

grain photographic plates obtained with the Kitt Peak 4-meter telescope, and R. G. Kron, who discusses briefly his counts as a function of color on similar plates, Karachentsev found significant differences between the observational data and the results expected on the basis of the simplest physical models. The galaxy counts clearly contain information about the universe long ago, when the light left the distant galaxies. But the numbers per unit magnitude result from a complicated interplay of galaxy formation rates, luminosity functions, and evolution, and the interpretation of observed counts is by no means single-valued. More information, particularly spectra of individual faint galaxies, will be necessary to distinguish between possible alternative models. Nevertheless, the deep photographs provide tantalizing glimpses out into the unknown.

The objects with the largest observed redshifts we know are the quasars and QSO's, names used interchangeably for quasistellar objects, whether they are radio-loud or radio-quiet, by most of the authors in this volume. In order to study them, and in particular to test whether the apparent cutoff at redshift $z = 3.5$ is real, it is necessary to find faint quasars. P. S. Osmer gives a good review of results already achieved by spectral surveys with objective prisms and "grisms" and of the limits that can be reached by these methods.

In arguing that there is an almost overwhelming case for the reality of noncosmological redshifts in quasars, G. Burbidge hints darkly that others who favor his view have not been invited to speak at the symposium and closes with the declaration that a revolution is upon us whether we like it or not. In the papers immediately before and after his, A. Stockton and R. J. Weymann present observational data that strongly favor the interpretation that the quasars they are studying spectroscopically do have cosmological redshifts.

This is a selection of the papers I found most interesting, not including the several on galaxy and QSO spectroscopy by University of California authors, which I will let the reader discover for himself or herself. The entire wavelength range is covered in the book, together with many theoretical interpretations and speculations. It is a stimulating, interesting, informative volume that I strongly recommend to every student of the universe.

DONALD E. OSTERBROCK

Lick Observatory,
University of California,
Santa Cruz 95064

Books Received

Anesthetic Exposure in the Workplace. Ellis N. Cohen. PSG Publishing Company, Littleton, Mass., 1980. xiv, 198 pp., illus. \$22.50.

Annual Reports on NMR Spectroscopy. Vol. 9. G. A. Webb, Ed. Academic Press, New York, 1979. x, 426 pp., illus. \$57.50.

Annual Review of Medicine. Selected Topics in the Clinical Sciences. Vol. 31. William P. Creger, C. H. Coggins, and E. W. Hancock, Eds. Annual Reviews, Palo Alto, Calif., 1980. x, 570 pp., illus. \$17.

Biomechanics of Human Movement. David A. Winter. Wiley-Interscience, New York, 1979. xx, 202 pp., illus. \$19.95. Biomedical Engineering and Health Systems.

Biomembranes. Fundamentals in Relation to Human Biology. James S. Beck. Hemisphere, Washington, D.C., and McGraw-Hill, New York, 1980. x, 172 pp., illus. \$19.95.

Combustion Modeling in Reciprocating Engines. Proceedings of a symposium, Warren, Mich., Nov. 1978. James N. Mattavi and Charles A. Amann, Eds. Plenum, New York, 1980. x, 606 pp., illus. \$69.50.

Comfortable Quarters for Laboratory Animals. Animal Welfare Institute, Washington, D.C., ed. 2, 1979. iv, 108 pp., illus. Paper, \$3.

The Coming Crisis of Western Sociology. Alvin W. Gouldner. Basic Books, New York, 1980. xvi, 528 pp. Paper, \$7.95. Reprint of the 1970 edition.

Common Intertidal Invertebrates of the Gulf of California. Richard C. Brusca with contributed chapters by ten others. University of Arizona Press, Tucson, ed. 2, 1980. xx, 514 pp., illus. + plates. Paper, \$26.95.

Computational Fluid Dynamics. Wolfgang Kollmann, Ed. Hemisphere, Washington, D.C., 1980. viii, 612 pp., illus. \$55. A von Karman Institute Book.

Computer Applications in Fermentation Technology. Proceedings of a conference, Philadelphia, Aug. 1978. William B. Armiger, Ed. Interscience (Wiley), New York, 1979. vi, 400 pp., illus. Paper, \$28. *Biotechnology and Bioengineering* Symposium No. 9.

Computer Organization. Hardware/Software. G. W. Gorsline. Prentice-Hall, Englewood Cliffs, N.J., 1980. x, 310 pp., illus. \$19.95.

Computer Processing of Electron Microscope Images. P. W. Hawkes, Ed. Springer-Verlag, New York, 1980. xiv, 298 pp., illus. \$34. Topics in current Physics, vol. 13.

Computer System Reliability. Roy Longbottom. Wiley-Interscience, New York, 1980. xxiv, 322 pp., illus. \$31.95. Wiley Series in Computing.

Computer Techniques in Radiation Transport and Dosimetry. Proceedings of a school, Erice, Sicily, Oct. 1978. Walter R. Nelson and Theodore M. Jenkins, Eds. Plenum, New York, 1980. xii, 522 pp., illus. \$55. Ettore Majorana International Science Series, vol. 3.

Computers and Management in a Changing Society. Donald H. Sanders and Stanley J. Birkin. McGraw-Hill, New York, ed. 3, 1980. xx, 490 pp., illus. Paper, \$12.95.

Concept Formalization in Nursing. Process and Product. Dorothea E. Orem, Ed. Little, Brown, Boston, ed. 2, 1979. xii, 314 pp. \$12.95.

The Fleecing of America. William Proxmire. Houghton Mifflin, Boston, 1980. x, 238 pp. \$10.95.

Flora Europaea. Vol. 5, Alismataceae to Orchidaceae (Monocotyledones). T. G. Tutin and eight others, Eds. Cambridge University

Press, New York, 1980. xxxviii, 452 pp. + maps. \$85.

Fluid Mechanics. William Bober and Richard A. Kenyon. Wiley, New York, 1980. xvi, 558 pp., illus. \$22.95.

The International Pharmacopoeia. Vol. 1, General Methods of Analysis. World Health Organization, Geneva, ed. 3, 1979 (U.S. distributor, WHO Publications Centre USA, Albany, N.Y.). 224 pp. Paper, \$14.40.

Introduction to Biological Membranes. Mahendra Kumar Jain and Roger Curtis Wagner. Wiley-Interscience, New York, 1980. xvi, 382 pp., illus. \$29.50.

Introduction to Functional Analysis. Angus E. Taylor and David C. Lay. Wiley, New York, ed. 2, 1980. xii, 468 pp. \$23.95.

An Introduction to the Chemistry and Biochemistry of Pyrimidines, Purines and Pteridines. Derek T. Hurst. Wiley, New York, 1980. viii, 266 pp., illus. \$39.

Parasitic Worms. D. W. T. Crompton and S. M. Joyner, Wykeham, London, and Crane, Russak, New York, 1980. x, 208 pp., illus. Paper, \$15.95. Wykeham Science Series.

Patterns of Chloroplast Reproduction. A Developmental Approach to Protoplasmic Plant Anatomy. Theodor Butterfass. Springer-Verlag, New York, 1979. xiv, 206 pp., illus. \$59. Cell Biology Monographs, vol. 6.

Patterns of Development in Conidial Fungi. Garry T. Cole and Robert A. Samson. Pitman, Marshfield, Mass., 1979. xii, 190 pp., illus. \$67.95.

Personality. Basic Aspects and Current Research. Ervin Staub, Ed. Prentice-Hall, Englewood Cliffs, N.J., 1980. xiv, 386 pp. \$17.95.

Pharmacokinetics of Psychoactive Drugs. Further Studies. Papers from a meeting. Dec. 1977. Louis A. Gottschalk, Ed. SP Medical and Scientific Books (Spectrum), New York, 1979. xiv, 158 pp., illus. \$20.

The Philosophy of Life and the Universe. Howard G. Schreiber. Vantage Press, New York, 1980. xii, 170 pp. \$6.50.

The Search for Solutions. Horace Freeland Judson. Holt, Rinehart and Winston, New York, 1980. xii, 212 pp., illus. \$16.95.

Secondary Plant Products. E. A. Bell and B. V. Charlwood, Eds. Springer-Verlag, New York, 1980. xvi, 676 pp., illus. \$108.90. Encyclopedia of Plant Physiology, New Series, vol. 8.

Selected Papers. Jacob Wolfowitz. J. Kiefer, Ed. Springer-Verlag, New York, 1980. xxiv, 642 pp. \$35.

Stones. Their Collection, Identification, and Uses. R. V. Dietrich. Freeman, San Francisco, 1980. xiv, 146 pp., illus. Cloth, \$12.95; paper, \$6.95. A Series of Books in Geology.


Street-Level Bureaucracy. Dilemmas of the Individual in Public Services. Michael Lipsky. Russell Sage Foundation, New York, 1980 (distributor, Basic Books, New York). xviii, 244 pp. \$10.

Women Discover Orgasm. A Therapist's Guide to a New Treatment Approach. Lonnie Barbach. Free Press (Macmillan), New York, 1980. xviii, 238 pp. \$20.

Writing for Communication in Science and Medicine. Barbara S. Lynch and Charles F. Chapman. Van Nostrand Reinhold. New York, 1980. xiv, 320 pp., illus. \$18.95.

You Gotta Deal with It. Black Family Relations in a Southern Community. Theodore R. Kennedy. Oxford University Press, New York, 1980. viii, 278 pp. Paper, \$4.95.

The Zero-Sum Society. Distribution and the Possibilities for Economic Change. Lester C. Thurow. Basic Books, New York, 1980. vi, 230 pp. \$12.95.



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Literature

TLC and Photographic Documentation products appear in a 16-page catalog. Fotodyne. Circle 810.

Multilingual Aeronautical Dictionary translates English, Spanish, French, Italian, Russian, German, Dutch, Portuguese, Turkish, and Greek terminology. National Technical Information Service. Circle 812.

ELISA Systems lists instruments, diagnostics, and options for Enzyme-Linked ImmunoSorbent Assay testing. Gilford Instrument Laboratories. Circle 813.

Separation Science offers primers on technique in addition to innovative products for fractionation and chromatography. Schleicher & Schuell. Circle 814.

Laboratory Equipment and Apparatus describes more than 40 major products in five lines including hoods, blowers and air movers, safety enclosures, time-savers, and Kjeldahl apparatus. Labconco. Circle 815.

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The 1981-82 AAAS Congressional Science and Engineering Fellow will receive a stipend of \$21,000; an additional \$1500 is available for relocation expenses and travel in connection with the Program.

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Qualifications for the position include a Ph.D. or M.D. degree and experience in teaching gross anatomy. Applicants should have sufficient evidence of scholarship and research potential to qualify for a tenure-track appointment in an appropriate academic department (for example, Biological Science) at Florida State University. Send letters of application along with curriculum vitae and three letters of recommendation to: Dr. Robert H. Reeves, Director, Program in Medical Sciences, Florida State University, Tallahassee, Florida 32306. Application deadline is 31 December 1980.

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Dr. Robert W. Rubin, Anatomy
University of Miami School of Medicine
P.O. Box 016960 (R124)
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Dr. Martin Prinz
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Applicants are being sought for three anticipated positions in **BIOLOGICAL SCIENCES.** All are tenure-track appointments at the assistant professor level. Development of a research program is expected.

COMPARATIVE ANIMAL PHYSIOLOGY: applicants may expect to teach in an introductory physiology course and to develop an upper level specialty course(s).

MAMMALIAN PHYSIOLOGY: primary teaching responsibilities are in introductory and upper-level courses in animal physiology. A background in pharmacology is preferable.

MICROBIOLOGY: teaching introductory courses associated with allied health programs is the major teaching responsibility.

Interested persons should send complete curriculum vitae, three letters of recommendation, transcripts of undergraduate and graduate study, and other supporting information to:

G. R. Hogan, Chairman
Department of Biological Sciences
Indiana University-Purdue University
at Fort Wayne
2101 Coliseum Boulevard East
Fort Wayne, Ind. 46805

Appointments are anticipated to be effective August 1981, and no applications will be accepted after 16 February 1981.

Indiana University-Purdue University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF MICROBIOLOGY

Department of Microbiology, College of Physicians and Surgeons, Columbia University, has openings for two assistant professors with strong research accomplishments in: (i) bacterial genetics (molecular) and (ii) molecular basis of bacterial pathogenesis. Applicants must have appreciable postdoctoral experience and capacity to establish strong, independent research program. In addition to research, successful candidates will be required to participate in courses for medical students and Ph.D. candidates. These tenure-track positions can begin July 1981. Interested persons should send résumé, summary of research interests, and names of four references to:

Harold S. Ginsberg, M.D., Chairman
Columbia University
College of Physicians and Surgeons
Department of Microbiology
701 West 168 Street
New York, New York 10032

Columbia University is an Equal Opportunity Employer.

CELL BIOLOGISTS—ANATOMISTS

The University of North Carolina at Chapel Hill invites applications for junior and senior faculty positions in the Department of Anatomy and Laboratories for Cell Biology. Applicants must have post-doctoral research experience and goals in cell surface or membrane biology, cellular immunobiology, cancer cell biology, somatic cell genetics, cellular neurobiology, or the biology of cytoskeleton or cell motility. Research utilizing cell culture methods in developmental, reproductive, and neurobiology especially desirable. Teaching obligations will be in medical histology, neurobiology, human gross anatomy, or in graduate-level courses in cell biology. Send curriculum vitae, a brief description of research plans, and the names of three references to: **Dr. Charles R. Hackenbrock, Chairman, Department of Anatomy, School of Medicine, 111 Swing Building 217H, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27514.**

An Equal Opportunity/Affirmative Action Employer

DEANSHIP

COLLEGE OF AGRICULTURE UNIVERSITY OF WISCONSIN—RIVER FALLS

POSITION: Dean, College of Agriculture. Twelve-month appointment with a 1 July 1981 starting date.

RESPONSIBILITIES: administration and responsibility for all academic, extension, and research programs within the College of Agriculture.

QUALIFICATIONS: earned doctorate in agriculture related field, college teaching experience, administrative experience, experience in research and/or extension, as well as interest in statewide agricultural programs.

SALARY: \$45,000 to \$40,000, depending upon qualifications.

The University of Wisconsin—River Falls is a non-land grant institution located in west central Wisconsin, 28 miles from St. Paul, Minnesota. It consists of a College of Arts and Sciences, College of Education, College of Agriculture, Division of Student Affairs, and a Graduate School. The 1980-1981 university enrollment is 5300 with 325 faculty members.

The College of Agriculture is divided into five academic departments: Agricultural Economics, Agricultural Education, Agricultural Engineering Technology and Industrial Education, Animal and Food Science, and Plant and Earth Science. In recent years, student enrollment in the College of Agriculture has been increasing at a rate of about 12.5 percent per year, with a current total of 1865 majors and 53 faculty members and academic staff.

Send letter of application, curriculum vitae, and three current letters of recommendation to:

Dr. Vern Elefson
Chairman, Search and Screen Committee
College of Agriculture
University of Wisconsin—River Falls
River Falls, Wisconsin 54022

Deadline for application is 1 January 1981.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSORSHIP, DEPARTMENT OF BIOCHEMISTRY AND BIOPHYSICS LOYOLA UNIVERSITY OF CHICAGO STRITCH SCHOOL OF MEDICINE

Tenure-track position. Active research essential. Grant record desirable. Applicant should have Ph.D. in biochemistry or related field and appropriate post-doctoral experience. Interest in cell surfaces, membranology, or immunology preferred. Competitive salary and appropriate starting funds offered. Duties include productive research and effective teaching of medical and graduate students. Application deadline: 1 January 1981. Send curriculum vitae, selective reprints, a concise description of current and prospective research program, and names of three references to:

Dr. A. Rosenberg, Chairman
Department of Biochemistry and Biophysics
LOYOLA UNIVERSITY MEDICAL CENTER
2160 South First Avenue
Maywood, Illinois 60153

Affirmative Action/Equal Opportunity Employer

ASSISTANT PROFESSOR: GENETICS. Applications are reopened for a tenure-track position in the Biology Department at Cleveland State University. Applicants should possess a Ph.D. with teaching and research interests in some aspect of genetics. Teaching in the introductory biology courses as well as participation in the graduate (M.S. and Ph.D.) programs, and establishment of an active research program is expected. Forward curriculum vitae, statement of teaching and research interests and goals, and three letters of recommendation by 15 January 1981 to: **Dr. Kenneth M. Hoff, Chairperson Search Committee, Department of Biology, Cleveland State University, 1983 East 24 Street, Cleveland, Ohio 44115.** *Equal Opportunity Employer, M/F/H.*

BIOCHEMICAL PHARMACOLOGIST

The Department of Biochemical Pharmacology of the State University of New York at Buffalo (SUNY/B) is seeking a biochemical pharmacologist. An individual is sought with expertise in one or other of the following areas: CNS pharmacology with a biochemical orientation; biochemical endocrine pharmacology; cellular toxicology. The candidate should have a Ph.D. in pharmacology and two or more years of experience beyond the postdoctoral level. Ideally, the applicant will have an ongoing and funded research program. Teaching responsibilities will include participation in undergraduate general pharmacology courses and research and teaching at the graduate level. Level: assistant professor (or under exceptional circumstances, associate professor); tenure track. Please send curriculum vitae and the names of three references to: **Dr. D. J. Trigg, Department of Biochemical Pharmacology, 317 Hochstetter Hall, State University of New York, Buffalo, New York 14260.** *SUNY/B is an Equal Opportunity/Affirmative Action Employer.* Deadline for applications: 15 February 1981.

BOTANISTS, ZOOLOGISTS, ECOLOGISTS

Environmental Quality Laboratory, Inc., is soliciting applications for a position in biological and water quality assessment in South Florida. Applicants must have M.S. in one of the above disciplines. Salary: \$14,000 to \$15,000. Apply to: **D. H. Ross, Environmental Quality Laboratory, Inc., Port Charlotte Industrial Park, 1767 South Tamiami Drive, Port Charlotte, Fla. 33952.**

CHIEF—ANIMAL CARE UNIT

The Primate Research Institute, New Mexico State University, seeks candidates to direct the Animal Care and Clinical Service Units. Responsibilities include administration of these units and supervision of clinical care and research support for 500 primates and a small rodent colony. The individual selected will be expected to lead the Institute toward AAALAC accreditation. Candidates must have a D.V.M. degree, preferably with specialty training in laboratory animal medicine or comparative medicine. Extensive and recent experience in administration as well as in clinical veterinary medicine of macaques and/or chimpanzees is necessary. Experience in experimental design, laboratory investigation, and experimental surgery would be highly desirable. Applicants are invited to submit curriculum vitae and references to: **Director, Primate Research Institute, New Mexico State University, P.O. Box 1027, Holloman Air Force Base, New Mexico 88330.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

Biologist TISSUE CULTURE BIOLOGIST SOUTHERN CALIFORNIA

Leading tissue culture labware manufacturing concern has an immediate requirement for enterprising B.S./M.S. who has majored in cell biology or virology. Ideally, this individual will have 2 to 3 years of laboratory experience in tissue culture, with a thorough knowledge of biochemical and immunological techniques.

Our progressive firm offers an attractive starting salary and benefits package, in a sunny coastal environment. For consideration, please address résumés in confidence to: **Human Resources Department, BECTON DICKINSON LABWARE, 1950 Williams Drive, Oxnard, Calif. 93030.** *As an Equal Opportunity Employer, we encourage all qualified minorities and females to apply.*

CELL AND MOLECULAR BIOLOGY

The Department of Biology at West Virginia University invites applications for a tenure-track assistant professor position. This appointment is contingent upon funding and would be available 16 August 1981. The applicant must be able to teach at the undergraduate and graduate level and to develop a strong research program. While all applicants with excellent research records in cell/molecular biology will be considered, special attention will be given to persons with expertise in one of the following areas: (i) development of an interface between cell- or microbiology and environmental studies (pollution- or energy-related) or (ii) a molecular or genetic approach to cell growth regulation. Before 1 February 1981 submit curriculum vitae, names of three references, and a description of research plans to: **Dr. D. C. Quinlan, Department of Biology, West Virginia University, Morgantown, W. Va. 26506.** *An Equal Opportunity/Affirmative Action Employer.*

CHAIRPERSON. Department of Biochemistry—Candidates must have substantial background in academic medicine evidenced by a record of excellence in teaching, research, and leadership in medical and graduate education. Interested persons are encouraged to submit their credentials and curriculum vitae to: **Dr. Donald E. Hill, Chairman, Biochemistry Search Committee, Slot 512, University of Arkansas College of Medicine, University of Arkansas for Medical Sciences, 4301 West Markham Street, Little Rock, Arkansas 72201.** *Affirmative Action/Equal Opportunity Employer.*

The University of Michigan, School of Natural Resources, is seeking applicants for a tenure-track, **ENDOWED CHAIR, TEACHING-RESEARCH POSITION** in outdoor recreation to be filled at a level commensurate with qualifications. Applications should be sent to: **William J. Johnson, Dean, School of Natural Resources, The University of Michigan, Ann Arbor, Mich. 48109.** Closing date: 31 January 1981. *An Equal Opportunity/Affirmative Action Employer.*

CHAIRPERSON, Department of Medicine, College of Medicine, Medical University of South Carolina, Charleston, South Carolina. *Qualified women and minority candidates are encouraged to apply.* Please send curriculum vitae to:

Dr. Richard L. Dobson
Chairman, Search Committee
171 Ashley Avenue
Charleston, S.C. 29403

DEAN, SCHOOL OF BIOLOGICAL SCIENCES

The University of California, Irvine, is seeking a new dean of the School of Biological Sciences, and professor of biological sciences. Applicants should be eligible for tenured appointment, have a strong record of research accomplishment, and demonstrated administrative experience. The dean has academic and administrative responsibility for the school and reports to the executive vice chancellor. Preference will be given to those whose research areas complement those of the existing faculty.

Letters of application, together with complete curriculum vitae and the names of three references, should be sent to:

Dr. James L. McGaugh
Executive Vice Chancellor
Room 509 Administration
University of California, Irvine
Irvine, Calif. 92717

To ensure consideration, applications should be submitted no later than 15 December 1980. *The University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

UNIVERSITY OF CHICAGO DIVISION OF THE BIOLOGICAL SCIENCES

The Department of Pharmacological and Physiological Sciences is considering candidates with research interests in the area of **CELL PHYSIOLOGY.** *From the time of its original charter, the principle of the University of Chicago has been to appoint scholars without regard to race, color, religion, sex, or national origin.* Please have three professional persons write us concerning you and send your résumé together with your most significant publications to:

Alfred Heller, Professor and Chairman
Department of Pharmacological and
Physiological Sciences
University of Chicago
947 East 58 Street
Chicago, Illinois 60637

CHAIRPERSON, DEPARTMENT OF BIOLOGICAL SCIENCES

We seek a biologist with demonstrated competence in teaching, research, and administration as professor and chairperson of a department of 40 faculty members. Curricula lead to the B.A., B.S., and M.A. degrees. The candidate is expected to generate grant support for innovative teaching or research. Send completed applications by 20 January to: **Dr. R. Bernstein, Biological Sciences Department, SAN FRANCISCO STATE UNIVERSITY, 1600 Holloway Avenue, San Francisco, Calif. 94132.**

An Equal Opportunity/Affirmative Action Employer. Qualified women and members of minority groups are strongly urged to apply.

CHAIRPERSON, DEPARTMENT OF PREVENTIVE MEDICINE

The University of Mississippi Medical Center seeks qualified candidates for chairperson of the School of Medicine Department of Preventive Medicine. Duties include providing leadership in building excellence in the teaching, research, and service functions of a department emphasizing epidemiology, health systems, and biometry. The position is available on 1 July 1981. Nominations or applications, including curriculum vitae, list of publications, and three or more references, should be sent before 15 February 1981 to: **Dr. Harold B. White, Jr., Chairman, Preventive Medicine Search Advisory Committee, University of Mississippi Medical Center, 2500 North State Street, Jackson, Miss. 39216.** *Equal Opportunity Employer, M/F.*

CHAIRMAN—RADIATION THERAPY

University of Maryland School of Medicine in Baltimore, Maryland, is seeking an individual to fill the position of chairman of the Department of Radiation Therapy. The individual must have strong credentials in the chemical and research areas as well as patient care. Please send your curriculum vitae and names of references to the address below. Nominations by others are also encouraged.

Send all information to:

Dr. Adil E. Shamoo
Chairman, Radiation Therapy Search Committee
Department of Biological Chemistry
University of Maryland School of Medicine
660 West Redwood Street
Baltimore, Maryland 21201

DIRECTOR REHABILITATIVE ENGINEERING R & D VETERANS ADMINISTRATION

The Veterans Administration seeks qualified candidates for the position of director, Rehabilitative Engineering Research and Development Service (RER & DS). Director is responsible for nationwide program of R & D in devices, techniques, and concepts of rehabilitation encompassing areas of prosthetics, orthotics, orthopedics, spinal cord injury, sensory and mobility aids. RER & DS supports over 70 research projects budgeted at \$9 million in FY 81. Experience in rehabilitative engineering and in management of R & D programs are both essential. Applicants must be licensed to practice medicine. U.S. citizenship required. This is an excepted service position with base salary to \$50,112 per annum and bonus pay to \$27,500. Initial appointment is for 4 years, subject to extension. Submit curriculum vitae to: **Richard J. Greene, Ph.D., M.D., Chairman, Search Committee (153), Veterans Administration, 810 Vermont Avenue, NW, Washington, D.C. 20420** or telephone: 202-389-2666. Application deadline: 31 December 1980. *The Veterans Administration is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR IN NEUROBIOLOGY to conduct active independent research program in mammalian neuroanatomy and neurophysiology. Applicants should send curriculum vitae, a statement of research interests, and names of references to: **Dr. Donald J. Woodward, Neurobiology Search Committee, Department of Cell Biology, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235.**

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

STS RESEARCH FELLOWSHIPS

The MIT Program in Science, Technology, and Society, with the support of the Exxon Education Foundation, invites applications for several one-year research fellowships on the relationships of science, technology, and society.

Selection criteria include:

- a record of outstanding performance in a particular field of science, engineering, social science, or the humanities;
- evidence of a commitment to research involving the interaction of science, medicine, or engineering with society;
- a proposal of study and research for the fellowship year related to the Program's areas of research and teaching, which include:
 - Social and Historical Studies of Science and Technology
 - Technology and the Political Economy of Industrial Societies
 - Cultural Dimensions (e.g., ideological, aesthetic, ethical) of Science and Technology
 - Policy Studies Involving Science and Technology

Application should be made in a letter consisting of no more than five double-spaced typed pages and a curriculum vitae. Additional material will be requested if necessary. PhD degree or equivalent desirable. PhD's at all levels of professional career and foreign nationals are eligible. Partial or full stipend available, normally not exceeding \$25,000. Stipend based on current salary. Senior candidates are encouraged to supplement stipends with other funds. Appointments will commence in September 1981. Address application to:

Professor Loren Graham
STS Program, Room 20D-213
Massachusetts Institute of Technology
Cambridge, MA 02139

Deadline for receipt of applications: January 15, 1981.

MIT is an Equal Opportunity/Affirmative Action Employer.

MIT

EPIDEMIOLOGISTS AND BIOSTATISTICIANS NEEDED

The Department of Biostatistics at the University of Washington is collaborating with the Medical Follow-up Agency of the National Academy of Sciences in expanding the U.S. commitment to assist in staffing the Department of Epidemiology and Statistics of the Radiation Effects Research Foundation (RERF) in Hiroshima, Japan. This effort is planned to produce a group of interested epidemiologists and biostatisticians sufficient in number to keep four or five visitors continuously in residence at Hiroshima for the years immediately ahead. The visitors will join with the permanent staff in the exploitation of the research potential of the ever expanding data resources at RERF.

Faculty of the School of Public Health and Community Medicine of the University of Washington, the Harvard School of Public Health, and the Department of Community and Family Medicine, University of Southern California, have expressed interest in participating in this effort. Opportunities for long-term commitments (2 or 3 years) as well as shorter periods are available. Also visiting appointments at the University of Washington either before or after a tour of duty in Hiroshima can be arranged. It is intended that the visitors include persons with different skills and experience levels, from new Ph.D.'s to very senior scientists. An initial contingent of five persons from the University of Washington will be in place at Hiroshima this fall.

Persons interested in learning more about this venture are encouraged to contact: **Dr. Donovan Thompson, Department of Biostatistics SC-32, University of Washington, Seattle, Wash. 98105. Telephone: 206-543-1044.**

NATIONAL SCIENCE FOUNDATION (NSF) CHIEF SCIENTIST, OCEAN DRILLING PROGRAMS

The Chief Scientist, Ocean Drilling Programs, is responsible to the Division Director for overall science planning and management of the ocean drilling programs and serves as Section Head of the ODP Science Section. The incumbent is recognized by NSF contractors, the national and international science community, other federal agencies, and participating petroleum companies as the division's principal authority and spokesman on scientific matters.

Applicants must have a Ph.D. or equivalent professional experience in the environmental or physical sciences, experience as a research scientist or a research administrator in the environmental or physical sciences, and a broad knowledge of diverse fields of science. Essential executive qualifications include: supervisory or managerial experience in achieving organizational objectives through subordinates; experience in the planning of scientific programs, presentation and advocacy of program plans or recommendations, and the allocation of resources, monetary and staff, within broad budgetary limitations; experience in changing and balancing complex and diverse science program demands against changing science trends and/or available resources; and demonstrated ability to exercise sound professional judgment in recommending initiation of research projects and programs.

This position is part of the Senior Executive Service with a salary ranging from \$52,247 to \$55,804 (currently limited to \$50,112 per annum). Appointment may be on a permanent or rotational basis.

All applicants are asked to contact: **Margaret Cademartori, telephone: 202-357-7857**, to request announcement EPB 80-55 for a career (permanent) appointment or EPB 80-65 for a rotational appointment. The vacancy announcements contain instructions concerning the preparation of the supplemental qualifications narrative which is required along with the SF-171, Personal Qualifications Statement, as application.

Send SF-171 and narrative to: **National Science Foundation, Executive Personnel Branch, Room 212, 1800 G Street, NW, Washington, D.C. 20550, attention: EPB 80-55 or 80-65.** Applications must be received by 26 December 1980.

Equal Opportunity Employer

DEAN COLLEGE OF MEDICINE

The Ohio State University is conducting a search for the position of Dean of the College of Medicine. The position is presently vacant following the promotion of the present dean to Vice President for Health Sciences.

The responsibilities of the Dean of the College of Medicine involve the Medical Center programs of teaching, research, and patient care. The dean is directly responsible to the Vice President for Health Sciences. Also included in the facilities is the School of Allied Medical Professions. The Ohio State University Medical Center is located on the main campus of the University in Columbus, Ohio.

Minimum qualifications are a medical degree and a strong background in clinical medicine, research, and teaching, as well as experience in medical administration. Salary is negotiable.

Interested candidates should submit a résumé and names of five professional references by 1 January 1981 to:

Dr. Ronald Glaser
Chairman, Department of Medical
Microbiology and Immunology
Chairman, Search Committee
The Ohio State University College of Medicine
5072 Graves Hall
333 West 10 Avenue
Columbus, Ohio 43210

The Ohio State University is an Equal Opportunity Employer.

POSITIONS OPEN

CARDIOVASCULAR PHYSIOLOGIST UNIVERSITY OF ALABAMA IN BIRMINGHAM

The Department of Physiology and the Cardiovascular Research and Training Center jointly offer a tenure-track assistant professorship to candidates engaged in basic research on hypertension. The successful applicant will be expected to participate in the teaching of cardiovascular physiology to medical and dental students, to train graduate students, and to develop an independent research program. The position requires a doctoral degree and postdoctoral training. Send curriculum vitae, bibliography, and names of three references by 1 January 1981 to:

Professor J. D. Neill
Department of Physiology and Biophysics
University of Alabama in Birmingham
Birmingham, Alabama 35294

The University of Alabama in Birmingham is an Equal Opportunity/Affirmative Action Employer.

CLINICAL CHEMIST

The Department of Laboratories at the Long Beach Veterans Administration Medical Center, a 1250-bed facility, is currently seeking a Board-certified pathologist with expertise in clinical biochemistry to direct the Biochemistry Section of the clinical laboratories. A joint appointment with the associated University of California, Irvine, will be provided commensurate with academic accomplishments. Excellent opportunities for research and teaching are available. *An Affirmative Action Employer.* Send curriculum vitae and references to: S. T. Nerenberg, M.D., Ph.D., Chief of Laboratory Service, VA Medical Center, 5901 East 7 Street, Long Beach, Calif. 90822 by 29 December 1980.

COORDINATOR OF CLINICAL SENSORY PHYSIOLOGY

The Boys Town Institute is seeking an individual with outstanding clinical and research capabilities to interact with an interdisciplinary staff in evaluating the auditory, visual, and somatosensory nervous systems of patients with significant communication disorders.

The applicant should be prepared to establish a productive electrophysiological research program in an area related to the communication sciences.

Requires a Ph.D. and significant experience with electrophysiological assessment of the human central nervous system in both clinical and research settings. Demonstrated competence in designing and conducting independent research.

Contact: Don W. Worthington, Ph.D., The Boys Town Institute for Communication Disorders in Children, 555 North 30 Street, Omaha, Neb. 68131.

An Equal Opportunity/Affirmative Action Employer

ECOLOGIST

The Department of Botany, Iowa State University, has an opening for a plant ecologist at the level of assistant professor. This is a tenure-track appointment with a minimum starting salary of \$16,000 (9 months). Teaching responsibilities include courses and seminars at the undergraduate and graduate levels. It is expected that the person filling this position will develop an active research program and will be involved with graduate student supervision. Preference will be given to candidates in physiological ecology or vegetation management, but candidates in other areas are encouraged to apply. A Ph.D. or equivalent is required.

Send curriculum vitae, a statement of research plans, and arrange to have three letters of recommendation sent to: Dr. Craig B. Davis, Department of Botany, Bessey Hall, Iowa State University, Ames, Iowa 50011. Application deadline: 15 January 1981 or until position is filled.

Iowa State University is an Equal Opportunity/Affirmative Action Employer.

ELECTRON MICROSCOPIST AND DIRECTOR OF EM FACILITY. An outstanding scientist is sought to conduct vigorous research; teach in the areas of cytology, TEM, and SEM, including x-ray microanalysis; and direct a modern well-equipped EM laboratory complex. The facility includes two TEM's, two SEM's, a Kevex x-ray analysis system, and full ancillary equipment in a 12-room suite. Academic rank and salary open, depending upon credentials. Submit résumé and have three letters of recommendation sent by 12 January 1981 to: Dr. Jong S. Yoon, Chair, EM Search Committee, Department of Biological Sciences, Bowling Green State University, Bowling Green, Ohio 43403. *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ECOLOGIST. Requires Ph.D. and demonstrated productivity in research. Should utilize experimental approach to field research in animal ecology. Possible areas of emphasis include, but are not limited to, population dynamics, competition, predator-prey interactions. Duties include teaching general and graduate ecology courses, directing graduate research, and pursuing an active research program. Tenure-track. Institution has excellent computer facilities, applied mathematics program, and proximity to a variety of aquatic ecosystems. Submit letter detailing research plan, curriculum vitae, reprints, and three letters of reference to: Ecologist Search Committee, Department of Biology, The University of Southwestern Louisiana, Lafayette, La. 70504. Applications accepted through 15 January 1981. *The University of Southwestern Louisiana is an Equal Opportunity/Affirmative Action Employer.*

ENTOMOLOGIST ARIZONA STATE UNIVERSITY

Applications are invited from qualified candidates for a position as assistant professor of zoology. The Ph.D. is required. Appointment begins 15 August 1981. Responsibilities will include developing a field research program in nonapplied entomology and teaching general entomology and courses related to candidate's specialty. Applications, including curriculum vitae, graduate transcripts, three letters of recommendation, and a statement of research interests and future research plans, should be sent to:

Dr. David I. Rasmussen
Chairman, Search Committee
Department of Zoology
Arizona State University
Tempe, Arizona 85281

Deadline: 15 February 1981. *Arizona State University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION in physical chemistry or chemical physics. Applications or nominations are invited for an opening in the Department of Chemistry at Massachusetts Institute of Technology (MIT). Applicants should have demonstrated ability to do outstanding independent research in chemistry and show promise of excellence in teaching. Appointment will probably be at the assistant professor level, but applications and nominations for other levels will be considered. Candidates should submit curriculum vitae, a publications list, a description of research interests, and have three letters of recommendation sent not later than 15 February 1981 to: Professor J. L. Kinsey, Room 18-399, MIT, Cambridge, Mass. 02139. *MIT is an Equal Opportunity/Affirmative Action Employer.*

INHALATION TOXICOLOGIST

The Medical and Health Sciences Division of Oak Ridge Associated Universities is seeking an inhalation toxicologist to manage and operate its inhalation facility. Duties will include generation of toxicants and monitoring of chambers for delivery of exposure regimens and dosages as required by scientific investigators; coordinating usage of chambers; maintaining units in satisfactory working order and providing technical input for modifications as needed. Must be cognizant of potential health hazards to humans and take precautions to operate facility safely.

Qualifications: M.S. or Ph.D. in inhalation toxicology with experience in operating inhalation chambers, generation of toxicants, and monitoring of exposure dosages. Must be able to maintain equipment for safe operation and proper functioning.

Send résumé, salary history and requirements, and names and addresses of references to:

Employment Office
OAK RIDGE
ASSOCIATED UNIVERSITIES
P.O. Box 117
Oak Ridge, Tenn. 37830
An Equal Opportunity Employer, M/F

POSITIONS OPEN

EVOLUTIONARY BIOLOGIST. This position is available 1 July 1981 with rank and salary open. This is a 12-month, tenure-line position in research and teaching. Research should address problems in evolutionary biology and/or biosystematics of insects including but not restricted to the following areas: processes of speciation, coevolution of plant insect or parasite-host systems, or ecological, behavioral, or molecular genetics. Teaching requirements include a graduate course in insect evolutionary biology, a topic seminar, and involvement in the graduate program. Duties also include coordination of the Maryland Center for Systematic Entomology (MCSE), a consortium of biosystematists and evolutionary biologists from the University of Maryland, Systematic Entomology Laboratory (USDA), and the Smithsonian Institution (USNM). MCSE is designed to train graduate students in the mechanics and theory of biosystematics. Qualifications include a Ph.D. degree with research experience in insect evolutionary biology and a background or appreciation for biosystematics. The candidate should have a record of excellence in both research and teaching and a proven ability to attract research funds. The application deadline is 15 January 1981 or until a qualified applicant is found, whichever is later. Submit curriculum vitae, including research background and current interests, teaching experience, secured grants, a brief outline for a proposed course, and a list of five persons willing to write letters of recommendation, to: Dr. John A. Davidson, Department of Entomology, University of Maryland, College Park, Md. 20742. *The University of Maryland is an Affirmative Action/Equal Opportunity Institution.*

FACULTY APPOINTMENT. The Department of Microbiology, College of Medicine, has an opening for an assistant (or possibly associate) professor. Responsibilities include teaching graduate and medical students. Preference will be given to candidates who will develop a strong research program in the control of gene expression or gene organization in prokaryotes, eukaryotes, or viruses. Use of recombinant DNA techniques is especially desirable. Postdoctoral experience is required. Send curriculum vitae and three references to: Dr. Paul S. Sypherd, Department of Microbiology, University of California, Irvine, College of Medicine, Irvine, Calif. 92717. *An Affirmative Action Employer.*

FACULTY POSITION, IMMUNOLOGY. The Department of Microbiology, College of Medicine, has an opening at the assistant or associate professor level. Responsibilities include teaching graduate and medical students. Candidates would be expected to develop a strong research program involving fundamental biochemical or genetic studies in an area of immunology. Applicants with substantial training or research experience in biochemistry and molecular biology are preferred. Postdoctoral experience is required. Send curriculum vitae and references to: Dr. Paul S. Sypherd, Department of Microbiology, University of California, Irvine, College of Medicine, Irvine, Calif. 92717. *An Affirmative Action Employer.*

FACULTY POSITION. University of Maryland Baltimore County (UMBC) is seeking a director and senior faculty (associate professor) for Health Science and Policy Program to start August 1981. Responsibilities include: (i) teaching courses in health services administration and management, health policy and planning, and other health related courses, (ii) administering HSP program, (iii) coordinating and developing formal internships, and (iv) seeking research and training grants. Applicant must have a doctoral degree in health or policy sciences. Demonstrated leadership with an established record of research publications required. Salary commensurate with experience. Send curriculum vitae by 15 December 1980 to: Dr. Thomas Wan, Chairman, Search Committee, Department of Sociology, UMBC, Baltimore, Md. 21228. *UMBC is an Equal Opportunity Employer.*

IMMUNOLOGIST. Assistant professorship available August 1981. Two years of postdoctoral experience required. Expected to conduct active modern basic research program in one of the following areas of immunology: genetics, development, cellular or molecular immunology, or immunochemistry. Teaching responsibilities will include an introductory microbiology course and an upper-level course in immunology. Salary is from \$19,500 and is commensurate with experience. Send curriculum vitae, summary of research interests, and names of three references by 15 February 1981 to: Dr. Gary L. Smith, School of Life Sciences, The University of Nebraska-Lincoln, Lincoln, Nebraska 68588. *Affirmative Action/Equal Opportunity Employer.*

NUCLEIC ACID CHEMIST

Immediate opening for Ph.D. chemist/biochemist, preferably with post doctoral experience, for new program of defined sequence oligodeoxynucleotide synthesis. Extensive experience in triester synthesis essential. Additional expertise in nucleic acid sequencing and recombinant DNA techniques desirable.

P-L BIOCHEMICALS, INC., is a leading producer of biochemical reagents for molecular biology and offers a unique environment combining academic expression with private enterprise.

Send letter, curriculum vitae, and list of three references in confidence to:

Dr. Robert Naylor
Vice President and
Technical Director,
Research Biochemicals.



P-L biochemicals, inc.
1037 WEST MCKINLEY AVENUE, MILWAUKEE, WIS 53205

Equal Opportunity Employer, M/F

RECOMBINANT DNA SCIENTISTS AND TECHNICIANS

Southern Medical and Pharmaceutical Corporation, a Florida based corporation, currently engaged in the production of human interferons and in research and development of recombinant DNA techniques, is currently increasing its staffing for its recombinant DNA division.

The corporation is soliciting curriculum vitae from qualified scientists at the Ph.D. and Master's Degree level with backgrounds in genetic engineering and recombinant DNA technology for immediate employment and/or for future placement of Ph.Ds and post doctoral candidates after completing their current educational or research endeavors. Southern Medical is in particular need of Ph.D level scientists with strong backgrounds in DNA sequencing techniques, molecular biology and biochemistry.

The company is located on the beautiful west coast of Florida, an area with superb recreational, cultural and educational opportunities. Excellent salaries, working conditions, fringe benefits and attractive stock options are available to qualified scientists.

Southern Medical and Pharmaceutical Corporation
128 South Moon Avenue
Brandon, Florida 33511

An equal opportunity employer

FACULTY POSITION REPRODUCTIVE PHYSIOLOGIST RUSH UNIVERSITY, CHICAGO

The Department of Obstetrics and Gynecology and Physiology have a joint faculty position available for a doctorally prepared (Ph.D., M.D., etc.) scientist pursuing a basic or clinical research program in Reproductive Physiology. Clinical experience or background is *not* required and involvement in the Department of Obstetrics and Gynecology will consist primarily of guiding and assisting research fellows and serving as a research consultant to faculty. Active participation in the Physiology Department research and teaching programs is expected. Rush is an equal opportunity employer and does not discriminate on the basis of race, religion, color or sex. Please send curriculum vitae and description of research program to:

S. K. Donaldson, Ph.D.
Department of Physiology
Rush University
Rush-Presbyterian-St. Luke's Medical
Center
1753 West Congress Parkway
Chicago, Illinois 60612

PROJECT LEADER

Ralston Purina Company's growing Microbiology Department is seeking a Project Leader in Fermentation Microbiology and Biochemical Engineering at the St. Louis World Headquarters.

This person will be responsible for developing an independent research program to produce commercial products from a variety of feedstocks and carry out bioconversion of waste materials.

The successful candidate will have:

- ...PhD in Microbiology, Biochemical Engineering or Food Science
- ...Minimum of 1-5 years of relevant experience in microbial fermentations with some knowledge of biochemical engineering, scale up principles, and fermentation economics
- ...Experience with computer programming and microprocessor controls a definite plus
- ...Ability to communicate with interdisciplinary team of scientists
- ...Demonstrated ability to be self starting and creatively lead other scientists in research projects

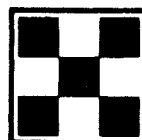
If you are seeking a challenging opportunity, you will find that we offer an excellent blend of challenge and growth potential in a stimulating microbial environment. Please send your resume, along with a list of publications and references in complete confidence to:

Harry V. Moppins
Corporate Employment Services

**Ralston Purina
Company**

Department N-5
Checkerboard Square
St. Louis, Missouri 63188

An Equal Opportunity Employer



POSITIONS OPEN

ENVIRONMENTAL/PESTICIDE CHEMIST applications are invited for a tenured position of assistant/associate professor, Pesticide Research Laboratory, Food Science and Human Nutrition Department, University of Florida. Responsibilities will include both research and teaching. Research will be in the areas of pesticides, environmental pollutants and/or other xenobiotics which occur in food or the environment. Teaching will be at the undergraduate and graduate levels in areas of environmental toxicology. Applications with curriculum vitae, statement of research interest, official transcripts, and three letters of reference should be sent to: Dr. W. B. Wheeler, Chairperson, Search and Screen Committee, Pesticide Research Laboratory, University of Florida, Gainesville, Fla. 32611. Applications must be received by 1 January 1981. *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION—MOLECULAR OR CELLULAR TOXICOLOGY UNIVERSITY OF ROCHESTER

Applications are invited for a tenure-track position as an assistant or associate professor. Appointees will be members of the Division of Toxicology within the Department of Radiation Biology and Biophysics. The candidates should be active in the molecular or cellular approaches to one of the following areas: chemical carcinogenesis, mutagenesis, receptor-mediated toxic responses, developmental toxicology, cytogenetics, or drug-DNA interactions. The candidates should be recognized investigators with demonstrated commitment to research and graduate education. Send curriculum vitae, a brief description of research interests, career objectives, and the names of three references to:

Angelo Notides, Ph.D.
Chairman, Toxicology Search Committee
Division of Toxicology
Department of Radiation Biology and Biophysics
University of Rochester School of Medicine
Rochester, New York 14642

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

FACULTY POSITION AVAILABLE DEPARTMENT OF OPHTHALMOLOGY UNIVERSITY OF PENNSYLVANIA VETERAN'S ADMINISTRATION HOSPITAL PHILADELPHIA, PENNSYLVANIA

Applications are invited for a faculty position at the assistant professor level for the position of Director of Outpatient Services at the Veteran's Administration Hospital.

Responsibilities include outpatient clinic, evaluation of Veteran compensation, resident teaching and surgery, and coordination of inpatient activities. As a general rule, only candidates who have had one or more years of post-residency training and/or equivalent experience will be considered. Those interested should direct inquiries, together with up-to-date curriculum vitae and bibliography, to:

Myron Yanoff, M.D.
Director, Scheie Eye Institute
Chairman, Department of Ophthalmology
University of Pennsylvania
Presbyterian Medical Center
51 North 39 Street
Philadelphia, Pa. 19104

An Equal Opportunity/Affirmative Action Employer

FACULTY POSITION IN ATMOSPHERIC SCIENCES

The Department of Atmospheric Sciences of the University of California, Los Angeles (UCLA), has a ladder faculty position open, starting 1 July 1981. Candidates must have a Ph.D. degree in atmospheric sciences or in a related area. Preferred areas of research specialization are: atmospheric dynamics, radiation, or aeronomy.

Besides carrying out research in own area of specialization, the candidate will be expected to teach both graduate and undergraduate courses in atmospheric sciences. Applicants should submit résumé, including a list of publications and the names of three references before 15 February 1981 to:

Chairman, Department of Atmospheric Sciences
University of California, Los Angeles
405 Hilgard Avenue
Los Angeles, Calif. 90024

UCLA is desirous of receiving applications from minorities and women candidates as well as from other qualified persons. UCLA is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITION—TOXICOLOGY

Established toxicologist to provide leadership and direction for M.S./Ph.D. programs in basic toxicology. A tenure-track position at professor or associate professor level. Applicant should have history or research, publications, grants, and experience in graduate education in toxicology, with demonstrated organizational and administrative experience. Background in pharmaceutical sciences is desirable. Send curriculum vitae, statement of research interests, and three letters of recommendation by 2 March 1981 to: Dr. W. H. Lawrence, Chairman of Search Committee, Department of Drug and Material Toxicology, College of Pharmacy, University of Tennessee Center for Health Sciences, Memphis, Tenn. 38163. *The University of Tennessee is an Affirmative Action/Equal Opportunity/Title IX/504/Title VII/Vietnam Veteran Employer.*

Washington University School of Medicine Division of Laboratory Medicine

Applicants are invited for FACULTY POSITIONS in our expanding clinical chemistry section. Individuals with an M.D. or Ph.D. degree with strong research interests and backgrounds as well as a commitment to excellence in teaching and patient care are sought. Position will be as an associate director of clinical chemistry at Barnes Hospital, a 1200-bed teaching hospital of Washington University. Academic rank and salary will be commensurate with prior experience and accomplishments. Send curriculum vitae and research and service interests to:

Jay M. McDonald, M.D.

or

Jack H. Ladenson, Ph.D.
Division of Laboratory Medicine
Washington University School of Medicine
Box 8118
St. Louis, Mo. 63110

FISHERY ASSESSMENT BIOLOGIST. Will assist in the development of management recommendations for Upper Great Lakes tribal commercial fisheries and will be responsible for the implementation of a field and laboratory assessment program. Applicant should have a background in commercial fisheries, a good working knowledge of fishery statistical methods, demonstrated technical writing ability, an interest in research, and strong field experience. M.S. degree preferred. Salary commensurate with experience and training. Send résumé, list of science courses, and names of three references to: Dr. William Eger, Tribal Fisheries Project Leader, Sault Ste. Marie Tribe of Chippewa Indians, 206 Greenough Street, Sault Ste. Marie, Mich. 49783. Closing date: 19 December 1980.

IMMUNOLOGIST. Assistant professor for a tenure-track position. Ph.D. required. Major responsibilities include teaching an undergraduate course in general microbiology and in immunology and participation in the teaching of other microbiology courses. The individual will be expected to develop a research program and direct graduate students in the area of immunology. Send curriculum vitae and three letters of reference by 8 March 1981 to: Dr. Marvin Rogolsky, Department of Biology, University of Missouri-Kansas City, Kansas City, Missouri 64110. *The University of Missouri is an Equal Opportunity Employer.*

LINGUISTIC ANTHROPOLOGIST

Senior assistant professor or associate professor. Regents funded. Faculty position in University of California, Los Angeles (UCLA) Medical Retardation Research Center.

Qualifications include: Ph.D. in linguistic anthropology; demonstrated scholarly productivity and ability to obtain research funding; university-level teaching experience; cross-cultural linguistic research experience and linguistic research experience with mentally retarded persons.

Candidate to teach courses on the following subjects: sociolinguistics, ethnolinguistics, and the communicative competence of the mentally retarded. Candidate's research interests should include studies of the communicative competence of mentally retarded persons.

Send curriculum vitae, publications, and names of three references to: Professor L. L. Langness, Mental Retardation and Child Psychiatry Division, Neuropsychiatric Institute, UCLA, 760 Westwood Boulevard, Los Angeles, California 90024.

Deadline for applications is 15 January 1981. *The University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

IMMUNOLOGIST. Assistant professor tenure-track position at the Catholic University of America for September 1981. Applicants must have Ph.D. and postdoctoral experience in some aspect of cellular immunology. The successful candidate is expected to teach at graduate and undergraduate levels, direct master's and doctoral students, and establish vigorous research program. Please send curriculum vitae and three letters of recommendation before 15 January to: Dr. B. T. DeCicco, Department of Biology, Catholic University, Washington, D.C. 20064. *An Equal Opportunity/Affirmative Action Employer.*

INSECT PEST MANAGEMENT Cornell University

Assistant professor, tenure-track position, IPM forage and field crops. Ph.D. with training in fundamentals of arthropod pest management and application of computer technology to IPM delivery systems. Effort distribution 50 percent research, 50 percent extension, in development and implementation of IPM programs in collaboration with interdisciplinary team. Opportunity for teaching may be developed. Send applications by 1 February 1981 to: Dr. E. H. Smith, Department of Entomology, Cornell University, Ithaca, N.Y. 14853. Include curriculum vitae, transcripts, and five references. *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

LABORATORY DIRECTOR— DEPARTMENT ADMINISTRATOR

Department of Biochemistry, Rice University

Responsibility for the administrative and service operations of the department. Duties will include fiscal management of budgets, personnel management of staff, research administration of grants and contracts. Substantial previous experience in the above areas and a reasonable scientific background are required. Send résumé and three letters of reference to: Professor George J. Schroepfer, Jr., c/o Jan Griffin, Allen Center, Rice University, Houston, Texas 77001.

An Equal Opportunity/Affirmative Action Employer

LIPID CHEMIST/BIOCHEMIST: assistant research scientist to investigate the chemistry, biochemistry, and physiology of lipids in mammalian epidermis and their relation to the normal and abnormal functioning of human skin. Duties: to identify and define problems, develop hypotheses, and carry out research into the role of lipids in human skin, including the development of research methods and equipment in the area of lipid chemistry and biochemistry. Qualifications: Ph.D. in chemistry, with training in lipid chemistry and biochemistry and demonstrated ability to carry out the duties outlined. The appointee will work under the general direction of Professor Donald T. Downing, Ph.D., in the Department of Dermatology, University of Iowa College of Medicine, Iowa City, Iowa 52242. Salary: \$16,000 to \$20,000. Send résumé and names of three references to: Thomas J. Cannon, Iowa Department of Job Service, 1810 Lower Muscatine Road, Iowa City, Iowa 52240, before 19 December 1980.

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

MICROBIOLOGIST

The University of Laboratories at the Long Beach Veterans Administration Medical Center, a 1250-bed facility, is currently seeking a Board-certified pathologist with expertise in clinical microbiology to direct the Microbiology Section of the clinical laboratories. A joint appointment with the associated University of California, Irvine, will be provided commensurate with academic accomplishments. Excellent opportunities for research and teaching are available. *An Affirmative Action Employer.* Send curriculum vitae and references to: S. T. Nerenberg, M.D., Ph.D., Chief of Laboratory Service, VA Medical Center, 5901 East 7 Street, Long Beach, Calif. 90822 by 29 December 1980.

MICROBIOLOGIST/GENETICIST

Assistant professorship, tenure-track, commencing 1 September 1981. Ph.D. in microbiology/genetics to teach general microbiology, genetics, and related courses. Ph.D. candidates in final stages of completion of degree requirements will be considered. Applications must be received by 15 March 1981. Send résumé and names of three references to: Dr. Edwin B. Kurtz, Chairman, Faculty of Life Science, The University of Texas of the Permian Basin, Odessa, Texas 79762. *An Affirmative Action/Equal Opportunity Employer.*

Research Scientist/ Thrombosis

The Upjohn Company has an opening for a research scientist in its Diabetes and Atherosclerosis Research Unit. The responsibilities will include disease-oriented mechanistic and drug-related research with the initial focus to be on platelet-related phenomena, especially interactions with other blood components and vessel walls. This individual will independently initiate and maintain a strong disease-oriented basic research program and will be responsible for interpreting, evaluating, and publishing the results of this research. The development of useful *in vivo* and *in vitro* models will also be a major part of the individual's research program.

The successful candidate will have Ph.D. in Biochemistry, Pharmacology, Physiology, or Pathology, with training in hematology and at least two years of post-doctoral experience with a strong research background in whole animal models of thrombosis and platelet function. Demonstrated good communication and interpersonal skills are very important.

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

Please send resume in confidence to:

William J. Hall 12244

Upjohn

THE Upjohn
Company
7000 Portage Road
Kalamazoo, MI 49001

An Equal Opportunity Employer M/F

Career Opportunities In Toxicology

LOS ALAMOS SCIENTIFIC LABORATORY

The Life Science Division is seeking a chemical toxicologist/experimental pathologist (M.D., Ph.D., or D.V.M.) to join a multidisciplinary program engaged in classic and developmental toxicological assays in intact animals, utilizing synthetic fuel materials (oil shale, tar sands, etc.). Major emphasis is placed on inhalation studies combining particulates and organic vapors/gases and on cutaneous exposure studies which are designed to investigate the relationship between dermal carcinogenesis, dermal toxicity and systemic toxicity. Opportunities will be provided for expansion and development of novel approaches for investigating *in vivo* mechanisms of toxic response. Demonstrated productivity in chemical toxicology/experimental pathology is required.

A second position is available for an experimental pathologist/radiation biologist (M.D., Ph.D., or D.V.M.) to direct an ongoing Lung Tumorigenesis Program. The candidate will be responsible for assessing histopathological changes in animals exposed to radioactive materials and for investigating the relationship between lung cell kinetics and tumor production. Among areas of interest are comparisons of diffuse versus focal irradiations and effects of adjunctive insults on radiogenic production of lung tumors. A background of productive research in the area of radiation biology/experimental pathology (intact animal studies) is required. Knowledge of pulmonary physiology is desirable.

Since the incumbents for both positions will be responsible for initiation and direction of experiments plus reporting of results, a demonstrable record of oral and written communication skills is essential.

Send resume, in confidence, to:

James C. Trout, DIV 81-J
University of California
Los Alamos Scientific Laboratory
P.O. Box 1663
Los Alamos, New Mexico 87545

University of California



An Affirmative Action/Equal Opportunity Employer: Women, Minorities, the Handicapped and Veterans are urged to apply. U.S. Citizenship Required.

LOS ALAMOS SCIENTIFIC LABORATORY

INFORMATION SPECIALIST

Library Resources & Services Department of Miles Laboratories, Inc., is seeking candidates for Information Specialist Positions. These individuals will be required to collect, analyze and disseminate scientific literature relevant to Miles' products and to provide literature search services in support of company projects. Successful candidates must have an advanced degree in science, preferably chemistry, biochemistry or microbiology experience with computerized information retrieval systems and good communication abilities. Foreign language knowledge is desirable.

Miles Laboratories, Inc., is located in Elkhart, Indiana, ninety miles from Chicago with easy access to lower Michigan. Our close proximity to the South Bend metropolitan area provides many cultural and recreational opportunities. We offer an excellent starting salary plus a superior benefits program. Relocation expenses paid by the company. If interested, please send complete resume in confidence to:

Kimberly K. Keller
Placement Representative
Department 970



MILES LABORATORIES, INC.

P.O. Box 40

Elkhart, Indiana 46515

An Equal Opportunity Employer M/F/H

POSITIONS OPEN

MAMMALOGIST—PALEOBIOLOGIST

The Yale University Department of Biology invites applications for a tenure-track assistant professorship in the area of evolutionary biology of recent and fossil mammals. An active research program and commitment to excellence in teaching are required. Send biography, bibliography, and reprints to: **Chairman, Department of Biology, Yale University, P.O. Box 6666, New Haven, Conn. 06511.** Application deadline: 1 February 1981. *Yale University is an Equal Opportunity/Affirmative Action Employer.*

MICROBIOLOGIST

Quality Control Department of major biological products company seeks a laboratory supervisor to conduct radioimmunoassay testing for diagnostic products. Ideal candidate will have M.S. degree and 2 to 5 years of experience with RIA methodology or related techniques.

CONNAUGHT offers a competitive compensation and benefits program including relocation assistance. Please send résumé, including current salary, to: **Jim Siglin**

CONNAUGHT LABORATORIES, INC.

Swiftwater, Pennsylvania 18370
Equal Opportunity Employer, M/F

MICROBIOLOGIST

Applicants are invited for the position of quality assurance microbiologist in our QC Department. Ph.D. or equivalent in microbiology required. Must have solid statistical background, 1 to 3 years of related industrial experience in microbiological control, sterilization technology, systems validation, and employee supervision desired. Responsibilities to include methods development, facility validation programs, facility contamination, and so forth.

CONNAUGHT LABORATORIES is a major biological manufacturer located in the beautiful Pocono mountains of Pennsylvania. We offer an excellent compensation and benefits program with relocation assistance. Please send résumé and salary requirements to: **Jim Siglin, Personnel Department**

CONNAUGHT LABORATORIES, INC.

Swiftwater, Pennsylvania 18370
Equal Opportunity Employer, M/F

THE DEPARTMENT OF ZOOLOGY of the University of California, Davis announces the opening of a faculty position of NEUROBIOLOGIST

The Department of Zoology, University of California, Davis, currently has a tenure-track opening for a neurobiologist with interests in cellular approaches to understanding the functions and organization of nervous systems. Level of appointment dependent on qualifications. Teaching duties will include an upper division course in neurobiology and an introductory biology course. Send curriculum vitae, a description of research programs and future plans, a summary of teaching experience and capabilities, the names and addresses of three referees, and copies of publications to: **Dr. John H. Crowe, Chair, Search Committee, Department of Zoology, University of California, Davis, Calif. 95616.** Screening of applications will begin 2 January 1981; closing date for receipt of applications is 15 January 1981. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

NEUROBIOLOGIST

The Department of Biological Sciences at Union College seeks a neurobiologist for a tenure-track faculty appointment at the assistant professor level. We require an earned Ph.D., a broad exposure to neurobiology with an emphasis on comparative and general physiology, and strong interests in both teaching and research. Send résumé to: **Dr. George Butterstein, Department of Biological Sciences, Union College, Schenectady, New York 12308.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

MYCOLOGIST. Applications are invited for an anticipated tenure-track assistant professor position, Ph.D., expected to begin as early as 1 April 1981. The successful candidate will teach courses in general botany, mycology, and possibly service courses in related fields. Development of an active research program supported primarily by grants and directing graduate student research are required. Strong field orientation with major interest in temperate forest or grassland ecosystems is expected and the particular research emphasis should complement the ecological, environmental, and organismic orientation of the department. A résumé, brief statement of research and teaching interests, transcripts, reprints, and three letters of recommendation should be sent by 15 January 1981 to: **Dr. Kathleen M. Peterson, Department of Botany, University of Montana, Missoula, Montana 59812.** *The University of Montana is an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

NEUROPATHOLOGISTS

The Pathology Department of the University of California, Irvine, and the Long Beach Veterans Administration Medical Center are jointly seeking the services of two Board-certified neuropathologists for their conjoined programs in neuropathology. Assigned academic rank will be commensurate with experience and academic accomplishments. Excellent opportunities for scholarly activities, service, and research are available. *An Affirmative Action Employer.* Send curriculum vitae and references to: **S. T. Nerenberg, M.D., Ph.D., Chief of Laboratory Service, Long Beach VA Medical Center, 5901 East 7 Street, Long Beach, Calif. 90822** by 29 December 1980.

PATHOGENIC MICROBIOLOGIST OR IMMUNOLOGIST. Tenure-track appointment at the assistant professor level available August 1981. Must teach courses in diagnostic (medical) bacteriology and area of specialization. Postdoctoral experience and demonstrated research productivity are required. Evidence of extramural funding an asset. Salary: approximately \$18,000 per academic year. Deadline for application: 19 January 1981. Send curriculum vitae and three letters of recommendation to: **Edward A. Birge, Ph.D., Chairman, Microbiology Search Committee, Department of Botany and Microbiology, Arizona State University, Tempe, Ariz. 85281.** *Arizona State University is an Equal Opportunity/Affirmative Action Employer.*

PATHOLOGY FACULTY POSITIONS—Faculty positions available immediately at associate, instructor, assistant professor, associate professor, and professor level.

Qualifications: must have a M.D. degree, Board-eligibility or equivalent. Must be eligible for Iowa medical license. Responsibilities will be in teaching, research, and service. All areas of academic pathology may apply; however, specific areas of interest are surgical pathology, clinical chemistry, clinical microbiology, transfusion service, and autopsy pathology. Salary is commensurate with training and experience. Excellent fringe benefits.

Qualified applicants send letter referring to this announcement and specify rank at which consideration is requested along with areas of interest; curriculum vitae, and three letters of recommendation to:

**Richard Lynch, M.D.
c/o Department of Pathology
Room 144, Medical Laboratories Building
University of Iowa
College of Medicine
Iowa City, Iowa 52242**

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

PLANETARY SCIENCES FACULTY POSITION

The Department of Planetary Sciences/Lunar and Planetary Laboratory at the University of Arizona will have a regular faculty position available beginning fall 1981. Rank and salary would depend upon the qualifications of the successful applicant. Duties include 50 percent time for graduate/undergraduate instruction in the department and 50 percent time for research in the laboratory. Applicants in all areas of solar system studies will be seriously considered, but there is particular interest at the moment in expanding the area of experimental/theoretical planetary geophysics. Please submit résumé and names of three references by 15 January 1981 to: **W. B. Hubbard, Director, Lunar and Planetary Laboratory, University of Arizona, Tucson, Arizona 85721.** *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

PHYSIOLOGY—UCR/UCLA PROGRAM IN BIOMEDICAL SCIENCES

The UCR/UCLA Program in Biomedical Sciences, which offers an accelerated M.D. curriculum jointly between the University of California, Riverside, and the University of California, Los Angeles, School of Medicine, has a faculty opening in **PHYSIOLOGY** at the **ASSISTANT PROFESSOR** level. Teaching responsibilities will be in cardiovascular/respiratory physiology for medical students. Applicants are required to have postdoctoral experience, and should be able to continue with or develop an independent research program. *The University of California is an Affirmative Action/Equal Opportunity Employer.* Applications, including curriculum vitae and names of references, should be sent to:

**Dr. Paul M. Quinton, Chair
Physiology Search Committee
Division of Biomedical Sciences
University of California, Riverside
Riverside, California 92521**

POLAR OCEANOGRAPHER/ SEA ICE DYNAMICIST

A position is available under the Intergovernmental Personnel Act of 1970 for persons now employed in state/local government or in colleges and universities. This position is located within the Oceanic Processes Branch of the Environmental Observation Division of the Office of Space and Terrestrial Applications, NASA Headquarters. The position is for 1 year, with the possibility for renewal for an additional year. Pay will be at a level commensurate with experience, and will be established after a review of qualifications.

Candidates must have been employed by the university in a permanent position for at least 90 days or be a career employee of a state or local government. Candidates must also meet the federal qualification standards for the position. These are as follows: a degree in an appropriate field of science, plus 3 years of progressively responsible experience in duties related to the position.

This individual will be responsible for planning, developing, and implementing a scientific research program in satellite remote sensing of oceanic processes in polar regions. A background in polar oceanography, sea ice dynamics, or a closely related field is required; experience in remote sensing, although desirable, is not essential. A Ph.D. or equivalent training and experience is mandatory.

Interested parties should send a current résumé to: **NASA Headquarters, attention: Sarah Keegan, Code EPM-3, Washington, D.C. 20546.**

Selection for this position will be made from otherwise eligible candidates without discrimination for any nonmerit reason such as race, color, religion, sex, national origin, politics, marital status, physical handicap, age, membership or nonmembership in an employee organization, or personal favoritism.

POSTDOCTORAL ASSOCIATE Cornell University

Available starting January 1981 to study the analysis of the vitellogenin gene and its expression in the mosquito *Aedes aegypti*; a joint research project between the Departments of Biochemistry and Entomology. Biochemical background essential; training in recombinant DNA techniques will be provided. Appointment renewable through August 1983. Send résumé to: **Dr. H. H. Hagedorn, Department of Entomology, Cornell University, Ithaca, N.Y. 14853.** *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available January 1981 for studies of the regulatory control of transformation and tumorigenicity in human cells. Research will include chromosome and DNA-mediated gene transfer. Experience in molecular genetics and/or cytogenetics preferred. Please send curriculum vitae and names of three references to: **Dr. Eric Stanbridge, Department of Microbiology, University of California, Irvine, Calif. 92717.** *Affirmative Action Employer*

POSTDOCTORAL POSITION open immediately for research on photodynamic modification of excitable cell membranes. Prior training in electrophysiology, membrane biochemistry, or photochemistry is required. Salary equivalent to NIH postdoctoral fellowships. Send curriculum vitae and letter of inquiry to: **Dr. John Pooler, Department of Physiology, Emory University, Atlanta, Georgia 30322.**

U.S. DEPARTMENT OF ENERGY THESIS RESEARCH- NUCLEAR WASTE MANAGEMENT

Description: The U.S. Department of Energy, in association with Argonne National Laboratory, will offer ten awards for Master's thesis research on nuclear waste management, in applicable areas of engineering or the physical sciences. The purpose of these awards is to enable graduate students in disciplines related to nuclear waste management to obtain practical research experience. Each of the ten research programs will be conducted at the academic institution in which the student is enrolled, under the guidance of the student's research professor. Any resources required for the research must be available on campus. The student will be required to provide to Argonne National Laboratory brief quarterly technical progress reports and a final detailed report at the conclusion of the research. Journal publication of the research is encouraged. The duration of the award will be from February 1, 1981 to May 31, 1982.

Areas of Research: All types of nuclear waste are of interest including high-level, low-level, airborne and transuranic. Typical research areas of interest include waste form properties, interactions with geologic media, and environmental and safety aspects of waste treatment, transportation, and final disposal.

Eligibility: An award recipient must currently be a U.S. citizen and full-time graduate student at an accredited U.S. college or university. The proposed research must have the approval of the applicant's research professor and department chairperson. Selections will be by peer reviews and will be based on academic record, availability of required research facilities and qualified faculty guidance, and applicability of the proposed research to the objectives and programs of the Department of Energy.

Financial Assistance: The Department of Energy will provide up to a total of \$10,000 for each accepted research proposal, payable in two installments to the academic institution where the research is performed.

Applications: Each student application should provide to Argonne National Laboratory, at the address shown below, a 200-300 word summary of the proposed research, academic qualifications, and availability of required research facilities and qualified faculty guidance. The application must be endorsed by the student's research professor and department chairperson.

Application Deadline: January 5, 1981

Mailing Address: Research proposals and requests for further information should be directed to:

Mr. J. H. Kittel
Manager, Office of Waste Management Programs
Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 60439
(312) 972-6677



An Affirmative Action, Equal Opportunity Employer. Women, Minorities, the Handicapped, and Veterans Urged to Apply.

NOTICE OF SEX DISCRIMINATION CLAIM PROCEDURES

UNIVERSITY OF MINNESOTA CLASS ACTION SUIT

A class action lawsuit has been pending for several years against the University of Minnesota alleging sex discrimination by the University against its women academic nonstudent employees and applicants since March 24, 1972. The lawsuit has been settled by a Consent Decree which was approved by the Court on August 13, 1980. The Consent Decree established procedures to redress (1) past and future individual instances of employment discrimination and, (2) future class-wide instances of employment discrimination not resolved by the prospective affirmative action program or other provisions in the Decree.

Any woman who is or has been in an academic position or has attempted or considered or may in the future consider academic employment at any University of Minnesota campus or facility, may be a member of the Plaintiff Class and may have her claim of sex discrimination determined by filing a completed Claim Form pursuant to the Consent Decree.

A Claim Form and the text of the Consent Decree shall be provided to you at no cost and without any obligation to proceed, upon your written request addressed to:

**Paul C. Sprenger—Sprenger, Olson &
Shutes, P.A.
Attorneys at Law—P.O. Box 2070
Loop Station—Minneapolis, Minnesota
55402**

The Court has determined that these attorneys are qualified and has directed them to respond to all inquiries and written requests in confidence.

The Claim Form procedure in the Consent Decree can result in a Court award to any women discriminated against and may include backpay, fees, costs, and academic positions or promotions with tenure and salary adjustments. You may withdraw your claim at a later date without any cost to you and you may then pursue any other avenue of relief under Federal or State law or under certain other provisions of the Consent Decree.

A claim asserting that a then existing or future continuing employment practice, policy or procedure of the University or any of its constituent units is discriminatory may be made at any time under the Consent Decree. A claim relating to acts occurring on or after September 1, 1980 must be postmarked no later than sixty days after you learn or have notice of the action which is the subject of your claim. A claim relating to acts occurring on or after March 24, 1972, and before September 1, 1980, must be postmarked no later than June 1, 1981.

**Dated: August 13, 1980 Miles W. Lord
United States District
Judge
District of Minnesota**

POSITIONS OPEN

PLANT BIOLOGIST

Section of Plant Biology, Division of
Biological Sciences, Cornell University

The Division of Biological Sciences is seeking a tenure-track faculty member (preferably an assistant professor) to teach an introductory course in general biology to nonmajors. Applicants must hold a Ph.D. degree in one of the biological sciences and have demonstrated research productivity in an area of plant biology. Postdoctoral research experience is highly desirable as is experience in teaching undergraduates. In addition to teaching the introductory course, the appointee will be expected to develop a vigorous research and graduate training program. Occasional participation in upper level courses in the appointee's area of interest is expected.

Applications, which should include a description of teaching experience, reprints of research publications and a statement of future research directions, should be sent to:

Dr. M. V. Parthasarathy
Section of Plant Biology
Room 237 Plant Science Building
Cornell University
Ithaca, New York 14853

Three letters of reference requested by the candidate should also be sent directly to the same address.

Applications should be received not later than 1 February 1981.

An Equal Opportunity/Affirmative Action Employer

PLANT MOLECULAR GENETICIST

Assistant or associate professor. Applications are invited for a faculty position in plant molecular genetics in the Department of Plant Pathology, Kansas State University. A Ph.D. degree with research interests and training in eukaryotic DNA isolation, manipulation, and parasexual transfer is required. Familiarity with recombinant DNA techniques would be helpful, and postdoctoral experience is preferred. This is essentially a full-time research position designated to implement modern DNA technology in the genetic modification of important cereal crops. The incumbent will complement ongoing programs of several additional scientists working in related areas both in terms of systems development and application. Candidates must have a demonstrated potential for excellence in independent research. Curriculum vitae, a statement of research interests as they pertain to this position, and three letters of reference may be sent by 15 January 1981 to:

Dr. J. F. Shepard
Search Committee Chairman
Department of Plant Pathology
Kansas State University
Manhattan, Kans. 66506

Kansas State University is an Equal Opportunity/Affirmative Action Employer.

PLANT POPULATION BIOLOGIST

The Department of Biology, Virginia Polytechnic Institute and State University (VPI & SU), invites applications for a tenure-track position at the assistant professor level to begin 1 September 1981. Postdoctoral or other relevant experience is desirable. The successful candidate will be expected to develop an active research program in plant population ecology, offer a graduate course in population dynamics emphasizing quantitative approaches, and offer training to undergraduate students in basic ecology and botany. Salary is competitive and commensurate with experience. A letter of application, curriculum vitae, a brief description of career goals and proposed research program, and the names, addresses, and telephone numbers of three referees must be received by 1 February 1981. Address to: Dr. W. Carter Johnson, Chairman, Search Committee, Department of Biology, VPI & SU, Blacksburg, Va. 24061.

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION available for candidates with Ph.D. or M.D. degree to study **RENAL TUBULAR MECHANISMS OF ION TRANSPORT USING MICROPUNCTURE AND MICROPERFUSION TECHNIQUES**. Salary: \$14,700 to \$19,000, depending upon experience and training. Send curriculum vitae with names of three references to: Stephen Weinstein, M.D., Division of Nephrology, Health Sciences Center, 15T-020, State University of New York at Stony Brook, Long Island, N.Y. 11794. An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL APPOINTMENT to last 1 to 3 years available at The Salk Institute. Educational specialty in organic chemistry required. Experience with nucleotide or phosphate chemistry desirable but not necessary. We offer a comprehensive benefit package and a stimulating research environment. Send your curriculum vitae to: **THE SALK INSTITUTE, P.O. Box 85800, San Diego, Calif. 92138. An Equal Opportunity Employer, M/F/H.**

POSTDOCTORAL POSITION IN BIOCHEMICAL ENDOCRINOLOGY. To characterize the gonadotropin receptor-adenyl cyclase system in the non-human primate (monkey) ovary and its role in the development, function, and regression of the corpus luteum during normal and infertile menstrual cycle and pregnancy. Expertise in cell biology, biochemistry, and cyclic nucleotide research highly desirable. Available immediately; must be filled by May 1981. Standard NIH Training Grant stipend. Send résumé, including statement of research plans and the names of three references, to: **Dr. Richard L. Stouffer, Department of Physiology, College of Medicine, University of Arizona, Tucson, Ariz. 85724. The University of Arizona is an Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.**

POSTDOCTORAL POSITIONS. The following members of the Marine Biomedical Institute of the University of Texas Medical Branch (UTMB) at Galveston have funds for postdoctoral fellows: J. E. Blankenship, electrophysiology of *Aplysia* neurosecretory neurons; R. E. Leonard and D. J. McAdoo, neurophysiology and neurochemistry of stingray spinal cord; H. Pinsker, simple reflexes, central pattern generation, and hormonal control of behavior in *Aplysia*; F. Wong, phototransduction (biochemistry, genetics and physiology) in *Drosophila* and *Limulus*. UTMB contains a high concentration of other neuroscientists. Contact investigator of interest at: **Marine Biomedical Institute, University of Texas Medical Branch, 200 University Boulevard, Galveston, Texas 77550. UTMB is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION

An industrial postdoctoral position with The Dow Chemical Company, Department of Health and Consumer Products, located in Indianapolis, Indiana, will be available in November 1980. The applicant should have training in cardiopulmonary/respiratory pharmacology or physiology. The individual will work with our respiratory group and participate in both collaborative and independent basic research designed to evaluate potentially new therapeutic agents. Publication of findings will be encouraged. Studies will focus on models of asthma, alterations in pulmonary functions, and immediate hypersensitivity.

Send a résumé with career goals to:

William D. Mackey, Jr.
Personnel Administration Manager
THE DOW CHEMICAL COMPANY
P.O. Box 68511
Indianapolis, Indiana 46268

Postdoctoral Position—Reproductive Endocrinology. A position is available for an individual to work on ongoing studies on the physiology and biochemistry of placental lactogens. Candidate will be involved in studies concerning the control of placental lactogen secretion. Strong background in reproductive endocrinology, radioreceptor/radioimmunoassay and organ/tissue culture is desired. Send curriculum vitae and three letters of recommendation to: **Dr. Frank Talamantes, Thimann Laboratories, University of California, Santa Cruz, California 95064.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position available for recent Ph.D. with background in inorganic chemistry and chemical physics. This individual will be a member of a group utilizing photoemission, Mössbauer, and EXAFS methods to carry out research on the electronic structure of solids and surfaces. In 1981 this group will also operate apparatus which is now being assembled at the National Synchrotron Light Source at Brookhaven National Laboratory. Applicants should send résumé, transcripts, and arrange for three letters of reference to be sent to: **Dr. J. Hudis, Chairman, Department of Chemistry, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y. 11973. An Equal Opportunity Employer, M/F.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS available in the Department of Microbiology, College of Medicine, University of California, Irvine. Areas of study include: the mechanism and genetic basis of inducible tetracycline resistance encoded by the transposable element Tn10, emphasizing recombinant DNA and DNA sequencing approaches; the role of the cell surface membrane in the control of animal cell proliferation; posttranslational modification of proteins; mechanisms employed by eukaryotic cells in regulating gene expression; serological and genetic structure of rat immunoglobulins, using hybridoma antibodies and DNA cloning. Applicants must have a Ph.D. and a background in the quantitative aspects of biochemistry, microbiology, or genetics. Stipends are provided from several sources, including research and training grants. Send curriculum vitae and the names of three references to: **Dr. Paul S. Sypherd, Department of Microbiology, College of Medicine, University of California, Irvine, California 92717. An Affirmative Action Employer.**

POSTDOCTORAL POSITION

Available to work on the development of immunological assays for the early diagnosis and clinical management of urinary bladder cancer. Applicant should have experience in immunochemical techniques.

Please send résumés to: **Professor James Gozzo, 110 Mugar Hall, Northeastern University, 360 Huntington Avenue, Boston, Mass. 02115. An Equal Opportunity/Affirmative Action/Title IX University.**

POSTDOCTORAL POSITION

Available immediately for investigating the genomic organization of the major histocompatibility complex (the transplantation antigen region). The project will involve screening of mouse and human gene banks with cDNA probes, nucleic acid sequencing, and other recombinant DNA techniques. Candidate should have a strong background in microbial genetics and/or recombinant DNA technology.

Send curriculum vitae and names of three references to: **Dr. Per A. Peterson, Department of Cell Research, Box 562, University of Uppsala, S-751 22 UPPSALA, Sweden.**

TWO POSTDOCTORAL POSITIONS in reproductive endocrinology available 1 January 1981 for (i) candidate with training in female reproduction experience with RIA and RRA preferred and (ii) candidate with training in protein fractionation, purification, and characterization; experience with membrane receptors also helpful. Send curriculum vitae to: **Dr. Geula Gibori, Department of Physiology and Biophysics, University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Illinois 60680. University of Illinois is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN CONTROL OF VITELLOGENESIS IN BITING DIPTERA. Available immediately, to participate in ongoing research on hormonal and molecular basis of vitellogenin synthesis. Strong background in biochemistry or molecular biology is preferred. Position is for 2 years with a possibility of a third-year extension. Salary: \$15,284 to \$17,000, depending on experience. Send curriculum vitae and three references to: **Dr. Dov Borovsky, Florida Medical Entomology Laboratory, Institute of Food and Agricultural Sciences, University of Florida, P.O. Box 520, Vero Beach, Fla. 32960.**

POSTDOCTORAL RESEARCH ASSOCIATE to be stationed at Brookhaven National Laboratory and work with the City College of New York Group. Multiparticle spectrometer experiments being analyzed or planned include precision studies of meson spectroscopy, search for glueballs, and so forth. Position and funds are available now. Salary dependent upon ability and experience. Please send letter and résumé to: **Professor S. J. Lindenbaum, Brookhaven National Laboratory, Upton, N.Y. 11973; or telephone: 516-345-3918. City University of New York is an Equal Opportunity Employer.**

POSTDOCTORAL TRAINING IN CLINICAL CHEMISTRY. Positions are available 1 July 1981 for basic scientists or physicians interested in careers as laboratory directors in academic laboratory medicine. The 2-year program provides practical experience in clinical chemistry laboratories and extends relevant basic scientific knowledge. Salaries equal NIH fellowships. Deadline: 31 December 1980. Write: **Dr. Margaret Kenny, Program Director, Department of Laboratory Medicine, SB-10, University of Washington, Seattle, Wash. 98195. An Equal Opportunity/Affirmative Action Employer.**

THE FIRST ANNUAL CONGRESS FOR RECOMBINANT DNA RESEARCH

25-27 FEBRUARY, 1981 - SAN FRANCISCO
HYATT UNION SQUARE

JOHN D. BAXTER, CHAIRMAN

The congress, organized jointly by Scherago Associates and the Journal of Recombinant DNA will include approximately thirty (30) papers and several poster sessions covering the following subjects:

- Gene Structure and Evolution
- Regulation of Gene Expression
- Transcription
- Transfer of Genes Into Eukaryotic Cells
- Synthesis of Mamalian Proteins in Bacteria
- Developmental Biology

SPEAKERS

John Abelson
University of California, San Diego

Richard Axel
Columbia University

John Baxter
University of California, San Francisco

J. Michael Bishop
University of California, San Francisco

Mario Capecchi
University of Utah

Pierre Chambon
Centre National de la Recherche Scientifique

Stanley Cohen
Stanford University

David Goeddel
Genentech

Howard Goodman
University of California, San Francisco

James Darnell
Rockefeller University

Ronald Davis
Stanford University

Walter Gilbert
Harvard University

Dean Hamer
National Institutes of Health

David Hogness
Stanford University

Leroy Hood
California Institute of Technology

Fotis Kafatos
Harvard University

Brian McCarthy
University of California, San Francisco

Bert O'Malley
Baylor College of Medicine

Robert Roeder
Washington University

William J. Rutter
University of California, San Francisco

Robert Schimke
Stanford University

John Shine
Australian National University

Robert Tjian
University of California Berkley

Harold Weintraub
Hutchinson Cancer Center

Charles Weissmann
Universitat Zurich

Scientists interested in presenting poster papers, send abstract to John D. Baxter, c/o Steve Nordeen, 671 HSE, University of California, San Francisco, CA 94143.

Regular Registration: \$225 (includes Lunches and Subscription to the Journal of Recombinant DNA)

Student Registration: \$175 (includes Lunches)

Attendance will be limited to approximately 300.

- ☐ Please reserve _____ space(s); Registration fee must be included.
- ☐ Please send a Registration Application.
- ☐ Please send Exhibit Information (Table Tops Only).

Name _____

Dept. _____

Organization _____

Street _____

City _____ State/Country _____ Zip _____

Telephone: () _____

Return to: E.R. Ruffing, Scherago Associates, Inc.
1515 Broadway, New York, N.Y. 10036
Tel: (212) 730-1050

POSITIONS OPEN

MEDICAL PHYSICIST— RADIATION ONCOLOGY

The Department of Radiation Oncology, Rhode Island Hospital, has an immediate opening for a medical physicist. This position will include a faculty appointment at Brown University at the level of assistant professor.

The successful applicant will be responsible for the administration of a quality assurance program, and will be expected to become involved in all aspects of the radiotherapy physics activities. Specifically, this will include teaching in the radiotherapy technology school, consulting with other members of the staff concerning patient treatments, making appropriate measurements on the treatment machines, and supervising the work of an assistant physicist who is directly responsible for treatment planning. In addition, the candidate will be expected to become involved in various teaching activities at Brown University, including the supervision of students engaged in research in the department.

The treatment facilities at Rhode Island Hospital include 18-MeV, 6-MeV and 4-MeV linear accelerators, a simulator, a transverse axial tomographic unit, a PDP-115 and two PDP-110 computers, and access to a CT scanner.

Applicants should have a Ph.D. in physics or a related field, with at least 1 year of full-time experience in radiation therapy physics. Send résumé by 1 January 1981 to:

Tom Powell
Employment Representative
Rhode Island Hospital
593 Eddy Street
Providence, R.I. 02902

Rhode Island Hospital and Brown University are Equal Opportunity/Affirmative Action Employers.

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately dealing with the role of adenosine and protein phosphorylation in the regulation of inotropic state and glycogenolysis in the mammalian myocardium exposed to adrenergic, ischemic, and anoxic stimuli and other factors influencing contractility. Preference will be given to an individual holding a Ph.D. degree in physiology or related discipline with biochemical training in cardiovascular physiology. The stipend available will be in accord with current NIH postdoctoral fellowship rates. Please submit curriculum vitae and have three letters of recommendation forwarded to: **Dr. James G. Dobson, Jr., Department of Physiology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, Mass. 01605.** An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE for studies of neural steroid receptor and behavioral systems. Experience in biochemical endocrinology or steroid biochemistry required. One-year appointment with renewal possible. Send curriculum vitae and description of research experience to: **R. E. Whalen, Long Island Research Institute, Health Sciences Center T10, State University of New York, Stony Brook, N.Y. 11794.** An Equal Opportunity Employer.

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOWSHIP available January 1981 for individual 3 to 5 years beyond doctorate to study metabolism of motor neurons. Background in biochemistry (protein purification, carbohydrate metabolism, cyclic nucleotides, and cell culture) highly desirable. Orientation is toward molecular approaches to the human disease amyotrophic lateral sclerosis (ALS; Lou Gehrig's disease) as well as to CNS regeneration. Appointment as research assistant professor possible. Stipend: \$18,000 to \$22,000 for 2 years, depending on qualifications. Submit curriculum vitae and request three letters of reference be sent to: **Dr. Barry W. Festoff, Neurobiology Laboratory, Room 101B, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, Kans. 66103.** An Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE. Position available to study metabolism of endocytic membrane and/or processing of pinocytotic vesicles in cultured fibroblasts. Strong background in either membrane biochemistry, cell biology, or electron microscopy desired. Position available 1 April 1981. Appointment for 2 to 3 years. Starting salary: \$14,000. Send curriculum vitae and names of three referees to: **Dr. Brian Storrie, Department of Biochemistry and Nutrition, Virginia Polytechnic Institute and State University, Blacksburg, Va. 24061.**

Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

POSTGRADUATE RESEARCH FELLOW with experience in computer programming and statistics. Opportunity to participate in program development. Northern Westchester, New York. Salary open. Benefits. Faculty appointment.

Box 277, SCIENCE

POSTDOCTORAL RESEARCH TRAINING positions are available in the areas of endocrinology, metabolism, and diabetes under the guidance of one of ten training faculty in six basic or clinical departments of Emory University School of Medicine. Ph.D. or M.D. graduates interested in advanced research and training in basic and clinical endocrinology and metabolic disorders for 1 or 2 years should send curriculum vitae, area of research interest, and names of two references to:

Dr. Mario DiGirolamo
Program Director
Emory University School of Medicine
69 Butler Street
Atlanta, Georgia 30303

Deadline for applications is 15 February 1981 with awards being made by 31 March 1981. An Equal Opportunity/Affirmative Action Employer.

NATIONAL SCIENCE FOUNDATION

National Science Foundation (NSF), Division of Science Education Resources Improvement, is seeking a qualified person who is interested in spending 1 to (preferably) 2 years at the National Science Foundation during 1981-1983 as a **PROGRAM MANAGER** in the Comprehensive Assistance to Undergraduate Science Education (CAUSE) Program. The program is designed to strengthen the undergraduate science instructional capabilities of colleges and universities. A CAUSE program manager's responsibilities consist of participation in program planning and development, preparing, and carrying out proposal evaluation plans, and recommending funding actions. This position is excepted from the competitive service at the EC-13/14 level (equivalent to the GS-13/14) \$32,048 to \$49,229 per annum. Salary is negotiable based on qualifications and experience. Applicants should have a Ph.D. or its equivalent in a biological, engineering, or social science field, and at least 5 years of recent college teaching experience, preferably in a 2-year or community college. Prior experience as an NSF Science Education proposal reviewer and participation in a CAUSE grant is desirable but not necessary. Submit résumé to: **National Science Foundation, Personnel Administration Branch, Room 212, EX 81-8, 1800 G Street, NW, Washington, D.C. 20550, attention: E. Paul Broglio.** For further information, telephone: 202-357-7840. Deadline for receiving résumé is 15 January 1981. NSF is an Equal Opportunity Employer.

PROBE TECHNICIAN

The Department of Mineral Sciences at the American Museum of Natural History is seeking a **probe technician** with primary responsibilities for maintenance, repair, user instruction, operation, and upgrading of an automated nine-channel ARL-SEM microprobe. To a lesser extent, duties will include support for x-ray diffraction equipment, other departmental equipment, sample preparation facilities, and an interdepartmental SEM. Some supervisory responsibilities may also be assigned.

To be considered, candidates should have a good working knowledge of electronics, high-vacuum technology, and minicomputer programming. Desirable areas of training and experience include materials analysis and geology. A master's degree or equivalent experience is an asset. Salary will be competitive based upon qualifications.

Applicants must submit a résumé of training and experience, a statement of salary requirements, and the names of several people familiar with your work to:

Dr. Martin Prinz, Chairman
Department of Mineral Sciences
The American Museum of Natural History
Central Park West at 79th Street
New York, N.Y. 10024

All materials must be received no later than 1 February 1981. An Equal Opportunity/Affirmative Action Employer, M/F/H.

POSITIONS OPEN

PROFESSEUR RÉGULIER EN ÉCOLOGIE VÉGÉTALE

(Poste accessible aux femmes et aux hommes)

Fonctions et cadre de travail: Assurer l'enseignement de 1er et 2ième cycles dans le domaine et participer à des recherches en biologie de l'environnement.

Date d'entrée en fonction: 1er janvier 1981

Exigences: Ph. D. et expérience d'enseignement.

Langue de travail: français

Traitement: Selon la convention collective en vigueur à l'U.Q.A.M. Les candidats sont priés de faire parvenir un curriculum vitae détaillé et trois lettres de référence avant le 30 novembre 1980 à:

M. Jean-Pierre Cheneval, directeur
Département de sciences biologiques
Université du Québec à Montréal
C.P. 8888
Montréal, Québec H3C 3P8



Université
du Québec
à Montréal

NATIONAL SCIENCE FOUNDATION

National Science Foundation (NSF), Division of Science Education Resources Improvement, is seeking candidates for a 2-year rotational appointment as **PROGRAM DIRECTOR** for the Resource Centers for Science and Engineering Program. The program is designed to promote increased participation in science and engineering by minorities and persons from low-income families. Projects are geographically dispersed and designed to carry out a variety of regional activities at all educational and community levels. Responsibilities include directing program activities and the conception and initiation of a range of activities, strategies, and organizational structures for addressing the concerns and needs of minorities in science and engineering. This position is excepted from the competitive service at the EC-14/EP level (equivalent to the GS-14/15), \$37,871 to \$50,112.50 per annum. Salary is negotiable, based on qualifications and experience. Candidates should have a Ph.D. or its equivalent in a physical, engineering, biological, or social science; broad experience in science especially as a teacher or administrator; and be familiar through experience, with barriers inhibiting minority entry into the sciences. Send résumés to: **National Science Foundation, Personnel Administration Branch, Room 212, EX 81-7, 1800 G Street, NW, Washington, D.C. 20550, attention: E. Paul Broglio,** by 15 January 1981. For further information, telephone: 202-357-7840. Applicants who applied under EMPB-80-38 will continue to receive consideration and need not reapply. NSF is an Equal Opportunity Employer.

NATIONAL SCIENCE FOUNDATION

National Science Foundation (NSF), Division of Science Education Resources Improvement, is seeking a qualified person who is interested in spending 1 to (preferably) 2 years at the National Science Foundation during 1981-1983 as a **PROGRAM MANAGER** in the Instructional Scientific Equipment Program. The program facilitates new or improved undergraduate instructional programs by providing grants to colleges and universities to purchase scientific instructional equipment. The program manager's responsibilities consist of participation in program planning and development, preparing, and carrying out proposal evaluation plans, and recommending funding actions. This position is excepted from the competitive civil service at the EC-13/14 level (equivalent to the GS-13/14), \$32,048 to \$49,229 per annum. Salary is negotiable based on qualifications and experience. Applicants should have a Ph.D. or its equivalent in any field of chemistry, physics, or engineering, but preference will be given to engineering. A minimum of 5 years of recent teaching experience at a college or university is also required. Prior experience as an NSF Science Education proposal reviewer and participation in an ISEP grant is desirable but not necessary. Submit résumé to: **National Science Foundation, Personnel Administration Branch, Room 212, EX 81-9, 1800 G Street, NW, Washington, D.C. 20550,** by 15 January 1981. For further information, telephone: E. Paul Broglio at 202-357-7840. NSF is an Equal Opportunity Employer.

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

Opening Date: November 20, 1980
Closing Date: December 20, 1980
All applications must be postmarked
by closing date.

**Announces a Senior Executive
Vacancy for the position of**

DIRECTOR, DIVISION OF EXTRAMURAL ACTIVITIES

Salary Range: \$52,247 to \$57,673 (currently limited \$50,112.50) (Candidates may be eligible for an additional \$7,000-\$10,000 under the Physicians Comparability Allowance Act)

The Director of the Division of Extramural Activities is responsible for the grant activities of NCI, including grant review as delegated to NCI by the Division of Research Grants, NIH, as well as grant administration and management; for maintaining current information regarding the program and status of all cancer research being conducted in the United States and elsewhere; for identifying and recommending priorities in cancer research; and for recommending expansion and reduction of particular areas of cancer research.

Mandatory Qualifications Required:

Candidates must meet the minimum educational requirements for Medical Officer, GS-602 (Doctor of Medicine) or Health Scientist, GS-601 (Bachelor's degree with major studies in the biomedical sciences), as defined by the U.S. Office of Personnel Management in the Civil Service Handbook X-118, Qualifications Standards for positions under the General Schedule and must have a knowledge of or experience in the conduct of a Federal grants program. In addition, candidates must have demonstrated professional competence to assume leadership responsibilities in assuring that national and agency goals and priorities are considered in carrying out the functions and responsibilities of the organization; establishing and maintaining relationships with key individuals and groups outside the organization; directing and guiding programs and projects, including long-term and short-term planning and establishing objectives and priorities; establishing procedures for the

development and defense for the organization's budget, and allocating of fiscal and personnel resources to support program implementation; developing processes and overseeing activities to implement EEO objectives and to assure the fair and equitable employment of qualified persons; developing and implementing procedures for monitoring program performance, including periodic analysis and evaluation.

Candidates who meet these mandatory requirements will be further evaluated on the following factors: training and education, honors and awards, and the degree to which they exceed the minimally qualified level of the mandatory requirements.

This is a Civil Service position in the Senior Executive Service (SES). The individual selected, if not presently in the SES, must serve a one-year probationary period. Candidates may be eligible for appointment in the U.S. Public Health Service Commissioned Corps. Applications will be accepted from all qualified U.S. citizens.

For additional information on the above requirements, call Ms. Jennie Mauck, (301) 496-6864. To apply, send a current SF-171, Personal Qualifications Statement, curriculum vitae and bibliography, to the above individual at **National Cancer Institute, National Institutes of Health, Building 31, Room 3A27, 9000 Rockville Pike, Bethesda, Maryland 20205. An Equal Opportunity Employer.**

NATIONAL INSTITUTES OF HEALTH

POSITIONS OPEN

RESEARCH ASSOCIATE. Cell surface receptors/recognition and pinocytosis of glycoproteins by cells. M.D. or Ph.D. required. Experience in biochemistry and cell physiology preferable. Position available immediately; \$13,800 per year. Send résumé to: **Dr. Philip Stahl, Washington University School of Medicine, Department of Physiology, St. Louis, Missouri 63110. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE position available now for 2 years for recent Ph.D. (biochemistry or related) for studies on the structure and cellular interactions of triacylglycerol-rich lipoproteins. Starting salary is \$14,000. Experience in lipoproteins, ligand-receptor interactions, enzymology, or cell culture is desired. Send curriculum vitae and names of three references to: **Dr. Sandra H. Gianturco, Department of Medicine, A-601, Baylor College of Medicine, Houston, Texas 77030. Affirmative Action/Equal Opportunity Employer.**

The **AUSTRALIAN NATIONAL UNIVERSITY** invites applications for appointment as **RESEARCH FELLOW (COAL FIELD ASSESSMENT PROJECT)** in the CENTRE FOR RESOURCE AND ENVIRONMENTAL STUDIES. The Centre is undertaking a major interdisciplinary study aimed at evaluating factors which may influence the future production of coal in a major Australian coal field. The positions advertised here relate to geological, mining, and geographical factors and the economic, social, and environmental implications of these. Applicants should have a Ph.D. or equivalent in a relevant field such as geology, mining engineering, or other fields relating to the earth sciences. The persons appointed will need to be willing to participate in research as part of a project team led by Professor G. H. Taylor. Appointment is for 3 years with possibility of extension to 5 years. Applications are welcomed from persons able to take leave from their own institutions. Salary range: A\$17,739 to A\$23,155 per annum (A\$1 = U.S.\$1.17). Reasonable appointment expenses, superannuation, housing assistance. Applications to: **Registrar, P.O. Box 4, Canberra ACT 2600, Australia, by 12 December 1980.**

SCIENTIFIC DIRECTOR FOR CANCER RESEARCH

AMC Cancer Research Center and Hospital seeks a director to administer and lead its clinical and basic science research programs. Responsibilities will include preparation and administration of budget, and personnel and facility planning. The successful candidate, who may be either an M.D. or Ph.D., should have recent or current experience in his/her own active research program and should have experience in managing such projects. Experience in federal grantsmanship is highly desirable. The successful candidate will have discretion for the development of new projects and termination of current ones.

Interested candidates will provide curriculum vitae and three confidential references and will document a successful research career including laboratory-based, clinically relevant research. The candidate must provide clear evidence of leadership capability and must meet the qualifications for a senior faculty appointment at the University of Colorado Health Sciences Center.

AMC offers a salary competitive to a medical school senior faculty member, housing assistance, competitive perquisites (insurance, pension, vacation, sabbatical leave, moving expense, a negotiable initial contract, and an annual salary review keyed to performance). Initial support for the research of the candidate is negotiable.

The position will be open 1 July 1981 and applications will be reviewed 15 January 1981. Please submit requisite information to: **President, AMC Cancer Research Center and Hospital, 6401 West Colfax Avenue, Lakewood, Colorado 80214. An Equal Opportunity Employer.**

VISITOR APPOINTMENTS are available for new and established Ph.D.'s for up to 1-year periods to carry out research in solar physics, solar-terrestrial physics, and related subjects. Applicants should provide curriculum vitae, including education, work experience, publications, the names of three scientists familiar with their work, and a statement of their research plans. Applications must be received by 15 January 1981 and they should be sent to: **Visitor Committee, High Altitude Observatory, National Center for Atmospheric Research (NCAR), P.O. Box 3000, Boulder, Colorado 80307. NCAR is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE with experience and interest in protein-protein interactions to join a team studying the assembly of nucleosomes containing different histone variants. The position is available immediately, with funding assured for at least 2 years in the range of \$15,000 to \$25,000 (including fringe benefits), according to experience. Send curriculum vitae, list of publications, and the names of three references to: **Dr. A. Zweidler, c/o Personnel Office, Institute for Cancer Research, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, Pa. 19111. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH AND DEVELOPMENT SOURCES SOUGHT TO PERFORM STUDIES ON MATHEMATICAL MODELLING OF THORACIC RESPONSE TO BLAST WAVES.

The research goal is the derivation of a model of thoracic wall response to air blast with the intent of defining human safety limits for exposure to impulse noise. Respondents must have a demonstrated capability in the computer modeling of biophysical systems. Experience with finite elements would be useful. The contractor will assist in design and execution of experiments measuring thoracic response to air blast in animals and humans. Prior experience with blast or impact effects is desirable. Questions of a technical nature may be addressed to: **Cpt. Y. Phillips, M.D., Division of Medicine, Walter Reed Army Institute of Research, Walter Reed Army Medical Center, Washington, D.C. 20012; telephone: 202-576-3014.** Respondents to this announcement are invited to submit evidence of interest, qualifications, and previous experience, in four copies within 10 days of this announcement, to the following address (this is not a request for proposal):

**U.S. Army Medical Research and
Development Command
SGRD-RMA (Ann E. May)
Fort Detrick
Frederick, Md. 21701**

VASCULAR PLANT ECOLOGIST UNIVERSITY OF SOUTH CAROLINA

The Department of Biology is seeking applicants for a tenure-track assistant professorship. The successful candidate will develop and maintain an excellent program of research and teaching. The department will provide funds for initiation of research. Modern facilities including a new research greenhouse are available. Applicants should, prior to 2 January 1981, submit curriculum vitae, reprints, proposed research, and names, addresses, and telephone numbers of references to: **Dr. Anthony Huang, Plant Ecology Search Committee, Department of Biology, University of South Carolina, Columbia, S.C. 29208.** The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.

VERTEBRATE PHYSIOLOGIST

Assistant professor sought for tenure-track post beginning 1 August 1981. Ph.D. in vertebrate physiology or related field required. Primary responsibilities include teaching vertebrate physiology, genetics, vertebrate embryology, or comparative anatomy on alternate years, and a nonmajor environmental biology course. Excellence in teaching and a commitment to research are desired. Application deadline: 31 January 1981. For a complete job description, write: **Rose Song, Secretary to the Dean, Linfield College, McMinnville, Oregon 97128. An Affirmative Action/Equal Opportunity Employer.**

ADVANCE STUDY INSTITUTE

**NATO ADVANCED STUDY INSTITUTE
Technological Risk Assessment
Erice, Italy, 21 to 31 May 1981**

International experts will lecture on key aspects of technological risk assessment. These aspects include mutagenesis, epidemiology, atmospheric and aquatic transport of pollutants, input-output, and other models for cradle-to-grave risk-benefit assessment.

For further information, write:

**Dr. P. F. Ricci
Electric Power Research Institute
3412 Hillview Avenue
P.O. Box 10412
Palo Alto, Calif. 94303**

CONFERENCE

THE ELECTRIC POWER RESEARCH INSTITUTE (EPRI)

Conference on ENVIRONMENTAL RISK ASSESSMENT: HOW NEW REGULATIONS WILL AFFECT THE UTILITY INDUSTRY

The Monteleone Hotel, New Orleans, La.
10 and 11 December 1980

A conference to address questions such as "What will the new directives say about carcinogens and toxic substances?" and "How will they affect state implementation plans?" Conference chairman is Dr. Ronald Wyzga of EPRI; keynote speaker will be Dr. Roy Albert of the New York University Cancer Assessment Group. A partial list of other invited speakers includes:

Dr. J. Stara, EPA, Water Quality Criteria,
Dr. J. A. Cotruvo, EPA, Safe Drinking Water Act,
Dr. J. Padgett, EPA, Clean Air Act,
Dr. B. Walker, OSHA, OSHA Regulations and Risk Assessment,
Dr. M. Schneiderman, NCI, Epidemiology, and
Dr. D. Hoel, NIEHS, Extrapolation Models of Animal Toxicology Data to Man.

The conference is intended primarily for those with responsibilities to the electric utility industry and state regulatory agencies. There are no conference fees; however, space is limited and advance registration is required. To attend, contact conference coordinator: **Phyllis Kemper, Sigma Research, Inc., 2950 George Washington Way, Richland, Washington 99352; telephone: 509-375-0663.**

GRADUATE STUDY

ENVIRONMENTAL PROGRAMS INDIANA UNIVERSITY

The School of Public and Environmental Affairs (SPEA) offers courses and degree programs in environmental science and policy on both the Bloomington and Indianapolis campuses. Concentration areas include chemistry, ecology, geography, geology, impact analysis, water resources, planning, and policy. Related studies in biogeochemistry, and environmental health, law, and engineering are available. Highly interdisciplinary degree programs, which encourage a wide range of individual educational objectives are offered at the bachelor's, master's, and doctoral level. Fellowships, teaching assistantships, and research assistantships are available to qualified applicants. SPEA has internship arrangements with several state and federal agencies and maintains a Placement Office. Information regarding curricula, faculty, research opportunities, and application procedures may be obtained from:

**Environmental Programs
Poplars 4385
School of Public and Environmental Affairs
Indiana University
Bloomington, Ind. 47405
Telephone: 812-337-9485**

GRADUATE ASSISTANTSHIPS IN LIFE SCIENCES up to \$5300 per year are available for master's (thesis) and Ph.D. candidates with research interests in animal, aquatic, physiological and plant ecology, bacterial and physiological genetics; medical microbiology; comparative, endocrine and sensory physiology; cellular biology; immunobiology; medical technology; mycology; neurobiology; parasitology; and virology. Research fellowships from NIH and NSF supported faculty research grants are available. Contact: **Chairperson, Department of Life Sciences, Indiana State University, Terre Haute, Indiana 47809**, for application and information. *Indiana State University is an Equal Opportunity/Affirmative Action Employer.*

The **Environmental and Occupational Health Sciences Program** within the School of Public Health, University of Illinois at the Medical Center, Chicago, offers graduate and professional degree programs leading to the master of public health, master of science, doctor of public health, and doctor of philosophy. Financial support is available to train qualified students for careers in environmental science and management; industrial hygiene; health effects and toxicology; and environmental-occupational aspects of medicine, safety, psychology, risk assessment, and policy analysis. For further information, contact: **Patricia Murphy, School of Public Health, University of Illinois, Box 6998, Chicago, Ill. 60680.**

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Director Cancer Research and Treatment Center University of New Mexico School of Medicine

The University of New Mexico Cancer Research and Treatment Center is a multidisciplinary unit of the School of Medicine which includes programs in basic and clinical research, patient care, epidemiology, and educational outreach. In addition, the Center is engaged in collaborative research with the Los Alamos Scientific Laboratory testing the therapeutic potential of negative pi mesons (including pions) generated in the 800-MeV proton linear accelerator at Los Alamos, New Mexico.

The University is seeking an outstanding scientist, recognized nationally for excellence in cancer research, who also has demonstrated administrative experience and abilities in generation foundation and grant support. The successful candidate will hold an advanced degree(s) and be eligible for tenured appointment at professorial rank in one of the academic departments of the School of Medicine.

Inquiries, nominations, and applications may be addressed prior to December 31, 1980 to:

Dr. Robert O. Kelley, Chairman
Search Committee for Director of the Cancer
Research and Treatment Center
Office of the Dean
University of New Mexico
School of Medicine
Albuquerque, New Mexico 87131

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

AAAS MASS MEDIA SCIENCE FELLOWS PROGRAM

The American Association for the Advancement of Science (AAAS) invites outstanding natural and social science and engineering students, preferably those at the graduate level, to apply for the 1981 Mass Media Science Fellows Program. Students majoring in English, journalism, or other nontechnical fields are not eligible for these fellowships.

Fellows will work as reporters, researchers, and production assistants for 10 to 12 weeks during the summer at radio stations, television stations, newspapers, and magazines throughout the United States. Fellows will have the opportunity to participate in the news-making process, to increase their understanding of editorial decision-making and information dissemination, and to develop skill in conveying to the public a better understanding and appreciation of science and technology. AAAS pays a \$250 weekly stipend and travel expenditures. Deadline for receipt of applications is 15 February 1981. *Minorities, women, and handicapped persons are especially encouraged to apply.*

For further information and an application, write:

**Mass Media Science Fellows Program
AAAS, 8th floor
1776 Massachusetts Avenue, NW
Washington, D.C. 20036**

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The ideal candidate will have a Ph.D. and 2 or more years of applicable post-doctoral experience. Individuals with a background in synthetic organic chemistry or immunochemistry/biochemistry are encouraged to apply.

Interested candidates should submit a resume with salary history to Mr. Steve Kinnal, New England Nuclear, 601 Treble Cove Road, Billerica, MA 01862.

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DOCTORAL PROGRAM

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ASSISTANTSHIPS

GRADUATE TRAINING IN BIOCHEMISTRY AND BIOPHYSICS at the University of Hawaii. Join our active medical school department engaged in numerous research projects of interest and importance. Unique geographical and cultural setting. Pre-doctoral teaching and research assistantships available September 1981 to qualified applicants. Write to: Chairman, Department of Biochemistry and Biophysics, University of Hawaii, Honolulu, Hawaii 96822. An Equal Opportunity Employer.

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The Weizmann Institute of Science is pleased to announce the establishment of the

JOSEPH MEYERHOFF FELLOWSHIPS

The Meyerhoff Fellowships are intended to attract outstanding scientists to the Weizmann Institute. They will be awarded to candidates from all over the world and are offered in two categories: to senior scientists for a period of 2 months to 1 year; and to candidates who have completed their Ph.D. requirements within the past 8 years.

Candidates are requested to apply to:

**The Meyerhoff Fellowship Program
c/o The Academic Secretary
The Weizmann Institute of Science
Rehovot
Israel**

PREDOCTORAL FELLOWSHIPS. The Graduate Program in Molecular Cell Biology invites applications from highly qualified students interested in an interdisciplinary Ph.D. program. Major areas of emphasis include animal virology, bacterial and somatic cell genetics, cancer biology, cellular immunology and immunochromatography, connective tissue and protein biochemistry, infectious diseases and host defense, membrane biochemistry, nucleic acid synthesis, and research involving the cause and prevention of dental caries. All students admitted to the program receive stipends of \$6300 plus tuition and fees per year. After admission to candidacy the stipend is increased to \$7000 per year. Contact: Dr. Roy Curtiss III, Director of Molecular Cell Biology Graduate Program, Department of Microbiology, University of Alabama in Birmingham, Birmingham, Alabama 35294.

FELLOWSHIPS IN HUMAN GENETICS—NIH research fellowship in biochemical and somatic cell genetics available immediately. Current research areas include human gene mapping, regulation and control of human heme biosynthesis, and lysosomal storage diseases. Experience in enzymology, immunology, hybridoma antibody production, somatic cell hybridization, or recombinant DNA techniques preferred. Salary based on experience; 1- to 3-year fellowships. Send curriculum vitae and two letters of recommendation to: Dr. R. J. Desnick, Division of Medical Genetics, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, N.Y. 10029.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS IN BLOOD BANKING SCIENCES

NIH-funded training program with research opportunities in transplantation immunology, immunobiology of HLA, hemostasis, platelet physiology, immunohematology, and transfusion therapy. Positions available for qualified candidates with M.D. and/or Ph.D. degrees. U.S. citizenship or permanent residency status required. Applicant should submit curriculum vitae and references to:

**Dr. Rene J. Duquesnoy
Director—Research and Development
The Blood Center of Southeastern Wisconsin
P.O. Box 10-G
Milwaukee, Wisconsin 53201**

POSTDOCTORAL FELLOWSHIP, Ph.D. in biophysics or biochemistry, physical biochemistry or biophysics of contractile proteins of muscle. Available at once. Send curriculum vitae and two letters of recommendation to: Dr. William F. Harrington, Department of Biology, The Johns Hopkins University, Baltimore, Maryland 21218.

POSTDOCTORAL RESEARCH FELLOWSHIPS available in the areas of diabetes, hormone action, and cyclic nucleotides. This is a multidisciplinary program with research training by faculty preceptors in basic and/or clinical areas. Interested applicants with M.D., M.D.-Ph.D., or Ph.D. degrees with or without residency training should send curriculum vitae to: Dr. Ferid Murad, Program Director, Departments of Medicine and Pharmacology, Box 419, University of Virginia, Charlottesville, Va. 22908. An Affirmative Action/Equal Opportunity Employer

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STATEMENT

Statement required by the Act of 12 August 1970: Section 3685, Title 39, United States Code showing the ownership, management, and circulation of:

SCIENCE published weekly on Friday except the last week in December, at 1515 Massachusetts Avenue, NW, Washington, D.C. 20005. Date of filing: 3 November 1980. This is also the address of the publisher, the editor, and the managing editor, who are, respectively, William D. Carey, Philip H. Abelson, and Robert V. Ormes.

The owner is American Association for the Advancement of Science, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005. Stockholders: None.

Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities: None.

The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes have not changed during preceding 12 months.

The average number of copies of each issue during preceding 12 months are (A) Total No. copies printed: 161,122; (B) Paid circulation: (1) sales through dealers and carriers, street vendors, and counter sales: 134; (2) mail subscriptions: 151,992; (C) Total paid circulation: 152,126; (D) Free distribution by mail, carrier, or other means: (1) samples, complimentary, and other free copies: 3,478; (2) copies distributed to news agents, but not sold: none; (E) Total distribution: 155,604; (F) Office use, leftover, unaccounted, spoiled after printing: 5,518; (G) Total: 161,122.

Actual number of copies of single issue published nearest to filing date are (A) Total No. copies printed: 165,148; (B) Paid circulation: (1) sales through dealers and carriers, street vendors, and counter sales: 136; (2) mail subscriptions: 150,914; (C) Total paid circulation: 151,050; (D) Free distribution by mail, carrier, or other means: (1) samples, complimentary, and other free copies: 3,109; (2) distributed to news agents, but not sold: none; (E) Total distribution: 154,159; (F) Office use, leftover, unaccounted, spoiled after printing: 10,989; (G) Total: 165,148.

I certify that the statements made by me above are correct and complete. (signed) ROBERT V. ORMES, Managing Editor

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

Opening Date: November 20, 1980
Closing Date: December 22, 1980
All applications must be postmarked
by closing date.

DIRECTOR, DIVISION OF CANCER CAUSE AND PREVENTION National Cancer Institute

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 Institute's efforts cover the spectrum of basic, applied, and developmental research. It encompasses the research thrusts of cause and prevention of cancer, detection and diagnosis, treatment and rehabilitation, and cancer biology. It also encompasses control interventions in prevention; detection, diagnosis, and pretreatment evaluation; and treatment, rehabilitation, and continuing care.

As Director of the Division of Cancer Cause and Prevention, the incumbent will be responsible for directing the NCI's major research effort related to the causes and prevention of cancer. The Division encompasses programs for intramural laboratory research in chemical and biological carcinogenesis and chemoprevention and for field studies (epidemiology) and statistics. The Division also is responsible for extramural (grants and contracts) activities related to its mission. It is anticipated that the Division will have a budget of approximately \$224 million and approximately 530 full-time permanent personnel in fiscal year 1981.

This is a Civil Service position in the Senior Executive Service (SES), with a salary range from \$52,247 to \$57,673 (currently limited to \$50,112.50 per annum). Candidates may be eligible for Physicians Comparability Pay 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 the SES, must serve a one-year probationary period.

The mandatory professional/technical qualifications for the position require that candidates: (1) meet the minimum educational requirements for Medical Officer, GS-602, or Health Scientist, GS-601, or equivalent combination of experience and training, as defined by the U.S. Office of Personnel Management Handbook X-118 (Qualification Standards for Positions under the General Schedule) which is available in

Federal personnel offices; and (2) have research experience and knowledge of research programs in one or more areas related to the biology, causation, or prevention of cancer. The managerial/executive qualifications are: experience in the leadership/management of a research program, demonstrating competence to assume leadership responsibilities in: (1) assuring that national and agency goals and priorities are considered in carrying out the functions and responsibilities of the organization; (2) establishing and maintaining relationships with key individuals and groups outside the organization; (3) directing and guiding programs and projects, including long-term and short-term planning and establishing objectives and priorities; (4) establishing procedures for the development and defense of the organization's budget, and allocating fiscal and personnel resources to support program implementation; (5) developing and implementing procedures for monitoring program performance, including periodic analysis and evaluation; and (6) developing processes and overseeing activities to implement EEO objectives and to assure the fair and equitable employment of qualified persons.

Candidates who meet the mandatory requirements will be evaluated by the Search Committee on the following factors: scientific reputation/peer recognition; training and education; and honors and awards, and the degree to which they exceed the minimally qualified level of the mandatory managerial/executive qualifications. Additional information may be obtained from Ms. Jan Maltbie, Supervisory Personnel Management Specialist, NCI, (301) 496-6864.

Applications (Personal Qualifications Statement SF-171) are to be sent to the above individual at this address: National Cancer Institute, Building 31, Room 3A27, 9000 Rockville Pike, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications of woman and/or minority group members are especially solicited.

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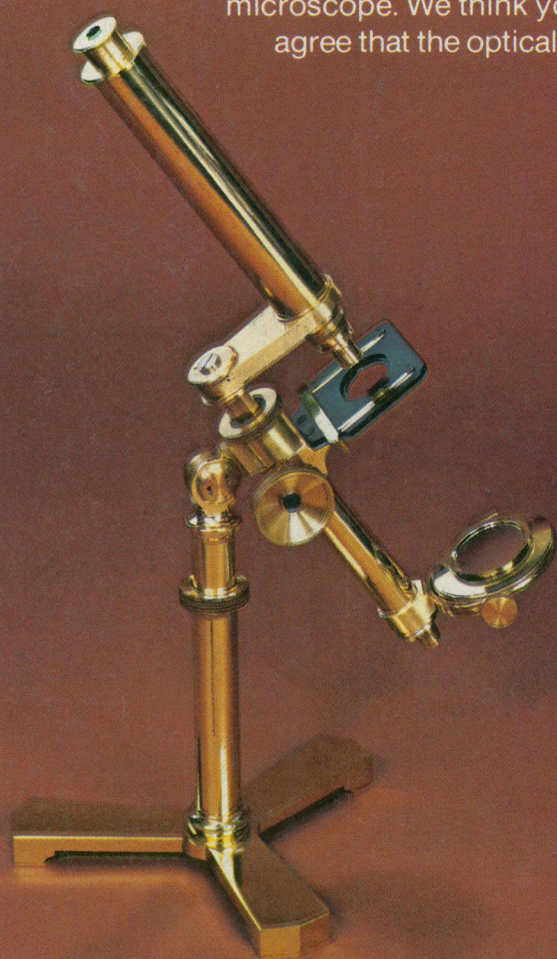
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