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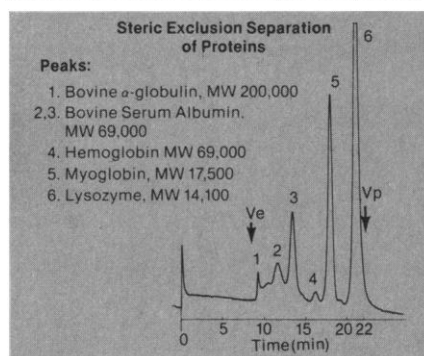
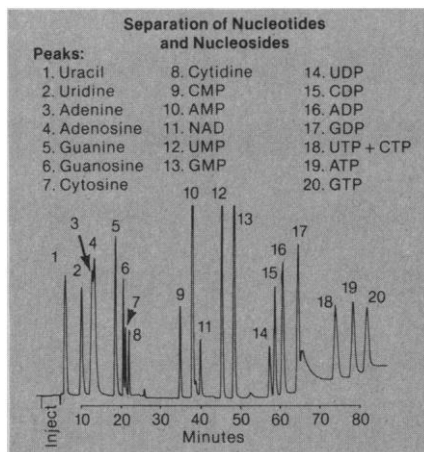
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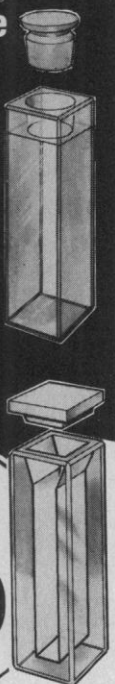
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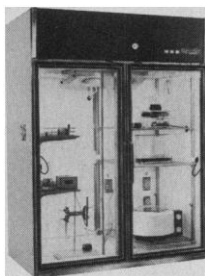
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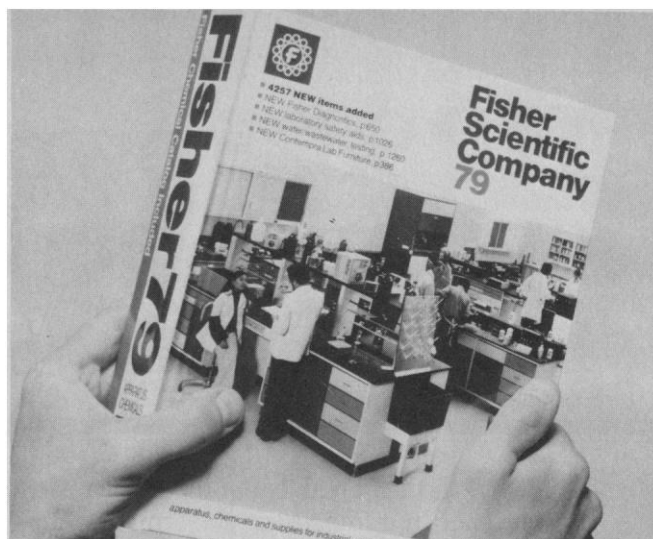
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COMMENTS ON INORGANIC CHEMISTRY

Edited by Norman Sutin, *Department of Chemistry, Brookhaven National Laboratory, New York* and Philipp Gütllich, *Institut für Anorganische und Analytische Chemie, Johannes Gutenberg Universität, Mainz, West Germany*

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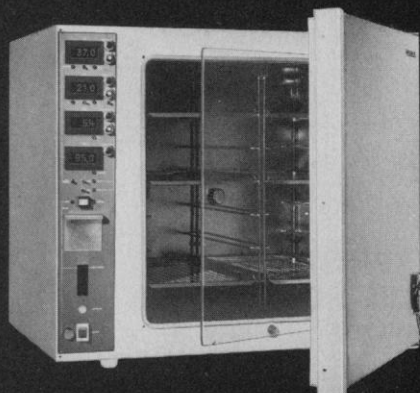
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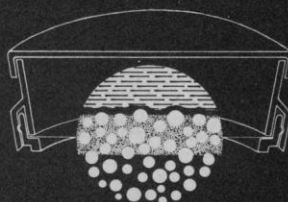
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Rutgers University is an Equal Opportunity/Affirmative Action Employer.

Amherst College seeks an **ASSISTANT PROFESSOR** in the area of **ECOLOGY** to begin 1 July 1981. Areas of particular interest are community, physiological, or coevolutionary ecology. Doctorate required. Responsibilities during the first year include co-teaching a general ecology course and team-teaching an introductory biology course, both with laboratories. The candidate will develop an active research program including the supervision of student research. During the second year, responsibilities include an advanced undergraduate course in the candidate's specialty. Three-year renewable contract, with tenure decision during the sixth year. Send curriculum vitae, copies of publications, and three letters of reference to: **Professor William M. Hexter, Chairman, Biology Department, Amherst College, Amherst, Mass. 01002.** The deadline is 28 November 1980. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR: GENETICS. Applications invited for a tenure-track position in the Biology Department. Applicants should possess Ph.D. with teaching and research interests in some aspect of genetics. Teaching in introductory biology courses, as well as participation in the graduate (M.S. and Ph.D.) programs, and establishment of an active research program expected. Forward curriculum vitae, statement of teaching and research interests and goals, and three letters of recommendation by 30 November 1980 to: **Dr. Kenneth M. Hoff, Chairperson, Search Committee, Biology, Cleveland State University, 1983 East 24 Street, Cleveland, Ohio 44115.** Equal Opportunity Employer, M/F/H.

West Virginia School of Osteopathic Medicine
400 North Lee Street
Lewisburg, West Virginia 24901

ASSISTANT PROFESSOR OF MICROBIOLOGY

Tenure-track position for Ph.D. available immediately. The candidate must have excellence in immunology/parasitology; preference given to those with prior medical school teaching experience. Research facilities available and research encouraged.

Submit curriculum vitae and names of three references by 5 October to: **Elizabeth Blatt, Ph.D., Associate Dean/Academic Affairs, West Virginia School of Osteopathic Medicine, Lewisburg, West Virginia 24901.**

An Equal Opportunity/Affirmative Action Employer

CHAIRPERSON DEPARTMENT OF ANATOMY UNIVERSITY OF NORTH DAKOTA

The University of North Dakota (UND) School of Medicine is conducting an active search for a chairperson for its Department of Anatomy. Applications are sought from individuals who possess a Ph.D. and who have both a demonstrated scholarly productivity in an active research program and an acknowledged history of providing quality education to medical, graduate, and undergraduate students. Candidates must possess a background that demonstrates grantsmanship experience, leadership, administrative abilities, and communication skills with faculty students. Interested persons should submit their curriculum vitae to:

**Anatomy Search Committee
Department of Anatomy
University of North Dakota School of Medicine
Grand Forks, North Dakota 58202**

Deadline for receipt of applications is 31 October 1980.

UND is an Equal Opportunity/Affirmative Action Employer.

GENETICISTS

Rapid growth of the Microbial Genetics Group in Pfizer Central Research has created the following opportunities for scientists with post-doctoral experience in all areas of recombinant DNA technology.

Microbial Geneticist

Should have broad training in genetics and microbiology, with working knowledge of basic recombinant DNA techniques. Expertise in *Escherichia coli* yeast or STREPTOMYCETE genetics particularly desirable.

Molecular Geneticist

Should be trained in molecular biology, with experience in all aspects of recombinant DNA technology. Background in microbiology or genetics preferred, but not essential.

Nucleic Acid Biochemist

Should be thoroughly trained and experienced in nucleic acid biochemistry. Particularly valuable is experience in the isolation and *in vitro* translation of m-RNA, preparation, cloning, and expression of c-DNA and immunological or hybridization screening methodologies.

In addition to the challenge of working in an exciting new group, Pfizer Central Research offers opportunities to participate in a large, multi-disciplinary research organization. You will also enjoy an excellent salary/benefits package and our attractive Connecticut shore location.

For prompt consideration, send your resume, a summary of your research experience and a list of publications to: **Mr. F. G. Ziegler, Pfizer Central Research, Eastern Point Road, Groton, CT 06340**



An Equal Opportunity Employer



MARINE BIOLOGICAL LABORATORY Woods Hole, Massachusetts 02543

announces **EIGHT SHORT COURSES FOR FALL, 1980** including a new offering on X-ray microprobe analysis. These residential programs emphasize laboratory practice and are intended primarily for scientists who require the techniques and information for their own work.

ELECTRON PROBE X-RAY MICROANALYSIS IN BIOLOGY AND MEDICINE

November 2-7, 1980

Offered for the first time, this course is limited to 12 participants. The instruction includes comprehensive theoretical treatment of X-ray production from scanning electron microscopes and their analysis and interpretation both with wavelength and energy dispersive detectors. The Instructor in Chief is A.J. Tousimis of Tousimis Research Corporation, assisted principally by L.S. Birks, Naval Research Laboratories, Oliver Wells of IBM, and Robert Ogilvie of MIT.

QUANTITATIVE ANALYSIS OF ELECTRON MICROGRAPHS — Stereology,

Morphometry, Optical Diffraction, and Three-Dimensional Reconstruction

December 7-12, 1980

Lee Peachey of the University of Pennsylvania is Instructor in Chief of this course offered for the fourth time. Associated Instructors are Brenda Eisenberg of Rush College of Health Sciences and John Haselgrove and Larry Palmer of the University of Pennsylvania. Attendance is limited to 20 students.

OPTICAL MICROSCOPY AND PHOTOMICROGRAPHY IN THE BIOLOGICAL SCIENCES

December 7-12, 1980

Limited to 16 participants who will have access to a wide array of modern microscopical and photographic equipment, this course will be offered for the fourth time at MBL by a faculty led by Robert Day Allen of Dartmouth College. Other instructors include Shinya Inoue of MBL and Nina Allen of Dartmouth.

SMALL COMPUTERS IN BIOMEDICAL RESEARCH

November 30 - December 5, 1980

Offered for the second time and limited to 16 participants, this program consists of a mixture of lectures and hands-on problem solving sessions using complete microprocessor based computer systems. There are no specific prerequisites;

students will learn to adapt computer techniques to their own application requirements. Larry Palmer of the University of Pennsylvania is Instructor in Chief, assisted principally by Lee Peachey, also of Pennsylvania.

COMPARATIVE LIGHT AND ELECTRON MICROSCOPY IN CLINICAL DIAGNOSIS

November 9-14, 1980

Offered for the second time, the maximum of 16 participants will consider the diagnostic application of imaging from a wide spectrum of light and electron microscope types and systems. The Instructor in Chief is Harry Carter of St. Vincent Charity Hospital, Cleveland, Ohio.

SCANNING ELECTRON MICROSCOPY IN THE BIOLOGICAL SCIENCES

October 26-31, 1980

Limited to 12 participants, this program will be offered for the third time and will be led by Bruce Wetzel of NIH, assisted principally by Ralph Albrecht of the University of Wisconsin. Emphasis is on critical preparation of biological specimens.

LIQUID SCINTILLATION COUNTING IN BIOLOGY AND MEDICINE

October 26-31, 1980

This program, offered for the third year at MBL, is led by Yutaka Kobayashi of New England Nuclear. The course provides theory and practice in the application of liquid scintillation counting and related techniques to biological and medical research. A section on RIA and protein binding assays will be taught by Gerald Litt of New England Nuclear. No more than 16 students will be accepted.

MARICULTURE: CULTURE OF MARINE INVERTEBRATES FOR RESEARCH PURPOSES

September 28 - October 4, 1980

Carl Berg, Jr. of Harvard and MBL will lead this program for the second time. Limited to 20 participants, the instruction allows ample opportunity for individual work and consultation with a distinguished faculty numbering twelve.

ADDITIONAL INFORMATION on course content and application materials may be obtained from the Admissions Office, Marine Biological Laboratory, Woods Hole, Massachusetts 02543; Telephone 617-548-3705. MBL is an Equal Opportunity Institution.

POSITIONS OPEN

DIVISION OF BIOLOGICAL SCIENCES CORNELL UNIVERSITY

ASSISTANT PROFESSOR to carry on a vigorous research program in any area of modern genetics, share the teaching of introductory genetics, and participate in advanced instruction. It should be noted that facilities for work with higher plants are available. Position available beginning 1 July 1981. Applicants with postdoctoral experience preferred. Candidates should send curriculum vitae, a statement of research interests, and the names of three references. Please arrange to have letters of reference sent directly to the Search Committee along with the other material, by 24 October 1980. Send applications to:

S. A. Zahler, Chairman
Search Committee
Section of Genetics and Development
Bradfield Hall
Cornell University
Ithaca, N.Y. 14853

Cornell University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR WILDLAND WATER QUALITY

The Department of Earth Resources, College of Forestry and Natural Resources, Colorado State University (CSU), is seeking candidates for a 9-month tenure-track faculty position within the department's Watershed Sciences Program. Responsibilities will include teaching and advising at both graduate and undergraduate levels. Specific water quality courses include Wildland Water Quality (ER 418), Water Quality Lab (ER 419), and Water Quality Systems (ER 714). Participation in several team-taught courses is also expected. In addition, the incumbent will be expected to develop a research program in water quality.

Qualifications for the position include a Ph.D. in water quality, watershed management, or closely related area plus research experience in water quality. Rank and salary will be commensurate with experience and qualifications.

Application, résumé, selected reprints, and three letters of recommendation, should be sent to:

Professor Freeman Smith
Department of Earth Resources
Colorado State University
Fort Collins, Colo. 80523
Telephone: 303-491-5661

Applications should be submitted by 30 October 1980. Position may be filled by 1 January 1981.

CSU is an Equal Opportunity/Affirmative Action Employer. Equal Opportunity Office: 314 Student Service Building.

University of California, San Diego School of Medicine ASSISTANT RESEARCH PSYCHOBIOLOGIST Department of Psychiatry

Ph.D.-level individual needed for neurophysiological and neuroanatomical research laboratory operation and maintenance, including computer operation, programming, and interfacing with neurophysiological preparation, experience in acute and chronic microelectrode fabrication and implantation. Minimum of 6 years of experience in electronics and neurophysiological data analysis. Responsibility for operation and maintenance of single neuron recording laboratories, equipment operation and maintenance, including troubleshooting of oscilloscopes, stimulators, and Tektronix 9900 microprocessors. Skill in programming and interfacing of microprocessors and small laboratory computer. Expertise in small animal surgery and chronic microelectrode implantation techniques essential. Extensive background in statistics and research design required. Experience in computer graphics, especially three-dimensional reconstruction from serial sections, in addition to standard computer graphics and programming and use. Will train graduate students, postdoctoral scholars, and others in electronics, statistics, computer technology, elementary operation and programming of laboratory computers, neurophysiological data collection, and analysis and interpretation. Salary: related to academic rank and step within the established salary schedule of the University of California, San Diego.

The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer. Send curriculum vitae to:

Lewis L. Judd, M.D.
Chairman, Department of Psychiatry (M-003)
University of California, San Diego
La Jolla, California 92093

POSITIONS OPEN

The **Biology Department** expects to make the following appointments: **PHYSIOLOGIST**—research interest in comparative physiology, cell physiology, or immunology; **MICROBIOLOGIST**—research interest in control mechanisms in prokaryotes or eukaryotes. Appointees will teach graduate and undergraduate courses in mammalian physiology, comparative physiology, general microbiology, or immunology and carry out an active research program. These are tenure-track appointments. Level of appointment will be determined by candidate's background but all applicants should have postdoctoral research experience. The Biology Department is a research-oriented department with 25 faculty members, 60 graduate students, and 200 undergraduate majors. Temple University is part of the Commonwealth of Pennsylvania System of Higher Education. Send curriculum vitae and names of three references to: **Search Committee, Department of Biology, Temple University, Philadelphia, Pa. 19122.**

BIOPHYSICIST/BIOCHEMIST/IMMUNOLOGIST, Department of Medicine, The University of Tennessee. College of Medicine-Knoxville Unit. Full-time position as a **research assistant professor** with major responsibilities in undergraduate, graduate, and continuing medical education; research; and clinical laboratory. Requires Ph.D. with minimum of 3 years of postdoctoral experience in research on human immunoglobulins (including x-ray crystallography); demonstrated leadership capabilities; and ability to conduct independent research program in immunology, including the development of hybridoma technology. Position available 1 November 1980. Salary commensurate with education and experience. Send curriculum vitae to: **Alfred D. Beasley, M.D., Professor and Chairman, Department of Medicine, The University of Tennessee, College of Medicine-Knoxville Unit, 1924 Alcoa Highway, U-28, Knoxville, Tennessee 37920. An Affirmative Action/Title IX/Section 504 Employer.**

CHAIRMAN OF BIOCHEMISTRY

The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, invites applications for the chairmanship of the Department of Biochemistry. This person is expected to provide leadership in the development of research programs in modern biochemistry and in graduate education. Please send curriculum vitae and list of publications by 1 November 1980 to: **Dr. Grady F. Saunders, Department of Biochemistry, The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, Texas 77030.**

CHAIRPERSON DEPARTMENT OF BIOLOGY EMORY UNIVERSITY

Emory University is seeking a **biologist** with a record of scholarly achievement and excellence in teaching, and preferably some administrative experience, to chair the Department of Biology. Candidates are expected to have an active research program of national stature and a demonstrated ability to generate research grant support. The position requires a strong commitment to graduate and undergraduate education in biology within the context of a liberal arts education. The new chairperson will help in the planning and design of a new biology building and in developing the direction of the department with new faculty appointments. At present, the Biology Department has 16 faculty and graduate programs at the M.S. and Ph.D. levels.

The appointment is to become effective 1 September 1981. Send curriculum vitae and names and addresses of at least three references to: **William H. Murdy, Chairman, Search Committee, Biology Department, Emory University, Atlanta, Ga. 30322.** Applications will be considered beginning 1 November 1980. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

ELECTRON MICROSCOPIST—SEM/TEM position available immediately and through 31 May 1982. The candidate is expected to perform ultrastructural research on salamander mutants (*Ambystoma mexicanum*). Preference will be given to an individual with a strong background in histochemistry. Salary for 21 months: \$24,000. Interested persons should send a résumé, publications, and two letters of reference to: **Dr. Rudolph Brun, Biology Department, Texas Christian University, Fort Worth, Texas 76129.** *Texas Christian University does not discriminate on the basis of sex, religion, handicap, race, or ethnic origin.* Application deadline: 3 October 1980.

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF BIOLOGY

The School of Biology, Chemistry and Ecology of the State University of New York (SUNY) College of Environmental Science and Forestry, seeks a chairperson for the Department of Environmental and Forest Biology. The successful candidate should be a demonstrated successful administrator, have achieved high scholarly attainment, and possess strong leadership abilities to direct and expand the department's instructional, research, and public service programs. Candidates should have an organismal or ecologic orientation and awareness of major biologic issues associated with forest or other natural ecosystems. The department has 34 faculty, 15 adjuncts, 6 nonteaching professionals, and 5 secretaries. An undergraduate program in biology involves 300 students. Graduate program areas include ecology, entomology, fish and wildlife biology and management, forest pathology and mycology, plant science, zoology, environmental physiology, and soil ecology. More than 100 graduate students are currently enrolled. Competitive research grants at present exceed \$2 million. The department is housed in a modern 5½-story building containing 85,000 sq. ft. of laboratories, classrooms, and supporting facilities. About 25,000 acres of College forest properties offer unique support facilities. The position is available 1 September 1981 or earlier by arrangement. Closing date for application is 1 November 1980. Send letter of application, résumé, and three reference letters to: **Dr. R. A. Zabel, Environmental and Forest Biology Department, SUNY College of Environmental Science and Forestry, Syracuse, N.Y. 13210. State University of New York is an Equal Opportunity/Affirmative Action Employer.**

The **DEPARTMENT OF CHEMISTRY**, Washington University, St. Louis, seeks applicants for a tenure-track position in **inorganic chemistry**. Preference will be given to applicants at the assistant professor level, but appointment as associate or full professor for a candidate with an outstanding record of accomplishment will be considered. Candidates of interest are those who have the potential for outstanding research accomplishments as well as excellence in teaching. Liberal start-up funds will be made available to successful applicant. Applicants are requested to submit curriculum vitae and a statement of research interests and to arrange to have three letters of recommendation sent to: **Professor William D. Phillips, Chairman, Department of Chemistry, Washington University, St. Louis, Mo. 63130. Washington University is an Equal Opportunity/Affirmative Action Employer.**

The **DEPARTMENT OF CHEMISTRY**, Washington University, St. Louis, seeks applicants for a tenure-track position in **organometallic chemistry**. Preference will be given to applicants at the assistant professor level, but appointment as associate or full professor for a candidate with an outstanding record of accomplishment will be considered. Candidates of interest are those who have the potential for outstanding research accomplishments as well as excellence in teaching. Liberal start-up funds will be made available to successful applicant. Applicants are requested to submit curriculum vitae and a statement of research interests and to arrange to have three letters of recommendation sent to: **Professor William D. Phillips, Chairman, Department of Chemistry, Washington University, St. Louis, Mo. 63130. Washington University is an Equal Opportunity/Affirmative Action Employer.**

PHYSIOLOGY DEPARTMENT. Accredited medical school in Puerto Rico is seeking all ranks, full-time staff. Teaching areas: central and autonomous nervous systems, sensory, gastrointestinal, endocrinology, respiratory, cardiovascular, and others. Laboratory instructor at either master's, Ph.D., or M.D. level is also needed. Research and supporting grants emphasized. Please send résumé and three references to: **Chairperson, Physiology Department, P.O. Box 7004, Ponce School of Medicine, Ponce, Puerto Rico 00731.**

POSTDOCTORAL POSITION is available to study the mechanism controlling photosynthate partitioning in agronomic plants. Areas of research will include either hormonal control of membrane transport of sugars or development of immunological assays for plant hormones. A strong background in biochemistry with experience in membrane transport is desirable. Send curriculum vitae and three letters of recommendation by 3 October to: **Dr. Roger Wyse, Department of Biology, Utah State University, UMC 63, Logan, Utah 84322. An Affirmative Action/Equal Opportunity Employer.**

**DIRECTOR
CENTER FOR HEALTH CARE AND
HUMAN VALUES
COLUMBIA UNIVERSITY
HEALTH SCIENCES CAMPUS**

Columbia University invites nominations and applications for the position of director of the Center for Health Care and Human Values. The director will be responsible, in consultation with principal investigators and advisory bodies, for designing and promoting interdisciplinary research and for developing educational materials for students not only in the health profession but also in the humanities.

The director will be responsible for nurturing and assuring the excellence of the Center. He/she must be able to recruit a broad constituency of persons of scholarly and pedagogic achievements or promise, attract fellows and graduate students, and guide, assist, stimulate, and support their work. He/she will serve as an advocate for the introduction of project-generated teaching materials and programs into the health sciences curriculum.

The director is expected to develop and maintain support from internal sources and appropriate state, federal, private, and foundation sources. The candidate must be a competent administrator who will be responsible for fiscal and personnel matters, as well as for relationships with the Medical School and University departments, administrations, and clinical service units (hospital, outpatient, community) with which the project may be engaged.

Candidates should be recognized as persons of sound medical understanding and experience, and learned and experienced in the humanities and the social and behavioral sciences. Degrees may be either in medicine or in one of the humanistic disciplines. He/she must show evidence of substantial scholarly accomplishments.

Applications, nominations, and further inquiries should be sent to: **Dr. Thomas Q. Morris, Chairman, Dean's Advisory Committee for Search for Director of the Center for Health Care and Human Values, Office of the Dean, College of Physicians and Surgeons, 630 West 168 Street, New York, New York 10032.**

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

GENETIC TOXICOLOGY Post-Doctoral

Rohm and Haas, a leading multinational chemical company, has available a study assignment in Genetic Toxicology at our Research Center located in Spring House, PA — a suburban community 20 miles north of Philadelphia.

We are looking for a research-oriented individual with a PhD in Molecular Biology, Microbiology, Biochemistry, Genetics, or a related discipline, to study chemical interaction with germ cell DNA. This program is a part of our strong commitment to product safety in this field.

This is a one year program with possible renewal for a second year.

Rohm and Haas is noted for its professional environment, excellent salaries and benefits program. All inquiries will be treated in confidence and should include academic record, background and scientific interests. Please address:

Recruiting and Placement #8680



An equal opportunity employer M/F.

CELL BIOLOGIST/ RECOMBINANT DNA

The Upjohn Company has a position available for a Cell Biologist to participate in an expanding program on human gene cloning.

The successful candidate will have a Ph.D. in biology, biochemistry, or molecular biology, evidence of high motivation, and proven work experience with skills in modern cell biology and DNA-mediated gene transfer.

Living in Kalamazoo, a mid-sized Southwestern Michigan community, provides immediate access to an excellent mix of cultural/recreational opportunities including lakes, nearby colleges, and a four-season climate. Excellent salary and benefits programs are available.

Please send resume in confidence to:

Upjohn

William J. Hall 11862-J
The Upjohn Company
7000 Portage Road
Kalamazoo, Michigan 49001

An Equal Opportunity Employer M/F

Pharmaceutical Development Scientist

We are the Research & Development Division of the Revlon Health Care Group—the recent integration of several progressive middle-sized pharmaceutical companies.

We are currently seeking an experienced PhD for this important, senior position which carries responsibility for innovative formulation of new parenteral dosage forms.

Applicants should have a degree in Pharmacy or background in sterile processes and biochemistry plus 5 years research or production experience with

a U.S. pharmaceutical manufacturer. Excellent communication skills are essential.

We offer a competitive salary and excellent fringe benefits.

Please send your resume, including salary history, in complete confidence to:
Manager of Professional Staffing
Research and Development Division
REVLON HEALTH CARE GROUP
One Scarsdale Road
Tuckahoe, New York 10707
An equal opportunity employer M/F

REVLON Health Care Group

POSITIONS OPEN

DEAN, COLLEGE OF SCIENCE OREGON STATE UNIVERSITY CORVALLIS, OREGON

Nominations and applications are invited for Dean of Science, available 1 July 1981. The chief administrative officer for this college at Oregon's Land-Grant institution is responsible for 14 departments and 12 additional college programs with about 250 faculty, 2100 undergraduate majors, and 600 graduate students. Qualifications include an earned doctorate, university-level teaching experience, distinction in scholarship and research, and an appropriate combination of significant administrative experiences. Application deadline: 1 November 1980. Send names of nominees or résumé and names of three references to: **W. Curtis Johnson, Chairman, Search Committee, Department of Biochemistry/Biophysics, Oregon State University, Corvallis, Oregon 97331.**

Oregon State University is an Equal Opportunity/Affirmative Action Employer and complies with Section 504 of the Rehabilitation Act of 1973.

DIRECTOR DEPARTMENT OF CHEMICAL CARCINOGENESIS

The Roswell Park Memorial Institute invites nominations and applications for the position of director of a new Department of Carcinogenesis. Criteria for selection of a nationally recognized investigator will include leadership in developing research programs, broad interests in basic and health science aspects of carcinogenesis, commitment to graduate education, and demonstrated administrative skills. Roswell Park Memorial Institute is a comprehensive cancer treatment and research center which includes medical and surgical oncology, cancer control and education, and biological and clinical research. Candidates should have an M.D. and/or Ph.D. degree. Letters of application should include curriculum vitae plus names and addresses of three persons who will provide letters of reference.

Applications and nominations should be sent before 3 October 1980 to: **Dr. E. Mihich, Chairman of Search Committee, Grace Cancer Drug Center, Roswell Park, Memorial Institute, 666 Elm Street, Buffalo, New York 14263.**

An Equal Opportunity/Affirmative Action Employer

DIRECTOR OF RESEARCH. The Children's Hospital, Children's Hospital Research Foundation, and Ohio State University College of Medicine invite applications and nominations for **Director of Research.** The Children's Hospital Research Foundation, The Foundation, housed in a 5-story building including a fully equipped animal facility, is located at one of the largest, most active pediatric institutions in the country, and engages in a complete program of basic and clinical pediatric research. Candidates should have a distinguished record of achievement in biomedical research. Responsibilities include providing administrative and scientific leadership, facilitating the faculty's research activities, and guiding the institution's growth. An interdisciplinary search committee will review all applications. Applications and nominations (including curriculum vitae) should be submitted by 14 November 1980 to: **Vincent Hamparian, Ph.D., Acting Executive Director, The Children's Hospital Research Foundation, 700 Children's Drive, Columbus, Ohio 43205.** *An Affirmative Action/Equal Opportunity Employer.*

The Department of Neurology at the University of California, Los Angeles (UCLA) School of Medicine is seeking a **NEUROLOGIST/CLINICAL NEUROLOGIST** interested in developing and expanding the ataxia-neuromuscular program at UCLA. Opportunities available for independent and collaborative research. Applicants must be Board-eligible in neurology and have demonstrated expertise in ataxias and/or neuromuscular disease. Prefer demonstrated expertise in neurochemical research. Appointment at the assistant or associate professorial level depending upon qualifications. *The University of California is an Affirmative Action/Equal Opportunity Employer.* Submit curriculum vitae to: **R. A. Pieter Kark, M.D., Associate Professor of Neurology, Reed Neurological Research Center, UCLA School of Medicine, Los Angeles, California 90024.**

POSITIONS OPEN

THE UNIVERSITY OF CHICAGO DEPARTMENT OF MICROBIOLOGY, MICROBIOLOGIST/CELL BIOLOGIST. The Department of Microbiology is accepting applications for a tenure-track faculty position. The major criteria for consideration are: (i) demonstrated potential for developing an active research program in molecular biology, particularly in the area pertaining to the pathogenesis of infectious disease, and (ii) desire and ability to participate in the department's teaching program. Send curriculum vitae and the names of three references to: **Patricia G. Spear, Search Committee Chairman, Department of Microbiology, The University of Chicago, 920 East 58 Street, Chicago, Illinois 60637.** *An Affirmative Action/Equal Opportunity Employer.*

NEUTRON SCATTERER. The Massachusetts Institute of Technology (MIT), Nuclear Reactor Laboratory, is seeking a neutron scattering expert with experience in diffraction and inelastic scattering research using reactor neutron beams. Expertise in related instrumentation would be desirable. Ability to relate to many different persons working on diverse problems in chemistry, biology, physics, and material science is an important requirement. Applicant will be expected to develop and carry out a viable research program in neutron beam tube uses of the MIT research reactor. Ph.D. required; a broad background in the field of neutron scattering is preferred. This is a research appointment at a level commensurate with the qualifications of the appointee. Applicants with at least several years of relevant experience preferred. Please submit résumé, referring to Job Number R80-172, to: **Professor Otto K. Harling, Director, Nuclear Reactor Laboratory, c/o MIT Personnel Office, 77 Massachusetts Avenue, Cambridge, Mass. 02139.** *MIT is an Equal Opportunity/Affirmative Action Employer.*

PHYSICAL CHEMIST

Seek recent Ph.D. in chemistry with background in gas-phase chemical kinetics, and a working knowledge of fast-flow reactors, flash photolysis techniques, and vacuum ultraviolet spectroscopy. The position involves the study of gas-phase atom-molecule reactions, with emphasis on combustion chemistry. Techniques utilized in this program include flash photolysis and discharge flow, both of which employ resonance fluorescence detection of atomic species.

Related research is being initiated in: (i) laser-induced fluorescence detection of radicals, and (ii) a photo-ionization mass spectrometric study of flame-generated intermediates. The second experiment is associated with the National Synchrotron Light Source which is expected to be operational in 1981.

Apply to: **Dr. R. Bruce Klemm, Department of Energy and Environment, Building 527,**

BROOKHAVEN NATIONAL LABORATORY

Associated Universities, Inc.
Upton, Long Island, N.Y. 11973
An Equal Opportunity Employer, M/F

POSTDOCTORAL POSITION available for studies on various aspects of interferon action in mammalian systems and its regulation. Applicants should have a Ph.D. in biochemistry, virology, or related subjects, preferably with broader interest. Salary: \$13,250, negotiable according to qualifications and experience. Send curriculum vitae and names of references to: **Dr. Sohan L. Gupta, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, N.Y. 10021.**

POSTDOCTORAL POSITION in one of several areas including chemical carcinogenesis, hormone receptors, recombinant DNA, cell proliferation, virology, and aging at Fels Research Institute, Temple University School of Medicine. Send inquiries to: **Dr. Renato Baserga, Temple University School of Medicine, Fels Research Institute, 3400 North Broad Street, Philadelphia, Pa. 19140.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

Wanted: **PHYSICIAN** who is fully trained in pulmonary medicine and who has strong interest in teaching and research to fill a job as **assistant or associate professor of medicine.** The position is on hard money and tenure-track. The department has a multidisciplinary research program administered through a Program Project Grant and a fellowship program funded through an Institutional Training Grant. Interested individuals should send letter of interest and curriculum vitae to: **Allen B. Cohen, M.D., Ph.D., Pulmonary Division, Temple University Medical Center, 3401 North Broad Street, Philadelphia, Pa. 19140.** *Equal Opportunity/Affirmative Action Employer.*

POPULATION GENETICIST

The Department of Biology at the University of California, Riverside, invites applications for a faculty position in population genetics beginning 1 September 1981. Candidates must have a Ph.D. and evidence of ability to initiate and sustain a creative research program, and enthusiasm and skill in teaching and supervision in both undergraduate and graduate programs. Teaching duties will consist of undergraduate and graduate courses in empirical and theoretical population genetics. The appointment will be made as assistant professor and a regular member of the department.

Applicants should send up-to-date curriculum vitae, a brief description of research and teaching goals, reprints of scientific papers, and request letters from three individuals who, from close personal knowledge, can evaluate the applicant. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

Applications are invited from all qualified individuals. Send applications by 21 November 1980 to:

**Professor R. Ruibal, Chairman
Department of Biology
University of California
Riverside, California 92521**

POSTDOCTORAL POSITION. Postdoctoral position available to study the molecular biology of rotaviruses. Research involves protein purification, in vitro RNA-protein synthesis, and analysis of post-translational polypeptide modifications. Experience in nucleic acid and/or protein biochemistry required and experience in tissue culture preferred. Send curriculum vitae and names of three references to: **Dr. Mary Estes, Department of Virology, Baylor College of Medicine, 1200 Moursund Avenue, Houston, Texas 77030.** *Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS IN FETAL AND NEONATAL BIOLOGY. Fields of investigation include the physiology, biochemistry, and pharmacology of the cardiovascular, respiratory, renal, and central nervous systems. Emphasis is on theoretical (mathematical modeling) and experimental studies. Fellowships commence 1 July 1981, and are available for 2 years. Please send curriculum vitae and bibliography to: **Dr. Lawrence D. Longo, Division of Perinatal Biology, School of Medicine, Loma Linda University, Loma Linda, Calif. 92350.**

POSTDOCTORAL POSITION The University of Texas at Dallas

Postdoctoral position available in DNA repair processes. Applicants with experience in mammalian cell culture or ultraviolet radiation biology preferred. Submit curriculum vitae (indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required) with publications list and letter of recommendation by 31 October 1980 to:

**Dr. Claud S. Rupert
Programs in Biology
The University of Texas at Dallas
P.O. Box 688
Richardson, Texas 75080**

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

RESEARCH ASSISTANT PROFESSOR. Full-time, nontenure-track research position available for Ph.D. with 5 years of postdoctoral experience in polycyclic hydrocarbon metabolism. Some background in organic chemistry necessary. Salary: \$18,000 per annum, contingent upon continued grant support; 40 to 50 hour week. Interested persons should submit curriculum vitae and names of three references to: **Department of Biochemistry, University of Vermont, Burlington, Vermont 05405.**

**THE GERMAN CANCER
RESEARCH CENTER**
a Public Foundation in Heidelberg and the
UNIVERSITY OF HEIDELBERG, Heidelberg, FRG
wish to appoint a qualified scientist as
HEAD of a DIVISION
to work on
TUMOR INVASION AND METASTASIS.

This division of the Cancer Research Center is expected to work on interactions between neoplastic cells and normal cells, in particular on problems relevant for tumor invasion and metastasis.

Qualifications: Recognized scientific experience in the research area mentioned above, as well as willingness to collaborate with other scientists at the Cancer Research Center who are already engaged in a multidisciplinary approach to the problem of metastasis and invasive growth. Applicants should be experienced in histomorphological, biochemical, cytogenetic, or other cell-biological methods.

Conditions: The position will be either at the C3 level or equivalent to this level. Provided approval of the C3 position in the budget, there exists the possibility of becoming appointed as a Professor of the University. The division offered is equivalent in space, personal and financial support to other divisions of the Cancer Research Center. Also available are central facilities, including animal laboratory, electronic data processing unit, library, electronic microscope and spectroscopy unit.

Applications together with a curriculum vitae and a list of publications are to be sent by the 31st of October 1980 to the German Cancer Research Center, Vorsitzender des Stiftungsvorstands, Im Neuenheimer Feld 280, D-6900 Heidelberg, FRG.

DIGESTIVE DISEASES RESEARCH SCIENTIST

The Upjohn Company is seeking a Biological Scientist to conduct imaginative exploratory research directed towards understanding digestive system diseases at the cellular and subcellular level, and to contribute to the development of drugs to control such disorders. The research would be performed in collaboration with members of a multidisciplinary group of scientists whose primary current efforts are directed towards studying the role of prostaglandins in the digestive system.

The successful candidate will have a Ph.D. in a biological science, with strong emphasis on biochemistry and/or cell biology. Postdoctoral training or experience, preferably in the biochemistry, physiology or pharmacology of the digestive system is highly desirable.

Living in Kalamazoo, a mid-sized Southwestern Michigan community, provides immediate access to an excellent mix of cultural/recreational opportunities including lakes, nearby colleges, and a four-season climate. Excellent salary and benefits programs are available.

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Biochemist

New England Nuclear is a world leader in the manufacture of radioactive chemicals for medical research and diagnosis.

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CHIEF, TOXICOLOGIC AND CARCINOGENIC EVALUATION BRANCH

(Health Scientist Administrator, GS-15)

The National Toxicology Program, Department of Health and Human Services (formerly the Department of Health, Education and Welfare), is seeking applicants for the position of Chief, Toxicologic and Carcinogenic Evaluation Branch. The incumbent is responsible for directing, coordinating, and evaluating an applied research program on the relationship of toxic chemicals and carcinogenesis; responsible for the formulation, design, execution and evaluation of procedures used in conducting bioassay tests to determine the toxic potential of chemical substances. The activities are performed principally through contracts supplemented by in-house laboratory investigations devoted primarily to carcinogenic and toxicologic test method development and validation. The National Toxicology Program currently has more than 200 chemicals on test with an annual budget of over \$40 million.

The position is located in Research Triangle Park, NC, on the campus of the National Institute of Environmental Health Sciences, an institute of the National Institutes of Health. Qualifications for the position are a Ph.D., D.V.M., M.D. or equivalent degree with experience in toxicology, carcinogenesis, or pathology and demonstrated ability to manage a large, integrated program. This is a Civil Service and Merit Pay appointment at the GS-15 level, salary range from \$40,832.00 to \$50,112.50.

Interested parties should forward their application (Personal Qualifications Statement—SF—171, Curriculum Vitae, Bibliography) by November 1, 1980, to the Deputy Director, NTP, P.O. Box 12233, Research Triangle Park, NC 27709. An Equal Opportunity Employer.

NATIONAL INSTITUTES OF HEALTH

**U.S. ENVIRONMENTAL PROTECTION
AGENCY (EPA)
Supervisory Toxicologist
Supervisory Pharmacologist
Supervisory Physical Scientist
(BRANCH CHIEF)**

The Hazard Evaluation Division of the Office of Pesticide Programs, EPA, invites applicants for the position of **CHIEF, TOXICOLOGY BRANCH**. The position is open to individuals with strong scientific credentials in toxicology, emphasizing quantification of risk to humans. The Toxicology Branch is the lead scientific branch of the EPA Pesticides Program, and is charged with evaluating the carcinogenic, teratogenic, and mutagenic risk to humans of pesticides.

Serious applicants will be recognized toxicologists of significant peer standing, with strong management credentials. Desirable management experience is experience in managing multidisciplinary scientific organizations, contractual resources, and evidence of influence on corporate or government decision-making. Strong communication and interpersonal skills are also desirable. Knowledge of the federal pesticides regulatory program, experience in the administration of health-related regulatory programs, and successful experience in communicating with government officials, industry, and the concerned public are also desirable qualifications.

This position may be filled by Civil Service or Public Health Service appointment. Applicants must have at least a bachelor's degree, plus 3 years of appropriate professional experience in a health-related field. Salary ranges from \$40,832 to \$50,112, depending on qualifications.

APPLICATION SUBMISSIONS—Please submit a completed SF-171, available at federal job information centers and federal agency personnel offices, to reach EPA no later than 10 October 1980, to: **GINNY HOOVER, Environmental Protection Agency, Hazard Evaluation Division, Mail Code (TS-769-C), 401 M Street, SW, Washington, D.C. 20460**. Also submit SF-171 to Office of Personnel Management, if this has not been done previously or if previous submission needs to be updated. (Please do not send résumés.) If you are now or have ever been employed in the federal service, you must also submit a performance appraisal and an appraisal of supervisory potential dated within 1 year of the closing date of the announcement. All applications (SF-171's) postmarked after the above date will be returned. *An Equal Opportunity Employer.*

**U.S. ENVIRONMENTAL PROTECTION
AGENCY (EPA)
Supervisory Chemist
Supervisory Environmental Scientist
(BRANCH CHIEF)**

The Hazard Evaluation Division of the Office of Pesticide Programs, EPA, invites applicants for the position of **CHIEF, ENVIRONMENTAL FATE BRANCH**. The position is open to individuals with strong scientific credentials in chemistry or environmental science which demonstrate expertise in the analysis and modeling of chemical transport and fate in the environment, including human exposure.

Serious applicants will be recognized scientists of significant peer standing, with strong management credentials. Knowledge of the federal pesticides regulatory program, experience in the administration of health-related regulatory programs, and successful experience in communicating with government officials, industry, and the concerned public are also desirable qualifications.

This position may be filled by Civil Service or Public Health Service appointment. Applicants must have at least a bachelor's degree, plus 3 years of appropriate professional experience in a health-related field. Salary ranges from \$40,832 to \$50,112 depending on qualifications.

APPLICATION SUBMISSIONS—Please submit a completed SF-171, available at federal job information centers and federal agency personnel offices, to reach EPA no later than 10 October 1980, to: **GINNY HOOVER, Environmental Protection Agency, Hazard Evaluation Division, Mail Code (TS-769-C), 401 M Street, SW, Washington, D.C. 20460**. Also submit SF-171 to Office of Personnel Management, if this has not been done previously, or if previous submission needs to be updated. (Please do not send résumés.) If you are now or have ever been employed in the federal service, you must also submit a performance appraisal and an appraisal of supervisory potential dated within 1 year of the closing date of the announcement. All applications (SF-171's) postmarked after the above date will be returned. *An Equal Opportunity Employer.*

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Only resumes containing current salary will be considered and may be sent in confidence to:

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**U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
Statistician (Health)
Epidemiologist
Environmental Health Scientist
(BRANCH CHIEF)**

The Hazard Evaluation Division (HEB) of the Office of Pesticide Programs, EPA, invites applicants for the position of **CHIEF, HEALTH EFFECTS BRANCH**. The position is open to individuals with strong scientific credentials in the statistical health, biological, or physical sciences who are also experienced managers. HEB develops and analyzes data on the exposure and the health effects of pesticides through a \$5 million program of cooperative agreements with nine major medical schools and three state public health departments, and with 25 in-house staff. The Branch has access to consultant specialists in veterinary and human medicine, oncology, toxicology, physiology, epidemiology, pathology, environmental and analytical chemistry, biostatistics, and other relevant disciplines. Specific programs include field studies to determine effects on farmworkers and other exposed populations, systematic collection and analysis of pesticide poisoning data, evaluation of pesticide hazard and exposure data, and investigation and special studies related to incidences of unintentional exposure.

Serious applicants will have considerable knowledge and experience in the development and evaluation of scientific data on the health impacts of pesticides on similar chemicals as well as experience in managing contractual program activities particularly in a matrix-management environment. Knowledge of the federal pesticides regulatory program, experience in the administration of health-related regulatory programs, and successful experience in communicating with government officials, industry, and the concerned public are also desirable qualifications.

This position may be filled by Civil Service or Public Health Service appointment. Applicants must have at least a bachelor's degree, plus 3 years of appropriate professional experience in a health-related field. Salary ranges from \$40,832 to \$50,112 depending on qualifications.

APPLICATION SUBMISSIONS—Please submit a completed SF-171, available at federal job information centers and federal agency personnel offices, to reach EPA no later than 10 October 1981, to: **GINNY HOOVER, Environmental Protection Agency, Hazard Evaluation Division, Mail Code (TS-769-C), 401 M Street, SW, Washington, D.C. 20460**. Also submit SF-171 to Office of Personnel Management, if this has not been done previously, or if previous submission needs to be updated. (Please do not send résumés.) If you are now or have ever been employed in the federal service, you must also submit a performance appraisal and an appraisal of supervisory potential dated within 1 year of the closing date of the announcement. All applications (SF-171's) postmarked after the above date will be returned. *Equal Opportunity Employer.*

VACANCY

DIRECTOR, BUREAU OF VETERINARY MEDICINE FOOD AND DRUG ADMINISTRATION

SALARY: \$47,889 to \$50,112 (SENIOR EXECUTIVE SERVICE)
Physicians are eligible for a comparability allowance up to \$10,000 per year

The Food and Drug Administration has a position available for **DIRECTOR, BUREAU OF VETERINARY MEDICINE**. The director is responsible for providing executive direction to the Bureau's scientific and regulatory activities which are designed to develop and implement veterinary medical policy with respect to the safety and effectiveness of animal drugs, feed additives, and devices.

This is an exciting and challenging opportunity for an individual who has worked professionally in the field of animal or health sciences. Candidates will be evaluated on demonstrated ability to make policy decisions; plan, implement, and evaluate programs; deal with individuals and groups outside one's organization; handle a supervisory or management position; and implement employment and career opportunities for minorities, women, handicapped, and special interest groups. It is desirable that candidates possess professional experience in the animal drug field and research experience.

Curriculum vitae should be sent to: **DIVISION OF PERSONNEL MANAGEMENT (HFA-425) Food and Drug Administration, Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20857**. For further information, please telephone: Mrs. Wood, collect on 301-443-4210. To ensure full consideration, applications should be received by 19 November 1980.

This position may also be filled by current commissioned officers of the U.S. Public Health Service or by former commissioned officers willing to rejoin the Corps.

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VACANCY

DIRECTOR, BUREAU OF DRUGS FOOD AND DRUG ADMINISTRATION

SALARY: \$47,889 to \$50,112 (SENIOR EXECUTIVE SERVICE)
Physicians are eligible for a comparability allowance up to \$10,000 per year

The Food and Drug Administration, Rockville, Maryland, invites applications for the position of **DIRECTOR, BUREAU OF DRUGS**. The director is responsible for planning and directing the Agency's scientific and regulatory programs which are designed to develop and implement national standards and regulations for human drugs.

This is an exciting and challenging opportunity for an individual who has worked professionally in the field of human drugs and has the executive qualifications necessary to lead and direct over 1100 medical, scientific, and allied professionals. Candidates will be evaluated on the quality of their experience in the field of human drugs; their ability to plan, implement, and evaluate programs; attract, retain, and motivate well-qualified scientific and professional personnel; enforce rules and regulations; represent an organization; implement equal employment opportunity; and on their professional stature, clinical competence, and research experience in human drug investigation.

Curriculum vitae should be sent to: **DIVISION OF PERSONNEL MANAGEMENT (HFA-425), Food and Drug Administration, Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20857**. For further information, please telephone: Mr. Dolch, collect, on 301-443-4210. To ensure full consideration, applications should be received by 14 November 1980.

This position may also be filled by current commissioned officers of the U.S. Public Health Service, or by former officers willing to rejoin the Corps.

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TRANSGENE S.A., a new research company, is being launched by leading industrial and financial French groups.

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at the post doctoral level, or having at least 2 to 3 years of practice in the aforementioned fields.

Salaries will be competitive and commensurate with qualification.

Initial contract duration will be 3 years.

Knowledge of French is not necessary.

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POSITIONS OPEN

UNIVERSITY OF CALIFORNIA. POSTDOCTORAL POSITION involving trace organic analyses of toxic pollutants in complex environmental mixtures. Experience in capillary gas chromatography is highly desirable; some knowledge of HPLC and mass spectrometry would be an advantage. Available 1 October for one year; second year subject to performance and continued agency funding. Salary range: \$17,112 to \$18,732. Candidates should send curriculum vitae and names of three references as soon as possible to: **Dr. B. J. Kimble, Laboratory for Energy-Related Health Research, University of California, Davis, Calif. 95616.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION IN BIOCHEMISTRY available 1 October 1980 to study transport and metabolism of purine bases and nucleosides in cultured neurons and isolated nerve terminals. Ph.D. in biochemistry or neuroscience preferred. Salary: \$13,500, with appointment renewable for second year. Send curriculum vitae and two letters of reference to: **Dr. Eugene M. Barnes, Jr., Department of Biochemistry, Baylor College of Medicine, Houston, Texas 77030.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH-TEACHING POSITION IN PSYCHOBIOLOGY available at the University of Florida for academic year 1980-1981. Teach a section of physiological psychology and remainder of time devoted to research. Research in behavioral neurochemistry preferred, but other interest would be considered. Send curriculum vitae, description of research, and three letters of recommendation to: **Dr. Merle E. Meyer, Chair, Department of Psychology, 114 Psychology Building, University of Florida, Gainesville, Florida 32611.**

POSTDOCTORAL RESEARCH ASSOCIATE

Position available to start fall-winter with group investigating role of ion transport in insulin action. Studies include Na-K-ATPase, ion fluxes, physiological studies on whole animals, effect of ions on metabolic pathways, intracellular microelectrodes, Fourier transform NMR. Previous experience in these specific areas is not necessary, but background which motivates interest in these areas is desirable. Send résumé and three references to: **Dr. Richard D. Moore, Professor of Biophysics, State University of New York, Plattsburgh, New York 12901.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL/RESEARCH ASSOCIATE

Ph.D. in biochemistry or related field required. Biochemist to study interactions of chemical carcinogens in liver proteins. Experience in protein isolation and characterization, growth factors, and chemical carcinogenesis is desirable. Send detailed résumé and supporting material to: **THE INSTITUTE FOR CANCER RESEARCH, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, Pa. 19111.** *Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATES. Positions available to work either on (i) cloning and studying the organization and transcription of the genes for small nuclear U1(D) and U2(C) RNA's; or (ii) the possible role of these RNA's in mRNA splicing. Send curriculum vitae and names of three references to: **Dr. G. L. Eliceiri, Pathology Department, St. Louis University Medical Center, 1402 South Grand Boulevard, St. Louis, Mo. 63104.** *Equal Opportunity/Affirmative Action Employer, M/F/H.*

NATIONAL SCIENCE FOUNDATION (NSF)

The NSF's Division of Physiology, Cellular, and Molecular Biology is seeking qualified applicants to fill 1- or 2-year terms as **PROGRAM DIRECTORS** for the Biochemistry, Cell Biology, Cellular Physiology, and Regulatory Programs. The positions will become available in August-September 1981. Applicants should have 6 to 8 years of experience beyond the Ph.D. and a broad understanding of current research in the areas represented in each of the programs. The positions are excepted from the competitive civil service at the EC-14/15 (equivalent to the GS-14/15) grade level; \$34,713 to \$45,126 per annum. Salary is based on professional qualifications and experience. Applicants should submit curriculum vitae by 1 November 1980 to: **National Science Foundation, Personnel Administration Branch, 1800 G Street, NW, Room 212, Washington, D.C. 20050.** For further information, telephone E. Paul Broglio, at 202-357-7841. *NSF is an Equal Opportunity Employer.*

POSITIONS OPEN

The Ocean Research Division has a **POSTDOCTORAL POSITION** in marine chemistry available in a research project involved in the study of low-molecular-weight organic acids in seawater. Strong background required in both organic chemistry and methodology used in high-resolution capillary gas chromatography. Some sea time will be necessary. Salary range: \$14,916 to \$18,732 commensurate with qualifications. Send résumé and names of three references by 3 October 1980 to: **Dr. Jeffrey L. Bada, A012-B, Scripps Institution of Oceanography, University of California at San Diego, La Jolla, Calif. 92093.** *University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE POSITION (postdoctoral) available immediately for biochemist-virologist interested in studying the role of protein, phospholipid, and nucleic acid methylations in viral infections. Experience with cell culture systems would be desirable. Salary: \$12,000 to \$13,500 per year, commensurate with experience. Send curriculum vitae and two letters of recommendation to: **Dr. Ronald T. Borchardt, Smissman Research Laboratories, 2095 Avenue A, West Campus, University of Kansas, Lawrence, Kans. 66044.** Deadline for applications: 3 October 1980. *University of Kansas is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE POSITION (postdoctoral) available immediately for biochemist-enzymologist interested in studying the active site and mechanism of catalysis of SAM-dependent methyltransferases. Salary: \$12,000 to \$13,500 per year, commensurate with experience. Send curriculum vitae and two letters of recommendation to: **Dr. Ronald T. Borchardt, Smissman Research Laboratories, 2095 Avenue A, West Campus, University of Kansas, Lawrence, Kans. 66044.** Deadline for applications: 3 October 1980. *University of Kansas is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH BIOPHYSICIST. Career federal service. To conduct research on the energetics of chemical and physical associations existing among selected plant components leading to new concepts and techniques for separating components from plant tissue. Salary based on qualifications and experience (GS-11 salary range: \$20,611 to \$26,794). Position located at Northern Regional Research Center, Peoria, Illinois. For application forms and complete details, contact: **William M. Doane, Biomaterials Conversion Laboratory, Northern Regional Research Center, 1815 North University Street, Peoria, Illinois 61604.** *An Equal Opportunity Employer.*

RESEARCH OPPORTUNITIES WITH SANOFI

- ▶ If you are an experienced research scientist
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- ▶ If you are ready to organize and animate a research unit
- ▶ If you are fluent in French and English

then a major French pharmaceutical group can offer you in France or in Belgium a responsible research position in one of the following fields:

- Neurophysiology
- Neurobiochemistry
- Haemobiology and thrombosis research
- Metabolism and pharmacokinetics
- Cardiovascular physiopathology

The directorship of a research center could be offered to an outstanding candidate. All applications together with a curriculum vitae should be mailed to: **C.R.E.P. (subsidiary of SANOFI), Attention, J. SINGIER, 37, Avenue Pierre I^{er} de Serbie, F-75008 Paris, France.**

Genentech, Inc., has an opening for a highly qualified **SCIENTIST** in our **Organic Chemistry Department**. Ph.D. in chemistry and more than 2 years of postdoctoral training in nucleic acid chemistry area are required. Familiarity with the phosphotriester method to the synthesis of DNA and publications in international journals on related topics will be highly considered. Competitive salary and excellent fringe benefits.

Please send résumé and list of names and addresses of three references to: **Genentech, Inc., 460 Pt. San Bruno Boulevard, South San Francisco, Calif. 94080.** Attention: Human Resources.

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POSITIONS OPEN

RESEARCH INSTRUCTOR—Ph.D. in pharmacology; nontenured position with research and teaching responsibilities. Research background should include animal studies, with opioid peptides and narcotics, EEG recording, power spectral analysis, and chronic intraventricular injections. Salary commensurate with qualifications. Write: **Dr. John J. O'Neill, Chairman, Department of Pharmacology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, Pa. 19140.** *Equal Opportunity/Affirmative Action Employer.*

TOXICOLOGY

We seek to appoint at Ph.D. level an individual having the necessary expertise and commitment to initiate, develop, and direct a regional toxicology laboratory within an academic framework. The programmatic components will include therapeutic drug evaluation, substance abuse, and a major thrust in industrial toxicology. The appointee would have opportunity for individual and/or collaborative research in a multidisciplinary department and be encouraged to develop relevant training programs for area health professionals. The appointment carries academic rank (assistant/associate professor), and professional growth is encouraged. Complete curriculum vitae and the names of three references should accompany the application and be addressed to:

**D. Salafsky, Ph.D.
Head, Department of Biomedical Sciences
Rockford School of Medicine
University of Illinois at the Medical Center
1601 Parkview Avenue
Rockford, Ill. 61101**

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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 September 1981 and December 1982. Applicants must be U.S. citizens and have a doctoral degree in the natural or social and behavioral sciences by the time of visit. Deadline for requesting applications is Friday, 17 October 1980. Please contact:

**Section on U.S.S.R. and Eastern Europe
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Telephone: 202-389-6228 or 389-6616**

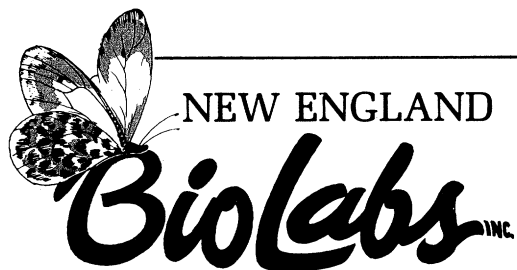
MARKETPLACE

RESEARCH GRANTS

Research Funding Journal (RFJ) is published monthly. RFJ is an ongoing source of information on both governmental and foundation funding sources for the biological, medical, and physical sciences. Funding sources along with their eligibility, deadlines, and application procedures are described in each issue. Price: \$39 per year. **Warren Research, Department 109, Box 1771, Decatur, Illinois 62525.**

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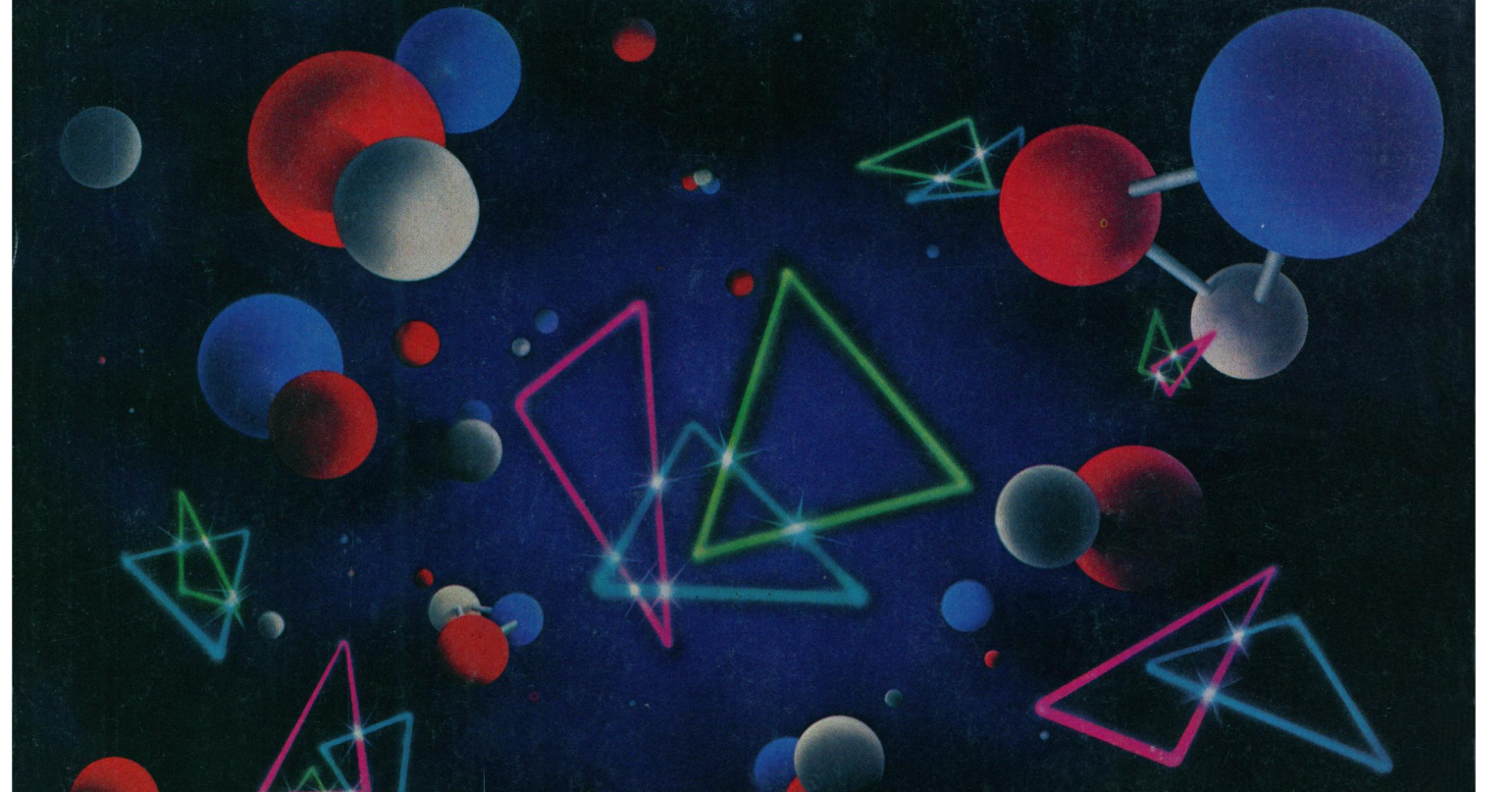
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IN SEARCH OF THE QUARK

Albert Einstein spent years trying to prove his "unified field" theory. He believed that all of nature's basic forces—gravitation, electromagnetism, and the nuclear strong and weak forces—contain the minutest of particles, dubbed quarks. If they exist, quarks could constitute the building blocks of all matter.

No one has yet seen a quark, but physicists have uncovered strong evidence that supports its existence. In an experiment conducted at Fermi National Accelerator Laboratory, electrons were smashed into positrons, producing mass-energy debris. Particles resulting from the high-voltage collision were analyzed and declared to indicate the presence of a quark,

an antiquark, and a gluon (believed to be the strong force binding together minuscule particles in the atomic nucleus).

To collect the debris formed in these experiments, the KODAK Chemicals scintillators, BBOT and PPO were imbedded in plastic and used as detectors.

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