

rected in the second printing of the book.

Despite these notational difficulties, I would strongly recommend volume 1 of *Spinors and Space-Time*. Its careful and comprehensive discussion virtually assures that it will become a standard reference in the field.

GARY HOROWITZ

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## Reprints of Books

## Previously Reviewed

**Likelihood.** A. W. F. Edwards. Cambridge University Press, New York, 1985. Paper, \$16.95. Cambridge Science Classics. *Reviewed* 177, 878 (1972).

**Niels Bohr.** The Man, His Science, and the World They Changed. Ruth Moore. MIT Press, Cambridge, Mass., 1985. Paper, \$9.95. *Reviewed* 155, 549 (1967).

**Theory and Experiment in Gravitational Physics.** Clifford M. Will. Cambridge University Press, New York, 1985. Paper, \$24.95. *Reviewed* 216, 978 (1982).

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**Advances in Geodesy.** Erik W. Grafarend and Richard H. Rapp, Eds. American Geophysical Union, Washington, D.C., 1984. vi, 310 pp., illus. Paper, \$23. Reprinted from *Reviews of Geophysics and Space Physics*.

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**Affluence and Cultural Survival.** Richard F. Salisbury and Elisabeth Tooker, Eds. American Ethnological Society, Washington, D.C., 1985. vi, 171 pp. Paper, \$14. The 1981 Proceedings of the American Ethnological Society.

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**Ancestral Voices.** Language and the Evolution of Human Consciousness. Curtis G. Smith. Illustrations by Katherine A. Dorfman. Prentice-Hall, Englewood Cliffs, N.J., 1985. xiv, 178 pp. \$15.95; paper, \$9.95. Frontiers of Science.

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**The Astronomical Scrapbook.** Skywatchers, Pioneers, and Seekers in Astronomy. Joseph Ashbrook, Leif J. Robinson, Ed. Cambridge University Press, New York, and Sky Publishing, Cambridge, Mass., 1985. xii, 468 pp., illus. \$19.95.

**Atlantic Hydrophysical Polygon-70.** Meteorological and Hydrophysical Investigations. V. G. Kort and V. S. Samoilenko, Eds. Balkema, Rotterdam, 1984. viii, 398 pp., illus. \$25. Russian Translations Series, 11. Translated from the Russian edition (Moscow, 1974).

**Basic Biochemical Methods.** Renee R. Alexander, Joan M. Griffiths, and Maria L. Wilkinson. Wiley-Interscience, New York, 1985. xiv, 241 pp., illus. Spiral bound, \$24.95.

**Basic Concepts in Teratology.** T. V. N. Persaud, A. E. Chudley, and R. G. Skalko. Liss, New York, 1985. x, 190 pp., illus. \$38.

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**Chimeras in Developmental Biology.** Nicole Le Douarin and Anne McLaren, Eds. Academic Press, Orlando, Fla., 1984. xiv, 456 pp., illus. \$78.

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**Conodont Biofacies and Provincialism.** David L. Clark, Ed. Geological Society of America, Boulder, Colo., 1984. vi, 340 pp., illus. Paper, \$36. Geological Society of America Special Paper 196. From a symposium, April 1983.

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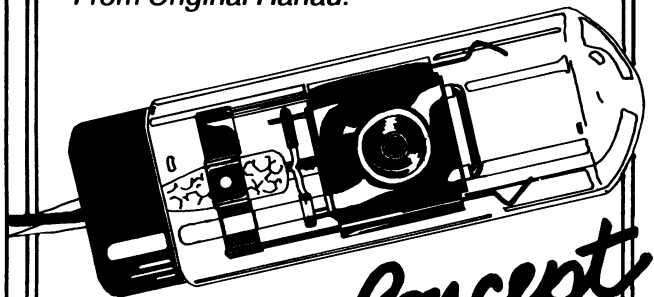
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(Continued on page 1456)

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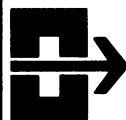
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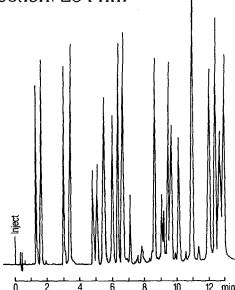
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## BOOKS RECEIVED

(Continued from page 1423)

Academic Press, Orlando, Fla., 1984. x, 244 pp., illus. \$32.50.

**Equality in America.** The View from the Top. Sidney Verba and Gary R. Orren. Harvard University Press, Cambridge, Mass., 1985. xiv, 334 pp. \$25; paper, \$12.50.

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**Global Conflict.** The Domestic Sources of International Crisis. John W. Burton. Center for International Development, University of Maryland, College Park, 1984. xiv, 194 pp. \$22; paper, \$12.

**Global Energy Assessment and Outlook.** Behram N. Kursunoglu, Arnold Perlmutter, and Linda Scott, Eds. Harwood, New York, 1984. xxx, 580 pp., illus. \$170. From a forum, Mexico City, Nov. 1981.

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**Handbook of Neurochemistry.** Vol. 9, Alterations of Metabolites in the Nervous System. Abel Lajtha, Ed. 2nd ed. Plenum, New York, 1985. xxviii, 595 pp., illus. \$85.

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**Health Consequences of Acute and Chronic Marijuana Use.** Madeline O. Maykut. Pergamon, New York, 1984. viii, 328 pp., illus. \$28.

**Health Psychology.** Treatment and Research Issues. Arthur R. Zeiner, Debra Bendell, and C. Eugene Walker, Eds. Plenum, New York, 1985. xii, 286 pp. \$45. From a conference, Oklahoma City, April 1983.

**Heat Shock Response of Eukaryotic Cells.** Lutz Nover, Ed. Springer-Verlag, New York, 1984. viii, 82 pp., illus. Paper, \$12.50.

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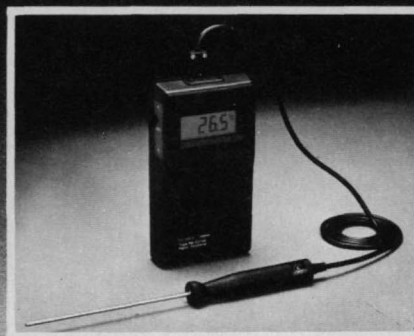
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**Popper Selections.** David Miller, Ed. Princeton University Press, Princeton, N.J., 1985. 479 pp. \$32.50; paper, \$9.95.

**Practical Comprehensive Treatment of Anorexia Nervosa and Bulimia.** Arnold E. Andersen. Johns Hopkins University Press, Baltimore, Md., 1985. xvi, 208 pp. \$28.50. Johns Hopkins Series in Contemporary Medicine and Public Health.

**Precalculus.** Functions and Graphs. M. A. Munem and J. P. Yizze. 4th ed. Worth, New York, 1985. xiv, 557 pp., illus. \$27.95.

**Prevention of Physical and Mental Congenital Defects.** Maurice Marois *et al.*, Eds. Liss, New York, 1985. Part B, Epidemiology, Early Detection and Therapy, and Environmental Factors. xxvi, 492 pp., illus. \$98. Part C, Basic and Medical Science, Education, and Future Strategies. xxvi, 435 pp., illus. \$96. Progress in Clinical and Biological Research, vols. 163B and 163C. From a conference, Strasbourg, France, Oct. 1982.

**A Primer on Riemann Surfaces.** A. F. Beardon. Cambridge University Press, New York, 1984. x, 188 pp. Paper, \$24.95. London Mathematical Lecture Note Series, 78.

**Proceedings of the First International Muskox Symposium.** (Fairbanks, May 1983.) David R. Klein, Robert G. White, and Sue Keller, Eds. Institute of Arctic Biology, University of Alaska, Fairbanks, 1984. x, 220 pp., illus. Paper, \$20. Biological Papers of the University of Alaska Special Report No. 4.

**Proceedings of the First International Polychaete Conference, Sydney.** (July 1983.) P. A. Hutchings, Ed. Linnean Society of New South Wales, Milson's Point, N.S.W., Australia, 1984. viii, 483 pp., illus. Paper, A\$40.

**Proceedings of the 14th Collegium Internationale Neuro-Psychopharmacologicum Congress.** (Florence, June 1984.) Giorgio Racagni, Rodolfo Paoletti, and Paul Kielholz, Eds. Raven, New York, 1984. xxxii, 990 pp., illus. Paper, \$68. *Clinical Neuropharmacology*, vol. 7, supplement 1.

**Proceedings of the International Symposium on In-Beam Nuclear Spectroscopy.** (Debrecen, Hungary, May 1984.) Zs. Dombárdi and T. Fényes, Eds. Akadémiai Kiadó, Budapest, 1984. Two volumes. 820 pp., illus. \$65.

**Progress in Land Evaluation.** J. C. F. M. Haans, G. G. L. Steur, and G. Heide, Eds. Balkema, Rotterdam, 1984. viii, 309 pp., illus., + maps. \$28. From a seminar, Wageningen, Netherlands, Sept. 1983.

**The Receptors.** Vol. 1. P. Michael Conn, Ed. Academic Press, Orlando, Fla., 1984. xviii, 659 pp., illus. \$78.

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**Reflections on Gender and Science.** Evelyn Fox Keller. Yale University Press, New Haven, Conn., 1985. viii, 193 pp. \$17.95.

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**Systems for Cytogenetic Analysis in *Vicia Faba* L.** G. P. Chapman and S. A. Tarawali, Eds. Published for the Commission of the European Communities by Nijhoff, Dordrecht, Netherlands, 1984 (U.S. distributor, Kluwer, Hingham, Mass.). xvi, 191 pp., illus. \$38. Advances in Agricultural Biotechnology. From a seminar, London, April 1984.

**TV, Science, and Kids.** Teaching Our Children to Question. Action for Children's Television. Kim Hays, Ed. Addison-Wesley, Reading, Mass., 1984. xiv, 210 pp., illus. \$17.95.

**Thermal Expansion 8.** Thomas A. Hahn, Ed. Plenum, New York, 1984. xiv, 279 pp., illus. \$85. From a symposium, Gaithersburg, Md., June 1981.

**Thyroglobulin.** The Prothyroid Hormone. Margaret C. Eggo and Gerard N. Burrow, Eds. Raven, New York, 1985. xviii, 341 pp., illus. \$58.50. Progress in Endocrine Research and Therapy, vol. 2. From a symposium, Quebec, 1984.

**Topologie et Perception.** Tome 1, Bases Mathématiques et Philosophiques. Claude-Paul Bruter. 2nd ed. Maloine, Paris, 1985. 309 pp., illus. Paper, 180 F. Collection Recherches Interdisciplinaires Dirigée par Pierre Delattre.

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**POSTDOCTORAL POSITIONS** to study biochemical modulation of sensitivity of tumor and normal tissue to x-rays or chemotherapeutic drugs. Background in biochemistry or tumor biology preferred. Areas of research interest which are favored include: redox or free radical chemistry, thiol biochemistry, mechanisms of cell killing, metabolic regulation, and mechanisms of DNA repair. Postdoctoral experience desirable, but not necessary. Salary commensurate with qualifications. Please send a short description of research interests along with curriculum vitae and three letters of recommendation to: **Dr. Edward Bump, Research Coordinator, Division of Cancer Biology, Joint Center for Radiation Therapy, Harvard Medical School, 50 Binney Street, Boston, Mass. 02115.** *An Equal Opportunity/Affirmative Action Employer.*

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Applications will be accepted through 30 August 1985 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (202) 696-4705.

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## Senior Environmental Specialists

### Help us set new standards of excellence.

The Agricultural Division of CIBA-GEIGY is the largest producer of pesticide products for the insecticide and herbicide markets and one of the leading Agricultural Companies in the United States. We are as highly regarded for our system to ensure that compounds meet existing and projected Government environmental safety requirements as we are for the quality of our products. In order to maintain our excellent reputation, we currently seek Senior Environmental Specialists to assure that necessary environmental data are collected through various studies to meet Environmental Protection Agency (EPA) requirements.

The individuals we seek will be responsible for the preparation of separate Environmental Impact (Chemistry) and Environmental Safety (Toxicological) statements, development of worker and involuntary exposure data, and awarding of environmental study contracts upon the Manager's approval. In addition, the successful candidates

will oversee all scientific aspects of conducting and evaluating studies.

Excellent opportunities exist for entry and senior level professionals with a Ph.D. in an appropriate scientific discipline. Depending upon position, requirements range from 1 to 10 years' experience in a field of Environmental Chemistry or Environmental Pathology. Knowledge of groundwater science or wildlife biology is desirable, but not a must.

In return for your expertise, we offer a competitive salary, excellent benefits, good relocation assistance and the opportunity to make a significant contribution to a prestigious company. For prompt and confidential consideration, forward a resume, including salary history and requirements, in confidence to: Mr. Jeff Owens, Supervisor, Employment and EEO, CIBA-GEIGY Corporation, P.O. Box 18300, Greensboro, NC 27419. We are an equal opportunity employer m/f/h/v.

# CIBA-GEIGY

**Progress Through Innovation**



## POSITIONS OPEN

### DEAN OF THE SCHOOL OF MEDICINE University of Pittsburgh Pittsburgh, Pennsylvania

Applications and nominations are invited for this position. The School of Medicine graduates approximately 136 M.D.'s each year and operates programs leading to the M.S. and Ph.D. degrees in each of the basic sciences. Its full-time faculty consists of 730 persons. The dean reports to the Senior Vice President for the Health Sciences to whom the deans of the Schools of Dental Medicine, Nursing, Pharmacy, and Health Related Professions, and the Graduate School of Public Health also report.

The School of Medicine is adjacent to six major affiliated hospitals and is on the main campus of the University of Pittsburgh in the Oakland section of the city of Pittsburgh. The University is a privately governed, state-related institution with a total enrollment of about 35,000 students.

Candidates should have a doctorate in medicine or in one of the basic biological sciences and a record of success in the administration of a major academic department or its equivalent.

Applications and nominations should be sent by 15 July 1985 to:

Secretary, Search Committee  
Room E-606 WPIC  
University of Pittsburgh  
Pittsburgh, Pa. 15213

*The University of Pittsburgh is an Equal Opportunity Employer.*

### DEVELOPMENTAL BOTANIST

The Biology Department at Carleton College has a temporary, full-time position available for a vascular plant developmental botanist for the 1985/1986 academic year. Applicants should be prepared to teach a course in the morphology/anatomy of the vascular plants, a course in developmental botany or morphogenesis of the vascular plants, and to share in the team-teaching of an introductory botany course. Involvement in the reading and evaluation of the senior integrative exercise is also expected. Applicants should have or be in the last stages of obtaining the Ph.D. in the botanical sciences. Prior teaching experience is expected. *Women and minority applicants are especially encouraged to apply.* Salary and appointment will be commensurate with experience. **Closing date:** 1 August 1985. Please provide curriculum vitae, undergraduate and graduate transcripts, and three letters of reference to: G. J. C. Hill, Chairman, Biology Department, Carleton College, Northfield, Minn. 55057. Telephone: 507-663-4391. Carleton College is an Equal Opportunity/Affirmative Action Employer.

**DIRECTOR, CLINICAL PHARMACOLOGY.** We invite applications for the position of director of the Division of Clinical Pharmacology in the Department of Medicine at Jefferson Medical College. The director is responsible for the organization and implementation of research, teaching, and clinical programs at Jefferson Medical College of Thomas Jefferson University. Please respond with curriculum vitae to: Willis C. Maddrey, M.D., Chairman, Department of Medicine, Jefferson Medical College, 1025 Walnut Street, Philadelphia, Pa. 19107.

**DIRECTOR, RESEARCH APPLICATIONS**—Growing manufacturer of instruments used for electrophysiological research is seeking a director of research applications. Ph.D. desired but not essential. Position requires helping laboratories select and use equipment, defining new instrument requirements, preparing application papers, and attending scientific meetings. Some worldwide travel. Compensation range \$35,000 to \$55,000. Send résumé to: Director of Personnel, Medical Systems, One Plaza, Greenvale, N.Y. 11548.

**EXERCISE PHYSIOLOGIST (Ph.D.)** is sought to become member of a research team examining the effects of prescribed medications on human behavior. Experience with microprocessor-based assessment procedures and a willingness to collaborate with psychologists and physicians are desirable. Position is a temporary civil service job with 1-year terms renewable for up to 4 years. Salary level ranges from \$26,381 to \$37,599, depending upon qualifications. Send curriculum vitae to: Dr. Vincent M. O'Donnell, Department of Behavioral Biology (SGRD-UWI-C), Walter Reed Army Institute of Research, Washington, D.C. 20307-5100.

## POSITIONS OPEN

### DIRECTOR LUDWIG INSTITUTE FOR CANCER RESEARCH BRANCH OF MONTREAL

The Ludwig Institute for Cancer Research is seeking an outstanding scientist to direct the research program of its proposed branch in the field of cancer genetics encompassing the latest developments in such areas as cell biology, biochemistry, and molecular biology. The Ludwig Institute is creating a new branch which will conduct its research in Montreal, Quebec, in conjunction with the Royal Victoria Hospital, and in association with McGill University. University and hospital academic appointment of an appropriately qualified candidate is anticipated. Planning calls for the branch to occupy space exceeding 12,000 square feet.

Candidates must have demonstrated outstanding research capabilities, both in their own personal research and in attracting and leading excellent younger investigators. A director will be a leader in basic science (Ph.D. and/or M.D.) and will have an associate staff member who will lead the clinical investigative activities. Interested candidates should submit up-to-date curriculum vitae and bibliography, about five selected recent reprints, and names of three internationally known referees no later than 15 July 1985 to: Dr. Lloyd Old, Scientific Director, Ludwig Institute for Cancer Research, Stadelhoferstrasse Number 22, 8001 Zurich, Switzerland.

**ENTOMOLOGIST.** Tenure-track assistant professor position available in systematics of economically important arthropods. Research, teaching, and curatorial responsibilities. Send curriculum vitae and three letters of recommendation by 15 July 1985 to: John L. Capinera, Entomology Department, Colorado State University, Ft. Collins, Colorado 80523. An Equal Opportunity/Affirmative Action Employer.

### FACULTY POSITIONS IN PHYSIOLOGY

We are seeking applicants for tenure-track positions in the Department of Physiology of Meharry Medical College. In selecting candidates, we hope to complement an existing departmental strength in neuroscience and neuroendocrinology and to assign teaching responsibility for the cardiovascular sections of the medical and dental curricula. In addition to teaching and participation in the department's graduate training efforts, successful candidates will be expected to perform productive research and achieve extramural support. Applicants must have a Ph.D. degree (or equivalent) and postdoctoral experience. Send curriculum vitae, brief description of research interest, and names and addresses of three references to: Dr. James G. Townsel, Chairman, Department of Physiology, Meharry Medical College, 1005 D. B. Todd Boulevard, Nashville, Tenn. 37208. These positions are available 1 July 1985. An Affirmative Action/Equal Opportunity Employer.

### THE HEBREW UNIVERSITY OF JERUSALEM THE FACULTY OF MEDICINE THE HEBREW UNIVERSITY HADASSAH MEDICAL SCHOOL Faculty Positions

The Faculty of Medicine invites applications for two tenure-track faculty positions and for Allon Fellowship candidates leading to tenure-track positions in any field of basic medical sciences. Ph.D. and/or M.D. degree and postdoctoral training are required. Excellence in research and teaching will be of prime importance in the decisions of the Search Committee. Candidates are expected to develop independent research. Curriculum vitae, list of publications, research plans, and three letters of recommendations should reach: Mrs. D. Abramson, Office of the Dean, P.O. Box 1172, Jerusalem 91010, Israel, not later than 1 September 1985.

### FACULTY POSITION

The Department of Biology, University of Alabama at Birmingham, invites applications for a tenure-track position. Applicants should provide evidence that they can develop a strong, independent research program in the areas of endocrinology or immunology. The successful candidate will be expected to contribute to the graduate program, and to teach an undergraduate course in immunology. Send curriculum vitae, selected reprints, a brief outline of future research plans, and the names of three references by 1 September 1985 to: Search Committee, Department of Biology, University Station, Birmingham, Ala. 35294. The University of Alabama at Birmingham is an Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

**FACULTY POSITION IN CLINICAL NUTRITION**—Tenure-track. We wish to employ an individual who is capable of conducting basic research in nutrition. Opportunities will be available for this individual to work directly with a number of clinical departments in the Medical Center as well as with the Sanders-Brown Gerontology Center. A Ph.D. in nutrition or one of the basic sciences is required. Additionally a research interest in gerontology is desirable. This position will be at either the assistant or the associate professor level depending upon experience, publication record, and proven track record regarding obtaining independent research support. All applicants please submit current curriculum vitae, three letters of recommendation, and a brief description of future research plans by 1 August 1985. Send to: Paul A. Thornton, Ph.D., Professor and Chairman, Department of Clinical Nutrition, University of Kentucky, 229 Medical Center Annex Two, Lexington, Kentucky 40536. The University of Kentucky is an Equal Opportunity Employer.

### FACULTY POSITION IN NEUROPHYSIOLOGY

#### BRAIN RESEARCH INSTITUTE, ZÜRICH

The Brain Research Institute, University of Zürich, invites applications to a tenured faculty position at the full professor level (Extraordinariat). Preference will be given to candidates with a strong research record in vertebrate system physiology at the single neuron level. The candidate is expected to interact with other neuroscience research groups at the medical faculty, particularly those studying neurotransmitters and developmental biology. Some teaching in neurophysiology courses for medical students is required. The candidate should acquire proficiency to teach in German within 1 year.

Send curriculum vitae, including a synopsis of past research experience, and a statement of research objectives to: The Chairman of the Search Committee, Dr. V. Henn, Neurological Clinic, University Hospital, 8091 Zürich, Switzerland. Deadline: 15 August.

**FACULTY POSITIONS** available in all basic science departments (Microbiology, Biochemistry, Physiology, Anatomy, and Pharmacology) and clinical sciences in a medical/veterinarian/dental school in the West Indies. Competitive, tax-free salary based on qualifications and experience. Send curriculum vitae and telephone number where contact can be made to:

M.S.C.S.  
980 North Michigan Avenue  
Chicago, Ill. 60611

The Department of Pathology of the University of Illinois has an immediate opening for an academically-oriented **HEAD OF THE CLINICAL MICROBIOLOGY LABORATORY**, in the Hospital Laboratories. Salary and rank dependent on experience and credentials. M.D. degree is required. Applicants must be Board-certified in clinical pathology and the subspecialty of clinical microbiology. The appointee is expected to share in teaching and service duties while continuing research activities. This person will directly supervise the bacteriology, virology, parasitology, and mycology sections of the Hospital Laboratories and be responsible to the director of Hospital Laboratories. Direct inquiries and curriculum vitae to: Egil Fosslien, M.D., Department of Pathology, University of Illinois Medical Center, 840 South Wood Street, Chicago, Ill. 60612. An Affirmative Action/Equal Opportunity Employer.

**IMMUNOLOGIST/GENETICIST:** Small, newly-established company engaged in biomedical laboratory services and manufacture and distribution of diagnostic reagents is seeking a Ph.D. with training in genetics and immunology to guide laboratory operations, review and approve test results, and direct R&D activities. Consultation readily available from internationally recognized scientists affiliated with company. Midwest location. Competitive salary and opportunity to share in future growth of company. Send curriculum vitae and other information to: Box 135, SCIENCE.

**NEUROSCIENCE RESEARCH POSITIONS** available for postdoctoral scientist interested in adult and/or child psychopathology. Tenure-track available for individual with established competence. Generous benefits. New York State position in Rockland suburb of New York City. Send curriculum vitae to: Search Committee, NATHAN S. KLINE INSTITUTE FOR PSYCHIATRIC RESEARCH, Orangeburg, N.Y. 10962. An Equal Opportunity Employer, M/F.

# PROJECT MANAGER

## ■ Land & Water Quality

EPRI, on the San Francisco Peninsula, an R&D firm chartered to provide research and development for all segments of the U.S. electric utility industry, seeks a senior professional to initiate and manage research contracts in land and water quality studies. Specifically, you will develop and manage research on the environmental behavior and fate of chemicals discharged by utility operations.

Candidates will have a PhD/Earth Sciences (or equivalent field), 5-10 years experience in conducting/directing research in land and water quality, experience in geochemical and hydrochemical modeling. Utility industry experience highly desirable. Proven management ability in contract research and good communication skills necessary.

EPRI offers a stimulating environment, competitive and comprehensive benefits. For immediate consideration, please send your resume, including salary requirements to F. Schaeffler, Employment Department SC-542, EPRI, 3412 Hillview Avenue, P.O. Box 10412, Palo Alto, CA 94303. An equal opportunity employer.

**EPRI**  
ELECTRIC POWER  
RESEARCH INSTITUTE

## ANALYTICAL CHEMISTS

### Explore Exceptional Opportunities in R&D

W.R. Grace & Co., a Fortune 50 company and the world's largest specialty chemical manufacturer, has immediate openings for Analytical Chemists at its expanding Research Division.

**LIQUID CHROMATOGRAPHER:** Requires a Ph.D. in Chemistry or Biochemistry with academic or industrial experience in the chromatographic analysis of organic or biomolecules.

**ANALYTICAL GENERALIST:** Requires a M.S. or Ph.D. in Chemistry with experience in the chromatographic or spectroscopic analysis of petroleum products. Demonstrated problem solving and project coordination skills are also required.

**X-RAY SPECTROSCOPIST:** Requires a Ph.D. in Chemistry with academic or industrial experience in X-ray Fluorescence or X-ray Diffraction techniques.

Successful candidates will work closely with other scientists to characterize new specialty organic, polymeric and biochemical products, develop new methods of analysis using state-of-the-art instrumentation, and provide leadership in the continuing development of Grace's analytical capabilities.

Grace offers an attractive salary and excellent employee benefit programs. The Washington Research Center is located midway between Baltimore, Maryland and Washington, D.C. in the picturesque, planned community of Columbia, Maryland. If you are interested in a rewarding and growth-oriented career, send your confidential resume with salary requirements to:

Manager, Employment  
**W.R. GRACE & CO.**  
Washington Research Center  
7379 Route 32  
Columbia, Maryland 21044

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## DISTINGUISHED RESEARCH FELLOWSHIPS

Los Alamos National Laboratory

The Medical Radioisotope Research Group is seeking three outstanding recent Ph.D. recipients for the postdoctoral fellowships described below. All positions require responsibility for planning, initiation, and implementation of independent research and presentation of research results. The ability to work as a team member is also required. Postdoctoral appointments are for one year with possible renewal for a second year. Compensation is \$27,900-\$29,376 per annum. **U.S. citizenship is required.**

**Synthetic organic or bioorganic chemist** to conduct research to prepare some molecules labeled with radionuclides (halogens or metals) for conjugation to monoclonal antibodies. Particular emphasis will be given to halogenation reactions using radioisotopes of bromine and iodine. Assist in animal biodistribution studies of radio-labeled molecules. Experience in halogenation, radiolabeling, chelation reactions or synthetic reactions utilizing organometallic reagents is required.

**Protein chemist or immunologist** to develop methods to radiolabel monoclonal antibodies and covalently bind radiolabeled small molecules to whole and fragmented antibodies. Determine stability, affinity, immunoreactivity and biodistribution of radiolabeled antibodies. Experience in immunological methods or protein modification is required.

**Analytical, inorganic, or radiochemist** to develop chemical separation procedures on a no-carrier-added level to isolate radioisotopes of interest to the nuclear medicine research community. Perform chemistry in radiochemical hot-cells. Develop new radioisotope generator systems. Interact with radiolabeling and biodistribution efforts of the program. Experience in chemical separation methods (ion-exchange, solvent extraction) and gamma-ray analysis is desirable.

**To Apply:** Interested candidates should send a resume to Janet Mercer-Smith (protein applicants) or to Fred Steinkruger (separation applicants) at INC-3, MS J514, Los Alamos National Laboratory, Los Alamos, New Mexico 87545.

To formally apply, send resume, bibliography, three letters of reference, and graduate and undergraduate transcripts to:

Sandy Harding, DIV 85-CW  
Personnel Administration Division  
Los Alamos National Laboratory  
Los Alamos, New Mexico 87545

Los Alamos National Laboratory is an Affirmative Action/Equal Opportunity Employer operated by the University of California for the United States Department of Energy.

University of California  
**LOS ALAMOS**

## POSITIONS OPEN

### MICROBIOLOGIST/CHEMIST

Beecham Laboratories, a leading manufacturer of veterinary biologics, has the following job opportunities: (i) **Protein Chemist**—Research and development. M.S. or Ph.D. in biochemistry, microbiology background desirable; identify and purify immunogens. (ii) **Virologist**—Quality control. B.S. or M.S. in microbiology, virology background desirable. Responsible for in vitro test development and virus testing. To apply, send résumé plus salary requirements to: **Hans Draayer, Manager Biological Research and Development, Beecham Laboratories, East Lincoln Road, White Hall, Ill. 62092. An Equal Opportunity Employer.**

Virginia Mason Research Center (VMRC), a non-profit biomedical research component of the Virginia Mason Medical Center, has a position open for a **MOLECULAR OR CELLULAR BIOLOGIST** in a new Immunology Research Laboratory. Candidates should possess an M.D. or Ph.D. degree, with at least 2 years of postdoctoral experience. Demonstrated evidence of scientific independence, innovation, and productivity are required. Research interests related to molecular biology of the MHC as part of a developing new interactive program in human immunogenetics are particularly encouraged.

A stable financial support base will be provided from which to launch grant applications for external funding. Level of appointment dependent upon qualifications. Salary, laboratory support, and Seattle lifestyle are excellent.

Applications at the postdoctoral level for study in human immunogenetics are also being accepted.

*VMRC is an Equal Opportunity Employer; minorities and women especially are encouraged to apply.*

Please send résumé and letter outlining research interests and career goals to: **Gerald T. Nepom, M.D., Ph.D., Director, Immunology Research Program, Virginia Mason Research Center, 1000 Seneca Street, Seattle, Washington 98101.**

### MOLECULAR NEUROSCIENTIST

Tenure-track assistant or associate professorship is available for an outstanding molecular neuroscientist. We seek an individual who would interact with our neuroscience oriented faculty and trainees in developing research problems related to gene expression during development and aging, the production of enzymes essential for neurotransmission, and immune and plastic phenomena in the nervous system, for example. The University of Rochester is characterized by a high degree of cooperation among departments; thus the successful candidate could expect also to develop research collaborations with the extensive molecular biology community at the University. Teaching responsibility in either medical histology or neural sciences. Please forward curriculum vitae, statement of research interests, and names of three references to:

**John R. Sladek, Jr., Ph.D.  
Professor and Chairman  
Department of Anatomy  
University of Rochester  
School of Medicine and Dentistry  
601 Elmwood Avenue  
Rochester, New York 14642  
Equal Opportunity Employer, M/F**

### UNIVERSITY OF WISCONSIN-MADISON MYCOLOGY/MICROBIAL ECOLOGY

**RESEARCH ASSOCIATE** (postdoctoral) position available 1 June 1985 on the **BIOTECHNOLOGY** and microbial ecology of fungal pathogens (biocontrols) to watermilfoil. Research aspects include mass culture and strain improvement techniques, interaction with other control measures, and tracking marked populations in water and sediment. Funding for 2 years. Salary competitive and commensurate with qualifications. Send résumé with names of three references to: **Dr. John H. Andrews, Department of Plant Pathology, 1630 Linden Drive, Madison, Wis. 53706. An Affirmative Action/Equal Opportunity Employer.**

**NEUROBIOLOGIST.** Postdoctoral fellow to collaborate in electrophysiological studies of single vertebrate photoreceptors, using patch-clamp and suction-electrode techniques. Send curriculum vitae and at least two letters of reference to: **Dr. Gary G. Matthews, Department of Neurobiology and Behavior, State University of New York (SUNY)-Stony Brook, Stony Brook, N.Y. 11794. SUNY-Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK Number 133.**

## POSITIONS OPEN

### PHARMACOLOGY

The Department of Pharmacology, Division of Functional Biology, of the West Virginia School of Osteopathic Medicine (WVSOM), seeks **two assistant or associate professors of pharmacology**. Applicants must have a good background in general physiology and pharmacology, with experience in one or more of the following areas: cardiovascular, pharmacology, neuropharmacology, chemotherapy, and antibiotics. Significant teaching experience and a demonstrated ability to conduct independent research are also required.

Rank and salary will be commensurate with qualifications. Send current curriculum vitae and three letters of recommendation to: **Michael K. Cope, Ph.D., Associate Dean for Academic Affairs, WVSOM, 400 North Lee Street, Lewisburg, West Virginia 24901, by 31 July 1985. The position is available immediately.**

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

### PHYSIOLOGIST

The West Virginia School of Osteopathic Medicine (WVSOM) invites applications for a tenure-track appointment at the **assistant professor** level. Applicants should have a systems physiology background (Ph.D.) with expertise in the cardiovascular system. Successful candidate will exhibit a strong commitment to teaching and demonstrate an active interest and background in research.

Applications, including current curriculum vitae and three letters of reference, should be sent to: **Michael K. Cope, Ph.D., Associate Dean for Academic Affairs, West Virginia School of Osteopathic Medicine, 400 North Lee Street, Lewisburg, West Virginia 24901, no later than 15 July 1985.**

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

### DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

**PLANT PHYSIOLOGIST,** Sugarcane Physiology Research, Honolulu, Hawaii. Appointment is for 3 years to study gene expression involved in cellular responses to environmental stress. Candidates must have a thorough knowledge of molecular biology, protein gel electrophoresis, radio-labelling of proteins, nucleic acid analysis, and immunological techniques. Ph.D. is desirable. Must be U.S. citizen. Salary is commensurate with experience: \$26,381 to \$31,619 per annum, plus 22½ percent cost of living. For information on application procedures/forms, contact: **Rita Millard, telephone: 301-344-3138, USDA, Agricultural Research Service, Personnel Operations Branch, Room 107, Building 003, BARC-W (WO1), Beltsville, Maryland 20705.** For information on the research program, contact: **Paul H. Moore, telephone: 808-487-5561.** Application must be postmarked by 15 July 1985. *An Equal Opportunity Employer.*

**PLANT SYSTEMATICS—POSTDOCTORAL POSITION.** Two-year position beginning 1 November 1985 to study generic delimitation in Maloideae (Rosaceae). Extensive use of cladistic and phenetic methods necessary, background with Rosaceae useful but not required. Send résumé and three letters by 1 September 1985 to: **Dr. Kenneth R. Robertson, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, Illinois 61820. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE** to work in CNS injury and regeneration using a model allowing the study of individual mammalian axons in vivo, with function and continuity preserved. This involves cell biology, neurophysiology, growth cone, and axon transport (using AVEC-DIC) methods. Send résumé, statement of interests, and three references to: **Walter Levy, M.D., N522 Neurosurgery, University of Missouri Health Sciences Center, 1 Hospital Drive, Columbia, Missouri 65212.**

**POSTDOCTORAL POSITIONS IN DRUG TARGETING FOR BIOCHEMISTS** available immediately and in December 1985 to study liposomes targeting and release in liver and macrophages at the cellular level. Experiences in protein or synthetic chemistry, cell culture, and fractionation, and willing to work with small animals. Support up to 3 years. Salary competitive. Send résumé and three letters of reference to: **Dr. Karl J. Hwang, School of Pharmacy, University of Southern California, 1985 Zonal Avenue, Los Angeles, Calif. 90033. Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### POSTDOCTORAL FELLOW POSITIONS

The University of Kentucky College of Medicine has postdoctoral positions available within the Department of Medical Microbiology and Immunology for individuals interested in the regulation of cellular interactions involved in antigen presentation, the study of antigen-specific cloned lymphocytes, regulation and function of autoreactive T cells, IA gene expression and regulation, B lymphocyte growth and differentiation, and pulmonary immunology. Salary is competitive, for a 2-year minimum, and positions are available immediately. Send curriculum vitae and three letters of reference to: **Alan M. Kaplan, Ph.D., Chairman, Department of Medical Microbiology and Immunology, University of Kentucky College of Medicine, MS-409 Medical Center, Lexington, Kentucky 40536-0084.**

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

**POSTDOCTORAL POSITION** available immediately, to participate in ongoing studies of the neurobiological, pharmacological, and behavioral interaction of abused substances. Strong background in either behavioral pharmacology, behavioral neuroscience, or the experimental analysis of behavior is desirable. Send curriculum vitae and three letters of recommendation to: **Dr. James E. Smith, Department of Psychiatry, Louisiana State University School of Medicine, P.O. Box 33932, Shreveport, La. 71130.**

*An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL POSITION** at Harvard Medical School available immediately in the Mailman Research Center of McLean Hospital. Research deals with the neurobiology of protein and neuropeptide metabolism and the role of proteolysis in neuropsychiatric disorders in aging. Particular emphasis is on the neuronal cytoskeleton. Experience or interest in one of the following areas is desired. Immunocytochemistry, RIA, immunocytochemistry, tissue culture, and protein purification and characterization. Address curriculum vitae and letters of reference to: **Ralph A. Nixon, M.D., Ph.D., Mailman Research Center, Ralph Lowell Laboratories, McLean Hospital, 115 Mill Street, Belmont, Mass. 02178. An Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available immediately for studies of eukaryotic gene regulation. Projects involve studies of DNA sequences and DNA-binding proteins regulating transfected pituitary genes. Applicants should have a solid background in biochemistry and an interest in learning and applying recombinant DNA techniques. Salary negotiable, depending on experience. Send curriculum vitae and names of references to: **Dr. F. Carter Bancroft, Molecular Biology Graduate Program, Sloan-Kettering Institute, 1275 York Avenue, New York, N.Y. 10021.**

**POSTDOCTORAL POSITION, YEAST MOLECULAR GENETICS,** available immediately to study the dsRNA viruses of *S. cerevisiae* with emphasis on the chromosomal genes which affect viral replication and gene expression. Attractive compensation package. **Potential to develop independent research program after 2 to 3 years.** Please submit curriculum vitae and names of three references to: **Steve S. Sommer, M.D., Ph.D., Department of Cell Biology, Mayo Foundation School of Medicine, Rochester, Minn. 55905. An Equal Opportunity/Affirmative Action Institution.**

### PROFESSORIAL POSITIONS

**Neurobiology Center  
Mount Sinai School of Medicine  
the City University of New York (CUNY)**

Mount Sinai School of Medicine of CUNY announces a new initiative in molecular genetics. The Neurobiology Center plans to appoint groups of research scientists who are creatively attacking important biological problems using the most advanced techniques in molecular genetics.

We are seeking (an) established investigator(s), who will assume a leadership role, as well as applicants for assistant or associate professorships.

Please send inquiries and curriculum vitae to:

**Dr. Kenneth L. Davis  
Department of Psychiatry  
Mount Sinai School of Medicine  
1 Gustave L. Levy Place  
New York, New York 10029**

**CSIRO**  
AUSTRALIA  
SENIOR PRINCIPAL RESEARCH SCIENTIST  
\$47,501—\$52,212

DIVISION OF ENTOMOLOGY, CANBERRA, AUSTRALIA

**GENERAL:** The division carries out basic and applied biological research on insects and related arthropods so as to acquire knowledge relevant to the solution of problems of economic and social significance. The research involves the study of the identity, abundance, and distribution of insects; and of their behaviour, pathology, and genetics. The division is a major centre in Australia for such research and has a professional staff of 120.

The division's research activities are grouped into a number of sections, each headed by a senior scientist whose role includes providing scientific leadership, control of resources, and advice to the chief of the division on the research direction of the section, as well as actively initiating and maintaining personal research projects.

The division has recently established a molecular biology program to investigate the relevance of recombinant DNA to basic and applied entomology. Current projects include studies on eukaryote chromosome organization and behaviour, gene structure and function, gene transfer technology, the molecular basis of insect development, and molecular analysis of entomophilic nematodes and their bacteria. The division is also interested in commencing research on the molecular analysis of insect behaviour and communication.

**DUTIES:** A vacancy exists for a senior scientist to provide research leadership to the molecular biology, physiology, biochemistry, and physical sciences programs. The appointee will be familiar with modern techniques of molecular biology and will be expected to develop a personal research program in molecular biology, physiology, or biochemistry of insects.

**QUALIFICATIONS:** A Ph.D. degree or equivalent qualifications in an appropriate field. An excellent record of contribution to research knowledge in this field is required, together with the capacity for research leadership of a high order.

**TENURE:** Indefinite with Australian Government superannuation benefits available. **SALARY RANGE:** Senior principal research scientist, but, for exceptionally eminent candidates, consideration may be given to appointment at a higher level.

**APPLICATIONS:** Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees, and quoting reference Number A 2107, should be directed to: **The Chief, CSIRO Division of Entomology, GPO Box 1700, Canberra, ACT 2601, AUSTRALIA**, by 15 June 1985. *CSIRO is an Equal Opportunity Employer.*

**CSIRO**  
AUSTRALIA  
MARINE LABORATORIES  
DIVISION OF OCEANOGRAPHY  
HOBART, AUSTRALIA  
PHYSICAL OCEANOGRAPHER  
\$33,209 to \$45,083

**GENERAL:** The Division of Fisheries Research and the Division of Oceanography constitute the CSIRO Marine Laboratories, which is Australia's principal marine research institution, employing about 230 scientists and support staff to investigate the physical, chemical and biological features, including fisheries, of the oceans around Australia.

The Division of Oceanography operates a modern oceanographic research vessel as a national facility and has a satellite receiving station at the laboratory.

Computing facilities available include two VAX 11/750'S, one located at the Marine Laboratories and one on the vessel, and on-line access to a CYBER-205.

The interests of the division in physical oceanography include continental shelf dynamics, mixed-layer dynamics, air-sea interaction, ocean circulation and boundary currents, the interpretation and application of satellite data, surface waves, numerical modelling, and geophysical fluid dynamics.

**DUTIES:** The appointee will initiate and direct a program of research into the role of the ocean in climate prediction. The program can involve field-work contributing to the establishment of a global ocean observing system, theoretical studies directed toward interpretation of ocean variability, and application of statistics in climate research.

**QUALIFICATIONS:** A Ph.D. degree or equivalent qualifications in physical oceanography, geophysical fluid dynamics or some other relevant discipline, plus a distinguished record of research accomplishments and publications in internationally recognized journals, as well as an ability to lead a program involving several scientists and staff.

**TENURE:** Indefinite with Australian Government superannuation benefits available.

**APPLICATIONS:** Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees, and quoting reference number A 6815, should be directed to: **The Chief, CSIRO Division of Oceanography, CSIRO Marine Laboratories, GPO Box 1538, Hobart, Tasmania 7001, AUSTRALIA**, by 15 June 1985. *CSIRO is an Equal Opportunity Employer.*

## NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

The NATIONAL INSTITUTES OF HEALTH (NIH) invites nominations and applications for the position of ASSOCIATE DIRECTOR, OFFICE OF PROGRAM PLANNING AND EVALUATION (OPPE), Office of the Director. This is a Civil Service position in the Senior Executive Service with a salary range of \$61,296 to \$68,700 per annum. The person selected may be eligible for Physician's Comparability Allowance of \$10,000 per year. A one-year probationary period must be served if the individual selected is not currently in the SES.

The Associate Director, OPPE, provides leadership for the conduct and coordination of program planning, policy analysis and legislative analysis for the NIH. This responsibility embraces the reporting and analytical (legislative, programs, resources) functions which comprise program development and policy formulation.

This position serves as the principal advisor to the Director, NIH on all major program planning, legislative, and analytical

issues related to the NIH research mission, resources, and capabilities.

Further information about the position and qualification requirements may be obtained by contacting Ms. Rita Anastasi at (301) 496-6521. Applications (SF-171, Personal Qualifications Statement) accompanied by a current curriculum vitae and bibliography should be submitted to Mr. Frederick C. Walker at: OD Personnel, Building 31, Room 1C-15, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20205.

Applications must be postmarked not later than July 17, 1985. (The SF-171 form is available at all Federal Personnel Offices and Job Information Centers). Applications from women and minority group candidates are solicited.

*AN EQUAL OPPORTUNITY EMPLOYER*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available July 1985. Research on the mechanisms and enzymology of replication of the kinetoplast DNA of trypanosomes. Strong background in enzymology or DNA biochemistry is essential. Send curriculum vitae and names of three references to: **Dr. Dan S. Ray, Molecular Biology Institute, University of California, Los Angeles, Calif. 90024.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

**VISITING PROFESSOR OR LECTURER** to teach food microbiology course fall semester 1985. Applicants must hold a Ph.D. degree and have training or experience in food microbiology. Send detailed curriculum vitae and three letters of recommendation to: **Dr. Ronald D. Hindsdill, University of Wisconsin, Department of Bacteriology, 1550 Linden Drive, Madison, Wis. 53706,** by 15 June 1985. *The University of Wisconsin provides Equal Opportunities for admission and employment.*

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS.** Two postdoctoral positions available 1 August 1985 for studies of the mechanisms of senescence of differentiated cells in culture and mechanisms of immortalization in neoplastic transformation. Ph.D. or M.D. required with training in cell and molecular biology. Send curriculum vitae and the names of two references to: **Dr. Peter J. Hornsby, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, Georgia 30912.** *Equal Opportunity Employer/Affirmative Action Program. J2901.*

**POSTDOCTORAL RESEARCH ASSOCIATE** available immediately for studies of chitin metabolism and cuticle structure in insects. Experience in enzymology, protein and carbohydrate chemistry desirable. Send letter of introduction, résumé, transcript, and names of four references to: **Dr. Karl J. Kramer, Department of Biochemistry, Kansas State University (KSU), Manhattan, Kansas 66506.** *KSU is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### POSTDOCTORAL POSITION SQUID GIANT SYNAPSE

An opportunity is available immediately to employ voltage clamp, intracellular Ca indicators, and microinjection methods in studies of transmitter release mechanisms at the 'giant' presynaptic terminal of this synapse. A year-round supply of squid is available by working in Los Angeles in the winter and Woods Hole in the summer. A background in physiology, biochemistry, or biophysics is desirable. Send curriculum vitae and names of references to: **George Augustine, Section of Neurobiology, University of Southern California, Los Angeles, Calif. 90089-0371.**

**POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS** (two) available immediately. Recent M.S. or Ph.D. in immunology, biochemistry, or related field with expertise in hybridoma-monoclonal antibody and cell culture applications. Second position for a recent Ph.D. in immunology or biochemistry to work in the area(s) of biochemistry and immunology of central and peripheral nervous system antigens. Starting salary: \$19,000 per year. Send curriculum vitae and names of three references before 15 August to: **Dr. Terry Joe Sprinkle, VA Medical Center, Research Service (151), Neurochemistry Laboratories, Augusta, Ga. 30910.** *Equal Opportunity/Affirmative Action Program. J2905.*

**POSTDOCTORAL RESEARCH ASSOCIATE**—Search re-opened: For research on endocrine, physiological, and anatomical relationships in steroid hormone regulation of brain function and behavior. Experience in neuroanatomical techniques or neuroendocrinology desirable. Salary: \$17,000 to \$18,000 with benefits depending on experience. Available 1 September 1985. Send curriculum vitae and three letters of reference by 15 July 1985 to: **Jeffrey D. Blaustein, Division of Neuroscience and Behavior, Psychology Department, University of Massachusetts, Amherst, Mass. 01003.** *University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL RESEARCH IN HYPERTENSION.** Applicants must have either a Ph.D., M.D., D.V.M., or comparable degrees and be citizens or permanent residents of the United States. Applications for the following positions, starting 1 July 1985, or thereafter, are solicited. (i) Neural, humoral, and metabolic regulation of blood pressure, cardiac output, and peripheral blood flow in chronically instrumented animals. (ii) Studies on genetically hypertensive rat strains. Areas of interest include: atrial natriuretic factor; vascular physiology and biochemistry; genomic DNA structure. Send curriculum vitae to: **Dr. John P. Rapp, Department of Medicine, Medical College of Ohio, C.S. 10008, Toledo, Ohio 43699.** *An Equal Opportunity Employer, M/F.*

**PROJECT DIRECTOR—NATURAL RESOURCES MANAGEMENT.** Washington based non-profit seeks a director for an AID-funded technical assistance project in environment and natural resource management. Applicants must have a technical background in a related field and at least 2 years of experience working in developing countries. Experience essential in producing quality reports within deadlines; and managing a government contract, budget, and staff. Applicants should send résumé and salary expectations to: **Box 134, SCIENCE.**

### REPRODUCTIVE BIOLOGIST

The Institute for Hormone and Fertility Disorders, Hamburg, is looking for a **postdoctoral research scientist** with an interest in the pineal gland and its role in the regulation of reproduction. The successful candidate will have an excellent academic record and research experience in mammalian reproductive endocrinology, preferably neuroendocrinology. The person will develop an independent research programme in the area of the pineal and will also collaborate with ongoing projects in related areas. This salaried position is initially for 3 years, with the possibility of renewal. Applicants should submit a brief statement of present and future research projects, curriculum vitae, with relevant reprints and the names of two referees to:

**Professor Dr. Med. F. Leidenberger  
Institute for Hormone and Fertility Disorders  
Osterstrasse 86  
2000 Hamburg 20  
Federal Republic of Germany**

Application deadline: 30 June 1985.

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PRAXIS BIOLOGICS, developer and manufacturer of vaccines and immunobiologic agents for the prevention of childhood infections, is expanding its R&D activities and has immediate openings. PRAXIS BIOLOGICS has developed and is manufacturing b-CAPSA™ VACCINE, the first FDA-approved vaccine recommended for universal immunization of children since 1969.

## DIRECTOR, LABORATORY RESEARCH

The successful candidate will direct and coordinate all laboratory research efforts including research in such functional areas as virology, bacterial polysaccharides and proteins, and immunology.

Candidates must possess a Ph.D. or M.D. and have 5-10 years of experience which demonstrates the individual's ability to direct and coordinate the research of several scientists in an industrial environment.

## DIRECTOR, CLINICAL STUDIES

The successful candidate will design, direct and coordinate multi-product, multiple site clinical trials. Responsibilities include data analysis and interpretation, and preparation of appropriate submissions to the FDA.

Candidates must possess an M.D. and have 5-7 years of postgraduate experience in infectious diseases and/or epidemiology.

## RESEARCH SCIENTISTS

**Immunology** - Experience in local immune responses to infectious agents; 2-4 years postdoctoral experience.

**Bacterial Polysaccharide** - 3-5 years postdoctoral experience in polysaccharide chemistry, immunochemistry or related topics.

**Microbial Biochemistry** - 3-5 years postdoctoral experience in the definition and purification of bacterial outer membrane proteins.

**Molecular Biologist, Virology** - Experience in recombinant DNA techniques and cDNA cloning; procaryotic and eucaryotic vector systems; 2-4 years postdoctoral experience.

## PRODUCT DEVELOPMENT

### Manager, Purification Laboratory

Hands-on experience in current methods for large-scale purification of proteins and polysaccharides and in supervising other scientists and staff in an active laboratory; at least 5 years of postdoctoral experience; preferably in an industrial environment.

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Send resume to:  
**A. Klingenberg  
PRAXIS BIOLOGICS  
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Rochester, NY 14623**

Equal Opportunity Employer



**THE UNIVERSITY OF ALBERTA  
INVITES APPLICATIONS FOR THE  
CANADIAN PACIFIC - ALBERTA AGRICULTURE  
CHAIR IN PLANT BIOTECHNOLOGY**

The University of Alberta is seeking an established scientist to occupy the Canadian Pacific - Alberta Agriculture Chair in Plant Biotechnology. The occupant of the chair will be expected to carry out research related to the improvement of agriculture in Western Canada, to provide leadership within the area of plant biotechnology in the Faculties of Agriculture and Forestry, and Science, and to communicate actively with the agricultural sectors of industry and government. Candidates presently located outside the scientific university community will be given serious consideration, although scientific credentials will be of paramount importance.

The successful candidate will be a member of the Department of Plant Science, in the Faculty of Agriculture and Forestry. The Faculty of Agriculture and Forestry has ninety academic members housed in a modern, well-equipped research complex. In addition, within the Faculty of Science, members of the Departments of Botany, Genetics, and Microbiology are currently involved in basic and applied plant research. The University of Alberta (approximately 25,000 students) is located in the capital city of Alberta. Please send curriculum vitae, names and addresses of at least three referees, and an outline of research interests, including reprints of relevant publications, to:

**Dr. Mary Spencer**  
Department of Plant Science  
Faculty of Agriculture and Forestry  
University of Alberta  
Edmonton, Alberta T6G 2P5  
Canada

Closing date for receipt of applications is August 31, 1985. Salary will be by negotiation. Appointment will commence on January 1, 1986, or as soon as possible thereafter.

The University of Alberta is an equal opportunity employer but, in accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.

# CHIEF PATHOLOGIST

Director of Laboratories at Los Angeles County Rancho Los Amigos Medical Center and Pathologist to USC/Clinical/Research Liver Group. Joint appointment with University of Southern California at the appropriate rank for an individual with an established or growing national reputation. Applicant should possess strong interest in scholarly pursuits and teaching. California Medical license required. Apply to:

**Matthew O. Locks, M.D.**  
Medical Director



**Downey, CA 90242  
(213) 922-7161**

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# TOXICOLOGIST



**Rhone-Poulenc, Inc.** is the rapidly growing U.S. subsidiary of the ninth largest chemical company in the world. Our Toxicology Group, headquartered in the Agricultural Division at our Monmouth Junction, New Jersey facility, is expanding to meet the needs of our other divisions, as well as the increasing challenges of our crop protection business.

This entry level position is available immediately. The successful candidate will assist in establishing and maintaining toxicology programs for U.S. products; provide technical expertise to Marketing groups; assist in the design, monitoring, and reporting of all contracted laboratory studies; and assist in the preparation of regulatory-compliance documentation.

A Ph.D. in Toxicology or related discipline is required with zero to 2 years of related experience.

We offer a competitive salary, attractive benefits and a chance to join a growing and dynamic organization in a position with opportunities for career growth. Please send resume, including salary requirements, to: Corporate Manager of Personnel, P.O. Box 125, Monmouth Junction, NJ 08852.

**RHÔNE-POULENC INC.**  
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The Waksman Institute of Microbiology, the Department of Chemistry, and the Department of Biochemical Engineering of Rutgers, The State University of New Jersey, invite applications and nominations for senior professorial positions in

## PROTEIN ENGINEERING PROTEIN CHEMISTRY MACROMOLECULAR CRYSTALLOGRAPHY

at the Institute on the New Brunswick/Piscataway campus.

The successful candidates will join a multidisciplinary and rapidly expanding group of investigators in the study of biomolecular structure, function, and design. We seek distinguished leaders with demonstrated ability and commitment to conduct vigorous research programs, to interface with molecular biology, to teach at the graduate level, and to assume other usual academic responsibilities. Because of the interface with molecular biology, two of the positions, protein engineering and protein chemistry, will be associated with a curatorship of two resource facilities, the fermentation laboratory, F1, and the biomolecular instrumentation laboratory, F2. F1 will be equipped with new microprocessor controlled vessels and state-of-the-art analytical equipment. F2 will run and maintain an oligonucleotide synthesizer, a peptide synthesizer, an amino acid analyzer, a high resolution protein sequencer, and HPLCs. Access to the supercomputer at the newly established John von Neumann Center for Scientific Computing, to several VAX computer systems, and to computer graphics equipment provides excellent computational facilities for this program. Salary and rank will be commensurate with experience, background, and professional qualifications.

Applications must include an expression of interest in the position, an up-to-date publication list, curriculum vitae, and confidential letters of recommendation from five professional references. Applications will be accepted until the position is filled.

Applications and nominations may be directed to:

**Professors Joachim Messing and Wilma K. Olson**  
Chairpersons  
Biomolecular Structure Program Search Committee  
Waksman Institute of Microbiology  
Rutgers, The State University  
P.O. Box 759  
Piscataway, New Jersey 08854-0759

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

## POSITIONS OPEN

### UNIVERSITY OF GUELPH COLLEGE OF BIOLOGICAL SCIENCE

Pre- and postdoctoral positions available for training in the molecular biology of post transcriptional control with special emphasis on structure and function of mRNP complexes and biogenesis of ribosome particles in prokaryotic and eukaryotic systems. Studies of this laboratory are directed to examining molecular events which occur during changes in growth rate and differentiation. Teaching opportunities available. Stipends for postdoctoral fellows are \$17,500 to \$21,000 and according to departmental guidelines for predoctoral fellows.

Please send résumé and names of three referees to:

**Bruce H. Sells**  
College of Biological Science  
University of Guelph  
Guelph, Ontario, Canada N1G 2W1

**Position: PROFESSOR AND HEAD**, Department of Biochemistry.

**Responsibilities to be fulfilled:** The University of Iowa College of Medicine is seeking to recruit a **BIOCHEMIST** with a distinguished record of scholarship and original research to assume the position of professor and head of the Department of Biochemistry. Preferred candidates should have a record of high academic accomplishments and be committed to providing the scientific, educational, and administrative leadership for the Department of Biochemistry.

**Qualifications desired:** Ph.D. and/or M.D. degree, or equivalent, and a demonstrated scholar and leader in biochemistry.

**Salary:** Appropriate for qualifications and responsibilities for a professor and head of biochemistry. Excellent fringe benefits.

**Employer:** The University of Iowa, Iowa City, Iowa 52242, is an Equal Opportunity Employer.

**Application:** Interested persons are invited to direct inquiries and submit curriculum vitae to:

**Richard G. Lynch, M.D.**  
Department of Pathology  
College of Medicine  
University of Iowa  
Iowa City, Iowa 52242

**PROTEIN BIOCHEMIST**—Conducts original laboratory research to isolate, purify, and characterize biologically active proteins in connection with cartilage and bone induction, using ion-exchange, gel exclusion and affinity chromatography, HPLC (high-performance liquid chromatography), electrophoresis, bioassays for cartilage and bone formation in both in vivo and in vitro subjects, and producing and characterizing monoclonal and polyclonal antibodies. Directs research programs: (i) to identify new proteins in bone extracellular matrix which are biologically active in triggering cartilage, bone, and bone marrow differentiation, and (ii) to understand the molecular mechanisms of cartilage and bone induction and to apply these findings to explore the clinical potential of bone matrix in the realms of orthopaedic, craniofacial, and periodontal surgery.

Requirements include a doctorate in biochemistry or biology, and at least 4 years of postdoctoral experience involving protein biochemistry and developmental biology of cartilage and bone; research in the developmental biology of endochondral bone, and use of protein purification. At least 1 year of experience must involve the isolation, purification, and characterization of biologically active molecules from cartilage and bone. Forty hours per week; \$3,450 per month. Position located in Cambridge, Massachusetts.

If interested, send résumé only to: **Job Order Number 5605, Division of Employment Security, C. F. Hurley Building, Boston, Mass. 02114.**

**RESEARCH SCIENTIST** for synthesis, isolation, purification, and characterization of intermediates, congeners, and prodrugs of antitumor agents of natural and synthetic origin. Characterization and analyses of organic compounds using  $^1\text{H}$  and  $^{13}\text{C}$  high resolution NMR, mass spectrometry, single crystal X-ray analysis and IR and UV spectrometry. Use of and development of isolation and separation procedures including TLC and HPLC. Design of experiments to test the mechanism of action of the antitumor agents. Require Ph.D. in organic chemistry. Salary: \$18,200 per year. Apply with résumé to: **Atlanta Job Service Center, 1 Peachtree Street, NE, Atlanta, Georgia 30303 (GA 5068531).**

## POSITIONS OPEN

### RESEARCH ADMINISTRATION

An experienced manager is being sought for the American Red Cross Biomedical Research and Development program. Responsibilities include grants administration and supervision of the National Headquarters-Laboratory central research support services and management of the Regional Blood Centers development support program. Position requires scientific background at the doctoral level or equivalent, plus superior administrative and communication skills. Must possess at least 5 years of experience in research and/or research administration with demonstrated staff management and planning skills. Salary commensurate with experience. Send curriculum vitae and the names of three references to:

**Leon W. Hoyer, M.D.**  
Associate Vice President  
American Red Cross Laboratories  
9312 Old Georgetown Road  
Bethesda, Maryland 20814

### RESEARCH ASSISTANT PROFESSORS

- 1) Ph.D. in analytical, organic, or biological chemistry for studies on polymerization and browning of protein by reducing sugars, and the role of these reactions in complications of diabetes and alterations in tissue protein during aging. Prefer candidates with previous experience in organic synthesis, protein or carbohydrate chemistry, and/or analytical techniques such as HPLC, GC/MS and pattern recognition. Excellent opportunity for interdisciplinary research in biorganic or bioanalytical chemistry.
- 2) Ph.D. in biochemistry or biomedical science for studies on sites and mechanisms regulating plasma protein catabolism in vivo using radioactive labels which residualize in lysosomes, and parallel studies on the regulation of albumin and immunoglobulin catabolism by cells in culture. Prefer candidates with experience in chemical modification of protein and cell culture techniques.

Send curriculum vitae and two letters of recommendation to: **Dr. John W. Baynes, Department of Chemistry and School of Medicine, University of South Carolina, Columbia, S.C. 29208. Telephone: 803-777-7272.**

**RESEARCH ASSISTANT**—Immediately available in protein chemistry. Qualified applicants should have B.S. or M.S. in chemistry or biochemistry. Experience with protein purification and analytical instrumentation (HPLC, protein sequencer) is preferred. Send curriculum vitae and three letters of reference to: **Personnel Manager, W. ALTON JONES CELL SCIENCE CENTER, 10 Old Barn Road, Lake Placid, New York 12946. Please refer to Job Order CR-8506.**

*Affirmative Action/Equal Opportunity Employer*

A **RESEARCH ASSOCIATE** position as a plant physiologist or biochemist is available at the U.S. Department of Agriculture (USDA), Agricultural Research Service, Athens, Georgia, to study cell wall changes associated with fruit ripening and plant growth. Position limited to 2 years; benefits available; annual salary: \$26,381. Ph.D. must have been received during last 24 months; must be U.S. citizen. Send résumé and list of publications to: **Dr. Russell Pressey, Richard B. Russell Agricultural Research Center, P.O. Box 5677, Athens, Georgia 30613; telephone: 404-546-3544.** Applications in response to this advertisement must be marked S-01. *USDA is an Equal Opportunity Employer.*

### RESEARCH ASSOCIATE POSITION GEORGETOWN UNIVERSITY MEDICAL CENTER

A position is available for a Ph.D. or M.D. with research experience in the molecular biology of hepatitis viruses starting immediately. Research project involves the cloning and sequencing of genomes of hepadna viruses and the hepatitis delta virus. Academic appointment as research assistant or research associate professor will be made to the Department of Microbiology. Salary commensurate with experience and training. Send curriculum vitae to: **Dr. John L. Gerin, Division of Molecular Virology and Immunology, 5640 Fishers Lane, Rockville, Md. 20852.**

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

## POSITIONS OPEN

**RESEARCH ASSOCIATES**—Tufts Human Nutrition Research Center (HNRC). First position: requires Ph.D. in biochemistry, nutritional biochemistry, or similar life science. Should have considerable expertise in protein chemistry, HPLC, metabolism, and enzymology. Initially, will design effective human and animal studies on the metabolism, mechanism of action, and requirement of vitamin K and aging populations. The associate is expected to make original contributions to expand the program over time to include detailed studies of the metabolism function, and requirements of other nutrients in aging human and animal populations, particularly those nutrients involved with oxidative stress. Send résumés to: **Dr. James Sadowski.** Second position: to work on systems of protein turnover and antioxidant function in lens as it affects cataract formation. Must have strong biochemistry training. Cell biology and molecular biology also useful. Send résumés to: **Dr. Allen Taylor, TUFTS UNIVERSITY HNRC, 711 Washington Street, Boston, Mass. 02111. An Affirmative Action/Equal Opportunity Employer.**

Full-time, 2-year academic position (**RESEARCH BIOLOGIST**, University of California, Santa Barbara), available July 1985, for an established Ph.D. in the modeling of population dynamics. Position will be funded on a 12-month basis for two full years, starting at time of hire. Specific level (assistant to full research biologist) will be commensurate with experience and qualifications. (Range: \$30,800 to \$42,900 per annum.) The position is that of co-principal investigator of a research contract devoted to assessing the environmental impacts of a coastal power plant on nearshore fish stocks for the California Coastal Commission. Experience with fisheries production models beneficial, but not essential. The appointee will be based at a laboratory and computer facility in Encinitas, San Diego County, California. Send curriculum vitae, representative reprints, and the names, addresses, and telephone numbers of at least three references to: **Dr. E. DeMartini, University of California, Santa Barbara, 531 Encinitas Boulevard, Suite 114, Encinitas, Calif. 92024, on or before 12 July 1985. The University of California is an Equal Opportunity/Affirmative Action Employer.**

The Departments of Biology and Chemistry of The City College of New York (CUNY) invite applications for up to four **tenure-track positions** in the following **RESEARCH AREAS:** neurobiology with molecular biology experience, molecular virology with emphasis on gene expression, somatic cell genetics with emphasis on gene regulation and development, biochemistry with interests in immunology, and genetic engineering or cloning.

Openings are anticipated for the 1985-1986 and 1986-1987 academic years. Rank and salary are open. Successful candidates must have a Ph.D. degree and some postdoctoral experience; will be expected to develop vigorous programs of research. Applicants should send a résumé, statement of professional interests and goals, and names and addresses of four references by 1 August 1985 to: **Dean Frank Martino, Science Division, The City College of CUNY, Convent Avenue at 138 Street, New York, N.Y. 10031. Applications from women and minority groups are particularly welcome. An Equal Opportunity/Affirmative Action Employer.**

### RESEARCH TRAINING IN SALIVARY SECRETION

Positions available starting summer 1985 at the University of Washington for research training in the biochemistry, cell biology, microbiology, physiology, pharmacology and/or pathology of salivary secretion. Applicants should have Ph.D. or professional degree (M.D., D.D.S., D.V.M., or equivalent) and must be U.S. citizens or have permanent visas. Graduate programs leading to Ph.D. or M.S. are available. Stipends: \$15,996 to \$30,000, depending upon experience. Send curriculum vitae, three references, and statement of research interests to: **Dr. Kenneth Izutsu, Department of Oral Biology, SB-22, University of Washington, Seattle, Wash. 98195, at earliest possible date. An Affirmative Action/Equal Opportunity Employer.**

### SENIOR RESEARCH TECHNICIAN

Immediate opening. Tasks include protein isolation, immunoblotting, measurements of enzyme activities, and analysis of peptides and amino acids.

B.S. degree and experience with HPLC required.

Send résumés to: **Dr. Andrew G. Szent-Györgyi, Brandeis University, Department of Biology, Waltham, Mass. 02254.**

## Cellular Immunologists Molecular Biologists

In your search for excellence, consider joining a well-funded, multi-disciplinary, monoclonal research team dedicated to the development of novel anti-infective therapeutics.

PhD level Cellular Immunologist with at least 2 years of post doctoral experience and demonstrated expertise in the area of T-cell functions and control of immune responses.

Research Associate, (BS or MS) with 5-10 years experience in molecular biology, serologic analysis and/or lymphoid cell culture techniques. A strong biochemical background is essential.

Salary, benefits and relocation allowances at Cutter are excellent. Join a leader in the worldwide healthcare industry and enjoy the fine quality of worklife in our modern research facilities, directly across the Bay from San Francisco. Please submit your resume, with salary history to **Dean Gallinatti, Cutter Group, Miles Laboratories, Inc., P.O. Box 1986, Berkeley, CA 94701.** We are an equal opportunity affirmative action employer.

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IGT, a company committed to advanced energy R&D, has an immediate opportunity for an experienced professional to direct our biotechnology research team.

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To find out more about our competitive salaries, excellent benefits and long-term potential, send a resume with salary history to: Personnel Department 1.

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## POSITIONS OPEN

### RESEARCH FELLOW

A research fellow position is available immediately to work on detection of HTLV III-associated antigens in blood. Experience in immunochemistry is desirable. Stipend from \$19,000, depending upon experience. Send curriculum vitae and names of three references to:

Dr. Nrapendra Nath  
American Red Cross  
Biomedical Research  
and Development Laboratories  
9312 Old Georgetown Road  
Bethesda, Maryland 20814

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

Applications invited for position of **RESEARCH SCIENTIST** to study cellular and biochemical mechanisms of oxygen radical mediated tissue injury. Salary and rank commensurate with experience. Send curriculum vitae to: **Vena B. Antony, M.D., Indiana University Hospital, 926 West Michigan Street, Room N559, Indianapolis, Ind. 46223.**

**SENIOR RESEARCH ASSOCIATE:** Biophysics Ph.D. with several years of postdoctoral experience in red cell membrane transport (tracer-fluxes, enzyme kinetics, density gradients, atomic absorption, flame photometry) and proven originality and productivity in this field, for research on genetic red cell disorders under NIH grant. Send curriculum vitae and other pertinent material to: **R. M. Bookchin, M.D., Department of Medicine, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, N.Y. 10461.**

## ANNOUNCEMENT

Now available from the TMI Public Health Fund: "A Review of the Carcinogenic Effects of Low Doses of Ionizing Radiation," by Daniel A. Hoffman, Ph.D., and Edward P. Radford, M.D. Available at cost (\$17) from the TMI Public Health Fund. Free to qualified individuals.

TMI Public Health Fund  
1622 Locust Street  
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Telephone: 215-875-3028

## ASSISTANTSHIP

**GRADUATE RESEARCH ASSISTANTSHIP** for 4 years at \$8,400 per year plus out-of-state tuition waiver in **MOLECULAR CLONING AND INSECT BIOCHEMISTRY** leading to Ph.D. in entomology; available immediately. Candidates with M.S. in molecular biology, biochemistry, or entomology send résumé and three letters of recommendation to: **Dr. Dov Borovsky, Florida Medical Entomology Laboratory, University of Florida, 200 9th Street, SE, Vero Beach, Fla. 32962.**

## FELLOWSHIPS

### UNIVERSITY OF TORONTO ERINDALE CAMPUS DEPARTMENT OF BOTANY

#### NSERC University Research Fellowship

The Department of Botany, University of Toronto, invites applications from Canadian citizens and permanent residents who wish to be sponsored for an NSERC University Research Fellowship, to be held at the Erindale Campus of the University of Toronto. Applicants from the areas of molecular biology/biotechnology of plants, fungi, or bacteria are particularly encouraged. Positions are available in April 1986, and would involve some teaching opportunities appropriate for the specialization of the appointee. NSERC University Research Fellowships are awarded for 5 years and carry a salary at the assistant professor level and include financial support for research. Submit curriculum vitae with names of three referees and representative reprints by 1 August 1985 to:

Professor P. A. Horgen  
Associate Chairman, Department of Botany  
University of Toronto, Erindale Campus  
Mississauga, Ontario, Canada L5L 1C6

*In accordance with Canadian immigration requirements this advertisement is directed to Canadian citizens and permanent residents.*

## FELLOWSHIPS

### The Johns Hopkins University Department of Anesthesiology and Critical Care Medicine

#### POSTDOCTORAL FELLOWSHIP IN RESEARCH

Applications are invited for this position available immediately to study the molecular biology of human cytochrome P450. The applicant must be creative and highly motivated to carry out independent experimentation utilizing human cytochrome P-450 under study.

M.D. and Ph.D. required with 1 to 2 years of experience in molecular biology. Contact:

Roy C. Levitt, M.D.  
The Johns Hopkins University  
Department of Anesthesiology  
and Critical Care Medicine  
Blalock 1410  
Baltimore, Maryland 21205  
Telephone: 301-955-7609

**POSTDOCTORAL FELLOWSHIP** position available for research on cellular energy metabolism during hemorrhagic and septic shock and after reperfusion. The position will involve studies employing NMR, small animal surgery, perfused organ techniques, and isolated cell assays. Salary and benefits depending upon experience (no NIH funding restrictions are applicable). The initial appointment is for 1 year, starting after 1 July 1985, renewable for 2 years. Send curriculum vitae and names and addresses of three references to: **Dr. Kay LaNoue, Department of Physiology, Box 850, Hershey Medical Center, Pennsylvania State University, Hershey, Pa. 17033.** Further information can be obtained from: **Dr. Louis Martin, telephone: 717-534-8867. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWSHIP.** NIH-supported. Available 1 July 1985 in red cell membrane biology. Candidates completing or with Ph.D. in structural biology, cell biology, biochemistry, or physiology would be appropriate. Skill in standard biochemical and morphological techniques is required. Salary is relevant NIH salary for level of experience and subject is membrane biology of human RBC. Send curriculum vitae and two names of references: **Dr. Stanley S. Schrier, Chief, Hematology, Stanford University Medical Center, Stanford, California 94305. Stanford University is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWSHIPS** available immediately to engage in research related to the biochemical, pharmacokinetic, and pharmacodynamic aspects of nitrate vasodilatation and tolerance. Recent Ph.D. graduates with expertise in biochemistry, pharmacokinetics, pharmacology, or medicinal chemistry would be preferred. Send curriculum vitae with two references to: **Dr. H.-L. Fung, Department of Pharmacology, 513 Hochstetter Hall, State University of New York, Buffalo, N.Y. 14260. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWSHIP** position in the field of pathogenic mechanisms of human retroviruses (HTLV-I and AIDS-associated retrovirus). Ph.D., M.D., or equivalent required. Send curriculum vitae and three references to: **Edgar G. Engleman, M.D., Department of Pathology—L235, Stanford University School of Medicine, Stanford, Calif. 94305. Stanford is an Equal Opportunity/Affirmative Action Employer.**

### COLUMBIA UNIVERSITY Department of Biochemistry and Molecular Biophysics

A **POSTDOCTORAL RESEARCH FELLOWSHIP** is available immediately for studies on the structure of Na/K-ATPase. The applicant should have a background in either synthetic organic chemistry or the biochemistry of integral membrane proteins. The work will involve both the preparation of heavy atom labeled ligands, and the reassembly and reconstitution of the ATPase subunits. Applications, including curriculum vitae and the names of two referees, should be sent to:

Dr. I. S. Edelman  
Department of Biochemistry and Molecular  
Biophysics  
Columbia University  
630 West 168 Street  
New York, N.Y. 10032

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

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIP** in endocrinology research. Group is part of NIH-funded diabetes-endocrinology research center. Focus is on pancreatic islet research. Applicants must possess M.D. or Ph.D. degree with background in biochemistry, physiology, or cell biology. Stipend is competitive. Send curriculum vitae, description of current research interests and objectives, and three letters of recommendation to: **Postdoctoral Search Committee, Department of Biochemistry, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, Mass. 01605. Affirmative Action/Equal Opportunity Employer.**

## CONFERENCE

The New York Academy of Sciences  
Conference on  
**TETRODOTOXIN, SAXITOXIN,  
AND MOLECULAR BIOLOGY  
OF THE SODIUM CHANNEL**  
11 to 13 December 1985  
Barbizon-Plaza Hotel, New York City

This conference will focus on biophysical, biochemical, and molecular biological aspects of the voltage-gated sodium channel of many excitable membranes. The objective is to summarize the current knowledge in this area from an integrated viewpoint, and to identify directions for future studies. Coverage will include: the chemistry of tetrodotoxin and saxitoxin and their analogues; biophysical aspects of the sodium channel function relevant to the theme of the conference; biochemical characterization and functional reconstitution of the isolated channel protein; genetics and molecular biology, as well as cellular biology of the sodium channel.

**CHAIRS:** C. Y. Kao, M.D., State University of New York, Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, N.Y. 11203, and S. R. Levinson, Ph.D., University of Colorado School of Medicine, Denver, Colo. 80262.

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

## TRAINEESHIPS

### MOLECULAR PARASITOLOGY TRAINING PROGRAM

Meharry Medical College has recently been awarded a Molecular Parasitology Training Grant to begin 1 August 1985. In collaboration with Vanderbilt University, graduate and postgraduate students will be trained in molecular, biochemical, and immunological aspects of African trypanosomiasis, Chagas' disease, schistosomiasis, malaria, and leprosy. The initial faculty of this training program includes: (i) Dr. George C. Hill—African Trypanosomiasis; (ii) Dr. Frank Hatcher—Chagas' Disease; (iii) Dr. P. J. Patel—Leprosy; (iv) Dr. Clint Carter—Schistosomiasis; and (v) Dr. Daniel Colley—Schistosomiasis.

Candidates with strong interests in these aspects of parasitic diseases should apply immediately. Stipends for graduate students will be \$6,552 the first year, plus payment of tuition and fees. The positions are open to U.S. citizens or permanent residents. Stipend for postgraduate students with no previous experience will be \$15,996. Deadline for applications is 15 July 1985. Please send a letter stating research interest, curriculum vitae, and three letters of recommendation to:

Dr. George C. Hall  
Program Director  
Molecular Parasitology Training Program  
Meharry Medical College  
Division of Biomedical Sciences  
Nashville, Tenn. 37208  
Telephone: 615-327-6193

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## PROFESSIONAL STAFF POSITIONS NATIONAL ACADEMY OF SCIENCES

The Space Science Board of the National Academy of Sciences, a nationally prominent, non-governmental institution located in Washington, DC is seeking candidates for the following positions:

### STUDY DIRECTOR

The incumbent will serve as principal staff officer for a large study on the major directions for space science from 1995-2015 and will be responsible for organization and management of the study group, study budget, direction of associated professional staff, supervision of support staff and publication of report. Experience in advisory service or a scientific committee with a broad general knowledge of the U.S. space science program. Qualifications include an M.S., Ph.D. or equivalent in Physics or Chemistry (or a related space science discipline), 5-8 years experience in major space science program management.

### STAFF OFFICER

The position will provide professional staff support to the Board, to several discipline committees, and selected studies. The incumbent should have at least 5 years of experience with knowledge of space science, the ability to perceive and articulate principal space and technology issues, and management skills to guide committee tasks and publications. Applicants should have an M.S., Ph.D. or equivalent in Physics or Chemistry (or a related space science discipline).

These positions require excellent writing skills. Please send resume to:

Dean P. Kastel  
**Space Science Board**  
**National Academy of Sciences**  
2101 Constitution Ave., N.W.  
Washington, DC 20418

EOE M/F/H/V

## RESEARCH CENTER DIRECTOR

Applications and nominations are invited for a Director, Center for Atmospheric and Biospheric Effects of Combustion, located in the Applied Science Division. The scope of the Center is interdisciplinary and includes four major areas: Combustion and Abatement, Atmospheric Pathways and Chemistry, Radiative Balance, and Ecosystem Pathways and Effects. The Director will coordinate the efforts of a number of scientists, including chemists, physicists, engineers, biologists, geologists, meteorologists, and energy analysts to carry out the objectives of the Center; will be responsible for obtaining research support from governmental and non-governmental organizations; will represent the Laboratory at various related national and international meetings; and will also carry out research within the Center. This position requires a Ph.D., and a record of distinguished leadership, outstanding research accomplishments and an international reputation in one or more of the above areas. Experience and background in program planning, development, implementation, administration and evaluation is required. The incumbent should also have experience in obtaining research funds and have a familiarity with organizations that provide these research funds. Salary will be negotiable. The successful candidate will be appointed a Senior Staff Scientist at the Lawrence Berkeley Laboratory. Applications and/or nominations should be forwarded to: Lawrence Berkeley Laboratory, One Cyclotron Road, Employment Office 90-1042, Berkeley, CA 94720. Please specify Job #A/3330. An Equal Opportunity Employer M/F/H.



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## NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

OPENING DATE: July 1, 1985

CLOSING DATE: July 31, 1985

(All applications must be postmarked by closing date)

The National Institutes of Health invites nominations and applications for the position of Director, Division of Research Grants (DRG).

The Director, DRG, directs an organization that provides staff support to the Office of the Director, NIH, in the formulation of grant and award policies and procedures; provides central receipt of all PHS applications for research and research training support and makes initial referral to PHS components; assigns NIH applications to supporting Institutes/Divisions and to DRG initial review groups; provides scientific review of NIH Research Grants, National Research Service Awards, and research career development applications; collects, stores, retrieves, analyzes and evaluates management and program data needed to administer extramural programs; reviews and analyzes the character and direction of research and training supported through NIH grants and the resources necessary for such support. The Division's staff includes over 430 employees with a direct budget of 19.8 million dollars, plus responsibility for Chariman's Grants in excess of 6 million dollars.

This is a Civil Service position in the Senior Executive Service (SES), with an authorized salary range from \$61,296 to \$68,700 per annum depending on qualifications. Candidates may be eligible for Physicians Comparability Allowance up to \$10,000 per year. Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.

The mandatory professional/technical qualifications require that candidates meet the minimum educational requirements for Medical Officer, GS-602, or Health Science Administrator, GS-601, as defined by the U.S. Office of Personnel Management Handbook X-118—Qualifications Standards for positions under the General Schedule, which is available in Federal Personnel Offices and Federal Job Information Centers. Candidates must also possess familiarity with Federal Grant and award programs, understanding

of the biomedical research community, and skill in negotiating sensitive issues in a scientific environment.

The mandatory managerial/executive qualifications require that candidates have demonstrated competence in the following areas: assuring that key agency and organizational goals are considered in making program decisions; representing the organization in negotiations with other organizations, and establishing working relationships with other program areas and relevant external groups; establishing program goals and the organizational structure and processes required; obtaining and allocating the necessary financial and material resources; developing a work environment that ensures that people are appropriately employed, effectively and efficiently utilized, and dealt with in a fair and equitable manner; and, establishing procedures for the periodic evaluation of programs, and making necessary adjustments to assure that appropriate results are being achieved.

Candidates who meet the mandatory qualifications will be further evaluated by the Search Committee on the following factors: training and education, and honors and awards. Additional information may be obtained from Mrs. Helen S. Stafford, (301) 496-4197.

Applications (Personal Qualifications Statement, SF-171) are to be sent to Helen C. Stafford, Executive Secretary, Search Committee for Director, DRG, National Institutes of Health, Building 1, Room 19, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.

**ALL QUALIFIED CANDIDATES WILL RECEIVE CONSIDERATION WITHOUT REGARD TO RACE, RELIGION, COLOR, SEX, AGE, NATIONAL ORIGIN, LAWFUL POLITICAL AFFILIATION, MARITAL STATUS, UNION MEMBERSHIP, OR ANY NONDISQUALIFYING PHYSICAL OR MENTAL HANDICAP.**



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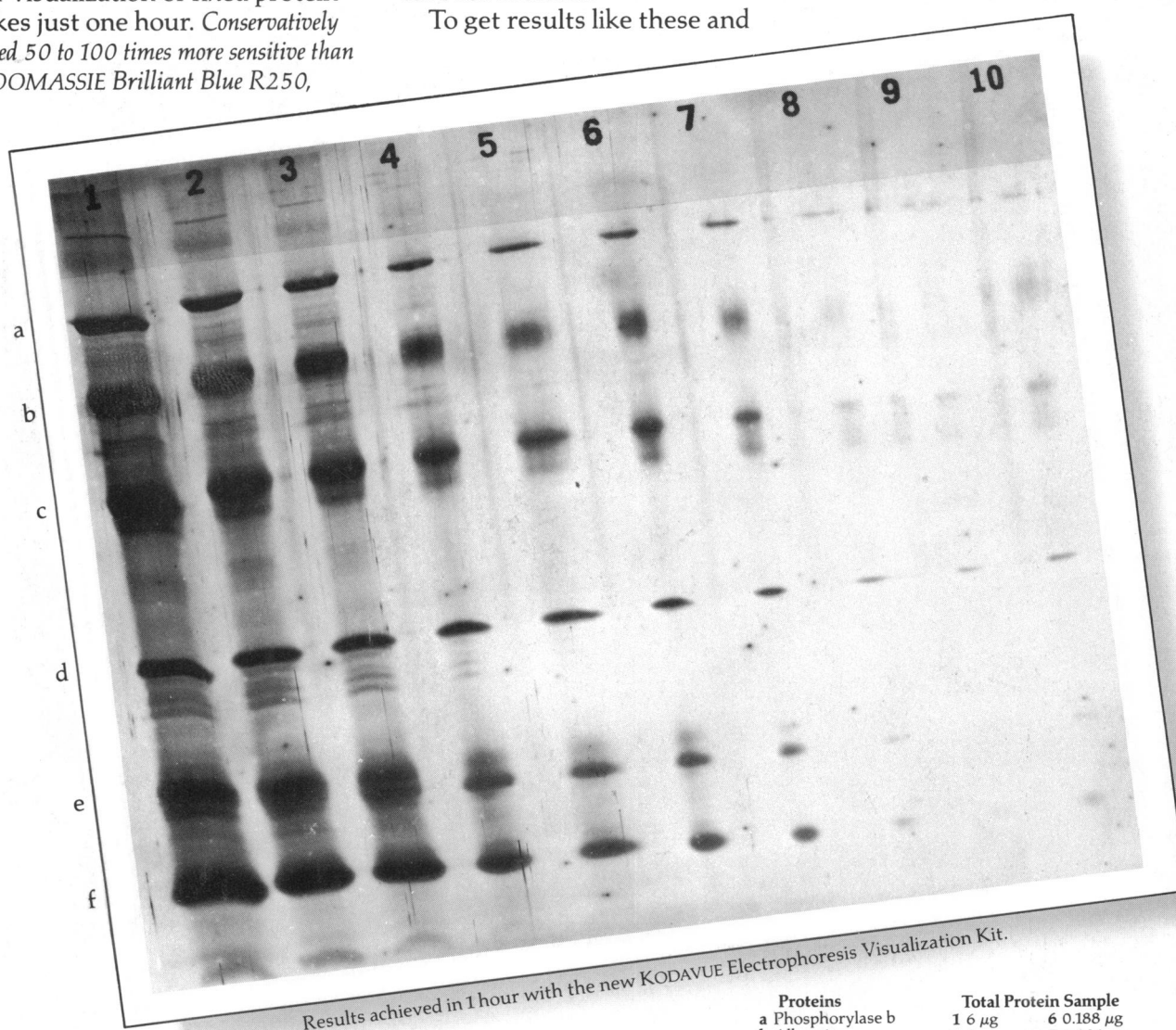
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