

documented single oceanic eddy phenomenon. A chapter by Rossby *et al.* is devoted to a description of selected accomplishments based on one new instrumental development that was widely exploited in the last decade. This review of SOFAR float results near the MODE and POLYMODE regions is particularly welcome.

WILLIAM J. SCHMITZ, JR.  
Woods Hole Oceanographic Institution,  
Woods Hole, Massachusetts 02543

## Books Received

**Amorphous Metallic Alloys.** F. E. Luborsky, Ed. Butterworths, Boston, 1983. xiv, 534 pp., illus. \$75. Butterworths Monographs in Materials.

**Anatomy of the Dicotyledons.** Vol. 2, Wood Structure and Conclusion of the General Introduction. C. R. Metcalfe and L. Chalk. 2nd ed. Clarendon (Oxford University Press), New York, 1983. xii, 297 pp., illus., + plates. \$75.

**Ancient Sedimentary Environments and the Habitats of Living Organisms.** Introduction to Palaeoecology. Jean-Claude Gall. Springer-Verlag, New York, 1983. xxii, 219 pp., illus. \$24. Translated from the French edition (Paris, 1976).

**Annual Review of Biochemistry.** Vol. 52. Esmond E. Snell *et al.*, Eds. Annual Reviews, Palo Alto, Calif., 1983. xvi, 950 pp., illus. \$29.

**Annual Review of Materials Science.** Vol. 13, 1983. Robert A. Huggins, Richard H. Bube, and David A. Vermilyea, Eds. Annual Reviews, Palo Alto, Calif., 1983. viii, 454 pp., illus. \$64.

**Annual Review of Nutrition.** Vol. 3. William J. Darby, Harry P. Broquist, and Robert E. Olson, Eds. Annual Reviews, Palo Alto, Calif., 1983. xii, 478 pp., illus. \$27.

**Antibiotics Containing the Beta-Lactam Structure.** Part 1. A. L. Demain and N. A. Solomon, Eds. Springer-Verlag, New York, 1983. xviii, 360 pp., illus. \$116. Handbook of Experimental Pharmacology, vol. 67.

**Applied Charged Particle Optics.** Part C, Very-High-Density Beams. A. Septier, Ed. Academic Press, New York, 1983. xx, 545 pp., illus. \$74.50. Advances in Electronics and Electron Physics, Supplement 13.

**The Arctic Skua.** A Study of the Ecology and Evolution of a Seabird. Peter O'Donald. Illustrated by Robert Gillmor. Cambridge University Press, New York, 1983. xvi, 324 pp. \$49.50.

**Arms Control.** The Multilateral Alternative. Edward C. Luck, Ed. New York University Press, New York, 1983 (distributor, Columbia University Press, New York). xiv, 258 pp. \$32.50; paper, \$15. UNA-USA Policy Studies Book Series.

**Arterial Pollution.** An Integrated View on Atherosclerosis. H. Peeters, G. A. Gresham, and R. Paoletti, Eds. Plenum, New York, 1983. x, 422 pp., illus. \$55. NATO Advanced Science Institutes Series A, vol. 58. From an institute, Maratea, Italy, Aug. 1981.

**Arteries and Arterial Blood Flow.** C. M. Rodkiewicz, Ed. Springer-Verlag, New York, 1983. x, 417 pp., illus. Paper, \$28.60. International Centre for Mechanical Sciences Courses and Lectures, No. 270.

**At the Sea's Edge.** An Introduction to Coastal Oceanography for the Amateur Naturalist. William T. Fox. Illustrated by Clare Walker Leslie. Prentice-Hall, Englewood Cliffs, N.J., 1983. xvi, 317 pp. \$21.95; paper, \$12.95.

**Bacterial Cell Structure.** Howard J. Rogers. Van Nostrand Reinhold, New York, 1983. vi, 90 pp., illus. Paper, \$14.95. Aspects of Microbiology 6.

**The Dementias.** Richard Mayeux and Wilma G. Rosen, Eds. Raven, New York, 1983. xvi, 271 pp., illus. \$36. Advances in Neurology, vol. 38.

**Development of Auditory and Vestibular Systems.** R. Romand, Ed. Academic Press, New York, 1983. xvi, 576 pp., illus. \$59.50.

**Dictionary of Philosophy.** Dagobert D. Runes, Ed. 2nd ed. Philosophical Library, New York, 1983. 360 pp. \$24.95.

**Diet, Nutrition, and Cancer.** From Basic Research to Policy Implications. Daphne A. Roe, Ed. Liss, New York, 1983. x, 294 pp., illus. \$38. Current Topics in Nutrition and Disease, vol. 9. From a workshop, Ithaca, N.Y., Aug. 1982.

**Discourse Perspectives on Syntax.** Flora Klein-Andreu, Ed. Academic Press, New York, 1983. xxii, 266 pp. \$34.50.

**Discovery.** The Search for DNA's Secrets. Mahlon Hoagland. Van Nostrand Reinhold, New York, 1983. xii, 196 pp., illus. Paper, \$8.25. Reprint, 1981 ed.

**Drugs and Hormones in Brain Development.** M. Schlumpf and W. Lichtensteiger, Eds. Karger, Basel, 1983. viii, 243 pp., illus. \$99. Monographs in Neural Sciences, vol. 9. From a symposium, Zurich, Apr. 1982.

**Economic Evaluation of Mineral Property.** Sam L. VanLandingham, Ed. Hutchinson Ross, Stroudsburg, Pa., 1983 (distributor, Van Nostrand Reinhold, New York). xiv, 385 pp., illus. \$45. Benchmark Papers in Geology, vol. 67.

**Effects of Accumulation of Air Pollutants in Forest Ecosystems.** B. Ulrich and J. Pankrath, Eds. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). xviii, 389 pp., illus. \$58.50. From a workshop, Göttingen, Germany, May 1982.

**Endocrine System.** T. C. Jones, U. C. Mohr, and R. D. Hunt, Eds. Springer-Verlag, New York, 1983. xvi, 366 pp., illus. \$69. Monographs on Pathology of Laboratory Animals.

**Energy Deskbook.** Samuel Glasstone. Van Nostrand Reinhold, New York, 1983. xii, 453 pp., illus. \$24.95.

**Energy from Biomass and Wastes VII.** Institute of Gas Technology, Chicago, 1983. xiv, 1417 pp., illus. Paper, \$100. From a symposium, Lake Buena Vista, Fla., Jan. 1983.

**Energy Storage and Redistribution in Molecules.** Juergen Hinze, Ed. Plenum, New York, 1983. xii, 615 pp., illus. \$85. From two workshops, Bielefeld, Germany, June 1980.

**Enlargement and Compaction of Particulate Solids.** Nayland G. Stanley-Wood, Ed. Butterworths, Boston, 1983. x, 294 pp., illus. \$59.95. Butterworths Monographs in Chemical Engineering.

**Environmental Carcinogens—Selected Methods of Analysis.** Vol. 6, N-Nitroso Compounds. H. Egan *et al.*, Eds. International Agency for Research on Cancer, Lyon, 1983 (U.S. distributor, WHO Publications Centre USA, Albany, N.Y.). xxiv, 518 pp., illus. \$40. IARC Publications No. 45.

**Environmental Health Field Practice.** Sanford M. Brown, Wayne N. Clark, and Steven L. Zueback. Praeger, New York, 1983. xii, 289 pp., illus. Spiral bound, \$16.95.

**Environmental Psychology.** Directions and Perspectives. Nikolaus R. Feimer and E. Scott Geller, Eds. Praeger, New York, 1983. vi, 362 pp. \$36.95. From a symposium, Blacksburg, Va., 1980.

**Equity Issues in Radioactive Waste Management.** Roger E. Kasper, Ed. Oelgeschlager, Gunn and Hain, Cambridge, Mass., 1983. xiv, 381 pp. \$30.

**Ergodic Theory.** Karl Petersen. Cambridge University Press, New York, 1983. xii, 329 pp., illus. \$49.50. Cambridge Studies in Advanced Mathematics 2.

**A Field Guide to the Beetles of North America.** Text and illustrations by Richard E. White. Houghton Mifflin, Boston, 1983. xiv, 368 pp., + plates. \$15.95; paper, \$10.95. Peterson Field Guide Series, 29.

**Fish Stock Assessment.** A Manual of Basic Methods. J. A. Gulland. Wiley-Interscience, New York, 1983. xii, 223 pp. \$34.95. FAO/Wiley Series on Food and Agriculture, vol. 1.

**Forensic Hypnosis.** Psychological and Legal Aspects. Roy Udolf. Lexington (Heath), Lexington, Mass., 1983. xii, 239 pp. \$25.95.

**Formaldehyde Toxicity.** James E. Gibson, Ed. Hemisphere, Washington, D.C., 1983. xxii, 312 pp., illus. \$49.95. Chemical Industry Institute of Toxicology Series. From a conference.

**Four Lienzoes of the Coixtlahuaca Valley.** Ross Parmenter. Dumbarton Oaks, Washington, D.C., 1982. iv, 83 pp., illus. Paper, \$12. Studies in Pre-Columbian Art and Archaeology, No. 26.

**Introduction to Neuropsychology.** J. Graham Beaumont. Guilford, New York, 1983. vi, 314 pp., illus. \$18.95.

**Isozymes.** Current Topics in Biological and Medical Research. Mario C. Rattazzi, John G. Scandalios, and Gregory S. Whitt, Eds. Liss, New York, 1983. Vol. 8, Cellular Localization, Metabolism, and Physiology. xvi, 274 pp., illus. \$56. Vol. 9, Gene Expression and Development. xvi, 230 pp., illus. \$50. From a congress, Austin, Tex., June 1982.

**Kodo Zuroku.** Illustrated Book on the Smelting of Copper. Masuda Tsuna. Color woodcuts by Niwa Motokuni Tōkei. Cyril Stanley Smith, Ed. Burndy Library, Norwalk, Conn., 1983. 96 pp. Paper, \$12.50. Facsimile of the original edition (ca. 1801). Translated from the Japanese by Zenryu Shirakawa.

**Land Drainage.** Planning and Design of Agricultural Drainage Systems. Lambert K. Smedema and David W. Rycroft. Cornell University Press, Ithaca, N.Y., 1983. 376 pp., illus. \$32.50.

**Leben wir in einer Volterra-Welt?** Ein ökologischer Zugang zur angewandten Systemanalyse. Manfred Peschel and Werner Mende. Akademie-Verlag, Berlin, 1983. 233 pp., illus. Paper, 30 M. Mathematical Research, Band 14.

**Lectures on the Affinity of Painting with the Other**

**Fine Arts.** Samuel F. B. Morse. Edited with an introduction by Nicolai Cikovsky, Jr. University of Missouri Press, Columbia, 1983. viii, 145 pp., illus. \$20.

**Living with the Texas Shore.** Robert A. Morton *et al.* Duke University Press, Durham, N.C., 1983. xii, 190 pp., illus. \$22.75; paper, \$9.75. Living with the Shore.

**Localization in Neuropsychology.** Andrew Kertesz, Ed. Academic Press, New York, 1983. xvi, 527 pp., illus. \$53.

**Magnetic Atoms and Molecules.** William Weltner, Jr. Scientific and Academic Editions (Van Nostrand Reinhold), New York, 1983. xvi, 422 pp., illus. \$39.50.

**Order and Surprise.** Martin Gardner. Prometheus, Buffalo, N.Y., 1983. 396 pp., illus. \$19.95.

**Orderly Tangles.** Cloverleaves, Gordian Knots, and Regular Polylinks. Alan Holden. Photographs by Doug Kendall. Columbia University Press, New York, 1983. xii, 97 pp. \$19.95.

**Parasitology.** A Global Perspective. Kenneth S. Warren and John Z. Bowers, Eds. Springer-Verlag, New York, 1983. xii, 292 pp. \$38.50. From a meeting, Bellagio, Italy, April 1982.

**PDP-11 Software Source Book.** Digital, Northboro, Mass., 1983. xii, 980 pp., illus. Paper.

**Perspectives on Prevention and Treatment of Cancer in the Elderly.** Rosemary Yancik *et al.*, Eds. Raven, New York, 1983. xviii, 342 pp., illus. \$55. Aging, vol. 24.

**Playing with Form.** Children Draw in Six Cultures. Alexander Alland, Jr. Columbia University Press, New York, 1983. xiv, 223 pp., illus. \$29.50; paper, \$13.50.

**The Politics of Early Old English Sound Change.** Thomas E. Toon. Academic Press, New York, 1983. xviii, 229 pp., illus. \$26.50. Quantitative Analysis of Linguistic Structure.

**Quantum Electronics and Electro-Optics.** Wiley-Interscience, New York, 1983. xxvi, 451 pp., illus. \$54.95. From a conference, Hull, England, Sept. 1981.

**The Radon Transform and Some of Its Applications.** Stanley R. Deans. Wiley-Interscience, New York, 1983. xii, 289 pp., illus. \$34.95.

**Recent Clinical Developments in Gynecologic Oncology.** C. Paul Morrow *et al.*, Eds. Raven, New York, 1983. xiv, 209 pp., illus. \$45. Progress in Cancer Research and Therapy, vol. 24. From a conference, Dublin, Sept. 1981.

**Regional Transformation and Industrial Revolution.** A Geography of the Yorkshire Woollen Industry. Derek Gregory. University of Minnesota Press, Minneapolis, 1983. xvi, 294 pp., illus. \$39.50; paper, \$15.95.

**The Regulation of DNA Replication and Transcription.** The Role of Trigger Molecules in Normal and Malignant Gene Expression. Mirko Beljanski. Karger, Basel, 1983. x, 189 pp., illus. \$74.25. Experimental Biology and Medicine, vol. 8.

**Regulation of the Immune Response.** P. L. Ogra and D. M. Jacobs, Eds. Karger, Basel, 1983. xiv, 407 pp., illus. \$130. From a convocation, Amherst, N.Y., June 1982.

**Reliability Theory and Its Application in Structural and Soil Mechanics.** P. Thoft-Christensen, Ed. Nijhoff, The Hague, 1983 (U.S. distributor, Kluwer Boston, Hingham, Mass.). x, 651 pp., illus. \$87. NATO ASI Series E, No. 70. From an institute, Bornholm, Denmark, Aug. 1982.

**Sanitation in Food Processing.** John A. Troller. Academic Press, New York, 1983. xiv, 458 pp., illus. \$34.50. Food Science and Technology.

**Scholars' Guide to Washington, D.C., for Southeast Asian Studies.** Brunel, Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, Vietnam. Patrick M. Mayerchak. Woodrow Wilson International Center for Scholars, Washington, D.C., and Smithsonian Institution Press, Washington, D.C., 1983. xiv, 413 pp. \$29.95; paper, \$12.50. Scholars' Guide to Washington, D.C., No. 9.

**Selected Topics in Clinical Enzymology.** David M. Goldberg *et al.*, Eds. Walter de Gruyter, New York, 1983. xviii, 362 pp., illus. \$72.80. From a congress, Salzburg, Sept. 1981.

**Under the Microscope.** Alan Curry, Robin F. Grayson, and Geoffrey R. Hosey. Van Nostrand Reinhold, New York, 1983. 160 pp., illus. \$14.50.

**Unification of the Fundamental Particle Interactions II.** John Ellis and Sergio Ferrara, Eds. Plenum, New York, 1983. x, 527 pp., illus. \$69.50. Ettore Majorana International Science Series, vol. 15. From a conference, Erice, Italy, Oct. 1981.

**Water Relations of Plants.** Paul J. Kramer. Academic Press, New York, 1983. xii, 489 pp., illus. \$35.

**Where Will We Go When the Sun Dies?** John W. Maccvey. Stein and Day, New York, 1983. 264 pp., illus. \$16.95.

**World Ocean Atlas.** Vol. 3, Arctic Ocean. Sergei G. Gorskoy, Ed. Pergamon, New York, 1983. xiv, 184 pp. + index + booklet with English translation of text. \$400.

# Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

**LINE CLASSIFIED ADVERTISING DEADLINES:**  
24 February issue (mailed 17 February): **3 February**  
2 March issue (mailed 24 February): **10 February**  
9 March issue (mailed 2 March): **17 February**  
16 March issue (mailed 9 March): **24 February**

**POSITIONS WANTED:** 40¢ per word, plus \$4 for use of box number, per insertion. \$10 minimum, per insertion. Prepayment required. This rate is available only to individuals seeking jobs.

**LINE DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth):** \$10.40 per millimeter; \$260 minimum, per insertion (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing address required for all other advertising.

Send copy for all **Positions Wanted** ads and **Line Display** ads less than 1/6 page in size (125 millimeters) to:

SCIENCE, Room 107  
1515 Massachusetts Avenue, NW  
Washington, D.C. 20005  
Telephone: 202-467-4456

Send copy for **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads to:

Scherago Associates, Inc.  
1515 Broadway  
New York, N.Y. 10036  
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

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

## POSITIONS WANTED

**Anatomist.** Retired; interested in full-time position teaching gross anatomy and/or embryology and/or anatomy and physiology at the paramedical level. Box 28, SCIENCE. 2/3; 4/6; 6/1

**Biochemist/Immunochemist/Cell Biologist.** Interested in applied research and diagnostic assays. Ph.D. 1976. Extensive experience in primary liver cell cultures, proteins and enzyme purification and characterization, antibody production (polyclonal and monoclonal), and immunoassays. Excellent enzymologist. Box 26, SCIENCE. X

**Biochemist/Computer Science:** Ph.D. in chemistry. Postdoctoral research experience is mechanism steroid hormone action. Publications. Undergraduate minor in computer science. Long-term goal is career-type position combining my biochemical background and computer science. Box 27, SCIENCE. X

**Biochemist,** Ph.D. Purification and characterization of proteins, enzymes, peptides. Preparative scale-up. HPLC methods development. Three years of postdoctoral experience. Seeks to develop protein purification resource for biomedical/biotechnology applications. Peter A. Nagainis, 201 West California Avenue, Number 701, Sunnyvale, Calif. 94086. X

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

**Toxicologist/Ecologist.** Ph.D. Agricultural chemical background (basically insecticides). Teaching and management experience. Excellent communication and organizational skills. Highly motivated. Seeks research or administrative position. Box 29, SCIENCE. 2/3, 10

## POSITIONS WANTED

**Neurophysiologist;** strong background in electrophysiological techniques; CNS, stereotaxic work, VNS sleep dreams, stress, drugs, systems analysis, computer science; seeking research position in academia or industry. Box 30, SCIENCE. X

**Ph.D. Psychology.** University of Lancaster, England. Research interests in construct psychology, personality, dreams and sleep research, and the unconscious and its phenomena. Skilled in multivariate statistics (regression, factor analysis, Bayesian approaches), computer programming (Fortran, Algol, Basic, Nova DG Assembler, IBM 370 Assembler), design of physiological monitoring instrumentation and computer interfaces, and psychological test construction. Published in *British Journal of Psychology*, *Psychometrika*, *Multivariate Behavioural Research*. Book proposal currently in review by Oxford University Press. Seeks university research post or position in research institute. Excellent references. Box 25, SCIENCE. 2/3, 10, 17, 24

## POSITIONS OPEN

**ACADEMIC GERIATRICS:** Full-time faculty position to develop VA component of expanding Division of Geriatric Medicine at the University of Michigan (UM). Must be Board-eligible in internal medicine. Establishment of an active research program will be encouraged and supported. Close ties with UM Institute in Gerontology. Specific training in geriatrics is not required, but an interest in teaching geriatrics/gerontology and in care of the elderly is necessary. Address inquiries to: **H. David Humes, M.D., Acting Chief, Medical Service, VA Medical Center, Ann Arbor, Mich. 48105.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 351.

The University of Michigan Medical School, **Department of Radiology**, has on occasion open **FACULTY POSITIONS** within the department and its affiliated hospitals. Physicians filling these positions will take part in the programs of patient care, teaching, and research in the Department of Radiology. They will supervise the activities of house officers and aid in the teaching of house officers and medical students. Qualified applicants must be American Board of Radiology—certified or Board-eligible. Previous training or work experience in an academic institution as well as demonstration of previous academic research and teaching experience are desirable. Academic rank will depend on qualifications and experience.

Interested applicants should contact: **William Martel, M.D., Chairman, Department of Radiology, The University of Michigan Medical School, Ann Arbor, Michigan 48109.** A nondiscriminatory, Affirmative Action Employer. Code 47F0.

The University of Michigan Medical School, **DEPARTMENT OF INTERNAL MEDICINE**, has a position available at the Veterans Administration Hospital to work in the Division of General Medicine. The individual will have patient care activities in both ambulatory care and inpatient settings. Candidates should be Board-eligible in internal medicine and have an interest in health services and research. Address inquiries, including curriculum vitae, to: **Jeffrey K. Stross, M.D., The University of Michigan Medical School, Department of Internal Medicine, D3211 SACB, Ann Arbor, Michigan 48109.** The University of Michigan is a nondiscriminatory, Affirmative Action Employer. 151BO.

The Department of Radiation Therapy of the University of Michigan Hospital has openings for **Ph.D. PHYSICISTS**, including the director of the Physics Section, and for **M.S. CLINICAL PHYSICISTS**. Prior experience is essential for the director position and desirable for the other openings. Experience should include linear accelerator acceptance, calibration, and maintenance, as well as development and implementation of treatment planning software. Candidates should have experience in clinical physics, dosimetry, computerized treatment planning, computer programming, and teaching of residents and technologists. A strong background in experimental physics is important as is a commitment to physics research. Salary commensurate with background and experience. Interested applicants should send résumé to: **Dr. Allen Lichter, Department of Radiation Therapy, Room X3003, Box 56, University of Michigan Hospital, Ann Arbor, Michigan 48109.** A nondiscriminatory, Affirmative Action Employer.

## POSITIONS OPEN

**ANALYTICAL CHEMIST.** One-year sabbatical replacement in the Chemistry Department of Whitman College, a private liberal arts college offering ACS-certified B.A. Begin September 1984. Assistant professor level, for recent Ph.D. in analytical chemistry. Teach general, analytical and instrumental lecture and laboratory, including a one-semester advanced lecture in applicant's area of special interest. Direct undergraduate research. Apply by 30 March 1984. Send résumé, three letters of recommendation, transcripts, and description of teaching interests and philosophy and research plans to: **Gale Rhodes, Chemistry Department, Whitman College, Walla Walla, Wash. 99362.** An Equal Opportunity/Affirmative Action Employer.

### ANIMAL PHYSIOLOGISTS

A tenure-track assistant professorship will be available 1 September 1984. The position involves teaching a preprofessional anatomy and physiology course, an advanced course in the applicant's field of special interest, and development of a research program involving graduate and undergraduate students. Ph.D. required and postdoctoral experience is desirable. Applicants must submit curriculum vitae, at least three letters of recommendation, and a statement of research goals and teaching interests. Apply to:

**Dr. Frank J. Etges**  
Department of Biological Sciences  
University of Cincinnati  
Cincinnati, Ohio 45221-0005

Deadline: 17 February 1984.

An Equal Opportunity/Affirmative Action Employer

### ANIMAL PHYSIOLOGY/CELL BIOLOGY

Tenure-track position requiring ability to teach animal physiology, cell biology, nonmajors biology course, and an advanced course in your specialty. Ph.D. and teaching experience required. Simon's Rock is early entrance liberal arts college, with strong emphasis on high-quality teaching and interdisciplinary programs. Send curriculum vitae, transcripts, and a list of three references by 27 February 1984 to:

**Dr. E. T. Handelman**  
Dean of the College  
Simon's Rock of Bard College  
Great Barrington, Mass. 01230  
Affirmative Action/Equal Opportunity Employer

**ASSISTANT FACULTY FELLOW IN CHEMISTRY.** Nontenure-track faculty level position open to an individual to conduct research on funded projects in protein chemistry of blood coagulation and fibrinolysis. The candidate must have postdoctoral experience in biochemistry, cell biology, or immunology. Please submit a résumé and three letters of reference to: **Dr. Francis J. Castellino, Department of Chemistry, University of Notre Dame, Notre Dame, Indiana 46556.** The University of Notre Dame is an Equal Opportunity/Affirmative Action Employer.

### ASSISTANT PROFESSOR

Applications are invited for a tenure-track faculty appointment at the assistant professor level in the Department of Materials Science and Engineering, Stanford University, beginning 1 January 1985. The candidate's research area should concern materials science aspects of semiconductors, including properties, synthesis, processing, or characterization. *Stanford University is an Equal Opportunity Employer and welcomes nominations and applications of women and minority group members.* Applications should be sent by 4 April 1984 to:

**Professor Robert Sinclair**  
Chairman, Search Committee  
Department of Materials Science and Engineering  
Stanford University  
Stanford, California 94305

California—**CRANIOFACIAL RESEARCH**, University of California, San Francisco. Assistant Professor in Residence in Craniofacial Center, Department of Growth and Development. Primary responsibilities will be research with some teaching focusing on the neuromuscular system, muscle and/or bone remodeling. Salary: 0.5 FTE available with candidate providing remainder of support through research funding. *The University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.* Send curriculum vitae to: **Dr. Arthur J. Miller, Craniofacial Center, Department of Growth and Development, School of Dentistry, University of California, San Francisco, Calif. 94143.** Deadline: 1 April 1984.

SYMPOSIUM: MAY 20-24, 1984



BROOKHAVEN  
NATIONAL LABORATORY  
Upton, NY 11973, USA

**Assessment of Risk from Low Level  
Exposures to Radiation and Chemicals:  
A Critical Overview**

Symposium objective is to evaluate current dose-response models for risk assessment taking into account best current knowledge regarding carcinogenic mechanisms and fundamental experimental findings, such as

- Cell Biochemistry
- Competitive Inhibition
- Saturation Kinetics
- Human Experience

Oral presentations by invited speakers

Registration fee: \$250.00

(Non-refundable after May 10, 1984)

Includes dinners, accommodations and Symposium proceedings

For full information and registration forms, please contact:

**H. Z. Kondratuk**  
Biology Department  
Brookhaven National Laboratory  
Upton, L. I., New York 11973  
USA

## Professional Training Courses

OAK RIDGE ASSOCIATED UNIVERSITIES announces its radiation protection and radionuclide application courses for 1984.

**Applied Health Physics** — April 23-May 25 and September 10-October 12 to provide training in the principles of radiation protection.

**Radioisotope Techniques in Research & Development** — March 5-9 and June 18-22 to provide training and laboratory experience in the safe use of radionuclides.

**Internal Dosimetry for Fixed Nuclear Facilities** — April 9-13 to teach the newer techniques for calculating the radiation dose from internally deposited radionuclides.

For more information, telephone 8 a.m. to 5 p.m. Eastern:

800-362-5555 in continental U.S., except Tennessee  
615-576-3434 or FTS 626-3434

or write: Registrar, Professional Training Programs  
Oak Ridge Associated Universities  
P.O. Box 117  
Oak Ridge, Tennessee 37831-0117

## CHAIRPERSON

### Department of Physiology

**The Mount Sinai School of Medicine  
of the City University of New York**

The Mount Sinai School of Medicine of the City University of New York invites applications and nominations for the position of Chairperson of the Department of Physiology. The medical school seeks a biomedical scientist with an outstanding research program who is committed to the educations of M.D. students, Ph.D. students and M.D.-Ph.D. students. Please send c.v. and list of publications to: Dr. J. P. Green, Chairman, Search Committee, Department of Pharmacology, One Gustave L. Levy Place, New York, NY 10029. An Equal Opportunity Employer.

**The Mount  
Sinai School  
of Medicine**



## President and Scientific Director

**The Worcester Foundation for Experimental Biology, an independent biomedical research center, is seeking an accomplished scientist to replace its retiring Scientific Director.** The institution is located on a 100-acre campus in Shrewsbury, Massachusetts, 30 miles west of Boston, two miles east of Worcester, and in close proximity to the University of Massachusetts Medical School.

The Foundation's 40 scientists, 40 postdoctorals and 110 member scientific support staff are concerned exclusively with basic research into the nature of life processes. Its annual budget of \$10 million supports programs in cell biology (including embryogenesis, cancer viruses, gene expression and cell structure); the mechanism of hormone action; male and female fertility and reproduction; brain-hormone interactions in the control of behavior; and effects of drugs on behavior. Since 1971, the Foundation has been designated by the National Cancer Institute as one of 17 Specialized Basic Cancer Research Centers in the nation.

The Foundation's Board of Trustees seeks a candidate with a distinguished record of achievement in science who will be responsible for the overall direction of the institution, including its research activities, program development, and recruiting of new faculty.

Please address applications or nominations to the Chairman of the Search Committee:

**Dr. Bernard D. Davis, Bacterial  
Physiology Unit, Harvard Medical  
School, Boston, MA 02115**



## WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY

*Applicants will be considered entirely on the basis of individual merit.*

## POSITIONS OPEN

### ASSISTANT PROFESSORS

Applications are invited for tenure-track positions in the Department of Biological Sciences. The department is especially interested in candidates with research interests and experience in eukaryotic molecular/cell biology, molecular genetics, and immunology. Send curriculum vitae, names of three references, and a description of future research interests to: **Dr. Joseph S. Krakow, Chairman, Department of Biological Sciences, Hunter College, City University of New York, 695 Park Avenue, New York, New York 10021.**

*An Equal Opportunity/Affirmative Action Employer*

### ASSISTANT PROFESSOR

The Department of Food Microbiology and Toxicology, Food Research Institute, University of Wisconsin-Madison, invites applications from qualified individuals for a tenure-track faculty position. Applicants should have a Ph.D., productive postdoctoral experience, and demonstrated expertise in microbiological aspects of food safety and preservation. The primary duty of the incumbent will be to establish a high-quality research program on Gram-positive bacteria (preferably anaerobes) of importance in food safety. The incumbent will also be expected to deliver several lectures in area of speciality to undergraduate and graduate students each semester, perform university-related public service, and participate in activities contributing to the support of the department and the Food Research Institute. This is an exceptional annual (12-month) appointment offering excellent facilities in a challenging intellectual environment. Applicants should submit curriculum vitae and the names of three to five references to: **Dr. M. W. Pariza, Chairman, Department of Food Microbiology and Toxicology, Food Research Institute, University of Wisconsin, 1925 Willow Drive, Madison, Wis. 53706.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT OR ASSOCIATE PROFESSOR IN THE RESEARCH ASSOCIATE TRACK** to assume major responsibility in a cellular electrophysiology laboratory studying arrhythmogenesis and the actions of antiarrhythmic drugs. Experience in voltage clamping, cable analysis, ion sensitive microelectrodes, and computer programming preferable. Excellent scientific environment. Renewable term appointment with full fringe benefits. Immediate availability. Please send curriculum vitae, representative reprints, and names of three references to: **Morton F. Arnsdorf, M.D., Chief, Section of Cardiology, University of Chicago Hospitals, Box 423, 950 East 59 Street, Chicago, Ill. 60637.**

**ASSISTANT PROFESSOR—BOTANY.** The Biology Department of Mills College invites applications for a tenure-track position in botany from persons with a strong background in plant physiology. Teaching responsibilities include plant physiology, general botany, taxonomy, a nonmajors botany course, and part of general biology. Doctorate required. Preference given to applicants with demonstrated success in college level teaching. Mills College is a liberal arts college for women located in the San Francisco Bay area. Position available 1 July 1984. Send curriculum vitae and three letters of reference by 2 March to: **Dr. Karen C. Swearingen, Biology Department, Mills College, Oakland, Calif. 94613.**

*An Equal Opportunity Employer. Women and minorities are encouraged to apply.*

### ASSISTANT PROFESSOR OF PHYSICS The University of Akron

Applications are invited for a physics faculty position at the level of assistant professor, to begin fall 1984 or, optionally, spring 1985. The Ph.D. is required; salary is commensurate with background and experience. All qualified theorists and experimentalists will be considered, but there is particular interest in persons with the following areas of experience and inclination: Research involving polymers, NMR, or inelastic electron tunneling spectroscopy; interest in the application of computers to physics instruction or research; or interest in instruction in electronics and instrumentation. A second physics faculty position, with part-time teaching duties in computer science, may also become available; preferred physics teaching and research interests would again be as indicated above. Please send a letter of application and a current résumé, plus names and addresses of four references, by 1 March to: **Dr. Ernst von Meerwall, Chairman of Search Committee, Department of Physics, The University of Akron, Akron, Ohio 44325.** *The University of Akron is an Equal Education and Employment Institution.*

## POSITIONS OPEN

Clarke College, a Catholic coeducational liberal arts college of 900 students in Dubuque, Iowa, seeks a qualified **ASSISTANT PROFESSOR OF MICROBIOLOGY/BIOCHEMISTRY** beginning in August 1984. Teaching assignments will include organic chemistry and biochemistry, microbiology, molecular or cell biology and genetics for majors, and organic-biochemistry for nonmajors. Ph.D. preferred in microbiology or biochemistry. Direct letter of application, résumé, official transcripts, and names of three references to: **Dr. Classic G. Hoyle, Vice President for Academic Affairs, Clarke College, Dubuque, Iowa 52001.** Screening of applications will begin 5 March. *Affirmative Action/Equal Opportunity Employer.*

The University of Michigan is seeking applicants for a full-time, 9-month, tenure-track position in **NATURAL RESOURCE SOILS/WATERSHED MANAGEMENT** at the **ASSISTANT PROFESSOR** level. Applicants should have a Ph.D., preferably in a combination of soils and watershed management, and experience in teaching and research. Primary training and research in soils are required. It is expected that the position will be filled by 1 September 1984.

Applicants should submit curriculum vitae, list of publications, transcriptions of college work, and names and addresses of three references. All materials should be sent to: **Dr. James E. Crowfoot, Dean, School of Natural Resources, 3516 Dana Building, The University of Michigan, Ann Arbor, Mich. 48109-1115.**

Closing date: when a suitable candidate is found. Applications will be welcomed until the position is filled.

*A nondiscriminatory, Affirmative Action Employer.*

**ASSISTANT PROFESSOR, DEPARTMENT OF PSYCHIATRY, UNIVERSITY OF PITTSBURGH.** **THE BEHAVIORAL SCIENCE DIVISION** at the **CHILDREN'S HOSPITAL OF PITTSBURGH**, seeks a psychologist with a clinical and developmental background to direct the psychology program. Responsibilities include leading a group of Ph.D. and master's psychologists in the evaluation of the cognitive behavioral status of patients with acute and chronic medical, surgical, and neurological problems, the assessment and management of behavior disorders and learning-disabled children, and teaching pediatric house officers, medical students and nurses. Evidence of productivity by scholarly publications essential. Ample research opportunities in psychosomatic disease, psychopathology, and child development. Salary commensurate with qualifications. Send letter of inquiry, curriculum vitae, and references to: **Herbert L. Needleman, M.D., Chief, Behavioral Science Division, Children's Hospital of Pittsburgh, 125 DeSoto Street, Pittsburgh, Pa. 15213.** *An Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR, POSTDOCTORAL POSITIONS.** Multidisciplinary cardiovascular research laboratory studying the cellular and molecular biology of lipoproteins and cell surface receptors seeking candidates with recombinant DNA/molecular biology experience. Send résumé and names of references to: **Personnel, Gladstone Foundation Laboratories for Cardiovascular Disease, University of California, San Francisco, P.O. Box 40608, San Francisco, Calif. 94140.** *The University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

**BIOCHEMIST** with protein sequencing experience to direct central facility in Department of Cell Biology. Will provide laboratory, newest equipment, technical, and supply support for 3 years with possibility for extension. Junior faculty, nonpermanent appointment. Please send curriculum vitae, bibliography, and names of three references to: **Robert J. Ryan, M.D., Department of Cell Biology, Mayo Medical School, Rochester, Minn. 55902.** *An Equal Opportunity/Affirmative Action Institution.*

**BIOLOGY.** Comparative animal physiologist. Tenure-track position, beginning 1 September 1984 in the Joint Biology Department of the College of St. Benedict and St. John's University. Teaching assignment for 1984-1985 will include courses in comparative animal physiology, general physiology, and lower division courses. Ph.D. in comparative animal physiology preferred. Send letter of application, curriculum vitae, and three letters of recommendation to: **Personnel, St. John's University, Collegeville, Minn. 56321.** Applications received after 2 March 1984 cannot be guaranteed consideration. *Women and minorities are encouraged to apply.*

## POSITIONS OPEN

### BIOCHEMICAL ENDOCRINOLOGIST

**INSTRUCTORSHIP** available to study mechanism of glucocorticoid hormone action. Project involves purification and characterization of the glucocorticoid receptor. Teaching responsibilities in the area of endocrinology. Salary commensurate with experience. Send curriculum vitae and names of three references to:

**Dr. F. Norman Briggs**  
Department of Physiology and Biophysics  
Medical College of Virginia  
Richmond, Va. 23298

*An Equal Opportunity Employer*

## Biochemist/ Molecular Biologist

The Monsanto Agricultural Products Research Division is looking for qualified candidates in the fields of Biochemistry or Molecular Biology.

Candidates will have a master's degree or equivalent experience. Expertise in plant sciences or microbiology is desirable.

Submit resume and salary requirements to: **K.K. Kiger; MONSANTO COMPANY; Bldg. 03H; 800 N. Lindberg Blvd.; St. Louis, Missouri 63167.** *An Equal Opportunity/Affirmative Action Employer M/F/H/V.*

# Monsanto

**TWO BIOLOGY POSITIONS** at Jesuit university in Pocono Northeast. Ph.D. required. September 1984. (i) **Botanist.** Organismal or suborganismal preferred. General biology courses for majors and nonmajors as well as courses in specialty. Tenure-track position. (ii) **Vertebrate biologist.** Comparative anatomy. One-year sabbatical replacement. Send curriculum vitae and letters of recommendation by 1 March to: **Dr. Michael Carey, Chairman, Biology Department, University of Scranton, Scranton, Pa. 18510.** *Equal Opportunity/Affirmative Action Employer and Educator.*

### DEPARTMENT OF PHARMACOLOGY Harvard Medical School BIOORGANIC CHEMISTRY

A postdoctoral position is available for bioorganic chemical studies on the transformations of vitamin A in the retina. The project includes specific chemical and inhibitor modifications of enzymes which process vitamin A. Please send curriculum vitae and bibliography with the names of three references to: **Professor Robert R. Rando, Department of Pharmacology, Harvard Medical School, Boston, Mass. 02115.**

**CHIEF OF OPHTHALMOLOGY,** St. Paul-Ramsey Medical Center, major University of Minnesota-affiliated program. Desire Board-certified ophthalmologist with minimum of 6 months of experience as chairperson of an Ophthalmology Department and 2 years of clinical experience in an academic setting. This is a nontenured position and candidates should be able to lead qualified faculty involved in active research program, education, and service. Must have done advanced training in diseases of the cornea and anterior segment. Must have an interest and involvement in the provision of excellent patient care. Competitive salary and fringe benefits. Last date for receipt of application is 1 May 1984. Address inquiries to: **Bruce D. Snyder, M.D., Chairperson, Ophthalmology Search Committee, St. Paul-Ramsey Medical Center, 640 Jackson Street, St. Paul, Minn. 55101.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

## NATIONAL SCIENCE FOUNDATION

NSF's Division of Information Science and Technology is seeking qualified applicants for the position of Program Director for Information Science. The position is excepted from the competitive civil service and will be filled on a one- or two-year rotational basis under the provisions of NSF's Rotator Program. The per annum salary ranges from \$40,000-\$65,000. Responsibilities include all aspects of proposal development, review and evaluation, grants and program administration, and representation of Information Science within the Foundation and to the research community. Applicants should have a Ph.D. or equivalent experience in Information Science or a cognate discipline and in addition, 6 to 8 years of scientific research experience beyond the Ph.D. A broad, general understanding of current research in information science and some administrative experience is also desirable. Applicants should refer to Announcement No. EX 84-17 S when submitting resumes to the National Science Foundation (current salary information should be included), Personnel Administration Branch, Rm 212, Washington, D.C. 20550. Attn: Timothy G. Connelly. For further information call Dr. Edward C. Weiss (202) 357-9572. Hearing impaired individuals should call TDD - 202/357-7492. NSF is an Equal Opportunity Employer.

## ENVIRONMENTAL SCIENCE AND ENGINEERING FELLOWSHIPS

### Applications Invited

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

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

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

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

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

## CNS Behavioral Pharmacologist

This Central Nervous System Section of the Department of Biological Research has an immediate position available for a Research Scientist with experience in the Behavioral area. The position is for a senior scientist trained in Behavioral Pharmacology or physiological psychology with 5-7 years post-doctoral experience. A Ph.D. or equivalent is required. The scientist will be responsible for the identification and evaluation of drugs that affect the central nervous system. He/she will be part of the CNS research team and will be provided with appropriate support staff and a well-equipped laboratory. Good communication, supervisory and interpersonal skills are needed. Industrial experience in drug evaluation and some expertise in neurophysiology are desirable.

We offer a full benefit package and a compensation program commensurate with your experience. For prompt consideration, please send your resume with salary history/requirements to:

Sheila Copeland  
#727-10

Searle Research and Development  
Division of G. D. Searle & Co.  
4901 Searle Parkway  
Skokie, Illinois 60077

Equal Opportunity Employer  
Minorities/Females/Handicapped

# SEARLE

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

## ASSOCIATE DIRECTOR FOR NUTRITION

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

Salary Range — \$56,945 to \$63,800 per annum  
Position information and qualifications requirements may be obtained by contacting:

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

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

AN EQUAL OPPORTUNITY EMPLOYER



## POSITIONS OPEN

### BIOCHEMIST

The Monsanto Agricultural Products Research Division is looking for qualified candidates in the fields of Biochemistry or Plant Biochemistry.

Candidates should have a doctoral degree. Expertise in plant sciences and experience in the area of molecular biology are desirable.

Submit resume and salary requirements to: **K.K. Kiger; MONSANTO COMPANY; Bldg. 03H; 800 N. Lindberg Blvd.; St. Louis, Missouri 63167.** An Equal Opportunity/Affirmative Action Employer M/F/H/V.

# Monsanto

#### CELL BIOLOGIST

Department of Cell Biology at The University of Texas Health Science Center at Dallas is seeking an outstanding cell biologist to join a strong group of cell and molecular biologists on this campus. Appointment will be made at the assistant professor level with excellent salary and fringe benefits. Preference will be given to individuals who utilize cellular and molecular approaches to investigate structure-function relationship in cells. A strong research background and a commitment to teaching in a team-taught medical histology course as well as an advanced cell and molecular biology graduate course are required. Send detailed curriculum vitae, a brief statement of research interests, and the names of three references to: **Richard G. W. Anderson, Department of Cell Biology, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235.**

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

#### CHAIRMAN DEPARTMENT OF ANATOMY

Applications are invited for the position of professor and chairman, Department of Anatomy, Schools of Medicine and Dentistry, University of Alabama in Birmingham. We are seeking candidates with research and teaching experience, leadership qualities, and administrative skills. This department has teaching responsibilities for graduate students in anatomy, medical, dental, and other students. Please submit applications and curriculum vitae to:

**Antonietta D. Hyche  
Administrative Officer  
University of Alabama School of Medicine  
Dean's Office—MEB 306  
Birmingham, Alabama 35294**

*An Equal Opportunity/Affirmative Action Employer*

#### CURATORIAL POSITION IN INVERTEBRATE ZOOLOGY

Applications are solicited for a curatorial position in invertebrates at the Natural History Museum of Los Angeles County. Responsibilities consist of the conduct of collection-oriented research on the systematics of marine crustaceans or annelids, active participation in collection management, and participation in public programs of the museum. Applicants must possess a doctorate or provide certification that it will be granted within a short time. Position will be filled at the level of the best-qualified candidate. Starting curatorial salaries: assistant, \$20,176; associate, \$23,794; full, \$30,276. Applications, including names of three references, should be sent before 15 March 1984 to: **Dr. Daniel M. Cohen, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, Calif. 90007; telephone: 213-744-3367.** An Equal Opportunity Employer.

## POSITIONS OPEN

**DEVELOPMENTAL BIOLOGIST**—A tenure-track position is to be filled at the assistant or associate professor level for September 1984. Duties include teaching an undergraduate course in embryology, one other cell or development course per year, and maintaining a vigorous research program including supervision of graduate students. All areas of developmental biology will be considered, including developmental genetics, pattern formation, and developmental neurobiology. Applicants with postdoctoral experience should send their curriculum vitae and a list of at least three referees to: **Dr. Joseph Kunkel, Chairman, Developmental Biology Search Committee, Zoology Department, University of Massachusetts, Amherst, Mass. 03003.** Deadline for receipt of application is 7 March 1984. *An Equal Opportunity/Affirmative Action Employer.*

**OHIO UNIVERSITY, PROGRAM IN ECOLOGY, BEHAVIOR AND EVOLUTION**, seeks applicants for two tenure-track positions; Ph.D. required, assistant professor level, pending funding.

1) **POPULATION GENETICS**—Teach general genetics, population genetics, and course of choice. Develop research on naturally occurring animal populations, establish a laboratory in population genetics, and interact with ongoing research in ecology, behavior, systematics, evolution, and molecular genetics.

2) **AVIAN ECOLOGY AND SYSTEMATICS**—Teach ornithology, general ecology, and course of choice. Develop research in ecology and systematics of birds; preference given to candidates with a background using molecular techniques in ecology and systematics.

Send a résumé, list of publications, statement of research interest, and three letters of recommendation to: **Gerald E. Svendsen, Department of Zoological and Biomedical Sciences, 107 Irvine Hall, Ohio University, Athens, Ohio 45701.**

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

#### FACULTY POSITION IN BIOCHEMISTRY

Nominations and applications are invited for a faculty appointment in biochemistry in the Department of Chemistry and Biochemistry at the University of California, Los Angeles. The appointment will preferably be made as assistant professor, but higher levels will be considered. Faculty, as appropriate, may also be affiliated with the interdepartmental Molecular Biology Institute.

Candidates should show exceptional promise as creative research scientists and as excellent teachers. Preference will be shown for candidates with a strong background in chemistry and with an interest in teaching metabolic biochemistry, enzymology and related areas. *The University of California is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minority candidates.* Applicants should send curriculum vitae, a list of publications, copies of transcripts, a brief statement of research plans, have one letter of reference sent directly, and provide the names of two other professional references to:

**Professor David Eisenberg  
Department of Chemistry and Biochemistry  
University of California  
Los Angeles, Calif. 90024**

**GENERAL CHEMISTRY**: The Chemistry Department at Millersville University anticipates an opening for a temporary faculty member for the 1984-1985 academic year. The successful applicant will teach general chemistry recitation sections and laboratory sections and possibly lecture in general chemistry and preparatory chemistry and/or instruct upper level laboratory courses. Undergraduate research efforts are encouraged. The M.S. degree in chemistry is required; a chemistry Ph.D. and/or teaching experience at the postsecondary level in chemistry is preferred. The appointment will be at the instructor or assistant professor level, depending on qualifications. Send current curriculum vitae, official graduate and undergraduate transcripts, and arrange to have three letters of recommendation sent to: **Chairperson, General Chemistry Search Committee, Chemistry Department, MILLERSVILLE UNIVERSITY, Millersville, Pa. 17551.** Applications will be accepted until an appointment is made; screening will begin on 1 April 1984. The department anticipates making an appointment by 15 May 1984. *Millersville University is an Affirmative Action Employer and actively seeks minority and women candidates.*

## POSITIONS OPEN

The Department of Health Science, Wichita State University, invites applications for a **FACULTY POSITION IN HUMAN PHYSIOLOGY**. Teaching activity is in areas of exercise and biomedical clinical physiology for undergraduate and graduate students in allied health and nursing programs. Candidates must have an earned doctorate in an appropriate field and show evidence of independent research competence in human physiology. Successful experience in teaching human physiology or related areas at either the graduate or undergraduate level required. This is a 9-month faculty position, eligible for tenure review. Preferred starting date: August 1984. Letters of application, curriculum vitae, and names and addresses of four persons able to provide current references should be sent to: **Dr. Sidney D. Rodenberg, Dean, College of Health Related Professions, Wichita State University, Wichita, Kansas 67208.** Deadline for receipt of application: 2 March 1984. *Wichita State University is an Affirmative Action/Equal Opportunity Employer.*

The Department of Health Science, Wichita State University, invites applications for a **FACULTY POSITION IN BIOMEDICAL STATISTICS AND MANAGEMENT INFORMATION SYSTEMS**. Teaching activity will be in areas of clinical application of computer technology for undergraduate and graduate students in nursing and allied health programs. Responsibilities also include development of in-service training programs and acting as a resource for the College. Master's degree in statistics, computer science, or related field required, with doctorate desired. Experience in data collection and health care information systems required. Successful experience in teaching biomedical statistics or related areas at either the graduate or undergraduate level required. This is a 9-month faculty position, eligible for tenure review. Preferred starting date: August 1984. Letters of application, curriculum vitae, and names and addresses of four persons able to provide current references should be sent to: **Dr. Sidney D. Rodenberg, Dean, College of Health Related Professions, Wichita State University, Wichita, Kansas 67208.** Deadline for receipt of application: 2 March 1984. *Wichita State University is an Affirmative Action/Equal Opportunity Employer.*

#### THE UNIVERSITY OF CHICAGO

The Department of Physics and The James Franck Institute of The University of Chicago expect to have some **JOINT FACULTY POSITIONS** available in condensed matter physics, starting in the academic year 1984-1985. In addition to carrying a standard teaching load in the Department of Physics, appointees would perform their research in the interdisciplinary environment (condensed matter physics and physical chemistry) of The James Franck Institute. Candidates must have a Ph.D. degree, be interested in research as well as teaching, and must have demonstrated highest promise for original research. Applicants should send their curriculum vitae, publications list, and at least five references to: **Director, The James Franck Institute, 5640 South Ellis Avenue, Chicago, Illinois 60637.**

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

#### IMMUNOPHYSIOLOGY

Two research associate positions are available immediately in immunophysiology to study endocrine influences on number and function of T cell subsets using monoclonal antibody and transfection techniques. Applicants need a Ph.D. with training in cell biology and immunology. Positions are full time and 3-year duration beginning 1 April 1984. Deadline: 1 March 1984. Submit curriculum vitae and have three references send letters to: **Dr. D. E. Becker, Head, Department of Animal Science, University of Illinois, 1301 West Gregory Drive, Urbana, Ill. 61801.** *An Equal Opportunity/Affirmative Action Employer.*

**INVERTEBRATE ZOOLOGIST**—The Biology Department of Hobart and William Smith Colleges, an undergraduate institution located on Seneca Lake in upstate New York, is searching for an invertebrate zoologist to fill a tenure-track position at the assistant professor level, effective 1 July 1984. Teaching responsibilities include invertebrate zoology, introductory biology, and an advanced course in the area of specialty, as well as participation in the colleges' general curriculum. In addition, the candidate must carry on a research program that is amenable to the participation of junior and senior biology majors. Applicants should send a complete résumé and three letters of recommendation by 9 March 1984 to: **Dr. Joel T. Kerlan, Department of Biology, Hobart and William Smith Colleges, Geneva, New York 14456.**

# Biochemists

We have an opportunity for 2 Biochemists to join a lab unit specializing in purification and characterization of therapeutic proteins.

## Staff Scientist

PhD with strong publication/patent record and minimum five years experience in protein purification (or equivalent) to perform both basic lab work and process development.

## Sr. Associate Research Scientist

We require a technically skilled individual with a Bachelor's degree plus four years experience, (or equivalent) to collaborate in protein purification of key projects.

Join Cutter and enjoy the convenience of our modern research facilities, directly across the Bay from San Francisco. Salaries and benefits are excellent. Please submit your resume with salary history to **Heidi Lawton, Cutter Group, P.O. Box 1986, Berkeley, California 94701.**

Equal opportunity/affirmative action employer.

**Cutter**

**CUTTER Group**

Miles Laboratories

# Pulmonary Pharmacologist

Sterling-Winthrop Research Institute announces an opening for a Senior Research Biologist in the immunopharmacology section of its Pharmacology Department. This scientist will participate with a drug discovery team investigating asthma and related inflammation disease processes.

The successful candidate will have a PhD in Pharmacology or Physiology and at least 2 years of relevant experience with a background in the area of IN VIVO and IN VITRO models of pulmonary disease. A record of publication indicating ability to undertake independent and creative research is desirable.

We offer an attractive salary and benefits package with the opportunity for professional growth. The Institute is located near Albany, New York, which is a major center for summer and winter recreational activities.

Please send CV including salary requirements in confidence to:

*Mr. William F. Sheldon*  
*Employee Relations Administrator*

**STERLING-WINTHROP  
RESEARCH INSTITUTE**

**A Division of Sterling Drug, Inc.**  
**Columbia Turnpike**  
**Rensselaer, NY 12144**

Equal Opportunity Employer M/F/H



## DIVISION OF RESEARCH RESOURCES NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

The National Institutes of Health (NIH), Division of Research Resources (DRR) invites nominations and applications for the position of Chief, General Clinical Research Centers Program Branch (GCRCPB).

The position is a Civil Service position established as Medical Officer, GM-602-15 with a salary range from \$53,407 to \$67,969 (currently limited to \$66,000 per annum. Physicians may also be eligible for Physicians' Comparability Pay up to \$10,000 per year.)

The GCRCPB Branch is responsible for administration of a grant-in-aid program currently supporting 74 clinical research centers with 600 research beds, which serve as institutional research resources for inquiry, examination, evaluation, and training in an effort to define the basic processes of human disease and its treatment. The Chief, General Clinical Research Centers Program Branch, is responsible for the program planning, development, evaluation, and management of the GCRCPB which utilizes resource grants and contracts to provide high quality clinical research environments throughout the nation.

Candidates must meet the minimum educational requirements for Medical Officer, GM-602-15 (or equivalent combination of experience and training as defined

by the U.S. Office of Personnel Management Handbook X-118 Qualification Standards for Positions under the General Schedule), plus at least five years of professional experience in research program administration in which professional judgments were exercised through the application of scientific knowledge of health and clinical research. In addition, the incumbent must have managerial experience, and knowledge of research programs in one or more areas related to clinical research.

Further information about the position and qualification requirements may be obtained by contacting Ms. Pathenia A. Wiggins at (301) 496-1524. Applications (Personal Qualifications Statement, SF-171) accompanied by current curriculum vitae and bibliography should be submitted to Ms. Wiggins at the DRR Personnel Office, National Institutes of Health, Building 31, Room 5B06, 9000 Rockville Pike, Bethesda, Maryland 20205. Applications should be postmarked no later than February 29, 1984.

Applications from women and minority group members are especially solicited.

THE NATIONAL INSTITUTES OF HEALTH IS AN EQUAL OPPORTUNITY EMPLOYER.



## Faculty Position Available Immediately

### University of Massachusetts Medical School

The Department of Surgery seeks a full-time research scientist to direct its Division of Surgical Research. The candidate must have the Ph.D., M.D., or equivalent degree, as well as the demonstrated ability to conduct independent research. The appointee will be expected to conduct original research, as well as to coordinate, assist and direct the research of others. Research facilities and support will be provided.

The research interests of the appointee should lie in the disciplines of Physiology, Biochemistry or other basic sciences pertinent to the field of Surgery. A joint appointment in the appropriate basic science department is anticipated.

The level of appointment and salary will be commensurate with qualifications. Applications should include a curriculum vitae and the names and addresses of three references. Applications should be forwarded to:

**Dr. H. Brownell Wheeler**  
Professor and Chairman  
Department of Surgery  
University of Massachusetts  
Medical School  
Worcester, Mass. 01605

Further information may be obtained from Dr. H. Brownell Wheeler at (617) 856-2201. The University of Massachusetts Medical School is an equal opportunity employer.

## CLAY MINERALOGY

### University of Illinois at Urbana-Champaign

The Department of Geology invites applicants for a tenure-track faculty position in clay mineralogy. We are seeking candidates who have clearly demonstrated the potential to be outstanding researchers in the general areas of mineralogy, crystallography, and chemistry of clay minerals, in the origin, diagenesis, and metamorphism of argillaceous sediments and whose future research will complement our existing programs in the petrology and diagenesis of sediments, experimental studies of compaction and of kinetics of burial diagenesis, behavior of clay minerals during deformation, petroleum geology, and stable isotope geochemistry. In addition to the development of a strong research program, the successful candidate is expected to participate in all aspects of teaching and advising at the graduate and undergraduate levels.

The Department of Geology houses a variety of facilities for clay mineralogy research, including x-ray diffraction and fluorescence units, an atomic absorption spectrophotometer, two NMR spectrometers, an isotope ratio mass spectrometer, and electron microprobes. Numerous other analytical services are available on campus, particularly at the Materials Research Laboratory where there is equipment for Auger electron spectrometry, x-ray photo-electron spectrometry, scanning electron microscopy, transmission electron microscopy, and ion microprobe studies.

This position is available immediately. Ph.D. is required. Rank and salary will be commensurate with experience and qualifications. For equal consideration, please submit a letter of application that includes a statement of current and future research interests as well as curriculum vitae, bibliography, and the names of at least three references willing to comment on your qualifications and promise, by 1 April 1984 to: **Dr. Albert V. Carozzi, Chairman, Search Committee, Department of Geology, 245 Natural History Building, 1301 West Green Street, Urbana, Ill. 61801. Telephone: 217-333-3008. The University of Illinois is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### FACULTY POSITION—BIOCHEMISTRY

The Department of Biochemistry, University of Kansas Medical Center, is seeking to fill a tenure-track faculty position at the level of assistant or associate professor. Candidates should have a Ph.D. in biochemistry or a related field. Preference will be given to individuals developing an active research program in biochemical endocrinology or related areas utilizing recombinant techniques. Teaching is in medical and graduate biochemistry. Candidates are to send curriculum vitae, summaries of current and proposed research, and the names of three references to: **Dr. K. E. Ebner, Chairman, Department of Biochemistry, University of Kansas Medical Center, Kansas City, Kans. 66103.** Applicant evaluation will begin on 15 March 1984 and continue until a suitable candidate is found. *An Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITION IN PLANT PATHOLOGY

**MOLECULAR AND PHYSIOLOGICAL BASIS OF PLANT HOST-PATHOGEN INTERACTIONS.** A tenure-track position in plant pathology (85 percent research, 15 percent teaching) at the rank of assistant professor. Individual will be expected to establish a strong research program in some fundamental aspect of the biochemistry, physiology, molecular biology, or genetics of plant host-pathogen interactions and to develop a graduate course in plant host-pathogen interactions. Ph.D. degree is required and postdoctoral experience is strongly preferred. Applicants should submit curriculum vitae, transcripts of all academic records, list of publications, reprints of publications, and three letters of recommendation to: **Thomas C. Moore, Chairman, Department of Botany and Plant Pathology, Oregon State University, Corvallis, Ore. 97331.** Closing date is 1 April 1984. The position is available 16 September 1984. *Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.*

### FACULTY POSITION IN PLANT NEMATOLOGY

A position in plant nematology is available beginning 1 July 1984. Major responsibility will be for research on plant disease problems caused by nematodes. Population dynamics, pathogen-vector-host interactions, or other aspects of nematode-caused diseases are potential areas of emphasis.

This is a tenure-track, 12-month type of appointment at the assistant professor level. Teaching will consist of a graduate course in nematology and limited participation in a course in general plant pathology. A Ph.D. degree is required, and postdoctoral experience is strongly preferred. Closing date for applications is 1 April 1984.

Applications and inquiries should be addressed to:

**Dr. Thomas C. Moore, Chairman**  
Department of Botany and Plant Pathology  
Oregon State University  
Corvallis, Ore. 97331

Applications should include curriculum vitae, reprints of research papers, transcripts of all academic records, three letters of recommendation, and any other information considered pertinent by the applicant.

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

### GERONTOLOGY CHIEF/ASSOCIATE DIRECTOR OF GRECC SEATTLE VETERANS ADMINISTRATION MEDICAL CENTER

Internist sought with strong background in clinical or basic research to coordinate the research program of the multidisciplinary Geriatric Research, Education and Clinical Center (GRECC) and to assume position of chief, Gerontology and Geriatric Medicine at Seattle VA Medical Center (VAMC). Bio-medical investigative experience in areas relevant to geriatric medicine and gerontology including but not limited to endocrinology, immunology, cardiology, or neurology is desirable plus a willingness to assume leadership of geriatric medicine clinical programs on the Medical Service. Affiliated with University of Washington Medical School. *Equal Opportunity Employer; Hispanics, other minorities, and women are encouraged to apply.* Address applications to: **Richard K. Root, M.D., Chief, Medical Service (111), Seattle VAMC, 1660 South Columbian Way, Seattle, Wash. 98108.**

# Senior Scientist GENETIC ENGINEERING

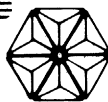
Bristol-Myers Company, a leader in industrial biotechnology and a major international manufacturer of pharmaceutical products, has a challenging genetic research opportunity in its Genetic Engineering Department.

We are seeking a scientist who will be responsible for the development of host/vector systems for the efficient expression of cloned gene products. The successful candidate will be expected to work closely with scientists in both the Genetic Engineering and Fermentation Development Departments.

To qualify, your published research must document past experience in the cloning and

expression of heterologous genes. In addition, you should be experienced in DNA sequencing techniques; synthesis of oligonucleotides desirable. A Doctorate in Molecular Biology/Biochemistry must be supported by 2 or more years of postdoctoral research.

Bristol-Myers offers a salary fully commensurate with your experience and qualifications, a comprehensive benefits package, and a professional environment where high visibility will propel you farther faster. For prompt, confidential consideration, please forward your resume indicating current compensation, to: **Manager of Employment.**



## BRISTOL-MYERS COMPANY INDUSTRIAL DIVISION

P.O. Box 4755, Syracuse, New York 13221  
*An equal opportunity employer M/F*



## ***DIRECTOR, PLANNING & ASSESSMENT***

The Office of Naval Research (ONR) is seeking an outstanding individual to serve in this Civil Service position in the Senior Executive Service. Salary range is \$58,938 to \$69,600, depending on qualifications.

ONR provides overall leadership, coordination and funding for the basic research program within the Department of the Navy. The Director, Planning and Assessment, exercises centralized policy formulation, planning and assessment for ONR's research and technology programs. The basic research program is currently budgeted at 300 to 350 million dollars per year. The incumbent ensures the integration of planning, programming, budgeting and appraisal, and provides policy and programmatic recommendations to the Technical Director.

Candidates should have progressive and responsible experience in research and development, including a Ph.D. or equivalent experience, with a broad knowledge of life, engineering, physical and environ-

mental sciences, and specific experience and knowledge in a scientific or technical field that falls within ONR's R&D mission. Demonstrated competence in developing technical policy and recommendations, including the integration of planning, programming, budgeting, and appraisal in a research and development environment is necessary. It is desirable that candidates have a working knowledge of DOD and DON internal R&D organization, procedures, and priorities.

Interested persons should submit a resume or Standard Form 171, Personal Qualifications Statement (available at Federal Job Information Centers or from the address below), to:

### **OFFICE OF NAVAL RESEARCH**

**Civilian Personnel Division, Code 791SC • ATTN: Announcement #83-60 (S)  
800 North Quincy Street • Arlington, VA 22217**

Applications will be accepted through 29 February 1984 and they must be received by that date. For further information and supplemental forms, please call (202) 696-4705.

**AN EQUAL OPPORTUNITY EMPLOYER • U.S. CITIZENSHIP REQUIRED**

## ***SCIENTIFIC DIRECTOR***

***Office of Naval Research • Branch Office, London***

The Office of Naval Research maintains a Branch Office in London responsible for keeping U.S. Navy activities, laboratories and contractors abreast of research and technology developments in Europe and the Middle East. ONR is recruiting for a distinguished scientist or engineer currently from the academic sector to serve as Scientific Director of the London office for a two-year period beginning about August 1985. This is a U.S. Government limited-term Senior Executive Service position. Salary is negotiable depending on qualifications; effective 8 January 1984, SES salaries range from \$58,938 to \$69,600.

The ONR London Scientific Director provides scientific leadership and guidance to the technical staff at the London office, and serves as the Navy's chief civilian scientist to the European scientific community. Principal duties include developing and prosecuting a continuing effort to estab-

lish and maintain scientific rapport and liaison with research activities in Europe and the Middle East, and providing direction for the European Scientific Notes, ONR London Technical Reports and other publications.

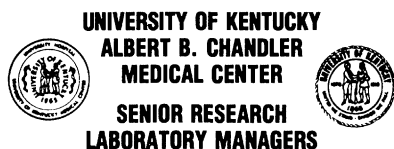
The position requires a Ph.D. or equivalent experience in the physical, life, environmental or engineering sciences, combined with established stature and reputation in the scientific community. Factors considered highly desirable are: broad knowledge of the international R&D community, previous overseas experience, and knowledge of Navy and/or other Defense Department R&D activities.

Applicants should send a resume or Standard Form SF-171, Personal Qualifications Statement (available at Federal Job Information Centers or from the address below) by 31 March 1984 to:

### **OFFICE OF NAVAL RESEARCH**

**Code 791SC (Kathy Fear) • ATTN: Announcement #ONRL-2 (S)  
800 North Quincy Street • Arlington, VA 22217**

The successful candidate will be required to provide a completed SF-171 before formal appointment. For further information on conditions of service, contact Ms. Debra T. Hughes, (202) 696-4108.



**UNIVERSITY OF KENTUCKY  
ALBERT B. CHANDLER  
MEDICAL CENTER  
SENIOR RESEARCH  
LABORATORY MANAGERS**

Two full-time positions are available in the department of anatomy at the University of Kentucky for qualified individuals to head the (1) histotechnics laboratory and (2) electron-microscopy facility. Duties include supervision, operation and maintenance of these facilities.

Requirements for each position include BS or MS degree and five years related experience. Knowledge of contemporary technics is essential. Starting salary \$18,600. Send your curriculum vitae and three letters of recommendation to: Dr. M. B. Nikitovitch-Winer, Professor and Chairman, Department of Anatomy. Deadline for receipt of resumes is February 17, 1984 but may be extended if additional applicants are necessary. An Equal Opportunity/Affirmative Action Employer.

**PERSONNEL DIVISION  
MEDICAL CENTER  
UNIVERSITY OF KENTUCKY  
LEXINGTON, KY. 40536-0084  
(606) 233-5634  
Martin May  
Employment Manager  
An Equal Opportunity Employer**

**DEDICATED TO EDUCATION,  
RESEARCH AND PATIENT CARE**

**ASSISTANT OR ASSOCIATE  
PROFESSOR**

**DEPT. OF HUMAN ANATOMY**

**The Dental School**

Lecture and laboratory instruction to first year dental students in histology, neuroanatomy, gross anatomy and embryology. Cooperation with departmental instructional and research activities for graduate and undergraduate students.

**Qualifications:** PhD in human anatomy (DDS, DMD, MD) from an accredited medical or dental school; 2-5 years of teaching experience in gross anatomy, neuroanatomy, histology and embryology.

Salary is commensurate with experience and consistent with University structure. Appointment to commence no later than 9/1/84.

Applicants must submit letter of application, vitae and 3 references no later than April 1, 1984 to: Campus Personnel Services Manager,

**fairleigh dickinson university**

1000 River Rd., Teaneck, NJ 07666

Equal Opportunity/Affirmative Action Employer

**POSITIONS OPEN**

**FACULTY POSITION IN EPIDEMIOLOGY**

The Division of Epidemiology, Department of Family and Community Medicine, University of Utah School of Medicine, is seeking a faculty member with experience in the epidemiology of congenital defects and cancer. The Division has established research and teaching programs in cancer etiology. The current faculty operate the Utah Cancer Registry and support an active research program in cancer and other chronic disease epidemiology, emphasizing the life style, nutrition, familial, environmental, and occupational factors in disease causation. The state of Utah offers unique research resources in the Cancer Registry, large genealogy record resources, and centralized tertiary care facilities for a large geographic area. Division faculty teach in the department's Master of Science in Community Medicine Program.

The candidate must hold either a professional degree and master's degree in public health or a Ph.D. in epidemiology, and have 5 years of research experience on congenital defects. The candidate will be expected to establish a research program in congenital defects which will involve faculty from the Departments of Family and Community Medicine, Pediatrics, and Medical Genetics.

Send curriculum vitae to: **Joseph L. Lyon, M.D., M.P.H., Department of Family and Community Medicine, 50 North Medical Drive, Salt Lake City, Utah 84132.** Salary and rank are negotiable.

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

**TRUDEAU INSTITUTE**

Applications are invited for an **IMMUNOBIOLOGIST** to develop an independent research program related to immunity to cancer or infectious diseases. Appointment may be made at either junior or senior faculty rank. Applicants should have at least 3 years of postdoctoral experience and provide visible evidence that they already have been scientifically productive. Funds are available to support the successful applicant for a minimum of 3 years. The Trudeau Institute is a not-for-profit pure research institute situated on the shore of Saranac Lake, N.Y., 8 miles from Lake Placid, N.Y. Send curriculum vitae and names of three references to: **Dr. Robert J. North, Director, Trudeau Institute, Inc., P.O. Box 59, Saranac Lake, N.Y. 12983.** An Equal Opportunity Employer.

**IMMUNOLOGIST**

Ph.D. immunologist to direct in vitro RIA Laboratory and participate in active monoclonal antibody research program. Written inquiry, to include curriculum vitae, to: **W. H. Beierwaltes, Director, Nuclear Medicine Division, Box 021, Room W5614, University of Michigan Hospitals, Ann Arbor, Mich. 48109.** A nondiscriminatory, Affirmative Action Employer.

**TRUDEAU INSTITUTE**

**POSTDOCTORAL FELLOW IN IMMUNOBIOLOGY.** A position exists for a postdoctoral fellow to study the immunobiology of the tumor-host relationship. Current research is directed at investigating T cell-mediated, down regulation of the anti-tumor immune response. Applicants should have a knowledge of immunology.

The Trudeau Institute is a not-for-profit basic research institute situated on the shore of Saranac Lake, 8 miles from Lake Placid, N.Y. Pay scale is \$15,500 to \$17,500 with generous fringe benefits. Campus housing is available.

Send curriculum vitae and names of three references to: **Dr. Robert J. North, Director, Trudeau Institute, Inc., P.O. Box 59, Saranac Lake, N.Y. 12983.** An Equal Opportunity Employer.

**TRUDEAU INSTITUTE**

**POSTDOCTORAL POSITION** is available to study mechanisms of host resistance to chronic mycobacterial lung infections. Candidates should have a strong background in cellular immunology of molecular biology. Experience with hybridoma technology would be helpful, but not essential.

The Trudeau Institute is a not-for-profit basic research institute situated on the shore of Saranac Lake, 8 miles from Lake Placid, N.Y. Pay scale is \$15,500 to \$17,500 with generous fringe benefits. Campus housing is available.

Send curriculum vitae and names of three references to: **Dr. Frank M. Collins, Trudeau Institute, Inc., P.O. Box 59, Saranac Lake, N.Y. 12983.** An Equal Opportunity Employer.

**POSITIONS OPEN**

As part of the rapidly expanding research and graduate training programs in the basic sciences at Emory University School of Medicine, the Department of Microbiology and Immunology is seeking to fill a **NEW FACULTY POSITION IN MOLECULAR VIROLOGY** starting September 1984.

Candidates should be prepared to develop a vigorous research program using the latest molecular approaches in eukaryotic systems. Please submit curriculum vitae along with a summary of research plans and have three letters of reference forwarded by 1 March 1984 to: **Dr. Linda Gooding, Molecular Virology Search Committee, Department of Microbiology and Immunology, Emory University School of Medicine, Atlanta, Georgia 30322.**

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

**MARINE GEOLOGIST or PHYSICAL OCEANOGRAPHER:** Tenure-track (assistant professor) faculty position to start September 1984. Ph.D. required. Successful candidate will teach introductory and advanced courses in area of expertise. Applicants with interest in coastal processes and ability to contribute to College general education program will be favored. Establishment of an active research program is important. Send résumé, transcripts, letter of application, and three letters of reference before 28 February 1984 to: **Dr. John E. Reynolds, III, Eckerd College, P.O. Box 12560, St. Petersburg, Florida 33733.** An Equal Opportunity Employer.

**MEDICINAL CHEMISTRY—ASSISTANT PROFESSOR.** The Department of Pharmaceutical Chemistry, University of California, has two tenure-track vacancies in the medicinal chemistry area. Candidates must have a solid understanding of organic chemistry, postdoctoral experience, a strong commitment to research and to professional and graduate education, and demonstrated excellence in their fields. Research interests should be in medicinal chemistry, bioorganic chemistry, drug metabolism and toxicology, or molecularly oriented aspects of pharmacology or biochemistry relevant to modern medicinal chemistry. Interest in teaching medicinal chemistry is essential. The salary will be in the range \$25,000 to \$35,000 consistent with the level of the 11-month appointment. Candidates should arrange for three letters of reference and should send curriculum vitae, a list of publications, a brief summary of research accomplishments, and a brief outline of proposed research area to: **Professor Paul R. Ortiz de Montellano, Vice Chairman, Department of Pharmaceutical Chemistry, School of Pharmacy, 926-S, University of California, San Francisco, Calif. 94143.** Applications will be accepted until 1 March 1984 for a 1 July starting date. *The University of California is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

**MEMBRANE TRANSPORT**

Postdoctoral and research assistant positions are available immediately for individuals interested in pursuing studies on the structure and mechanism of the ion-translocating ATPases. We have recently demonstrated that the electrogenic proton-translocating ATPase in the plasma membrane of the eukaryotic microorganism, *Neurospora*, operates via a mechanism that is quite similar to that of the Na<sup>+</sup>/K<sup>+</sup> and Ca<sup>2+</sup>-translocating ATPases of animal cell origin. Research will involve investigation of the biochemistry of this ATPase with the goal of elucidating the molecular mechanism of ion-translocating ATPases in general. Salaries are commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Gene A. Scarborough, Department of Pharmacology, School of Medicine, The University of North Carolina at Chapel Hill, Chapel Hill, N.C. 27514.** Equal Opportunity Employer.

**MOLECULAR GENETICIST** with experience in recombinant DNA technology. Assistant professor to begin 1 September 1984. Ph.D. in biology or biochemistry required. Must be qualified to teach beginning biology and advanced undergraduate and graduate courses in specialty. Must have research experience in molecular biology/DNA technology with a record of publication. Incumbent will also establish and maintain a research program which actively involves seniors and graduate students. Curriculum vitae listing publications and research interests and three letters of recommendation should be sent to: **Dr. Anthony Gaudin, Chairman, Biology Department, California State University, Northridge, Calif. 91330,** by 1 March 1984. *The University is an Equal Opportunity/Affirmative Action Employer.*

# PROPULSION SCIENTIST

The Office of Naval Research is seeking a highly qualified propulsion scientist to serve as a Scientific Officer to plan and manage a contract research program. The research sponsored is conducted principally at universities and industrial laboratories. This is a Civil Service position at the **GM-13** (\$36,152–\$46,997), **GM-14** (\$42,722–\$55,538) or **GM-15** (\$50,252–\$65,327) level, depending on qualifications.

The incumbent is responsible for planning, coordinating and directing research and development programs involving fundamental thermal, chemical and internal fluid flow processes relating to aircraft, missile, land vehicle, ship, and underwater weaponry propulsion systems. The contracted research will be directed to complex multi-disciplinary problems including chemical kinetics, combustion, thermodynamics, heat transfer and fluid mechanics with

particular emphasis on multi-phase chemically reacting and non-reacting systems.

Applicants must have a Ph.D. degree or equivalent in engineering, physics, or applied mathematics and a minimum of three years of progressively responsible professional experience. At least one year of experience must be comparable in difficulty and responsibility to the next lower level in the Federal service. Equivalent combinations of professional experience and graduate education may be acceptable. A thorough understanding of advanced experimental techniques and computational methods is required. Previous experience in the scientific management of propulsion-related research tasks is also desirable.

Interested persons should submit a resume or Standard Form 171, Personal Qualifications Statement (available at Federal Job Information Centers or from the address below), to:

## OFFICE OF NAVAL RESEARCH

Civilian Personnel Division, Code 791SC  
**ATTN: Announcement # 84-03 (S)**  
800 North Quincy Street, Arlington, VA 22217

**Applications will be accepted through 9 March 1984 and must be received by that date. For further information and supplemental forms, please call (202) 696-4705.**

**AN EQUAL OPPORTUNITY EMPLOYER  
U.S. CITIZENSHIP REQUIRED**

# DIRECTOR, MANAGEMENT AND MANPOWER

The Office of Naval Research is seeking an individual with outstanding executive and managerial experience. The position is in the Senior Executive Service of the Federal Government. Salary range is \$58,938 to \$69,600, depending on qualifications.

ONR provides overall leadership, coordination and funding for the basic research program within the Department of the Navy. The Director, Management and Manpower is responsible for supervising, coordinating and controlling a \$7 million corporate management operation, including the support and oversight of personnel policies and procedures; manpower planning and utilization; implementation and utilization of management information systems; computer operations and office automation; basic policy development; measurement of operational performance; facilities management; administrative services; internal control systems and programs. The incumbent advises on, initiates and implements management programs across the organization in conjunction with senior management officials and serves as the command Inspector General.

Candidates should have progressive and responsible experience in managing the diverse operations of a major organization including a demonstrated ability to direct complex programs or projects of considerable breadth and scope. This experience should have been at a level which provided substantial exposure to personnel operations,

administrative and support services, and facilities management and should clearly demonstrate the ability to exercise creativity in problem solving, organizational improvement, and in achieving efficiency and economy of operation. A technical background in centralized policy formulation, organizational appraisal and resources allocation, long range planning and programming, reorganization implementation, operations or systems analysis, or executive/professional development is necessary.

Interested persons should submit a resume or Standard Form 171, Personal Qualifications Statement (available at Federal Job Information Centers or from the address below), to:

**OFFICE OF NAVAL RESEARCH  
Civilian Personnel Division, Code 791SC  
ATTN: Announcement #84-01 (S)  
800 North Quincy Street, Arlington, VA 22217**

**Applications will be accepted through 29 February 1984 and they must be received by that date. For further information and supplemental forms, please call (202) 696-4705.**

**AN EQUAL OPPORTUNITY EMPLOYER  
U.S. CITIZENSHIP REQUIRED**

**GEORGIA — Augusta — Section Chief and Coordinator of Clinical Psychiatric Research.** This position will be a joint appointment at the Augusta Veterans Administration Center and the Department of Psychiatry, Medical College of Georgia. The position requires supervision of an appropriate clinical section, along with the overall development, organization, and administration of clinical research services for the Psychiatric Service, Augusta VAMC. The position will require interdigitation of basic and clinical research to improve patient care capability and improve clinical procedures. Applicants should be board-certified in Psychiatry, eligible for medical license in Georgia, have demonstrated excellence in clinical patient care and research productivity, and academic qualifications for a senior level faculty appointment. Contact: **E. Mansell Pattison, M.D., Professor and Chairman, Department of Psychiatry and Health Behavior, Medical College of Georgia, Augusta, GA 30912, (404) 828-3284.** The Veterans Administration and the Medical College of Georgia are EOE employers.

**GEORGIA — Augusta — Section Chief and Coordinator of Clinical Psychiatric Research.** This position will be a joint appointment at the Augusta Veterans Administration Center and the Department of Psychiatry, Medical College of Georgia. The position requires supervision of an appropriate clinical section, along with the overall development, organization, and administration of clinical research services for the Psychiatric Service, Augusta VAMC. The position will require interdigitation of basic and clinical research to improve patient care capability and improve clinical procedures. Applicants should be board-certified in Psychiatry, eligible for medical license in Georgia, have demonstrated excellence in clinical patient care and research productivity, and academic qualifications for a senior level faculty appointment. Contact: **E. Mansell Pattison, M.D., Professor and Chairman, Department of Psychiatry and Health Behavior, Medical College of Georgia, Augusta, GA 30912, (404) 828-3284.** The Veterans Administration and the Medical College of Georgia are EOE employers.

## POSITIONS OPEN

**MICROBIAL PHYSIOLOGY.** Tenure-track position in microbial physiology at the assistant professor level and available September 1984. Ph.D. required with postdoctoral experience desirable. Applicant must have a strong commitment to excellence in teaching and research and will be expected to develop a graduate course in appropriate area of expertise. Undergraduate teaching expected. Send curriculum vitae, transcripts, reprints, a brief statement of research interests, and three letters of recommendation by 15 March 1984 to: **Dr. Lewis Coons, Chairman, Search Committee, Department of Biology, Memphis State University, Memphis, Tenn. 38152.** *Memphis State is an Equal Opportunity University.*

**MICROBIOLOGIST**—Faculty position. Millersville University has anticipated that a tenure-track position will be available in its Biology Department beginning August 1984. The position involves teaching microbiology, immunology, epidemiology, and introductory biology in a 16-member department. Ph.D. required. Applicants should provide evidence of scholarly activity and teaching effectiveness. Appointment is anticipated at the assistant professor level commensurate with experience. Applicants should send three letters of recommendation, a current curriculum vitae, and official transcripts of undergraduate and graduate courses to: **David S. Ostrovsky, Ph.D., Chairperson, Department of Biology, MILLERSVILLE UNIVERSITY, Millersville, Pa. 17551.** The screening of applicants will begin on 1 March 1984, and will continue until a suitable candidate is found. *Millersville is an Equal Opportunity/Affirmative Action Employer earnestly seeking and eager to receive applications from women and minority candidates.*

## UNIVERSITY OF MANITOBA DIVISION OF HUMAN GENETICS MOLECULAR GENETICIST

The Division of Human Genetics of the Faculty of Medicine invites applications for a full-time assistant professor to commence by 1 July 1984. Preference will be given to individuals with demonstrated research experience in molecular genetics using recombinant DNA technology on mammalian systems, particularly in the area of genome organization, control of gene expression or gene mapping. A Ph.D., postdoctoral training, and potential for an independent career as an experimental scientist are prerequisites.

An interest in developing expertise and a desire to be an effective educator are desirable qualities. *The position is open to both women and men. Both women and men are encouraged to apply. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

For full consideration, send a concise description of projected research goals and interests, names of at least three individuals for letters of reference, and curriculum vitae to: **Dr. P. J. McAlpine, Division of Human Genetics, Faculty of Medicine, University of Manitoba, 770 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E 0W3.** Deadline for receipt of applications: 1 March 1984.

**NEUROPATHOLOGIST.** East Tennessee State University (ETSU) College of Medicine is seeking a neuropathologist to head the Section of Neuropathology at the medical school, supervise the Autopsy Service at Mountain Home VA Medical Center and serve as consultant to Johnson City Medical Center Pathology Department. The university is sponsor of a pathology residency program at these institutions. The position is available immediately. Send your curriculum vitae and three references to: **Philip S. Coogan, M.D., Department of Pathology, ETSU COM, P.O. Box 19540A, Johnson City, Tenn. 37614.** *ETSU is an Affirmative Action/Equal Opportunity Employer.*

**NUCLEAR MAGNETIC RESONANCE IN BIOMEDICAL RESEARCH**—Associate professor or professor, Department of Physiological Chemistry. Candidates should have demonstrated state-of-the-art expertise in NMR imaging or high field analysis of metabolic states in living tissues. The person hired will conduct research and participate in departmental graduate and teaching programs. Applicants should send a résumé with research interests plus three letters of reference to: **Dr. James E. Dahlberg, Search Committee Chairperson, 587 Medical Science Building, University of Wisconsin-Madison, Madison, Wis. 53706.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### NEUROSURGEON Division of Neurosurgery Case Western Reserve University School of Medicine

The Department of Surgery is conducting a search for qualified candidates for a **neurosurgeon** at the assistant professor level. Applicants should have demonstrated competence in teaching, research, and administration. *Case Western Reserve University is an Affirmative Action/Equal Opportunity Institution in Employment and Admissions.* Letters, curriculum vitae, and proposals should be sent to:

**Robert A. Ratcheson, M.D.,  
Director-Neurological Surgery  
University Hospitals of Cleveland  
Case Western Reserve University  
2074 Abington Road  
Cleveland, Ohio 44106**

**INSTITUTE OF ECOSYSTEM STUDIES—ORGANIC CHEMIST.** The Institute of Ecosystem Studies of The New York Botanical Garden announces a 2-year postdoctoral appointment with potential for a continuing position. Research will support programs in chemical ecology. Applicants should have a Ph.D. in organic chemistry—natural product elucidation and synthesis. Collaborative, multidisciplinary, and independent research programs are expected. Send curriculum vitae, statement of research interests, and names of three references by 31 March to: **Clive G. Jones, Chemical Ecologist, Institute of Ecosystem Studies, The Mary Flagler Cary Arboretum, Box AB, Millbrook, N.Y. 12545.** *An Equal Opportunity Employer.*

Openings at the University of Mississippi Medical Center for **THREE PHYSIOLOGISTS** at assistant professor or instructor level. Two neurophysiologists (motor, integrative and analytical, or biophysical aspects), one biomedical engineer with interest in microcirculation. Skill in use and design of electronic technology needed. Send curriculum vitae and bibliography to: **Dr. Arthur C. Guyton, Department of Physiology and Biophysics, University of Mississippi Medical Center, Jackson, Miss. 39216-4505.** *Equal Opportunity Employer, M/F/V/H.*

**PHYSIOLOGY/NEUROSCIENCE.** A tenure-track position in biology at the assistant professor level with joint appointment in medicine for fall semester 1984. Candidates must have doctorate in physiology or neuroscience and demonstrated research productivity in their area of interest. The successful candidate will be expected to effectively teach in their own area as well as areas of human physiology, in an undergraduate, graduate, or medical school setting. Postdoctoral experience preferred, teaching experience desirable, cell and molecular biology interest. Send curriculum vitae and three letters of recommendation by 15 March to: **Physiology Search Committee, Biology Department, University of Missouri-Kansas City, Kansas City, Missouri 64110.** *An Equal Opportunity/Affirmative Action Employer.*

## PLANT BIOLOGY

A limited term appointment (2 years with possible extension) will be made, effective 1 July 1984, at the assistant professor level. Applications are invited from botanists with a completed Ph.D. and research expertise in any of: cell biology, taxonomy and evolution, and biochemistry. The successful candidate will be required to pursue research and to teach in the undergraduate programme. *Canadian immigration regulations require the University to assess applications from Canadian citizens and permanent residents of Canada before considering foreign applicants.* Applications should consist of curriculum vitae, the names and addresses of three referees, and copies of graduate transcripts, submitted before 31 March 1984, to: **Dr. Joan Grusec, Chairman, Life Sciences Division, Scarborough Campus, University of Toronto, 1265 Military Trail, Scarborough, Ontario, Canada M1C 1A4.**

**PLANT PATHOLOGIST.** Crop Genetics International, a growing plant biotechnology company located in close proximity to the USDA Beltsville Laboratories, is seeking an individual with a Ph.D. or equivalent experience in the identification, analysis, and manipulation of prokaryotic pathogenic microorganisms. Duties will be divided between an ongoing research project in bacterial association/infection and field diagnosis. Individuals with prior experience in both areas and a background in disease etiology are preferred. Please reply in confidence to: **T. Sherwood, 7170 Standard Drive, Dorsey, Md. 21076.** *An Equal Opportunity Employer.*

# THE U.S. ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND IS ACCEPTING PROPOSALS FOR RESEARCH IN

## MEDICAL DEFENSE AGAINST CHEMICAL THREATS

DAMD17-84-Q-0001

Studies to define the mechanisms by which toxic threat nerve agents in lethal or sublethal concentrations induce their sequence of pathophysiologic effects and the relationship of these actions to dose, route of challenge, and/or pharmacokinetics of the agents are sought. Program emphasis is on development of comprehensive medical treatment of battlefield casualties to include: drug prophylaxis, pretreatment, therapy, resuscitation and definitive care. Research areas of interest include:

- SENSORY CONTRIBUTION TO CENTRAL RESPIRATORY DRIVE  
The role of peripheral receptors/mediators.
- AIRWAYS REACTIVITY (UPPER AND PULMONARY AIRWAYS)  
Nerve agent modulation of normal airways response.
- SALIVARY SECRETIONS/BRONCHIAL AND SMALL AIRWAYS SECRETIONS  
Their role in airway resistance/obstruction.
- "COUGH SYNCOPE"-LIKE SYNDROME FOLLOWING EXPOSURE AND INITIAL RECOVERY  
Mechanism of cough-induced heart block.
- LUNG SURFACTANT METABOLISM  
The role of altered surfactant metabolism in ventilatory function.
- ALVEOLAR MACROPHAGE FUNCTION  
Effects on macrophage mediator production/phagocytic function.
- DIFFUSION AND GAS TRANSPORT  
The role of the alveolar-capillary membrane, RBC membrane, etc.

- PERIPHERAL CONTROL OF CIRCULATION  
The function of cardiovascular reflexes during intoxication.
- THERMOREGULATION (CENTRAL AND PERIPHERAL MECHANISMS)  
Low dose effects on sensitivity to high and low temperatures.
- ERGONOMIC PERFORMANCE (LOW AND/OR CHRONIC DOSING)  
Muscular strength, endurance, fine motor control, aerobic exercise.
- HYPOVOLEMIA, SHOCK, OR TRAUMA  
Combined injury; complication of traditional military casualties.
- ANALGESIA OR GENERAL ANESTHESIA  
Complications in management of nerve agent casualties.

Proposals may be submitted for one or more of the above topics or a specific portion of one topic. A proposer may submit separate proposals on different topics or different proposals on the same topic.

In accordance with the Defense Acquisition Regulation (DAR) any contracts awarded under this solicitation may be of any type or combination of types which will promote the best interests of the Government. It is anticipated that multiple-year, incrementally-funded, level-of-effort type, cost reimbursement contracts will be awarded. Each increment will be approximately 12 months. Duration of the contract should be commensurate with the proposed scope of work but in no case shall exceed five years.

## PROPOSAL PREPARATION INSTRUCTIONS AND REQUIREMENTS

Research proposals shall include a table of contents and should cover the points cited below, insofar as they are applicable.

- a. *Name and Address of Organization.* At least one copy must carry the original signatures of an official authorized to legally bind the organization.
- b. *Title of Proposed Research.*
- c. *Description of Proposed Research.* Submit a detailed description of the research objectives, hypothesis, approach, methods, relationship to the state of knowledge in the field and to comparable work in progress elsewhere, military significance, previous relevant experience, bibliography and pertinent literature citations.
- d. *Research Involving Human Subjects.* USAMRDC policies governing the use of human subjects parallel those contained in 45 CFR 46, 21 CFR 312 and DoD Instruction 5030.29. Submit a copy of completed Form HHS 596 with the proposal.
- e. *Research Involving Animals.* Acknowledgement that conduct and reporting of the studies shall adhere to the "Guide for the Care and Use of Laboratory Animals" ((NIH) 78-23, 1978) must be included.
- f. *Personnel.* Qualifications of the principal investigator and other senior

professional personnel and the time each will devote to the research. This information, to the extent that it is information about an individual, is subject to the requirements of the Privacy Act of 1974 (5 USC 552(a)). The principal purpose and routine use of the information are for the evaluation of the qualifications of those persons who will perform the research. Disclosure of the information is voluntary, but failure to provide such will prevent evaluation of the proposal.

g. *Facilities and Equipment Available.*

h. *Cost Estimate.* An estimate of the total research project cost with a breakdown of funds by category (direct labor cost, indirect cost, property or equipment cost, travel cost, publication cost, consultant cost, other direct costs, fee or profit) by year must accompany each proposal and must be submitted on DD Form 663 with complete supporting information.

Every effort will be made to protect the confidentiality of the proposal and any evaluations. The submitter may mark the proposal with a legend such as that provided in DAR 3-507.1(a). Proposals containing a more restrictive legend shall not be considered.

Unnecessarily elaborate brochures or presentations beyond that sufficient to present a complete and effective proposal are not desired.

## CONSIDERATIONS

*Reports.* Quarterly, annual and final progress reports shall be required in accordance with the schedule of any resultant contract. Reprints of any publications resulting from sponsored research shall also be provided to the USAMRDC.

*Contract Provisions.* Contracts awarded shall contain, where appropriate, detailed special provisions concerning patent rights, rights in technical data and

computer software, reporting requirements, equal employment opportunity, care of laboratory animals, use of human subjects, good laboratory practices requirements, acquisition and disposition of equipment, and other requirements. Contracts shall also incorporate all general provisions required by the DAR.

## METHOD OF SELECTION AND EVALUATION CRITERIA

Proposals will be evaluated on a competitive basis by review committees composed of scientists knowledgeable in the topic area. Proposals will be evaluated first on their relevance to the chosen topic. Those found to be relevant will then be evaluated using the criteria listed below.

- a. *Research Objective.* Is it clear, valid and logical?
- b. *Military Requirement.* Is it clear, unique, relevant and significant?
- c. *Scientific Feasibility.* Are the plans, methods and procedures feasible, clear, valid, adequately referenced and state-of-the-art?
- d. *Investigator Competence.* Has the investigator demonstrated the scientific and administrative capability to effectively conduct the proposed research?
- e. *Requested Budget.* Is the budget realistic in terms of proposed objectives, methodologies, supplies, salaries and travel?
- f. *Safety Considerations.* Is the investigator cognizant of the requirements for and capable of working with any hazardous materials involved? Has the organization agreed to allow storage and use of such materials in its facility?
- g. *Animal Use/Human Use Consideration.* Are the studies, in which animal models or human subjects to be used, to be conducted in accordance with all

appropriate regulations? Are all necessary assurances of compliance and certificates provided? (NOTE: Failure to adequately document compliance will prevent evaluation of the proposal.)

Although cost will be a factor in the evaluation of proposals, technical merit in the above listed areas will be more significant factors in the selection of a contractor. Further, to be selected for an award, the proposed cost must be realistic and reasonable.

Negotiations will be conducted with those contractors in the competitive range, determined by the factors in paragraphs a-g above. Final decisions for funding will be made by the USAMRDC based upon these criteria and consideration of possible duplication of other research and program balance. The USAMRDC may elect to fund several or none of the proposed approaches to the same topic. There is no commitment by the USAMRDC to make any awards on any topic, to make a specific number of awards or to be responsible for any monies expended by the proposer before award of a contract. It should be noted that only a duly appointed Contracting Officer has the authority to enter into a contract on behalf of the U.S. Government.

## SUBMISSION OF PROPOSALS

Ten copies of the complete proposal are required for review and evaluation. Proposals must be submitted by 4:00 p.m. on 19 March, 1984 to:

Commander  
U.S. Army Medical Research and Development Command  
ATTN: SGRD-RMA/DAMD17-84-Q-0001 (Shackelford)  
Fort Detrick, Frederick, MD 21701



## POSITIONS OPEN

**POSTDOCTORAL ASSOCIATE** for study of the role of fungal components in determining plant resistance. Experience in membrane and carbohydrate characterization an advantage. Send résumé and three letters of recommendation by 15 March 1984 to: **Dr. Anne Anderson, UMC 45, Utah State University, Logan, Utah 84322. An Affirmative Action/Equal Opportunity Employer.**

### POSTDOCTORAL JUNIOR STAFF FELLOW: INHALATION TOXICOLOGIST AND NEUROCHEMIST

Applications are invited for two junior staff fellow positions available immediately at the National Center for Toxicological Research (annual salary: approximately \$25,000). The inhalation toxicologist will design, validate, and perform a variety of inhalation exposure techniques to acutely and chronically administer psychoactive or other agents to nonhuman primates and other appropriate animal models. The neurochemist will design, validate, and perform a variety of conventional and specialized experimental techniques to elucidate the neurochemical effects of acute and chronic administration of psychoactive agents to nonhuman primates and other appropriate models. Research projects will also involve evaluation of pre- and perinatal exposures to psychoactive agents, neurotoxins, and other agents of interest. The successful applicants will have obtained a Ph.D. in chemistry, pharmacology, toxicology, neuroscience, or related field. They must have appropriate experience in the designated area and have worked with rodents and/or preferably nonhuman primates. Both positions require joint responsibility for ongoing research projects and sole responsibility for projects specific to each position.

For further information and applications, contact:

**Dick King  
FDA Personnel  
National Center for Toxicological Research  
Jefferson, Ark. 72079**

### POSTDOCTORAL FELLOW MOLECULAR GENETIC NEUROSCIENCE

One position available as part of a developmental neurobiology research program. Identification of synapse-related proteins and genes and the control of their expression are under investigation. Background in molecular genetics preferred. Please contact: **Dr. Mark C. Fishman, Section on Neurobiology, Developmental Biology Laboratory, Massachusetts General Hospital, Boston, Mass. 02114.**

**POSTDOCTORAL POSITION** available immediately to study the mechanism of action of natural killer cells. Candidates should have a strong background in biochemistry or immunology. Send résumé and names of three references to: **Dr. Tom Oeltmann, Division of Oncology, A2125 Medical Center North, Vanderbilt University, Nashville, Tenn. 37232. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available in May to study the histogenesis of mouse lung tumors. This project in cancer cell biology involves immunocytochemical and autoradiographic approaches (see *Lab. Invest.*, December 1983) to the cellular origin and development of these tumors. Strong cell biology background desirable. Send curriculum vitae and letters of reference to: **Dr. Alvin M. Malkinson, University of Colorado, School of Pharmacy, Boulder, Colo. 80309. The University of Colorado is an Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available immediately for 1 year with possible extension dependent on grant renewal. Ph.D. in biochemistry, nutrition, or neuroscience to work on one-carbon metabolism in brain. Experience with folates and folate-dependent enzymes desirable. Salary: \$17,000. Send résumé and three letters of reference to: **G. Franklin Carl, Ph.D., Director, Nutrition Laboratories, Section of Nutrition, Department of Medicine, Medical College of Georgia, Augusta, Ga. 30912. The Medical College of Georgia is an Equal Opportunity Employer.**

**POSTDOCTORAL POSITION**, industry-funded, available to study the physiology of solvent-producing anaerobic bacteria. Experience in bioenergetics, membrane transport, and/or anaerobic organisms desirable. Please send your curriculum vitae and names of three references to: **Dr. Eva Kashket, Department of Microbiology, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118. An Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately for a Ph.D. in chemistry or biochemistry to study drug metabolism. Research experience in protein purification and characterization preferred. Project involves cytochrome P-450 purification and studies to elucidate the role of drug metabolism in regulating microsomal biosynthetic reactions. Salary commensurate with experience. Send résumé and names of three references to: **Dr. L. Waskell, Veteran's Administration Medical Center, 4150 Clement Street, San Francisco, Calif. 94121.**

**POSTDOCTORAL POSITION** with responsibilities to conduct research on the clinical use of tactical communication devices and on other topics related to communication disorders. Prefer individual with some experience in one or more of the following language sciences: psychoacoustics, speech perception and production, curriculum development, program evaluation, and education of the hearing-impaired. Clinical certification in speech-language pathology desirable. Position available 1 June 1984. Send curriculum vitae and three letters of recommendation to: **William J. Gavin, Ph.D., Director of Research, Institute of Logopedics, 2400 Jardine Drive, Wichita, Kans. 67219.**

**POSTDOCTORAL POSITION—MOLECULAR ENDOCRINOLOGY.** A 2-year position is available immediately to study the molecular mechanisms of estrogen action. Salary: \$16,000 to \$17,000 per year. Preference will be given to individuals with a background in molecular or cellular biology, microbiology, or molecular endocrinology. Send curriculum vitae, bibliography, and names of at least three references to: **Dr. Daniel R. Schoenberg, c/o Personnel Manpower Division, Department of Pharmacology, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20814. An Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITIONS

Two postdoctoral positions available. Experience in recombinant DNA technology and/or protein chemistry or sequencing is preferred. The areas of research are: (i) study of the structure and expression of normal and variant apolipoprotein genes and (ii) isolation of a protease that modifies apolipoprotein A-I in plasma. Write to: **Dr. Vassilis I. Zannis, Metabolism Division, Children's Hospital/Harvard Medical School, 300 Longwood Avenue, Boston, Mass. 02115.**

**POSTDOCTORAL POSITIONS** available to study gene expression in the rat dorsal prostate or Dunning prostatic tumor. Clones already identified to androgen-regulated genes will be used to select genomic sequences for DNA transfer experiments. Candidates with a background in the area of the prostate, cell culture, or molecular biology desired. Salary: C\$17,000. Send résumé to: **Dr. Robert J. Matusik, Department of Physiology, University of Manitoba, Winnipeg, Manitoba, Canada R3E 0W3.**

**POSTDOCTORAL POSITIONS** available for research on the role of clathrin-coated membranes in intracellular membrane dynamics. Specific projects involve studies on the in vitro and in vivo structure and assembly of the clathrin coat using protein chemistry, monoclonal and polyclonal antibodies, immunocytochemistry, and microinjection techniques. Send curriculum vitae with the names of three references to: **Dr. James H. Keen, Fels Research Institute, Temple University School of Medicine, Philadelphia, Pa. 19140. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE** to conduct experiments in which neurotransmitters and enzymes are measured in experimental animals or human volunteers after being subjected to a variety of nutritional conditions including trace element deficiencies. Requires Ph.D. in biochemistry with experience in enzymology, neurochemistry, and HPLC. Prefer 1 to 2 years of postdoctoral experience. Anticipated beginning date for appointment is 1 May 1984. Salary: \$15,000 to \$17,000 plus benefits; 1-year appointment with possibility for renewal. Send curriculum vitae, names of three references, and relevant publications to:

**Alice Hoffert  
Human Nutrition Research Center  
P.O. Box 7166, University Station  
Grand Forks, N.D. 58202**

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

**SEVERAL POSTDOCTORAL POSITIONS** available during 1984 for research into mammalian appendage, organ, and tissue regeneration at the: **Developmental Biology Center, University of California, Irvine, Calif. 92717.** Ph.D. required, preferably in cell, molecular, or developmental biology; neurobiology; or genetics.

- 1) For work on the nervous system in fetal, neonatal, and adult mammals, contact: **Ronald Meyer** (address above) regarding the optic system and **Herb Killackey** (Department of Psychobiology, University of California, Irvine) regarding the somatosensory system of limbs.
- 2) For work on appendage, organ, or tissue regeneration in fetal, neonatal, and adult mammals, contact: **Susan Bryant** (address above).

Submit résumé, brief description of research interests and experience, and names of three individuals qualified to evaluate your work. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION IN METHANOGENIC FERMENTATIONS** is available immediately at Health Research, Inc., to study the use of H<sub>2</sub> to control the rate of conversion of biomass to CH<sub>4</sub> and CO<sub>2</sub> in laboratory-scale continuous cultures. A background in bioengineering is essential and experience with computers and electronics is highly desirable. Send résumé to: **Dr. M. J. Wolin, Center for Laboratories and Research, New York State Department of Health, Empire State Plaza, Albany, New York 12201.**

### POSTDOCTORAL POSITION

Position available for individual interested in areas of gene structure and regulation or molecular mechanisms of site-specific recombination; previous experience with (or desire to learn) DNA cloning, nucleic acid or protein biochemistry, genetics, in vitro systems. Please send résumé with desired starting date and list of three references to: **Arthur Landy, Division of Biology and Medicine, Brown University, Providence, R.I. 02912. An Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITION The University of Texas at Dallas

**POSTDOCTORAL POSITION** available to study the molecular biology and genetics of the mammalian mitochondrion. Research projects employ molecular genetic, somatic cell genetic, and biochemical approaches to investigate the organization, inheritance, and expression of the mammalian mitochondrial genes. *Indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required.* Send curriculum vitae and names and telephone numbers of three references to:

**Dr. G. Breen  
Biology Department  
The University of Texas at Dallas  
P.O. Box 830688  
Richardson, Texas 75083-0688**

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

**POSTDOCTORAL OR RESEARCH ASSOCIATE** position available. Studies of in vivo or in vitro regulation of insulin receptors and action in fat cells and tissue. Experience in biochemistry and/or physiology preferred for this basic science-oriented laboratory. **Dean H. Lockwood, M.D., Endocrine-Metabolism Unit, Department of Medicine, University of Rochester Medical Center, Rochester, New York 14642. An Equal Opportunity Employer.**

### PRESIDENT UNIVERSITY OF CINCINNATI

The Presidential Search Committee is accepting nominations and applications for the position of President and Chief Executive Officer of the University.

The University of Cincinnati is a comprehensive, state university with an enrollment of approximately 32,000 undergraduates and 5,000 graduate and professional students. The university includes 18 separate colleges and a major medical center and has an annual operating budget in excess of \$425,000,000.

Application deadline is 1 March 1984. Forward nominations and applications to: **Secretary, Presidential Search Committee, Room 201 Administration Building, University of Cincinnati, Cincinnati, Ohio 45221-0062.** All nominations and applications will remain confidential.

*An Equal Opportunity/Affirmative Action Employer*

# RepliGen

## BIOTECHNOLOGY

Repligen Corporation, a rapidly growing biotechnology company involved in the development of a variety of innovative peptide and protein products by both recombinant DNA and conventional biological techniques, seeks qualified candidates at the B.S./M.S. level with at least two years' laboratory experience in the following areas:

**Protein Chemistry:** Experience with purification/characterization is required.

**DNA Biochemistry:** Familiarity with recombinant DNA techniques is required.

**Molecular Genetics/Bacterial Physiology:** A firm background in bacterial genetics is required.

Successful candidates will be highly motivated individuals who can take advantage of the outstanding growth opportunities at Repligen. Repligen offers competitive salaries, excellent benefits, and equity participation. Submit resume and the names of three references to: Director of Personnel, Repligen Corporation, 101 Binney Street, Cambridge, MA 02142. An equal opportunity employer.

## PATHOLOGIST

An excellent career opportunity is now available with our aggressive research team for a DVM and/or PhD in Pathology to conduct toxicologic pathology on research animals in support of preclinical drug safety assessment (IND, NDA). Applicants with toxicological pathology experience with a pharmaceutical company are preferred and Board certification or eligibility is also a plus.

In addition to an excellent salary and fringe benefits, there is good potential for continued professional growth. Interested and qualified candidates are invited to forward their CV in confidence to:

MR. MORT KESSLER

**Wyeth Laboratories Inc.**  
P.O. BOX 861  
PAOLI, PA 19301  
Equal Opportunity Employer, M/F/H

## Biogen Research Corp.

We have an immediate opening in our Cambridge Laboratory for a qualified individual to run a facility dedicated to:

### cDNA Cloning.

Candidates should have a BS/MSc and several years of experience in constructing cDNA libraries and have a strong background in molecular biology.

The ideal individual should be able to work independently. All replies will be treated in confidence.

Biogen offers an excellent compensation and benefits package. Please send your resume and the names of 2 references to: **Nanci Pye, Dept. CL-15, Manager of Human Resources, Biogen Research Corp., 14 Cambridge Center, Cambridge, MA 02142.**

An equal opportunity employer

BIOGEN



New From

**Kendall/Hunt Publishing Company**

2460 Kerper Boulevard • P.O. Box 539 • Dubuque, Iowa 52001

## Instruments for Physical Environmental Measurements

### Volume I

Second Edition

By **J.Y. Wang,**

Milieu Information Services and

**Catherine M.M. Felton,**

San Francisco State University

1983/392 pages/paper/\$16.95

ISBN 0-8403-3098-7

### Volume II

by **J.Y. Wang,**

1983/432 pages/Paper/\$16.95

ISBN 0-8403-3102-9

### Instruments for Physical Environmental Measurements,

a two-volume set, is designed for use in college and university upper division and graduate level courses. These impressive volumes will give your students in-depth descriptions of basic scientific techniques that they will need in their future careers. Up-to-date information from current sources offers students timely data to keep them informed of the latest developments in the field. Contemporary and comprehensive in scope.

■ Fill out this coupon today! ■

### Yes, I would like to receive:

\_\_\_\_\_ Instruments for Physical Environmental Measurements, Volume I (40309801)

\_\_\_\_\_ Instruments for Physical Environmental Measurements, Volume II (40310201)

☐ For 30-day examination ☐ For college adoption consideration

Name \_\_\_\_\_

Affiliation \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State/Zip \_\_\_\_\_

1149

PRINTED IN U.S.A.

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS

Two postdoctoral positions are available in the area of cardiovascular research. One position, requiring a pharmacology background, will involve the characterization of alpha adrenoceptors in vascular smooth muscle. The second position, requiring a background in neurosciences/anatomy, will involve studies of the morphological characteristics of central and peripheral mechanisms controlling the cardiovascular system. Annual salary commences at \$18,000, and relocation expenses are available. Send curriculum vitae, statement of research interests, and the names of three academic references to: **Dr. C. R. Triggie, Associate Dean of Basic Medical Sciences, Faculty of Medicine, Memorial University, St. John's, Newfoundland, Canada A1B 3V6.**

**POSTDOCTORAL POSITION IN PLANT MOLECULAR BIOLOGY AVAILABLE IMMEDIATELY.** The project involves isolation of environmentally induced plant genes, the study of their expression, eventually in transformed plants. Candidate should have a strong background in plant biochemistry plus knowledge of molecular techniques, or be a molecular biologist interested to apply own knowledge to plant research. Send curriculum vitae and names of references to: **Hans J. Bohnert, College of Agriculture, Department of Biochemistry, BioSciences West, University of Arizona, Tucson, Ariz. 85721. The University of Arizona is an Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE** to do research in the application of monoclonal antibodies to the diagnosis and treatment of human neuroblastoma. Should have experience in cell culture and immunological techniques and should be available by early or mid-1984. Send résumé and three letters of reference to: **Dr. Roger Kennett, c/o Dr. Audrey Evans, The Children's Hospital of Philadelphia, 34th and Civic Center Boulevard, Philadelphia, Pa. 19104. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.**

**The Basic Science Departments (Anatomy, Biochemistry, Microbiology, Pathology, Pharmacology, Physiology), Medical School, University of Minnesota, periodically have openings for POSTDOCTORAL TRAINING.**

For information about possible openings in these programs, write, specifying department of interest, to:

**University of Minnesota Medical School  
Box 293 Mayo Building  
420 Delaware Street SE  
Minneapolis, Minnesota 55455  
Attention: James C. Nelson**

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

**PROCESS BIOCHEMIST**—Full-time position in the Blood Derivatives Program to be responsible for adapting published protocols and innovating process improvements in the area of protein separations at laboratory and pilot scale. Responsibilities will also include transferring developed processes from the pilot plant to manufacturing facilities. Candidates must have Ph.D. degree in biochemistry and extensive experience in the area of protein separation, including all forms of column chromatography. Experience in large-scale separation and/or blood proteins a plus. Demonstrated capacity for individual research is essential. Excellent benefits package. Send résumé, salary requirements, and three references to: **B.H., Personnel, The New York Blood Center, 310 East 67 Street, New York, N.Y. 10021. An Equal Opportunity Employer.**

**RESEARCH ASSOCIATE**—Research directed toward the total synthesis of "rubaridins" and biologically active organic compounds. Must know infrared, nuclear magnetic resonance, ultraviolet and mass spectroscopy, and modern chromatographic techniques, including medium-pressure and high-pressure liquid chromatography. Required: Ph.D. in organic chemistry and 5 years of experience. Must operate state-of-the-art spectrometers, \$14,500 per year. Send résumé to: **Job Order Number 3739018, c/o Charles Wilson, Office of Employment Security, Room 1302, State Office Building, Pittsburgh, Pa. 15222.**

## POSITIONS OPEN

**RESEARCH ASSOCIATE/POSTDOCTORAL** position is available to study receptor mechanisms and/or mechanism of saliva formation. Send curriculum vitae and names of three references to: **Dr. T. Barka, Chairman, Department of Anatomy, Mount Sinai School of Medicine, New York, N.Y. 10029.**

*Affirmative Action/Equal Opportunity Employer*

**RESEARCH ASSOCIATE** position available to study DNA replication and mutagenesis in Mammalia cells. This project involves the investigation of in vitro replication of DNA containing mutagenic lesions using mammalian enzyme systems. Procedures to be employed include cell and virus culture, DNA molecular biology and sequencing, and some enzymology. Experience in one or more of these techniques together with an understanding of genetics and DNA replication is required. The position is available immediately. Salary range: \$18,000 to \$20,000 depending on experience. Send curriculum vitae and name of three references to: **Dr. Peter Moore, Department of Microbiology/Immunology, University of Illinois at Chicago, 835 South Wolcott, Room E-703 MSA, Chicago, Ill. 60612.**

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

**RESEARCH INSTRUCTOR**—The Department of Medicine, Division of Oncology, University of Texas Health Science Center at San Antonio, invites applications for a nontenure-track position. Highly qualified candidates with a Ph.D. in synthetic organic chemistry and at least 3 years of postdoctoral experience in steroid D-ring derivatization and radiochemical manipulations are required for a research program on steroid receptor ligands. Teaching of synthetic organic methods will also be required. Salary according to qualifications; minimum: \$18,000 per year. Starting date: 1 July 1984. Send résumé and names and addresses of two references to: **Minerva de la Garza, MEDICINE/Oncology, University of Texas Health Science Center, San Antonio, Texas 78284. An Equal Opportunity/Affirmative Action Employer.**

## RESEARCH SCIENTIST

The Applied Science Division of Lawrence Berkeley Laboratory is seeking a research scientist to assist in projects involving system configurations and control strategies for active solar cooling systems. Assignments include: evaluation of sensitivity studies, TRNSYS subroutine maintenance and development to simulate various control strategies and system configurations for active solar cooling systems, significant contribution to the project's report and publication effort, and some engineering economics analysis. Experience in computer simulation and analysis of active solar systems required. Prefer some experience with VAX/VMS systems and a degree in engineering.

Please specify Job Number A/2626. Résumés must be received by 1 March 1984. Send two copies of résumé to: **Lawrence Berkeley Laboratory, Employment Office, Building 65, One Cyclotron Road, Berkeley, Calif. 94720. Equal Opportunity Employer, M/F/H.**

**VETERINARY PATHOLOGIST.** Board-certified or -eligible veterinary pathologist interested in an academic and research career. The position is at the level of assistant or associate professor, depending on qualifications and experience, and will be tenure-accruing. A strong background in clinical and morphological pathology of laboratory animals is required. The successful candidate will be responsible for operation of the department's diagnostic laboratories. Time will be divided between professional service, research, and teaching. The development of independent and collaborative research interests will be encouraged. Salary is negotiable. Please address letters of interest to: **Christian R. Abey, Chairman, Department of Comparative Medicine, University of South Alabama College of Medicine, 1040 Medical Sciences Building, Mobile, Alabama 36688.**

## POSITIONS OPEN

**RESEARCH ASSOCIATE** position available immediately to work on the mechanism of wildfire disease resistance in tobacco and the development of dominant selectable markers for plant recombinant DNA vectors. Experience with recombinant DNA techniques or the Ti plasmid are desirable. Salary up to \$22,000. Please submit curriculum vitae before 15 March 1984 to: **Dr. Robert Dickson, Department of Biochemistry, or Dr. Glenn Collins, Department of Agronomy, University of Kentucky, Lexington, Ky. 40536. An Equal Opportunity Employer.**

### RESEARCH ASSOCIATE

Position available immediately to study the regulation of renal adenylate cyclase and 250H-vitamin D-1-hydroxylase by estradiol and parathyroid hormone. Applicants should have a Ph.D. in an appropriate discipline and experience in a variety of biochemical techniques. Salary negotiable. Send curriculum vitae with names and addresses of three references to: **Dr. Leonard R. Forte, Ph.D., Department of Pharmacology, School of Medicine, University of Missouri, Columbia, Mo. 65212. Deadline: 17 February 1984.**

**RESEARCH FELLOW** in orthopedic surgery, Harvard Medical School at The Children's Hospital Medical Center, available from March 1984, to work on biochemistry, physical chemistry, and biosynthesis of bone matrix phosphoproteins. Ph.D. required. At least 1 year of postdoctoral training desirable. Apply with curriculum vitae and names of three referees to: **Dr. Melvin J. Glimcher, Laboratory for the Study of Skeletal Disorders and Rehabilitation, The Children's Hospital Medical Center, 300 Longwood Avenue, Boston, Mass. 02115. Applications from women and minority candidates are encouraged. An Equal Opportunity/Affirmative Action Employer.**

**RESEARCH INVESTIGATOR** to perform research on the physiology and molecular biology of corticosteroids and their metabolites. Must hold Ph.D. or equivalent degree. A background in organic chemistry or enzymology is desired. Salary is commensurate with qualifications and experience. Send curriculum vitae and the names and addresses of three persons who can be contacted for reference purposes. *An Equal Opportunity Employer.*

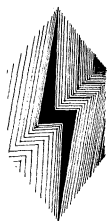
Send résumés to: **Dr. Carl Mander, The Population Council, Center for Biomedical Research, Tower Building, 1230 York Avenue, New York, New York 10021.**

### DEPARTMENT OF ANATOMY AND CELLULAR BIOLOGY

**Tufts University Schools of Medicine, Dental Medicine and Veterinary Medicine  
VETERINARY ANATOMY POSITION**

The Department of Anatomy and Cellular Biology, Tufts University Schools of Medicine, Dental Medicine and Veterinary Medicine, invites applications for a tenure-track position beginning July 1984. Applicants should possess the Ph.D. in anatomy and/or the D.V.M. (or equivalent). The position involves the teaching of either veterinary histology or veterinary gross anatomy. Applicants at the assistant professor level should have at least 2 years of postdoctoral research experience and show promise of developing an independent research program. Applicants at the associate or full professor level must have an active, funded research program and extensive teaching experience in veterinary anatomy. Research areas in the department include pulmonary cell biology, reproductive biology, neuroendocrinology, neurobiology, muscle biology, tumor biology, connective tissue biochemistry, and cell/developmental biology including secretory mechanisms, cell-extracellular matrix and membrane-cytoskeleton interactions, cell motility, and control of cell multiplication. We especially seek candidates to join a group involved in musculoskeletal research. Salary and rank dependent upon qualifications and experience. Applicants are invited to submit curriculum vitae, names of three references, and a letter describing research and teaching interests to: **Dr. Bryan Toole, Acting Chairman, Department of Anatomy and Cellular Biology, Tufts University Schools of Medicine, Dental Medicine and Veterinary Medicine, 136 Harrison Avenue, Boston, Massachusetts 02111. Deadline for receipt of applications is 1 March 1984.**

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



## SYNTRO CORPORATION

### A LEADER IN AGRICULTURAL BIOTECHNOLOGY,

Syntro is concerned with the challenge of today's agricultural problems, and is dedicated to the successful application of biotechnology to those problems. Our newly expanded facilities are geared to meet the needs of our staff: providing a creative research environment in the heart of Southern California's scientific community. Our beautiful coastal setting allows a unique opportunity for personal and professional growth.

Syntro is currently seeking qualified individuals with expertise in the following areas...

**MOLECULAR BIOLOGY** — familiar with all aspects of recombinant DNA technology: gene isolation, cloning, expression and regulation.

**VIROLOGY** — having a working knowledge of viral cloning systems. Experience with animal viruses and recombinant DNA technology is desirable.

Syntro offers a competitive compensation package. If you would like to be part of this outstanding biotechnology group, please send resume with a list of references to:

Personnel Director  
**Syntro Corporation**  
11095 Torreyana Road  
San Diego, CA 92121

AN EQUAL OPPORTUNITY EMPLOYER

## MOLECULAR BIOLOGISTS

**PROGRAM MANAGER/SENIOR SCIENTIST** in MAMMALIAN GENE EXPRESSION—Ph.D. or equivalent with at least two years experience in mammalian expression systems and vectors. Opportunity to join a group of molecular biologists and biochemists involved in the cloning, expression and recovery of biologically functional immunoglobulins.

**PROGRAM MANAGER/SENIOR SCIENTIST** in DNA and RNA PROBES—Ph.D. or equivalent with at least two years post-doctoral experience in nucleic acid hybridization.

**PROJECT LEADER** to work jointly with HLA and MOLECULAR BIOLOGY GROUPS. Ph.D. or equivalent with experience in molecular biology; some familiarity with immunology and/or HLA highly desirable.

**RESEARCH STAFF**—M.S. or B.S. with several years experience in the above mentioned areas.

Genetic Systems is a leader in the field of biotechnology. Using monoclonal antibodies, the Company is developing products for the diagnosis and treatment of human diseases.

Genetic Systems is an equal opportunity employer that offers competitive salaries and excellent benefits. Please send your resume to Dr. Robert C. Nowinski, Scientific Director.



**Genetic Systems**  
CORPORATION

3005 First Avenue, Seattle, WA 98121

## THE FIRST WORD IN... IMMUNOASSAY DEVELOPMENT

Abbott Laboratories is a world leader in the development of sophisticated immunoassays for medical diagnostics. That leadership is based on an ongoing commitment to advanced R&D, and has resulted in assays that use enzymes and fluorescence polarization as well as traditional radioactivity. For the scientists in our Diagnostics Division the challenge continues...as we strive to develop new and more accurate assays.

### CHEMIST/IMMUNOLOGIST

Joining a highly advanced project team, this position involves developing new diagnostic immunoassays and complementary instrumentation. Ideal candidates will have 1-3 years post-doctoral and/or industrial experience in immunoassay development, plus the ability to work effectively in a group environment. Good communication skills and an inclination toward bench work are important. Proficiency in protein chemistry, organic synthesis, immunology, HPLC, GC, and fluorescence applications preferred.

### BIOCHEMIST

Responsibilities of this position involve development of novel medical diagnostic assays using enzymatic, immunochemical and/or ligand binding reagents. Research methodology will include reagent purification and stabilization, kinetic characterization and clinical evaluation. Solving technical problems related to testing, manufacturing and performance of assay components will also be involved. Qualifications include a Ph.D. in chemistry, biochemistry, or a related field, and research experience with enzymes or immunoassays. Experience with spectrophotometric and/or fluorometric equipment and kinetic assays also needed. Good communication and supervisory skills and experience in data reduction methods, optimization techniques and clinical assay evaluations preferred.

### RESEARCH ASSISTANT

Working in a project team environment, the selected individual will perform research experiments involving the isolation of tumor markers from biological fluids or cells, the preparation and characterization of antibodies, and the development of immunoassays to relevant antigens. Qualified candidates will have a BS or MS degree in chemistry, biochemistry, or related field, plus 1-2 years appropriate experience in sophisticated immunoassay and immunochemical methods.

Headquartered in an attractive suburban area on the Lake Michigan shoreline, 30 miles north of Chicago, Abbott is a \$2.9 billion health care products manufacturer. We provide excellent salaries, outstanding benefits including profit sharing and stock purchase plan, and outstanding opportunities for career growth with the world leader in medical diagnostics. For immediate consideration, send your resume with salary history, in complete confidence, to: **Sue Hart-Wadley/Corporate Placement**. Abbott is an Affirmative Action Employer.

 **ABBOTT**  
ABBOTT PARK IL. 60064

"HEALTH CARE WORLDWIDE"

## THE FIRST WORD IN...SUCCESS

## POSITIONS OPEN

### VIROLOGIST

Bioassay Systems Corporation is an exciting biotechnology company with an energetic research and development program in medical diagnostics. We are seeking a qualified candidate with a Ph.D. in virology or related science and experience in infectious or sexually transmitted diseases. Industry experience in diagnostic product development. Please send résumé to:

Mark Bear, Ph.D.  
Director Cell Culture Services  
Bioassay Systems Corporation  
Woburn, Mass. 01801

## PRIZE

### THE ARCTIC SCIENCE PRIZE

The North Slope Borough is pleased to announce the establishment of the Arctic Science Prize. The Prize (\$10,000) is to be given to distinguished scientists who have made significant contributions to man's understanding of natural processes in the Arctic. The purposes of the Prize are: to serve as recognition of the recipient's contributions, to further stimulate excellence in arctic science, and to focus attention upon the Arctic and its unique problems. An 11-member Candidate Review Committee will make the nominations and select the recipient.

The North Slope Borough is a local jurisdiction (county-like) that occupies most of the Alaskan Arctic. The Borough is very large (88,000 square miles) and sparsely populated (approximately 9,000 people).

Further information regarding The Arctic Science Prize may be obtained from: Eugene Brower, Mayor, North Slope Borough, Box 69, Barrow, Alaska 99723.

## GRADUATE STUDY

### GRADUATE ASSISTANTSHIPS IN PHARMACOLOGY AND TOXICOLOGY

The Department of Pharmacology at the Medical College of Georgia has recently expanded its graduate (Ph.D.) training program in the field of toxicology. Areas of interest and active research among the 14-member faculty include cardiovascular, peptide, pulmonary, and nervous system pharmacology and toxicology, teratology, and cryobiology. Qualified individuals with strong undergraduate scientific background should contact: John D. Catrivas, Ph.D., Department of Pharmacology and Toxicology, Medical College of Georgia, Augusta, Georgia 30912.

## TRAINEESHIPS

**POSTDOCTORAL TRAINEESHIP** in myocardial metabolism or in the field of metabolic alterations following sepsis and trauma. Available immediately. Strong research and education program. Please send curriculum vitae to: John J. Spitzer, M.D., Professor and Head, Department of Physiology, Louisiana State University Medical Center, New Orleans, La. 70112.

*An Affirmative Action Employer*

### POSTDOCTORAL TRAINEESHIPS IN BURNS AND TRAUMA RESEARCH

Research trainee positions are available for postdoctoral candidates, M.D., Ph.D., or D.M.D., to carry out research in areas that are related to clinical problems that result from burns and trauma. The particular areas of interest are:

- The endocrine control of metabolism and the nutritional state of the postburn patient,
- The structure and biosynthesis of scar tissue,
- Metabolic alterations following trauma,
- Inhalation injury and the acute respiratory distress syndrome, and
- Interaction of acute-phase reactants and injury.

Excellent clinical and laboratory facilities affiliated with the Massachusetts General Hospital and Harvard Medical School. *United States citizen or resident alien.* Write for further details or send résumé, transcripts, names of three references, and letter indicating research interests to: J. F. Burke, M.D., Chief of Trauma Service, Massachusetts General Hospital, Boston, Mass. 02114.

## ASSISTANTSHIPS

**GRADUATE RESEARCH ASSISTANTSHIP** for 4 years at \$8400 per year in **MOLECULAR CLONING AND INSECT BIOCHEMISTRY** leading to Ph.D. in entomology; available immediately. Candidates with M.S. in molecular biology, biochemistry, or entomology should send résumé and three letters of recommendation to: Dr. Richard H. Baker, Florida Medical Entomology Laboratory, University of Florida, 200 9th Street, SE, Vero Beach, Florida 32962.

## FELLOWSHIPS

### HARVARD SCHOOL OF PUBLIC HEALTH POSTDOCTORAL FELLOWSHIPS



Interdisciplinary Programs in Health (IPH) invites applications from promising graduates of advanced-degree programs in the natural or social sciences interested in turning to research in environmental health and public policy. The program focuses on the scientific and analytical foundations for environmental decisions. In addition to individual research, recent group projects include monographs on the molecular and cellular basis of toxicity, the susceptible individual and environmental regulation, and toxic wastes. Further studies will be adapted to interests of fellows. A study on ground water is considered.

Fellows will be appointed for a term of 1 year starting September 1984. Award may be renewed. Application deadline: 9 March 1984. Decisions announced in May.

For information, write to:

Professor Donald F. Hornig  
Director, IPH  
Harvard School of Public Health  
665 Huntington Avenue  
Boston, Massachusetts 02115

### POSTDOCTORAL FELLOWSHIP

Available immediately for study of development and testing of novel diagnostic contrast agents for x-ray, CT, and NMR imaging. A background in biology, chemistry, or pharmacology is desirable.

Send résumé to: Steven E. Seltzer, M.D., Department of Radiology, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115.

*An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL RESEARCH FELLOWSHIP IN THE NEUROSCIENCES.** This 2- to 3-year position in the Ensor Foundation Research Laboratory is available immediately or by mutual arrangement. The laboratory, under a new chief, will be engaging in toxic and genetic studies relevant to understanding the etiology and treatment of brain disorders or movement, dementia, and schizophrenia utilizing a multidisciplinary approach. A Ph.D. or M.D. and laboratory experience is required.

Stipend is \$16,000 to \$18,000 per annum. Applicants should send curriculum vitae to: Dr. Martin Cohen, Associate Professor, Department of Neuropsychiatry and Behavioral Science, University of South Carolina School of Medicine, P.O. Box 202, Columbia, S.C. 29208, or telephone: 803-758-5764.

### GEORGE S. WISE POSTDOCTORAL FELLOWSHIPS

The George S. Wise Faculty of Life Sciences at Tel Aviv University offers postdoctoral fellowships commencing 1 October 1984 in basic and applied biology.

The faculty is engaged in such research areas as anatomy, taxonomy, and physiology of plants; anatomy, sociobiology, and physiology of animals; marine biology; cellular and molecular biology and genetics; lipid and protein research; bioenergetics; neurobiology; immunology; virology; cancer biology; biotechnology and nature preservation. Application forms may be obtained from: The Dean, The George S. Wise Faculty of Life Sciences, Tel Aviv University, Tel Aviv 69978, Israel. Deadline for applications is 29 February 1984.

## FELLOWSHIPS

### PRE- AND POSTDOCTORAL FELLOWSHIPS

The Visual Sciences Research Training Grant at Vanderbilt University has support for predoctoral and postdoctoral trainees interested in a career in the visual sciences. This program offers broad, interdisciplinary training involving the Departments of Ophthalmology, Anatomy, Biochemistry, and Psychology. Candidates must be U.S. citizens or permanent residents. Direct inquiries to: Dr. J. S. Andrews, Department of Ophthalmology, Vanderbilt University School of Medicine, Nashville, Tenn. 37232. *Vanderbilt University is an Affirmative Action/Equal Opportunity Employer.*

**RESEARCH FELLOWSHIP IN NEUROIMMUNOLOGY** available for 2- to 3-year program. The program is designed to combine a basic science study of cellular immunoregulation with experimental immunotherapy in multiple sclerosis. Send curriculum vitae to: Jeffrey I. Greenstein, M.D., Department of Neurology, Temple University Medical School, 3400 North Broad Street, Philadelphia, Pa. 19140. *Equal Opportunity Employer.*

The Department of Psychiatry is offering a 1-year **FELLOWSHIP IN ALCOHOL/DRUG DEPENDENCE** for physicians licensed in the United States who have had at least 3 and preferably 4 years of previous training in a primary care field (including psychiatry). Training includes inpatient, outpatient, consultation-liaison, day and evening programs, teaching, administration, and research. Send correspondence, including résumé and three references, to: Joseph Westmeyer, M.D., Director, Alcohol/Drug Treatment Program, University of Minnesota Hospitals, Box 393 Mayo Memorial Building, Minneapolis, Minn. 55455. *The University of Minnesota is an Equal Opportunity Employer and specifically invites and encourages applications from women and minorities.*

**POSTDOCTORAL RESEARCH FELLOWSHIP** in pharmacology, available immediately or at earliest convenience. Participation in ongoing studies on the actions of calcium channel blockers and antihypertensive drugs on baroreflex and central control of cardiovascular function. Prerequisites include background in autonomic and cardiovascular pharmacology and proficiency with neural recording techniques. Send curriculum vitae, three letters of reference, and requests for further information to: Dr. A. J. Ingenito, Department of Pharmacology, School of Medicine, East Carolina University, Greenville, N.C. 27834. *An Equal Opportunity Employer through Affirmative Action.*

**INSTITUTE OF ECOSYSTEM STUDIES—SUMMER RESEARCH FELLOWSHIPS.** The Institute of Ecosystem Studies (IES) of The New York Botanical Garden will award up to three IES Summer Research Fellowships in 1984. These awards are to provide an opportunity for recent Ph.D.'s with current academic appointments to do ecological research as part of the new IES program at the Mary Flagler Cary Arboretum in Millbrook, N.Y. A diversity of terrestrial, wetland, and stream habitats, as well as excellent laboratory facilities, is available on the 779-hectare Arboretum. Award provides a \$2,000 stipend, \$1,000 for research expenses; low-cost housing is available on the site during June through August. Applicants should have a Ph.D., an ecosystem orientation, and a current academic appointment and be interested in collaborative, multidisciplinary studies. Send letter of application, curriculum vitae, and names of three references by 1 March 1984 to: Dr. Gene E. Likens, Director, Institute of Ecosystem Studies, The Mary Flagler Cary Arboretum, Box AB, Millbrook, N.Y. 12545. *An Equal Opportunity Employer.*

## MARKETPLACE

### BUSINESS OPPORTUNITIES

#### Toxicology laboratory available

Fully equipped lab located in New York area 35,000 sq ft buildings with room to expand. AAALAC approved facility. Equipment includes cages, washers, and all new laboratory (Hematology, Histology, Pathology). Extensive inhalation operation with 16-6 M<sup>3</sup> + smaller chambers in separate building. Ready to operate. Call for details 201 864-4200, Helmsley-Spear, Agent



# 1984 Cold Spring Harbor Laboratory

## Meetings Schedule

Molecular Biology of the Cytoskeleton, April 25–29

*Organizers:* C. Borisy, *University of Wisconsin*, D. Cleveland & D. Murphy, *Johns Hopkins Medical School*

First International Meeting on Ciliate Molecular Genetics, May 2–6

*Organizers:* P. Bruns, *Cornell University*, M. Gorovsky, *University of Rochester*

Molecular Biology of the Photosynthetic Apparatus, May 9–13

*Organizers:* L. Bogorad, *Harvard University*, C. Arntzen, *Michigan State University*, S. Bonitz, *CSH Lab*

RNA Processing, May 16–20

*Organizers:* H. Robertson, *Rockefeller University*, A. Shatkin, *Roche Institute*, M. Mathews, *CSH Lab*

RNA Tumor Viruses Ninth CSH Meeting, May 22–27

*Organizers:* T. Hunter, *Salk Institute*, S. Martin, *University of California, Berkeley*

Recombination at the DNA Level,

49th CSH Symposium on Quantitative Biology, May 30–June 6  
*Organizers:* A. Klar & J. Strathern, *CSH Lab*

Molecular Biology of SV40, Polyoma and Adenoviruses, August 15–19

*Organizers:* T. Grodzicker, *CSH Lab*, M. Botchan, *University of California, Berkeley*

Phage and Bacterial Regulatory Mechanisms, August 21–26

*Organizers:* S. Adhya, *NIH*, H. Echols, *University of California, Berkeley*

Polypeptide Hormones, August 28–September 1

*Organizers:* O. Rosen, *Albert Einstein College of Medicine*, R. Ross, *University of Washington*, J. Feramisco, *CSH Lab*

Modern Approaches to Vaccines, September 12–16

*Organizers:* R. Chanock, *NIH*, R. Lerner, *Scripps Clinic*

## Courses in Genetics

Molecular Biology of Plants, June 8–28

*Instructors:* I. Sussex, *Yale University*, R. Malmberg, *CSH Lab*, J. Messing, *University of Minnesota*

Molecular Cloning of Eukaryotic Genes, June 8–28

*Instructors:* A. Bothwell, *Yale University*, F. Alt, *Columbia University*, J. Mullins, *Harvard School of Public Health*

Advanced Bacterial Genetics, July 1–21

*Instructors:* T. Silhavy & M. Berman, *Frederick Cancer Research Facility*, L. Enquist, *Molecular Genetics, Inc.*, S. Bear, *NIH*

Molecular Embryology of the Mouse, July 8–21

*Instructors:* B. Hogan, *Imperial Cancer Research Fund*, F. Costantini, *Columbia University*, L. Lacy, *Sloan-Kettering Cancer Center*

Advanced Techniques in Molecular Cloning, July 24–August 13

*Instructors:* T. Atkinson & M. Smith, *University of British Columbia*, J. Fiddes, *California Biotechnology, Inc.*, D. Shortle, *State University of New York, Stony Brook*

Yeast Genetics, July 24–August 13

*Instructors:* F. Sherman, *University of Rochester*, G. Fink, *Massachusetts Institute of Technology*, J. Hicks, *CSH Lab*

## Courses in Neurobiology

Neurobiology of Human Disease, June 8–17

*Instructors:* X. Breakefield, *Yale University*, I. Black, *Cornell University*

Immunoglobulins: Molecular Probes of the Nervous System, June 8–28

*Instructors:* S. Hockfield, *CSH Lab*, C. Kintner, *Medical Research Council*, L. Swanson, *Salk Institute*, E. Weber, *Stanford University*

Neurobiology of *Drosophila*, July 1–21

*Instructors:* L. Jan, Y. Jan, & P. O'Farrell, *University of California, San Francisco*, R. Greenspan, *Princeton University*

Molecular Biology of the Nervous System, July 5–18

*Instructors:* R. Kelly, *University of California, San Francisco*, R. McKay, *CSH Lab*

Developmental Neurobiology, July 20–August 2

*Instructors:* D. Purves, *Washington University*, P. Patterson, *California Institute of Technology*

Advanced Electrophysiological Methods, July 24–August 13

*Instructors:* P. Ascher, *Ecole Normale Supérieure*, S. Schuetze & S. Siegelbaum, *Columbia University*

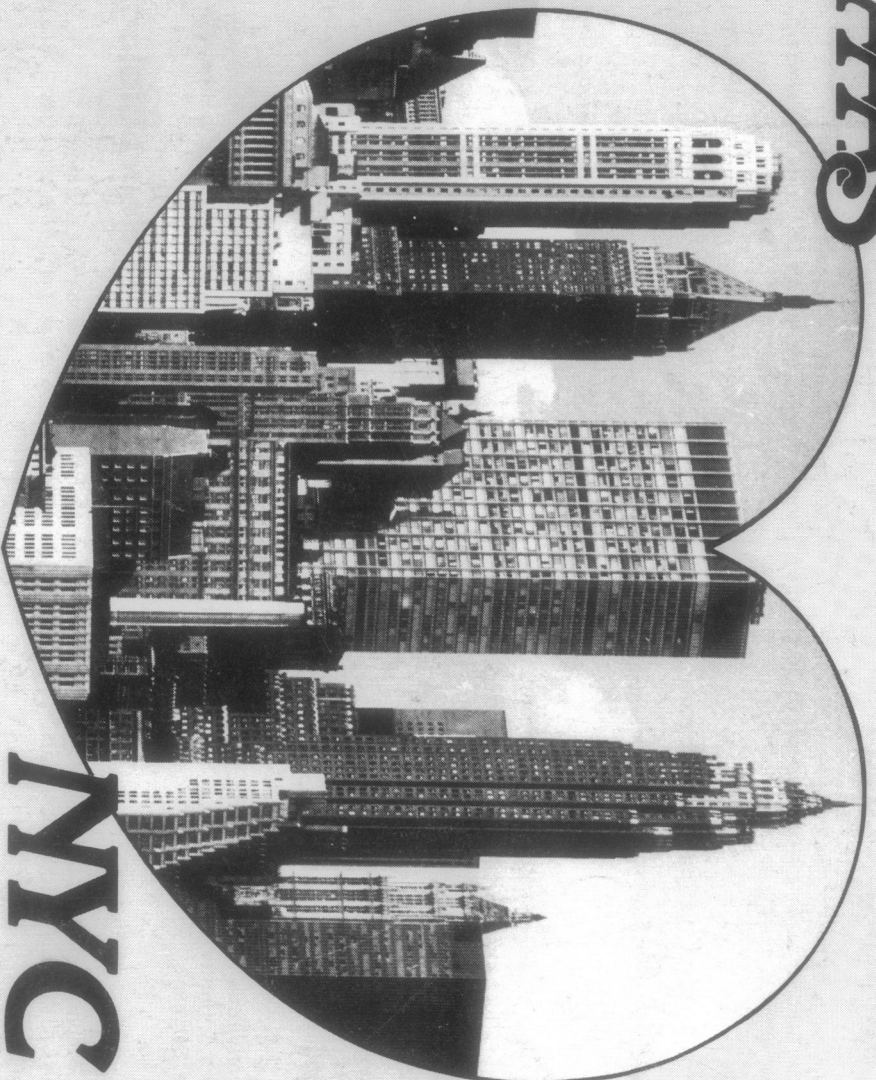
For information and applications write to:

Meetings Coordinator or Course Registrar



**Cold Spring Harbor Laboratory, Box 100  
Cold Spring Harbor, New York 11724**

# AAAS



## And we'll be there in 1984

Don't miss the 1984

AAAS Annual Meeting & Exhibit

24-29 May

The New York Hilton and  
the Sheraton Centre New York

*For advance information, write AAAS Meetings Dept.,  
10th floor, 1101 Vermont Ave., NW, Washington, DC 20005*