Department
St. Jude Children's Research Hospital
332 North Lauderdale
Memphis, Tennessee 38101
Affirmative Action Employer**

VETERINARY PATHOLOGIST

The College of Veterinary Medicine, University of Illinois at Urbana-Champaign, announces the availability of a tenure-track assistant professorship in the Department of Veterinary Pathobiology. Candidates must have the D.V.M. or equivalent degree plus a Ph.D. degree in veterinary pathology or equivalent training. ACVP Board-Certification or eligibility is required. Additional requirements are a clear commitment to academic veterinary pathology and evidence of developing research strength. Duties include teaching veterinary pathology in the veterinary and graduate programs and development of a strong independent research program. Salary is competitive and negotiable based on experience and qualifications. Applications will be accepted until 1 March 1984, or until acceptable candidates are identified. Starting date as soon thereafter as possible. Send résumé, statement of career objectives, and the names of three references to: **Dr. Wanda M. Haschek-Hock, Department of Veterinary Pathobiology, College of Veterinary Medicine, University of Illinois, 2001 South Lincoln Avenue, Urbana, Ill. 61801; telephone: 217-333-2449.**

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

POSITIONS OPEN

RESEARCH ASSOCIATE

Position available immediately for postdoctoral scientist to participate in studies involving molecular cloning and expression of viral genes. Should have previous experience with recombinant DNA techniques. Salary: \$16,000 to \$27,000, depending on experience. Send curriculum vitae and three letters of reference to: **Dr. R. W. Compans, Department of Microbiology, University of Alabama in Birmingham, Birmingham, Ala. 35294.** *An Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSOCIATE—Conduct research on the structure, function, and metabolism of individual mammalian messenger RNA species and on the role of proteins associated with these mammalian RNA's. Direct the activities of a graduate student and a technician involved in this research.

Requirements include Ph.D. in biochemistry, 1 year of research experience, and thorough knowledge of the manipulation of mammalian cells, the isolation and characterization of polyribosomes and mRNA particles, isolation and purification of mRNA, isolation of recombinant plasmids, Northern and Southern blotting, dot hybridization, S1 mapping, and cell-free translation and analysis of translation products. Salary: \$18,000 per year; 35 hours per week.

Send résumé to: **Mr. Willis, Job Order Number 4099, Division of Employment Security, Hurley Building, Government Center, Boston, Mass. 02202.**

SOMATIC CELL GENETICIST

Candidate should preferably have experience in cytogenetics, labeling of cell surface antigens and/or DNA probes. The work will involve mapping of genes for human differentiation antigens with interspecies specific cell hybrids, and requires at least 2 to 3 years of postdoctoral experience. Submit curriculum vitae, list of publications, and references to: **Dr. Jim P. Schröder, Chief Scientist, Monoclonal Antibodies, Inc., 2319 Charleston Road, Mountain View, Calif. 94043.**

Applied bioTechnology Inc.

A MOLECULAR BIOLOGIST AND A VIRAL IMMUNOLOGIST

sought for young firm in Cambridge, Massachusetts concerned with exploitation of recombinant DNA techniques for creation of immunogenic proteins for use as viral vaccines. Research involves development and use of a range of techniques in molecular biology, protein chemistry, virology and immunology. Located near several excellent academic research departments. Two years of post-doctoral experience in related areas desired.

**Applied Biotechnology
Attention: Personnel
80 Rogers St.
Cambridge, MA 02142**

ENVIRONMENTAL SCIENCE AND ENGINEERING FELLOWSHIPS

Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for six environmental science and engineering fellowships available for summer 1984. Postdoctoral to mid-career scientists, engineers, and other appropriate professionals are encouraged to apply. **The deadline for applications is 1 March 1984.** The 10-week appointment is scheduled for 11 June 1984 through 17 August 1984. The awards will be announced prior to the end of April 1984.

The persons selected will work closely with the Environmental Protection Agency (EPA), Office of Research and Development, and assist it in identifying and assessing the significance of long-range environmental problems and opportunities. The award consists of a taxable stipend of \$575 per week and a nominal additional amount for temporary relocation expenses and travel in connection with the fellowship.

Each awardee will undertake a detailed, future-oriented research project of mutual interest to the fellow and one of EPA's research or program offices. A project report will be prepared by each fellow at the completion of the summer's work. The selection of projects and research approach will be designed to meet the purpose of the program stated above as well as to fit the fellow's professional goals. Broad areas of research interest within EPA include: environmental risk assessment, biological pesticides, acid deposition, mobile source air pollution; oxidants, gases and particles; hazardous municipal wastewater and spills; drinking water; solid hazardous waste; chemical testing and assessment; pesticides; radiation; and energy.

Candidates are expected to be postdoctoral to mid-career professionals, to be critical thinkers, articulate, adaptable, and able to work with a variety of people from different professional backgrounds. Applicants should have backgrounds in the physical, biological, or behavioral sciences or any field of engineering or any other relevant professional field.

Persons interested in further information and details on selection criteria and requirements should contact: **Patricia S. Curlin, Environmental Science and Engineering Fellows Program, American Association for the Advancement of Science, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036; telephone: 202-467-4310.**

POSITIONS OPEN

THE UNIVERSITY OF TEXAS HEALTH CENTER AT TYLER

Has positions available in the following disciplines:

RESEARCH SCIENTISTS

Applicants trained in areas which can be applied to the study of lung diseases. Must have experience in the study of lung diseases and/or be front-line competitive investigators with proven current track record, with NIH grants, and with high quality publications.

PULMONARY MEDICINE AND RESEARCH

Individuals with M.D. or M.D./Ph.D. who have expertise in all lung diseases, intensive care, bronchoscopy, and pulmonary physiology. Must have demonstrated clinical and research experience in clinical and/or basic sciences as well as a high quality publication record.

CHAIRMAN, DEPARTMENT OF MEDICINE

Must have demonstrated excellence in pulmonary medicine and research and also in management and in leadership.

Candidates should submit a résumé and letter of interest to:

THE UNIVERSITY OF TEXAS HEALTH CENTER AT TYLER

Personnel Office

P.O. Box 2003

Tyler, Texas 75710

Telephone: 214-877-3451, extension 2118

SYMPOSIUM

The Sixth Annual University of California-Riverside Nichols Institute Symposium on Cellular and Molecular Endocrinology will be held 30 and 31 March 1984 on the University of California, Riverside, campus. Topics will include: hormonal control of cellular proliferation and function; steroid hormone metabolizing enzyme systems; recombinant DNA, growth factors, and related molecules; and clinical applications of "newer" biomedical technology. Speakers include: A. C. Brownie, C. P. Channing, R. J. Collier, A. Dugaiczky, S. L. Kaplan, J. A. Katzenellenbogen, T. C. Merigan, Jr., M. G. Rosenfeld, R. Ross, J. J. Van Wyk, M. R. Waterman, L. E. Vickery, and C. F. Ware. Registration fees are \$25 per participant [\$15, postdoctoral student/fellow; \$10, student; \$125 CME (category 1) enrollment]. For further information, write: Dr. A. W. Norman, Program Director, Endocrinology Symposium, Department of Biochemistry, University of California, Riverside, Calif. 92521.

SCIENTIFIC EXCHANGES

NAS SCIENTIFIC EXCHANGE PROGRAMS WITH U.S.S.R. AND EASTERN EUROPE

Applications are invited from American scientists who wish to make professional visits in the U.S.S.R., Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia between January and December 1985. Applicants must be U.S. citizens and have a doctoral degree in the natural, biomedical, or social and behavioral sciences by the time of visit. Deadline for requesting applications is Friday, 17 February 1984. Please contact:

National Academy of Sciences
Section on U.S.S.R. and Eastern Europe
2101 Constitution Avenue, NW
Washington, D.C. 20418
Telephone: 202-334-2644/2645

GRADUATE STUDY

PREDOCTORAL PROGRAM IN BIOMEDICAL SCIENCE

The School of Medicine at the University of South Carolina offers interdisciplinary graduate training and research in anatomy, microbiology and immunology, pharmacology, and physiology leading to the Ph.D. degree. Assistantships begin at \$6000 per year. Please contact: Assistant Dean for Graduate Studies, School of Medicine, University of South Carolina, Columbia, S.C. 29208. *Equal Opportunity/Affirmative Action Employer.*

GRADUATE STUDY

NEUROSCIENCES AT BAYLOR COLLEGE OF MEDICINE

Baylor College of Medicine offers an interdepartmental Neuroscience Program for students interested in advanced study leading to the Ph.D. in neuroscience. Applications must be completed by 1 April 1984, and applicants will be notified regarding admission and financial support by 15 May 1984. Information regarding the program curriculum, faculty, research opportunities, and application procedures may be obtained from:

Scott F. Basinger, Ph.D., Director
Predoctoral Program in Neuroscience
Cullen Eye Institute
Baylor College of Medicine
Texas Medical Center, Houston, Texas 77030

GRADUATE STUDY IN BIOCHEMISTRY

GRADUATE ASSISTANTSHIP IN BIOCHEMISTRY leading to the Ph.D. degree are available for the 1984-1985 academic year to qualified applicants. The department has a challenging academic and vigorous research program in a broad range of biochemical disciplines. Stipends for 12-month appointments begin at \$7400. Write: Dr. William P. Kolb, Department of Biochemistry, The University of Texas Health Science Center at San Antonio, San Antonio, Texas 78284. *An Equal Opportunity/Affirmative Action Employer.*

GRADUATE STUDY IN ANATOMY AND PATHOLOGY at the University of New Mexico Medical School.

The faculty in the Departments of Anatomy and Pathology and the affiliated faculty in the Life Sciences Divisions of the Los Alamos National Laboratories invite applications for study leading to the degree of Ph.D. in biomedical sciences. The program emphasizes cellular and developmental biology, immunology, neurobiology, and biophysics. Graduate stipends are available. For further information and application forms, contact: Dr. D. E. Van Epps, Department of Pathology, University of New Mexico Medical School, Albuquerque, New Mexico 87131.

PREDOCTORAL TRAINING IN PHARMACOLOGY. The Department of Pharmacology, College of Medicine, University of Vermont, invites applications from qualified candidates for graduate study leading to the Ph.D. degree in pharmacology. Major areas of research in the department include cardiovascular pharmacology, mechanisms of action of anticancer drugs, biochemical pharmacology of antiparasitic drugs, and toxicology. A limited number of assistantships are available, each of which provides a stipend of approximately \$7000 plus tuition. Further information and application materials may be obtained from: The Director of Graduate Studies, Department of Pharmacology, Given Building, University of Vermont, Burlington, Vermont 05405.

GRADUATE STUDIES IN BIOCHEMISTRY. The Department of Biochemistry of the Albany Medical College invites applications for its graduate training programs leading to the master's and doctoral degrees. M.S. program can be 1 or 2 years, Ph.D. program usually 4 years. Research and teaching assistantships with tuition remission available for qualified candidates on a competitive basis. The department emphasizes individually tailored training programs qualifying students for careers in biomedical research and stresses close faculty-student interactions. For further information, contact: Director of Graduate Studies, Department of Biochemistry, Albany Medical College of Union University, Albany, New York 12208.

We are an Affirmative Action/Equal Opportunity Employer.

DOCTORAL PROGRAM IN MOLECULAR AND CELLULAR BIOLOGY AND PATHOBIOLOGY

Interdisciplinary program leading to Ph.D. degree seeks qualified candidates interested in fundamental molecular and cellular biology and its application to disease states in man.

Stipends are available on a competitive basis. Contact: Director, Program in Molecular and Cellular Biology and Pathobiology, College of Graduate Studies, Medical University of South Carolina, Charleston, South Carolina 29425.

GRADUATE STUDY

PREDOCTORAL TRAINING EFFECT OF DRUGS AND CHEMICALS ON LIVING SYSTEMS

Training, leading to the Ph.D. degree, is offered in modern chemical and biological concepts, the scientific approach and investigative technology required to participate in exciting career opportunities concerned with (i) how drugs and chemicals affect cell, tissue, and organ function, (ii) the discovery and development of new ways to treat or prevent diseases, and (iii) the discovery and development of new processes to protect living systems against the toxic effects of chemicals. Training is provided by a group of interdisciplinary investigators with expertise in organic chemistry, biochemistry, cell biology, biophysics, physiology, pharmacology, and toxicology. These investigators are concerned with fundamental and applied questions about how drugs and chemicals affect living systems, are well equipped and funded, and work with the trainees and with each other on closely related research projects. Stipends are available on a competitive basis. For further information, contact: Graduate Training Director, Department of Pharmacology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S.C. 29425.

Equal Opportunity/Affirmative Action Employer

ASSISTANTSHIPS

THE MEDICAL SCIENTIST TRAINING PROGRAM AT THE MEDICAL UNIVERSITY OF SOUTH CAROLINA offers assistantships for a select number of individuals for training in an integrated basic and clinical medical science program leading to a combined M.D./Ph.D. degree in 6 to 7 years. For further information, please contact: Director, Medical Scientist Training Program, Dean's Office, College of Graduate Studies, Medical University of South Carolina, Charleston, South Carolina 29425.

ANNOUNCEMENT

INDOOR AIR MONITORING—The California Department of Health Services is compiling a list of private companies and public agencies which conduct air contaminant measurements in nonindustrial indoor environments (for example, residences, offices, schools, public buildings). If your laboratory routinely measures one or more indoor contaminants (for example, asbestos, formaldehyde, organics, radon, CO, NO₂) and would like to be included in this listing, please request further information from: Dr. Ken Sexton, Indoor Air Quality Program, Air and Industrial Hygiene Laboratory, California Department of Health Services, 2151 Berkeley Way, Berkeley, Calif. 94704.

CONFERENCE

The New York Academy of Sciences Conference
On
**MEMORY DYSFUNCTION: AN INTEGRATION
OF ANIMAL AND HUMAN RESEARCH
FROM PRECLINICAL AND
CLINICAL PERSPECTIVES**
The Barbizon-Plaza Hotel
New York City
13 to 15 June 1984

The conference examines memory disorders as studied in the clinic and in animal models. Topics include: the description of amnesic syndromes; the neurochemical mechanisms underlying normal memory, the pathological changes responsible for amnesia, and therapeutic interventions for alleviating memory loss.

We seek a limited number of posters to be presented during the conference and to have abstracts published in the Proceedings. Abstracts of approximately 200 words should be submitted to: Conference Department, The New York Academy of Sciences, 2 East 63 Street, New York, N.Y. 10021, by 1 March 1984.

For a program and information about registration, write to the above address.

Chairs: Dr. S. Corkin, Massachusetts Institute of Technology; Dr. Elkan Gamzu, Hoffmann-La Roche, Inc.; and Dr. D. Olton, The Johns Hopkins University.

DEAN COLLEGE OF SCIENCE AND TECHNOLOGY

The University of Southern Mississippi invites applications and nominations for the position of **DEAN OF THE COLLEGE OF SCIENCE AND TECHNOLOGY**. This comprehensive University, operated by the state of Mississippi, is the largest of eight public universities and has an enrollment in excess of 13,500 and a faculty of over 600. Located in the south central part of the state, the University enjoys many advantages by virtue of its proximity to New Orleans, Mobile, Jackson, and the Mississippi and Florida coasts.

The College of Science and Technology, the largest of the five colleges in the University, has 135 faculty, 3400 undergraduate majors, and 435 graduate students. It is organized into 11 departments: Biological Sciences, Chemistry, Computer Science and Statistics, Construction and Architectural Engineering Technology, Geology, Industrial Technology, Mathematics, Medical Technology, Physics and Astronomy, Polymer Science, and Science Education. In addition to the undergraduate degree programs that are synonymous with these department names, curricula are offered in Electronics Engineering Technology, Mechanical Technology, Computer Technology, and Data Processing. Biological Sciences, Chemistry, Polymer Science, and Science Education offer the doctoral degree, and nine departments offer the master's degree.

Qualifications for the position include an earned doctorate in a discipline within the College of Science and Technology or a related discipline, evidence of professional leadership, a record of sustained scholarly achievement, evidence of ability to develop research funding sources, and experience in administration or related activities.

Salary, rank, and tenure status will be commensurate with qualifications and experience. Effective date of appointment will be 1 July 1984, or as negotiated.

Applications, nominations, and inquiries will be received in confidence. A letter of application, résumé, and the names, addresses, and telephone numbers of three references will be received through 15 February 1984 by:

Professor Grayson Rayborn
Chair, Advisory Search Committee
University of Southern Mississippi
Southern Station, Box 5002
Hattiesburg, Miss. 39406-5002

Affirmative Action/Equal Opportunity Employer

The International Laboratory for Research on Animal Diseases (ILRAD), Nairobi, Kenya, is an internationally funded institution with the mandate to develop improved methods of control for two major diseases of livestock, trypanosomiasis and theileriosis. The multidisciplinary research programme includes biochemistry, molecular biology, immunology, cell biology, pathology and parasitology and supporting units. Applications for the following postdoctoral (PD) positions and research associate (RA) position are invited.

MOLECULAR BIOLOGISTS—PD/L2/83/3 and PD/L2/83/4 (two positions)

To contribute to the molecular biology program studying gene structure and expression in haemoparasitic trypanosomes and *Theileria* parasites. Applicants should have recently received their Ph.D.'s in biochemistry or molecular biology and have at least 3 years of experience with recombinant DNA technology. Dideoxy DNA sequencing experience would be an advantage.

RESEARCH ASSOCIATE—RA/L2/83/5

To support the molecular biology program studying gene structure and expression in the haemoparasites *Trypanosoma* and *Theileria*. Applicants should have a good honours science degree and 5 years of postgraduate laboratory experience, including direct experience in M13 cloning and sequencing techniques. Additional recombinant DNA experience would be an advantage.

IMMUNOLOGIST—PD/L4/83/5

To study the influence of African trypanosomes on the differentiation of B-lymphocytes to high-rate antibody secreting cells. Applicants should have recently completed a Ph.D. in immunology and have experience with analysis of B-cell differentiation.

The above positions are international staff positions and salaries will be paid in U.S. dollars. Initial salary levels will be determined by qualifications and experience. Moving, housing, commutation, and education allowances are paid and there are medical and retirement benefits. Applications should include current curriculum vitae and the names and addresses of three referees and cite the position reference number. Send to:

Chief Personnel Officer
ILRAD
P.O. Box 30709
Nairobi, Kenya

CONGRESSIONAL SCIENCE AND ENGINEERING FELLOWSHIPS APPLICATIONS INVITED

The American Association for the Advancement of Science (AAAS) invites applications for a 1-year **Congressional Science and Engineering Fellowship** it will offer for the period beginning 1 September 1984. The Fellowship Program provides an opportunity for accomplished and societally aware postdoctoral to mid-career scientists and engineers to participate in and contribute to the public policy-making processes within the Congress for approximately 1 year. Fellows work as special legislative assistants within the congressional staff system.

Persons may apply from any physical, biological, or behavioral science or any field of engineering. The term "science" is used broadly to include the system sciences, public health, and other technical professions. In addition to the fellowship awarded by the AAAS, about 25 others are given by the 20 other participating professional societies. The AAAS runs a year-long educational program for the set of Congressional Science and Engineering Fellows. Addresses of all participating societies are available from the address listed below.

The 1984-1985 AAAS Congressional Science and Engineering Fellow will receive a stipend of \$25,200; an additional \$1500 is available for relocation expenses and travel in connection with the Program.

In order to obtain detailed information on the program and specific application requirements write:

Congressional Science and Engineering Fellow Program
American Association for the Advancement of Science
1776 Massachusetts Avenue, NW
Washington, D.C. 20036

The deadline for application is 1 February 1984. The award will be announced around 1 May 1984.

POSTDOCTORAL POSITION


Wyeth Laboratories

Postdoctoral fellow position is immediately available at our headquarters facility in Radnor, PA. This position is in bacterial vaccine research and development. Candidates should have expertise in recombinant DNA technology and experience with fermentors and/or protein purification. Applicants should have a degree in molecular biology, microbiology, or biochemistry.

This position, which is immediately available for a one year appointment and can be renewed for another year, offers an attractive salary and benefits.

Qualified candidates can send resume in strict confidence to Personnel Department,

Wyeth Laboratories, Inc.

 P.O. Box 8299
Philadelphia, PA 19101

Equal Opportunity Employer, M/F/H

CONFERENCE

The New York Academy of Sciences
Sponsors
**THE FIRST INTERNATIONAL CONFERENCE
ON NEURONAL CHOLECYSTOKININ**
3 to 6 July 1984
Brussels, Belgium

Cholecystokinin is a gut peptide recently discovered in high concentrations in mammalian brain. This is the first international meeting planned to bring together the leading researchers on neuronal cholecystokinin, for presentations of the current biochemical, anatomical, physiological, behavioral, and clinical information, in a state-of-the-art format. There will be 50 invited symposium speakers and three evening poster sessions. The program is designed to maximize opportunities for informal scientific exchange and discussion of new directions for international collaborative studies on neuronal cholecystokinin. Abstracts for poster presentations may be submitted to either of the chairpersons, by 1 April 1984, including the names of the author(s), institution, and a one-page summary of the work to be presented.

Chairpersons: Dr. Jean-Jacques Vanderhaeghen, Director, Neuropeptide Research Laboratory, Free University of Brussels, 1 J. J. Crocq Avenue, B-1020, Brussels, Belgium; and Dr. Jacqueline N. Crawley, Chief, Unit on Behavioral Neuropharmacology, Clinical Neuroscience Branch, National Institute of Mental Health, Building 10, Room 4N214, Bethesda, Md. 20205.

For further information, contact: Conference Department, The New York Academy of Sciences, 2 East 63 Street, New York, N.Y. 10021.

FELLOWSHIPS

PREDOCTORAL FELLOWSHIPS IN MOLECULAR PHARMACOLOGY

Student fellowships are available for predoctoral study in the Pharmacology Graduate Program of the Grace Cancer Drug Center, Roswell Park Memorial Institute, a Graduate Division of the State University of New York at Buffalo. Stipends and tuition waivers are available for eligible students. The program offers diversified training related to the pharmacological and biochemical basis for drug action with emphasis on cancer therapeutics as related to: inhibition or alteration of nucleic acid, protein and membrane components, cellular differentiation, cellular ultrastructure, oncogenes, drug resistance, pharmacokinetics and drug metabolism, medicinal chemistry, immunotherapy, mechanisms of carcinogenesis, toxicology, genetic basis for drug action, molecular pharmacology, endocrine pharmacology and metabolic regulators, hematology, and preclinical and clinical pharmacology. U.S. citizens and permanent residents may send applications to:

E. Mihich, M.D., Chairman
Graduate Pharmacology Program
Roswell Park Memorial Institute
666 Elm Street, Buffalo, N.Y. 14263

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL FELLOWSHIP, Ph.D. or equivalent, 2-year position. To participate in active research program on inflammation, arachidonic acid metabolism in blood vessels. Salary: \$17,000. To begin January to June 1984. Send inquiries, curriculum vitae, and two references to: Michael A. Moskowitz, M.D., Harvard Medical School, Massachusetts General Hospital, Boston, Mass. 02114.

PREDOCTORAL FELLOWSHIPS in CANCER CELL BIOLOGY AND ANATOMY at HAHNEMANN UNIVERSITY SCHOOL OF MEDICINE

Fellowships are available for candidates holding an M.S. or M.A. degree to work toward a Ph.D. in anatomy. Training will be in cancer cell biology using tools of modern biotechnology. For further information, write to: Dr. Robin H. Chou, Department of Anatomy, Number 408, Hahnemann University Graduate School, Broad and Vine Streets, Philadelphia, Pa. 19102. Include curriculum vitae and three letters of recommendation.

Hahnemann University is an Equal Opportunity/Affirmative Action Employer.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP/RESEARCH ASSOCIATE POSITION. A postdoctoral fellowship or research associate position is available (after 1 April 1984; 2 to 3 years) in the Bone Marrow Transplantation Unit, Oncology Center, Johns Hopkins University. The position involves research in human immunology regarding T-cell subsets activated in mixed lymphocyte responses. Specifically, research will entail T-cell cloning and the biochemical characterization of membrane proteins and soluble lymphokines secreted by the cloned T-cell subsets. Requirements include either the Ph.D. or M.D. degree. Experience in human immunology is desirable but not mandatory. Salary will be between \$18,000 and \$20,000 depending upon experience. Please forward curriculum vitae and the names of three references to: Allan D. Hess, Ph.D., The Johns Hopkins Oncology Center, Room 3-127, 600 North Wolfe Street, Baltimore, Maryland 21205. *Equal Opportunity Employer.*

SEVEN POSTDOCTORAL FELLOWSHIP POSITIONS available in fall 1984 for research in estuarine lagoon and nearshore continental shelf waters. Research areas include phytoplankton systematics and ecology, zooplankton biology, invertebrate reproduction development, benthic community ecology, fish ecology and behavior sedimentary processes, biogeochemistry, physical oceanography and algal or animal mariculture emphasizing nutrition, pathology, genetics, or reproductive biology. Deadline for application is 1 April 1984. Request information brochure and application packet from: Dr. Kevin J. Eckelbarger, Postdoctoral Program, Harbor Branch Institution, Inc., RR 1, Box 196-A, Ft. Pierce, Fla. 33450. *An Equal Opportunity Employer.*

PIMLEY POSTDOCTORAL FELLOWSHIP Department of Neurology Stanford University School of Medicine

A postdoctoral fellowship has been established in the Department of Neurology at Stanford University School of Medicine by endowment from the bequest of Edward F. and Irene T. Pimley. Basic or clinical investigations may focus on the pharmacology and/or electrophysiology of CNS transmitters and modulators; motor control in humans or primates; or other areas relevant to Parkinsonism and related movement disorders. The first Pimley Fellowship will be available beginning 1 July 1984. Salary for this position will range from \$17,000 to \$20,000, depending upon prior training and experience.

Candidates who would like to obtain further information should send curriculum vitae together with the names of three referees and a brief statement of their potential research interests to: David A. Prince, M.D., Professor and Chairman, Department of Neurology, Stanford University School of Medicine, Stanford, Calif. 94305. *Stanford University is an Equal Opportunity Employer and welcomes nominations of women and minority group members and applications from them.*

POSTDOCTORAL FELLOWSHIP

The Center for the Study of Drug Development is a nonlaboratory research unit within the Department of Pharmacology of the University of Rochester, School of Medicine, that has gained an international reputation for its studies on drug development, regulation, and related public policies. Applications are invited for postdoctoral fellows interested in training and participating in this interdisciplinary field. Basic laboratory work and clinical studies are not part of this program. Primary responsibilities include: (i) independent and collaborative work on study design, data collection, and analyses for research projects, and (ii) write-ups of study proposals and project results, including publishable manuscripts. Preference will be given to candidates who hold the M.D. degree or a Ph.D. degree in pharmacology or a related biomedical science and who have a demonstrated command of written English. Initial appointment, at a flexible starting date, is for 1 year, renewable, with opportunity for extension or for conversion to a research associate position. Minimum salary for the first year is competitive, with consideration made for prior relevant postdoctoral experience. A letter of application, including a brief statement of research objectives, curriculum vitae, and names and addresses of three references should be sent to: Kristine Niven, Administrator, Center for the Study of Drug Development, University of Rochester Medical Center, Rochester, New York 14642. *The University of Rochester is an Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP IN IMMUNOBIOLOGY. Postdoctoral fellowships in cancer immunobiology are available at Sloan-Kettering Institute for Cancer Research. Fellows will be trained in cellular immunology, development and interaction of lymphoid cells, molecular immunology, clinical immunology and cancer, human and mouse immunogenetics, tumor immunology, cell surface immunochemistry, and immunogenetics. Training methods include individualized research with qualified mentor training in clinical laboratory analysis, lectures, courses, seminars, discussions, rounds, clinics, and conferences. Individual research program will be offered either in New York City or at Walker Laboratory, Rye, N.Y. Only U.S. citizens or foreign nationals with permanent resident or immigrant visas will be considered. Send inquiry with brief résumé to: Dr. Y. S. Choi, Immunobiology Training Program Director, Sloan-Kettering Institute for Cancer Research, 145 Boston Post Road, Rye, N.Y. 10580. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOWSHIPS FOR RESEARCH TRAINING IN HYPERTENSION AND CARDIOVASCULAR DISEASE. NIH postdoctoral fellowships starting 1 July 1983 are available for qualified applicants with the M.D. or Ph.D. degree as part of a multidisciplinary training program. Applicants must possess U.S. citizenship or permanent resident status. Possible areas for intensive research experience include: biochemical, physiological, pathological, and epidemiological studies on the cardiac, renal, adrenal, and neural components of vascular regulation. For further information, write to: Dr. R. L. Soffer, Departments of Biochemistry and Medicine, Cornell University Medical College, 1300 York Avenue, New York, New York 10021. *An Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS RESEARCH AND TRAINING IN ECOLOGY AT THE UNIVERSITY OF MICHIGAN BIOLOGICAL STATION 20 June to 18 August 1984

Students and senior researchers are invited to apply for a fellowship in the Naturalist-Ecologist Training Program at the Biological Station on Douglas Lake in northern Michigan. Participants select an ecological topic of their choice for research and study during the summer session and take part in a special seminar emphasizing current research. Distinguished visiting ecologists also participate in the seminar and lead special field trips. Student awards cover tuition, fees, and room and board. Senior investigator support includes a stipend, equipment and supplies, fees, room and board, plus 50 percent of room and board costs for up to two dependents. Applications are invited from advanced undergraduates, graduate students, and individuals with a Ph.D. or the equivalent and are due 29 February 1984. For further details, contact:

Dr. David M. Gates, Director
University of Michigan Biological Station
Ann Arbor, Mich. 48109-1048
Telephone: 616-763-4461

POSTDOCTORAL FELLOWSHIPS at Duke University Center for the Study of Aging and Human Development in adult development and/or aging. Research training available in many biomedical behavioral and social science disciplines. To request application materials, reply with curriculum vitae and brief description of proposed research area. Contact: Ilene C. Siegler, Box 2969, Duke University Medical Center, Durham, N.C. 27710. *An Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIP: COASTAL MARINE SCIENCE. The Marine Sciences Research Center is pleased to continue its postdoctoral program in Marine Sciences. We are seeking applications from promising scientists, interested in any aspect of coastal oceanography or coastal zone management. The program will provide up to 2 years of academic year stipend (\$17,000 per 10 months). Summer support will come from faculty sponsors. Appointments available after 1 April 1984. Submit a detailed résumé, statement of specific research interests, and three letters of recommendation by 1 March 1984 to: Dr. Douglas G. Capone, Chairman, Coastal Marine Scholar Program, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794 or telephone him at 516-246-7710. *SUNY Stony Brook is an Equal Opportunity/Affirmative Action Employer.* AK Number 808.

**National Cancer Institute
National Institutes of Health
Public Health Service
Department of Health and
Human Services**

The National Cancer Institute (NCI), is accepting applications for several leadership positions in the Division of Resources, Centers, and Community Activities (DRCCA). The NCI develops the overall national strategy against cancer, coordinates Federal government and non-Federal government career programs, and supports international programs of cancer research. DRCCA assures the rapid and effective application of cancer research findings in the prevention, detection, diagnosis, and treatment of cancer patients; and the research and development of cancer control programs designed to facilitate the transfer of findings from cancer research to the public and the professional community.

The following are Civil Service positions established at the GS-15 level with a salary range from \$48,553 to \$67,969 (currently limited to \$63,800 per annum). Physicians may also be eligible for Physicians' Comparability Pay up to \$10,000 per year.

THE CHIEF, DIET AND CANCER BRANCH will have full responsibility for the following critical activities: (1) planning, developing, directing, and coordinating a research program in the Diet and Cancer Branch as it relates to cancer prevention; (2) developing, refining, and testing hypotheses of diet in the etiology and prevention of cancer; (3) developing quantitative methods to monitor nutritional intake in large populations and to convert diet into nutrient content; (4) studying baseline dietary data on populations in chemoprevention trials; (5) studying and testing hypotheses related to macronutrients (e.g., fats, fiber, vegetables) and cancer; and (6) assessing strategies for altering diet in relation to cancer risks, and weighing scientific knowledge and the impact of such strategies. Candidates must meet the minimum experience and education requirements for Medical Officer, GS-602, as defined by the U.S. Office of Personnel Management (OPM) Handbook X-118 (Qualifications for Positions under the General Schedule) which is available in Federal personnel offices. In addition, candidates must have experience in nutritional science, epidemiology, or related field. Research experience involving human diet or clinical trials is desirable.

THE CHIEF, OCCUPATIONAL CANCER BRANCH is responsible for the overall administration of a research program designed to bring applied cancer prevention to the occupational setting. This includes program planning and development, scientific direction and evaluation and assessment of activities related to identifying persons and cohorts at risk for occupation-related cancers or pre-neoplastic conditions, identifying and implementing risk reduction strategies, identifying and implementing studies of cancer detection in high risk occupational groups, implementing programs

in worker education and, in conjunction with staff of other branches, identifying and implementing studies of chemoprevention or dietary intervention aimed at cancer prevention. Relevant research areas include epidemiology, toxicology, carcinogenesis, occupational health and cancer prevention. Responsibility also extends into participation in the overall planning for the Prevention, Detection, and Diagnosis Program and the administrative and scientific review of its research projects. Candidates must meet either the minimum experience and education requirements for Medical Officer, GS-602, as defined by the U.S. Office of Personnel Management (OPM) Handbook X-118 (Qualifications for Positions under the General Schedule) which is available in Federal personnel offices, or the minimum experience and education requirements for Health Scientist Administrator, GS-601, as defined in Announcement WAH-111, which is available from the National Institutes of Health, Special Examining Unit. Candidates must have cancer prevention and clinical experience and managerial skill. Research experience with cancer hazards related to occupational exposures, evaluation of trends in cancer incidence, early detection of cancer or premalignant lesions, early diagnosis and treatment, and the education of workers in methods of self-protection and cancer prevention would be preferable.

THE CHIEF, CANCER PREVENTION STUDIES BRANCH will have major responsibility for managing an intramural research program in cancer prevention. Specifically, CPSB: 1) plans, develops and conducts research in the areas of diet, nutrition and cancer, cancer chemoprevention, and occupational cancer studies and other cancer prevention research involving actions or interventions aimed at lowering human cancer risk; 2) plans, develops and conducts nutritional and chemoprevention interventions and trials designed to test the effect of nutritional and chemopreventive agents in reducing cancer risk; safety and toxicity studies; and clinical studies examining the relationship of substances under investigation to biochemical and physiological parameters; 3) develops methodologies for ascertaining research study priorities and for assuring quality control and excellence in the performance of the studies and appropriate standardization between studies; 4) develops, coordinates, and maintains data systems and other resources necessary for conducting these studies; and 5) determines key research needs and studies particularly suitable to be done at or by the National Cancer Institute and develops collaborative research arrangements and appropriate contracts, interagency agreements or other methods of supporting this intramural research. Candidates must meet either the minimum experience and education requirements for Medical Officer, GS-602 as defined by the U.S. Office of Personnel Management (OPM) Handbook X-118 (Qualifications for Positions under the General Schedule) which is available in Federal personnel offices, or the minimum experience and education requirements for Health Scientist Administrator, GS-601, as defined in Announcement WAH-111, which is available from the National Institutes of Health, Special Examining Unit. In addition, candidates must have experience in cancer research and scientific program administration with a broad understanding of cancer center programs. Prior experience in the management of university research programs is desirable.

THE CHIEF, COMMUNITY ONCOLOGY AND REHABILITATION BRANCH will have responsibility for: (1) developing programs to improve clinical oncology in community settings and integrating community oncology with research programs of the National Cancer Program; (2) promoting interactions between community oncologists and regional or national clinical cooperative groups; (3) stimulating psychosocial and physical rehabilitation research; (4) developing and conducting research on the management of cancer pain; (5) developing research in areas of supportive care for patients and families; (6) studying the impact of cancer control programs on the community; and (7) conducting studies of education, attitudes, and behavior of physicians, nurses, and other health professionals. Candidates must meet either the minimum experience and education requirements for Medical Officer, GS-602, as defined by the U.S. Office of Personnel Management (OPM) Handbook X-118 (Qualifications for Positions under the General Schedule) which is available in Federal personnel offices, or the minimum experience and education requirements for Health Scientist Administrator, GS-601, as defined in Announcement WAH-111, which is available from the National Institutes of Health, Special Examining Unit. Candidates must have experience in clinical oncology and/or cancer control and program management experience.

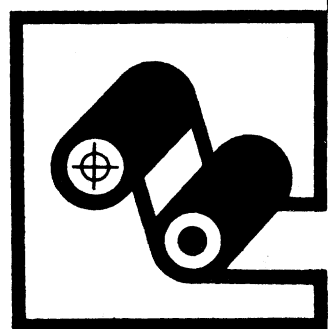
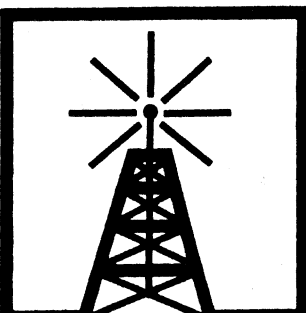
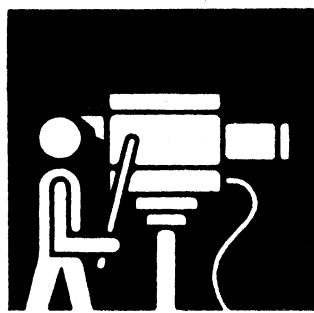
THE CHIEF, CANCER CENTERS BRANCH will have responsibility for: (1) promoting and supporting the development of multidisciplinary programs in laboratory and clinical research, training, education, detection, cancer control, and facilities construction; (2) consolidating and focusing cancer-related research efforts in a single administrative and programmatic structure; (3) developing, directing, and administering a program of planning grants and core support grants for comprehensive and specialized cancer centers; (4) coordinating branch activities with related activities in the Division and other Divisions of NCI; (5) evaluating the effectiveness of the Cancer Centers Program; and (6) maintaining liaison with appropriate Federal and non-Federal organizations, institutions, and scientists. Candidates must meet either the minimum experience and education requirements for Medical Officer, GS-602, as defined by the U.S. Office of Personnel Management (OPM) Handbook X-118 (Qualifications for Positions under the General Schedule) which is available in Federal personnel offices, or the minimum experience and education requirements for Health Scientist Administrator, GS-601, as defined in Announcement WAH-111, which is available from the National Institutes of Health, Special Examining Unit. Candidates must have cancer experience and demonstrated research and/or managerial skills.

Additional information may be obtained from Ms. Janet Gregory, Personnel Assistant, NCI, (301) 496-6862.

Applications (Personal Qualifications Statement, SF-171) are to be sent to the above individual at this address: National Cancer Institute, Building 31, Room 3A32, 9000 Rockville Pike, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.

*The National Institutes of Health
is an equal opportunity employer.*

1982 AAAS Westinghouse Science Journalism Awards



**Television
Radio
Print**

Rules

The aim of this competition is to encourage and recognize outstanding reporting on the sciences and their engineering and technological applications in newspapers, general circulation magazines, radio, and television. The following categories are not eligible: items on the field of medicine, items published originally in AAAS publications or produced by AAAS; reports by employees of the AAAS or Westinghouse Electric Corporation.

Print

- An entry for a newspaper competition may be any of the following: a single story; a series of articles; or a group of three unrelated stories, articles, editorials, or columns published during the contest year. A magazine entry may be a single story or series published during the contest year.

- A completed entry blank must be submitted together with seven copies of each entry in the form of tear sheets, clippings, reprints, or syndicate copy (not over 8½" x 11"), showing name and date of the publication. **ENTRIES MUST NOT BE ELABORATE!**

Broadcast

- An entry for the radio or television competition may be an individual news story, feature, or a series, regardless of length, broadcast during the contest year on either public or commercial stations. Entries must be comprised of scripted material. Interviews are not eligible.

- A completed entry blank must be submitted together with a cassette in the case of radio and copy of the script or a ¾" video-cassette in the case of television and copy of the script.

- Each entrant may submit three entries for any one category.

- Each entry must have been published or produced and broadcast within the United States during the contest year—1 October 1981 through 31 December 1982. (In case of a series, more than half of the items comprising it must have been published or broadcast during the contest year.) The date on the issue in which an article appears will be considered as the date of publication. All entries must be postmarked on or before midnight, 15 January 1983.

- Persons other than the author may submit entries in accordance with these rules. Entries will not be returned.

- Winner of the 1981 awards are not eligible for the 1982 awards. Persons winning three times are no longer eligible.

- The Judging Committee, whose decisions are final, will choose the winners. There are five awards of \$1,000: for the winning entry in the over 100,000 daily circulation newspapers competition; for the winning entry in the under 100,000 circulation newspapers competition; for the winning entry in the general circulation magazine competition; for the winning entry in the radio competition; and for the winning entry in the television competition. For award purposes, newspaper circulation will be sworn ABC daily circulation as of 30 September 1982. The Judging Committee may cite other entries for honorable mention.

- The awards will be presented at the dinner meeting of the National Association of Science Writers during the Annual Meeting of the American Association for the Advancement of Science in May 1983. Travel and hotel expenses of the award winners will be paid. **Entrants agree that, if they win, they will be present to receive their awards, unless prevented by circumstances beyond their control.**

Grayce A. Finger

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

1515 Massachusetts Avenue, N.W. Washington, D.C. 20005