

time and length scales for mass transport in lakes as a prelude to a general development of simple box models. These concepts are used to good advantage to describe the behavior of hydrophobic organic pollutants in several Swiss lakes. Morgan and Stone summarize a large quantity of chemical kinetics succinctly and relate theory to a practical understanding of reaction dynamics in aquatic systems. In between these two chapters, which emphasize fundamental concepts, are 15 chapters on topics ranging from the chemistry of bogs to the use of carbon isotopes to measure paleoproductivity. More than a third of the chapters treat some aspect of trace-metal aqueous geochemistry; topics range from strategies of microorganisms to resist metal toxicity to the importance of sorption and particle settling in removal of trace metals from lakes. Several chapters deal with important topics of lake pollution: eutrophication, acidification, and heavy metal and organic pollution. In each case, the chapter takes a fresh approach and focuses on understanding the chemical processes involved by means of compartment models.

This is an important and well-written book, and the editor has done a fine job of assembling a group of interesting topics and capable authors. The book is packaged nicely, and I found few typographical errors. It should be in the library of all who are interested in the chemistry of lakes.

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## Some Other Books of Interest

**Ecology of Mosquitoes.** Proceedings of a Workshop (Welaka, FL, Jan. 1984). L. P. LOUNTBOS, J. R. REY, and J. H. FRANK, Eds. Florida Medical Entomology Laboratory, Vero Beach, 1985. xxii, 579 pp., illus. \$15.

The editors of this proceedings volume begin their preface by commenting that since the publication of M. W. Service's *Mosquito Ecology* in 1976 medical and applied entomologists concerned with mosquitoes have come to utilize ideas and methods from basic ecology and basic ecologists have come to recognize mosquitoes as fruitful subjects for research. They present this volume as providing an overview of current research interests in the field. The volume consists of 35 papers by 43 authors, about a third of them from outside North America. The papers, which include general considerations of such issues as host selection and life history genetics as well as reports of individ-

ual research projects, are arranged under the headings Communities and Interactions, Population Dynamics, Forecasting and the Environment, Ecology and Epidemiology, Ecology and Genetics, and Strategies and Patterns, the last described by the editors as a catchall. Each group is followed by an edited transcript of the discussion that occurred at the workshop from which the volume derives. The volume has taxonomic and subject indexes and a combined reference list containing over 700 entries.

—K.L.

**Search for the Universal Ancestors.** H. HARTMAN, J. G. LAWLESS, and P. MORRISON, Eds. National Aeronautics and Space Administration, Washington, DC, 1985 (available from Superintendent of Documents, Washington, DC). xvi, 129 pp., illus. Paper, \$3.75. NASA SP-477.

In 1983 a group of authors identifying themselves as the Pre-Cambrian Paleobiology Research Group produced a 570-page compendium (*Earth's Earliest Biosphere*, J. W. Schopf, Ed.; Princeton University Press) addressing in detail the biogeochemical evidence bearing on the origins and early evolution of life. Now a (somewhat overlapping) group of 27 scientists concerned from various points of view with the origins of life have produced a brief discussion of the subject at a level suitable for a general audience. The volume opens with a "prologue" by Philip Morrison. In four ensuing chapters the authors collectively discuss the nature of life, give a history of the search for its origins, describe the paleontological and biochemical evidence bearing on the question, outline the relevant aspects of earth and solar system history, and discuss evidence that has been or could be obtained in the laboratory. A final chapter, "Recommendations," identifies some questions in need of further investigation and proposes some organizational steps to facilitate the effort, including establishment of a fellowship program to attract young researchers to the field and a series of occasional awards to encourage efforts at synthesis and evaluation such as the one that gave rise to the 1983 volume.—K.L.

**Sixth International Conference on Collective Phenomena.** Reports from the Moscow Refusnik Seminar. INGA FISCHER-HJALMARS and JOEL L. LEBOWITZ, Eds. New York Academy of Sciences, New York, 1985. xx, 411 pp., illus. Cloth or paper, \$94. Annals of the New York Academy of Sciences, vol. 452. From symposia, Stockholm, Dec. 1983, and Tel Aviv, May 1984.

The collective phenomena to which the majority of papers in this volume are devoted are not, as the subtitle might suggest,

social or political but physical and biological. As is explained in preliminary papers by the editors, the series of conferences the volume represents had its origins in the Sunday seminars held in Moscow by Soviet Jewish scientists who had been deprived of ordinary professional contacts. Several of the planned conferences in the series were not permitted to take place. The set that is designated the sixth was held with the support of various Western organizations and individuals and included papers by both Western and refusnik scientists, though the contributions of many of the latter had to be presented in absentia. Of the principal papers in the volume the first three, all by D. I. Golenko, deal with optimization in scheduling theory. There follow 28 other technical papers, mostly in various fields of physical science, concerning for example solar wind-magnetosphere interactions, adhesive friction of elastomers, and diffeomorphisms in the physics of particles, gravity, and fluids. The volume concludes with 13 poster papers, about half of them on biological subjects, and an index of the 62 contributors.—K.L.

## Books Received

**Acoustical Imaging.** Vol. 14. A. J. Berkhout, J. Ridder, and L. F. van der Wal, Eds. Plenum, New York, 1985. xvi, 801 pp., illus. \$110. From a symposium, The Hague, April 1985.

**Adenosine Deaminase in Disorders of Purine Metabolism and in Immune Deficiency.** George L. Trites, Ed. New York Academy of Sciences, New York, 1985. xii, 345 pp., illus. Paper, \$80. Annals of the New York Academy of Sciences, vol. 451.

**Adolescence.** Margaret A. Lloyd. Harper and Row, New York, 1985. xvi, 445 pp., illus. \$25.95.

**Applications of Plasma Processes to VLSI Technology.** Takuo Sugano and Hyo-Gun Kim, Eds. Wiley-Interscience, New York, 1985. xvi, 394 pp., illus. \$44.95.

**Arthritis and the Elderly.** Roland W. Moskowitz and Marie R. Haug, Eds. Springer, New York, 1986. xii, 195 pp. \$21.95.

**Artificial Intelligence and Psychiatry.** D. J. Hand. Cambridge University Press, New York, 1985. x, 266 pp., illus. \$39.50.

**Aspects of Symmetry.** Selected Erice Lectures. Sidney Coleman. Cambridge University Press, New York, 1985. xiv, 402 pp., illus. \$69.50.

**Atherosclerosis.** K. T. Lee, Ed. New York Academy of Sciences, New York, 1985. x, 327 pp., illus. Paper, \$75. Annals of the New York Academy of Sciences, vol. 454. From a symposium, Saratoga Springs, NY, Aug. 1984.

**The Atmosphere of Venus.** Recent Findings. G. M. Keating, A. J. Kliore, and V. I. Moroz, Eds. Published for the Committee on Space Research by Pergamon, New York, 1985. vi, 201 pp., illus. Paper, \$49.50. Advances in Space Research, vol. 5, no. 9. From a workshop, Graz, Austria, June 1984.

**Behavioral Case Formulation.** Ira Daniel Turkat, Ed. Plenum, New York, 1985. xvi, 321 pp. \$35.

**Beyond Busing.** Inside the Challenge to Urban Segregation. Paul R. Dimond. University of Michigan Press, Ann Arbor, 1985. xii, 411 pp. \$29.95.

**Beyond the Helix.** DNA and the Quest for Longevity. Carol Kahn. Times Books, New York, 1985. xii, 285 pp. \$17.95.

**Briefbook.** Biotechnology and Genetic Diversity. Steven C. Witt. California Agricultural Lands Project, San Francisco, 1985. 145 pp., illus. Spiral bound, \$12.50.

**The Bunker Climate Atlas of the North At-**

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Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

kilogram per cycle). All systems include three-solvent gradient capacity and may be used with virtually all available types of columns. Microprocessor control of the systems permits automated operation. The programs are menu-driven and stored on diskette. Varex. Circle 527.

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programmed for up to 15 control, gradient, and timed event files. Control of a slave pump forms a quaternary system. Programming may be via keyboard or from remote locations through an RS232 or IEEE 488 port to support interfacing. Solvent composition and system pressure may be monitored from analog terminals. LDC/Milton Roy. Circle 530.

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**Iantic Ocean.** Vol. 1, Observations. Hans-Jörg Isemer and Lutz Hasse. Springer-Verlag, New York, 1985. viii, 218 pp., illus. \$98.

**Computer-Aided Processes in Instruction and Research.** George C. Beakley and C. R. Haden, Eds. Academic Press, Orlando, FL, 1985. xii, 373 pp., illus. \$29.50; paper, \$24.50. From a meeting, Oct. 1985.

**Computing Without Mathematics.** BASIC, Pascal, Applications. Jeffrey Marcus and Marvin Marcus. Computer Science Press, Rockville, MD, 1986. xiv, 322 pp. Spiral bound, \$21.95; with diskette, \$32.95. Computers and Math Series.

**Darwin's Metaphor.** Nature's Place in Victorian Culture. Robert M. Young. Cambridge University Press, New York, 1985. xx, 341 pp. \$44.50; paper, \$15.95.

**Design Theory.** D. R. Hughes and F. C. Piper. Cambridge University Press, New York, 1985. viii, 240 pp. \$39.50.

**Designing Optimal Strategies for Mineral Exploration.** J. G. De Geoffroy and T. K. Wignall. Plenum, New York, 1985. xvi, 364 pp., illus. \$55.

**The Development of Word Meaning.** Progress in Cognitive Development Research. Stan A. Kuczaj, II, and Martyn D. Barrett, Eds. Springer-Verlag, New York, 1986. xviii, 351 pp., illus. Springer Series in Cognitive Development.

**Diagnostic Interviewing.** Michel Hersen and Samuel M. Turner, Eds. Plenum, New York, 1985. xii, 363 pp. \$37.50.

**Dietary Fiber and Obesity.** Per Björntorp *et al.*, Eds. Liss, New York, 1985. x, 115 pp., illus. \$22. Current Topics in Nutrition and Disease, vol. 14. From a symposium, Washington, DC, 1984.

**Dynamic Meteorology.** S. Panchev. Reidel, Dordrecht, 1985 (U.S. distributor, Kluwer, Hingham, MA). xxii, 360 pp., illus. \$74. Environmental Fluid Mechanics, vol. 4. Translated from the Bulgarian edition (Sofia, 1981).

**Early History of Cosmic Ray Studies.** Personal Reminiscences with Old Photographs. Yataro Sekido and Harry Elliot, Eds. Reidel, Dordrecht, 1985 (U.S. distributor Kluwer, Hingham, MA). xvi, 444 pp., illus. \$89. Astrophysics and Space Science Library, vol. 118.

**Earth.** Frank Press and Raymond Siever. 4th ed. Freeman, New York, 1986. xx, 656 pp., illus. \$32.95.

**The Fantasy Bond.** Structure of Psychological Defenses. Robert W. Firestone. Human Sciences, New York, 1985. 406 pp. \$29.95.

**FASTBUS Software Workshop.** Proceedings, CERN (European Organization for Nuclear Research), Geneva, 1985. viii, 168 pp., illus. Paper. CERN 85-15. From a workshop, Geneva, Sept. 1985.

**Fetal Liver Transplantation.** Robert Peter Gale, Jean-Louis Touraine, and Guido Lucarelli, Eds. Liss, New York, 1985. xviii, 356 pp., illus. \$58. Progress in Clinical and Biological Research, vol. 193. From a symposium, Pesaro, Italy, Sept. 1984.

**Genetic Approaches to Microbial Pathogenicity.** W. Goebel, Ed. Springer-Verlag, New York, 1985. xii, 283 pp., illus. \$59. Current Topics in Microbiology and Immunology 118.

**Genome Multiplication in Growth and Development.** Biology of Polyploid and Polytenic Cells. V. Ya. Brodsky and I. V. Uryvaeva. Cambridge University Press, New York, 1985. viii, 305 pp., illus. \$79.50. Developmental and Cell Biology Series. Translated from the Russian.

**Geochemistry of Marine Humic Compounds.** M. A. Rashid. Springer-Verlag, New York, 1985. xii, 300 pp., illus. \$68.

**Geology and Mineral Resources of West Africa.** J. B. Wright, Ed. Allen and Unwin, Boston 1985. xiv, 200 pp., illus. \$40.

**Glycosylated Hemoglobins.** Methods of Analysis and Clinical Applications. E. C. Abraham. Dekker, New York, 1985. xii, 238 pp., illus. \$59.75. Clinical and Biochemical Analysis, vol. 19.

**Imaging Saturn.** The Voyager Flights to Saturn. Henry S. F. Cooper, Jr. Holt, Rinehart and Winston, New York, 1985. xiv, 210 pp., illus. Paper, \$8.95. An Owl Book. Reprint, 1983 edition.

**Immunology of Rheumatic Diseases.** Sudhir Gupta and Norman Talal, Eds. Plenum, New York, 1985. xviii, 818 pp. \$89.50.

**Immunopharmacology.** Peter A. Miescher, L. Bolis, and M. Ghione, Eds. Raven, New York, 1985. x, 251 pp., illus. \$39. Sereno Symposia Publications, vol. 23. From a symposium, Taormina.

**Learning to Heal.** The Development of American Medical Education. Kenneth M. Ludmerer. Basic Books, New York, 1985. xvi, 346 pp.

**Logic for Computer Science.** Foundations of Automatic Theorem Proving. Jean H. Gallier. Harper

and Row, New York, 1985. xvi, 511 pp. \$31.50. Computer Science and Technology Series.

**The Long-Term Treatment of Functional Psychoses.** Needed Areas of Research. T. Helgason, Ed. Cambridge University Press, New York, 1985. x, 270 pp., illus. \$59.50. From a workshop, Bagnina, Italy, May 1983.

**Magnetite Biomineralization and Magnetoreception in Organisms.** A New Biomagnetism. Joseph L. Kirschvink, Douglas S. Jones, and Bruce J. MacFadden, Eds. Plenum, New York, 1985. xxii, 682 pp., illus. \$95. Topics in Geobiology, vol. 5.

**Manhattan.** The Army and the Atomic Bomb. Vincent C. Jones. U.S. Army Center of Military History, Washington, DC, 1985 (available from Superintendent of Documents, Washington, DC). xx, 660 pp., illus., + foldout charts. \$21. United States Army in World War II: Special Studies.

**Medical Treatment of Down's Syndrome and Genetic Diseases.** Henry Turkel and Ilse Nusbaum. 4th ed. Ubioica, Southfield, MI, 1985. x, 402 pp., illus. Paper, \$12.

**Motor Behavior.** Programming, Control, and Acquisition. H. Heuer, U. Kleinbeck, and K.-H. Schmidt, Eds. Springer-Verlag, New York, 1985. xii, 223 pp., illus. \$35. Based on a symposium, Dortmund, West Germany, March 1983.

**Novations.** Strategies for Career Management. Gene W. Dalton and Paul H. Thompson. Scott, Foresman, Glenview, Ill., 1985. xvi, 280 pp. \$18.95.

**Nuclear America.** Military and Civilian Nuclear Power in the United States, 1940-1980. Gerard H. Clarfield and William M. Wiecek. Harper and Row, New York, 1985. x, 518 pp. Paper, \$10.95. Reprint, 1984 edition.

**The Nuclear Waste Primer.** Handbook for Citizens. League of Women Voters Education Fund. Nick Lyons Books, 1985 (distributor, Schocken, New York). vi, 90 pp., illus. \$11.95; paper, \$5.95.

**Nutrient Adequacy.** Assessment Using Food Consumption Surveys. Subcommittees on Criteria for Dietary Evaluation, National Research Council. National Academy Press, Washington, DC, 1986. xii, 146 pp., illus. Paper, \$13.50.

**The Ocean Basins and Margins.** Vol. 7A, The Pacific Ocean. Alan E. M. Nairn, Francis G. Stehli, and Seiya Uyeda, Eds. Plenum, New York, 1985. xiv, 733 pp., illus. \$95.

**Population Genetics.** Freddy B. Christiansen and Marcus W. Feldman. Blackwell Scientific, Palo Alto, CA, 1985. x, 196 pp., illus. Paper, \$14.95.

**Population Genetics in Forestry.** H.-R. Gregorius, Ed. Springer-Verlag, New York, 1985. vi, 287 pp., illus. Paper, \$19.60. Lecture Notes in Biomathematics, vol. 60. From a meeting, Göttingen, Aug. 1984.

**The Population Structure of Vegetation.** J. White, Ed. Junk, Dordrecht, 1985 (U.S. distributor, Kluwer, Hingham, MA). xiv, 669 pp., illus. \$97.50.

**The Posterior Pituitary.** Hormone Secretion in Health and Disease. Peter H. Baylis and Paul L. Padfield, Eds. Dekker, New York, 1985. xii, 397 pp., illus. \$90. Basic and Clinical Endocrinology, vol. 6.

**A Practical Introduction to Optical Mineralogy.** C. D. Gribble and A. J. Hall. Allen and Unwin, Winchester, Mass., 1985. xiv, 249 pp., illus. \$30; paper, \$14.95.

**Rationality and Intelligence.** Jonathan Baron. Cambridge University Press, New York, 1985. viii, 299 pp. \$32.50.

**Rayleigh-Wave Theory and Application.** E. A. Ash and E. G. S. Paige, Eds. Springer-Verlag, New York, 1985. x, 360 pp., illus. \$35. Springer Series on Wave Phenomena. From a symposium, London, July 1985.

**Readings in Marine Ecology.** James W. Nybakken, Ed. 2nd ed. Harper and Row, New York, 1985. xiv, 359 pp., illus. Paper, \$23.95.

**Recent Advances in Bile Acid Research.** Luigi Barbara *et al.*, Eds. Raven, New York, 1985. xx, 327 pp., illus. \$54.50. From a symposium, Bologna.

**Reproduction in Sheep.** D. R. Lindsay and D. T. Pearce, Eds. Cambridge University Press, New York, 1985. x, 403 pp., illus. \$79.50. Australian Wool Corporation Technical Publication.

**Religion, Science, and Worldview.** Essays in Honor of Richard S. Westfall. Margaret J. Osler and Paul Lawrence Farber, Eds. Cambridge University Press, New York, 1985. xvi, 350 pp., illus. \$49.50.

**Rotating Fields in General Relativity.** Jamal Nazrul Islam. Cambridge University Press, New York, 1985. vi, 122 pp., illus. \$34.50.

**Seeing the Light.** Optics in Nature, Photography, Color, Vision, and Holography. David S. Falk, Dieter R. Brill, and David G. Stork. Harper and Row, New York, 1985. xviii, 446 pp., illus., + plates. \$35.50.

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### ASSISTANT PROFESSOR OF ANATOMY WEST VIRGINIA UNIVERSITY

Applications are invited for a nontenure track position as adjunct assistant professor of anatomy. Preference will be given to individuals having an active, productive, and funded program in cancer-related research which will augment activities in the Mary Babb Randolph Cancer Center, as well as the Department of Anatomy. A person having expertise in electron microscopic and biochemical analysis of hemopoietic organs and their microenvironments is particularly desired. A relevant doctoral degree and at least 2 years of postdoctoral experience is required, as is experience in teaching medical microscopic anatomy. Closing date for application is 1 April 1986. Submit curriculum vitae with complete bibliography and three letters of reference to: **Dr. Robert S. McCuskey, Professor and Chairman of Anatomy, Department of Anatomy, West Virginia University Medical Center, Morgantown, WV 26506. West Virginia University is an Equal Opportunity/Affirmative Action Employer.**

**ASSISTANT OR ASSOCIATE PROFESSOR IN BIOCHEMISTRY.** Medical school, full-time, tenure-track position available to teach freshman medical students starting 1 July 1986. Postdoctoral experience required; preferred expertise in molecular biology and/or membrane biochemistry. Send curriculum vitae and arrange for three letters of reference to be sent to: **Dr. P. G. Iatridis, Northwest Center for Medical Education, 3400 Broadway, Gary, IN 46408. Indiana University is an Equal Opportunity/Affirmative Action Employer.**

**BIOLOGY TENURE-TRACK POSITION, ASSISTANT/ASSOCIATE PROFESSOR,** for September 1986. The Biology Department of Ohio Dominican College, a small Catholic coeducational college of liberal arts and science has available a position for a person with instructional experience in the areas of human physiology, genetics, microbiology, immunology, and general biology. Other qualifications include successful teaching at the college level, ability to relate well with faculty in other disciplines, and the Ph.D. Salary is commensurate with experience. Send a résumé and the names and telephone numbers of three references by 21 March to:

**Biology Search Committee**  
c/o William A. Shergalis  
Vice President for Academic Affairs  
Ohio Dominican College  
1216 Sunbury Road  
Columbus, Ohio 43219

### PROFESSOR OF ANATOMY WEST VIRGINIA UNIVERSITY

Applications are invited from persons experienced in the combined use of histochemical and microchemical analyses to study hepatic metabolism. Preference will be given to individuals qualified to hold the rank of professor of anatomy, have a demonstrated record of relevant publications and extramural funding, and are qualified to teach medical gross anatomy and microscopic anatomy. Closing date for applications is 1 April 1986. Submit curriculum vitae with complete bibliography, record of extramural funding, and three letters of reference to: **Dr. Robert S. McCuskey, Professor and Chairman, Department of Anatomy, West Virginia University Medical Center, Morgantown, WV 26506. West Virginia University is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**ASSISTANT PROFESSOR IN MOLECULAR/CELLULAR NEUROBIOLOGY.** Applications are invited for a tenure-track position available 1 September 1986. Candidates should have Ph.D. and demonstrated ability to conduct independent research and attract extramural funding. Interest in manipulating gene expression in mammalian cells, in particular, developing an adult mural tissue pertaining to neuropeptides and/or cytoskeletal elements is desirable. Teaching experience in anatomical science courses also desirable. Salary will be commensurate with qualifications. For fullest consideration, applicants should submit curriculum vitae, a brief statement of research interests, representative reprints, and names and addresses of three references by 15 May 1986 to: **Dr. G. D. Pappas, Department of Anatomy, University of Illinois College of Medicine, P.O. Box 6998, Chicago, IL 60680.**

*The University of Illinois is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

### ASSISTANT PROFESSOR NUTRIENT PARTITIONING AND GROWTH

The Department of Animal and Dairy Science, University of Georgia, invites applications for a full-time, tenure-track position at the assistant professor level. The successful candidate must have a Ph.D. in biochemistry and/or physiology or equivalent. Experience in a successful molecular biology and/or experimental nutrition program is required. The appointment will be 75 percent research and 25 percent teaching with a 25 percent joint appointment in the College of Arts and Sciences. The successful candidate will be responsible for developing an independent and innovative research thrust in metabolic regulatory mechanisms of farm animals. Applications must be received by 1 May 1986. Send completed curriculum vitae and have four letters of reference sent directly to:

**Dr. David G. Spruill, Head**  
Animal and Dairy Science Department  
Livestock-Poultry Building  
University of Georgia  
Athens, GA 30602

The Department of Veterinary Biosciences, College of Veterinary Medicine, University of Illinois, Urbana-Champaign, is seeking applications for a permanent tenure-track position at the **ASSISTANT OR ASSOCIATE PROFESSOR** level in the area of veterinary macro- or microanatomy. Individual will teach either macro- or microscopic anatomy in the veterinary medical curriculum and will be expected to develop a research program and participate in graduate instruction. Current research interests in the group are in endocrine/reproductive and hard tissue studies.

Candidates should possess the Ph.D. degree or equivalent with preference to those who also hold the D.V.M. or equivalent. The applicant must use English fluently. Salary commensurate with qualification. To ensure full consideration, applications should be received by 15 April 1986. Starting date on or after 1 July 1986.

Send curriculum vitae and three letters of reference to: **Dr. W. C. Wagner, Chair, Anatomy Search Committee, University of Illinois, Department of Veterinary Biosciences, 2001 South Lincoln, Urbana, IL 61801; telephone: 217-333-2506.**

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

**INTERNATIONAL** research organization concentrating on family health programs (including family planning) seeks an **ASSOCIATE DIRECTOR OF CLINICAL TRIALS.** Primary response is management of clinical trials and related preclinical research involving domestic and international studies of contraceptive products. The successful candidate will possess scientific expertise and hold a Ph.D., M.D., or equivalent in reproductive biology, pharmacology, or related fields with a minimum of 2 years of postdoctoral experience, preferably in clinically related research. Specific activities include design, implementation, and management of research projects, preparation and review of scientific publications and regulatory documents, and participation in clinical research training programs. Salary dependent on qualifications. Send résumé to: **Personnel, Family Health International, 1 Triangle Drive, Research Triangle Park, North Carolina 27709. An Equal Opportunity/Affirmative Action Employer, M/F/H.**

## NORTHWESTERN UNIVERSITY

### Chairperson, Department of Community Health and Preventive Medicine Medical School

Northwestern University Medical School invites applications for the position of chairperson, Department of Community Health and Preventive Medicine. Reorganization of this department offers an opportunity for an experienced academic physician with administrative and research background in public health, internal medicine, or public health and preventive medicine. Application letters, along with CVs, should be sent to Harold M. Visotsky, MD, Northwestern University Medical School, 320 East Superior Street, Chicago, Illinois 60611.



An Affirmative Action,  
Equal Opportunity Employer

## AUBURN UNIVERSITY

### DEAN, COLLEGE OF AGRICULTURE

Nominations and applications are invited for the position of Dean of the College of Agriculture at Auburn University, the major land-grant university in Alabama. The College includes the departments of Agricultural Economics and Rural Sociology, Agricultural Engineering, Agronomy and Soils, Animal and Dairy Science, Entomology, Fisheries and Allied Aquaculture, Horticulture, Plant Pathology, and Poultry Science. There is a faculty of approximately 125, with over 500 undergraduate majors and 235 graduate students in 11 M.S. and 7 Ph.D. degree programs. A reorganization is underway bringing together responsibility for the instruction, research, and extension programs under the Dean. Associate Deans will assist the Dean in each of these areas. The Dean will be expected to provide strong leadership in the development and strengthening of the Programs.

#### Qualifications Desired:

- Successful administrative experience
- Commitment to the land-grant tradition and a distinguished, tenurable record in research, teaching, or extension
- Earned doctorate in one of the fields in the College
- Proven ability to communicate with many publics

The salary and starting date are negotiable. Applications or nominations should be submitted to:

Dr. Warren W. Brandt  
Chairman, Search Committee  
208 Samford Hall  
Auburn University, AL 36849-3501  
Telephone 205-826-5771

Applications should include a letter of interest addressing special qualifications, and a resumé. The Committee will begin its review of applications on or about April 22, 1986.

AUBURN UNIVERSITY IS AN AFFIRMATIVE  
ACTION/EQUAL OPPORTUNITY EMPLOYER

## IMREG INC.

### SENIOR RESEARCH SCIENTISTS

IMREG, Inc., a publicly traded biotechnology company, is a leader in the development of immunoregulators and diagnostics for human and veterinary applications. To support our continued growth, we are looking for additional scientists with excellent training, postdoctoral experience and accomplishments in the following areas:

1. *Molecular Biology*—recombinant DNA technology, gene cloning, DNA sequencing.
2. *Cellular Immunology*—human lymphokine biology, immunoregulation, T cell function.

IMREG, Inc. is developing unique technologies for clinically important problems which demand creative research and development. We are looking for scientists who desire intellectually challenging positions to work at the advancing edge of the developing areas of human lymphokines and recombinant DNA technologies as applied to problems in immunoregulation. Positions are available in either our Boston area facility to be established in mid-1986, or our New Orleans headquarters. Candidates should be able to work independently, and have had experience in organizing and supervising a laboratory group.

IMREG, Inc. offers competitive salaries commensurate with training, experience, and a record of research productivity, an attractive fringe benefit package including a stock option plan, and linkages to the national academic community.

Please send curriculum vitae in confidence to John L. Carlton, Vice President of Administration and Finance, IMREG, Inc., Suite 1400, 144 Elk Place, New Orleans, LA 70112.

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

Opening Date: March 1, 1986 / Closing Date: March 31, 1986  
(All applications must be postmarked before closing date)

### DIRECTOR, NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES

The National Institutes of Health invites nominations and applications for the position of Director, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). This Institute conducts, fosters, and supports research and research training on the prevention, management, and cure of diabetes and related endocrine and metabolic diseases; kidney, urologic and blood diseases; and digestive diseases. Programs encompass intramural laboratory research and extramural (grants and contracts) activities in fundamental diabetes, digestive and kidney disorders.

This is a Civil Service position in the Senior Executive Service (SES), with a salary range from \$61,296 to \$68,700 per annum depending on qualifications. Candidates may be eligible for Physicians Comparability Pay up to \$10,000 per year. Alternately, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service. The SES individual selected, if not presently in the SES, must serve a one-year probationary period.

The mandatory qualifications are: (1) meet the minimum educational requirements for Medical Officer, GS-602, or Health Scientist, GS-601, or equivalent combination of experience and training, which demonstrates a broad knowledge and understanding of major public health problems; and (2) have research experience and knowledge of research programs in one or more areas related to diabetes, digestive and kidney disorders. In addition, candidates must meet the following managerial/executive qualifications: experience in the leadership/management of a basic or clinical research program, demonstrating competence to assume leadership responsibilities in: (1) assuring that national and agency goals and priorities are considered in carrying out

the functions and responsibilities of the organization; (2) establishing and maintaining relationships with key individuals and groups outside the organization; (3) directing and guiding programs and projects, including long-term and short-term planning and establishing objectives and priorities; (4) establishing procedures for the development and defense of the organization's budget, and allocating fiscal and personnel resources to support program implementation; (5) developing processes and overseeing activities to assure the fair and equitable employment of qualified persons, and implementing EEO/Affirmative Action objectives; (6) developing and implementing procedures for monitoring program performances, including periodic analysis and evaluation.

Candidates who meet the mandatory requirements will be further evaluated by the Search Committee on the following factors: additional managerial/executive qualifications; scientific reputation/peer recognition; training and education; honors and awards; and communications and interpersonal skills.

Applications (Personal Qualifications Statement, SF-171) are to be sent to Helen C. Stafford, Executive Secretary, Search Committee for Director, NIDDK, National Institutes of Health, Building 1, Room 19, Bethesda, Maryland 20892. For further information, contact her on (301) 496-4197. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER.

## POSITIONS OPEN

The Office of Agricultural Entomology, Illinois Agricultural Experiment Station, University of Illinois at Urbana-Champaign, is seeking an **ASSISTANT OR ASSOCIATE PROFESSOR** (tenure track) with training or experience in molecular biology and entomology. Candidates must have a Ph.D. degree and be capable of developing a strong research program using the tools and approaches of molecular biology relevant to agricultural entomology. Salary open. Anticipated starting date is fall 1986. Applications should be received by 15 April 1986, to receive full consideration. Send curriculum vitae, reprints, statement of research interests, and names of three references to: **Dr. J. V. Maddox, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, IL 61820. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.**

### POSITION AVAILABLE IN IMMUNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)

The Department of Biology and the center for Cancer Research at MIT seeks applicants for a tenure-track position at the level of **ASSISTANT OR ASSOCIATE PROFESSOR**. Candidates should have significant research accomplishments and should be able to develop a creative research program addressing significant problems in contemporary immunology and to participate in the department's educational activities. Applicants should send curriculum vitae, bibliography, a brief description of research interests, and the names of at least three references to:

**Professor Phillip A. Sharp**  
Director, Center for Cancer Research  
Room E17-113  
Massachusetts Institute of Technology  
Cambridge, MA 02139

*MIT is an Equal Opportunity/Affirmative Action Employer. Qualified women and members of minority groups are encouraged to apply.*

**THE UNIVERSITY OF CALIFORNIA, SAN DIEGO, DEPARTMENT OF CHEMISTRY**, invites applications for a position in **ORGANIC CHEMISTRY**. The appointment is likely to be at the **ASSISTANT PROFESSOR** level (\$29,400 to \$33,400). We are seeking candidates with a Ph.D. and a demonstrated ability for creative research and teaching at the undergraduate and graduate levels. We are particularly interested in candidates with a strong background and research interests in synthetic organic, polymer, or bioorganic chemistry. Candidates should send curriculum vitae, a list of publications, reprints of representative papers, a summary of plans for their research programs, and names/addresses of references by 1 May 1986 to: **Chairman, Department of Chemistry (B-032), Attention: Organic Chemistry Search Committee, University of California, San Diego, La Jolla, CA 92093**. A prompt response is recommended.

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

**ASSISTANT PROFESSOR VERTEBRATE ZOOLOGY**: The Science Institute at Antioch College seeks applications for a zoologist to teach vertebrate zoology, animal physiology, genetics, and other courses appropriate to the individual's background. Interest in an area such as cell biology, biochemistry, women in science, and science and society would be useful. The position is a 2-year appointment with renewal. Send résumé to: **Biology Search Committee, Personnel Office, Antioch College, 795 Livermore Street, Yellow Springs, OH 45387** by 28 March 1986. *Antioch College is an Affirmative Action/Equal Opportunity Employer that encourages applications from women and members of minorities.*

**BIOLOGICAL OCEANOGRAPHER**—2-year-postdoctoral position in zooplankton ecology. University of Miami's Rosenstiel School of Marine and Atmospheric Science. Demonstrated expertise in field research and sampling. Familiarity with bioacoustics would be an asset, but not essential. Send résumé, relevant publications, and at least three letters of reference to:

**Dr. Peter B. Ortner**  
RSMAS/BLR  
4600 Rickenbacker Cswy.  
Miami, FL 33149

*An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**AUTOLOGOUS SKIN CULTURE TECHNICIAN**. B.S. in microbiology or immunology or medical technologist in microbiology with tissue culture experience. To aid in Development Skin Culture Program beginning July 1986. Reply with curriculum vitae, three references to: **Personnel Department, Central Indiana Regional Blood Center, 3450 North Meridian Street, Indianapolis, IN 46208**.

**BIOCHEMIST, Bacterial Behavior**: conduct research and analysis in methane-producing anaerobic bacteria, toward developing efficient and inexpensive method to produce energy and natural fertilizer; organize and maintain records on behavior of anaerobic bacteria. Bachelor degree, biochemistry, 1 year of experience necessary; 40-hour week; \$21,600 per year; **J.O. Number NY 8011250; DOT code 041.061.026**. Mail résumés to: **NYS Job Service, 97-45 Queens Boulevard, Rego Park, NY 11374**.

### BIOCHEMIST/MOLECULAR BIOLOGIST

Several grant-supported research positions are available to work with an interdisciplinary group interested in the area of hormonal regulation of gene expression. Ph.D. with experience/interest in recombinant DNA, cell culture, or immunochemistry is required. Rank and salary according to qualification and experience. Send curriculum vitae and names of three references to:

**Dr. Arun K. Roy**  
Professor of Biological Sciences  
Oakland University  
Rochester, MI 48063

*An Equal Opportunity/Affirmative Action Institution*

**BIOCHEMIST—QUEENS COLLEGE—CITY UNIVERSITY OF NEW YORK (CUNY)** The Department of Chemistry at Queens College—CUNY invites applications for a tenure-track position as assistant professor starting September 1986. While the specific research area is open, experience in either molecular biology, neurochemistry, or immunochemistry is desirable. Applicants should have recent postdoctoral experience, have a demonstrated record of excellence in biochemical research, be able to establish an independent and productive research program, and have a strong commitment to excellence in teaching at both undergraduate and graduate levels. Send curriculum vitae, a statement of future research plans, and three letters of recommendation by 15 April 1986 to: **Dr. George Axelrad, Chairman, Department of Chemistry, Queens College—CUNY, Flushing, NY 11367. An Affirmative Action/Equal Opportunity Employer.**

### BIOCHEMISTRY FACULTY POSITIONS

Additional tenure-track positions in biochemistry are available and interested candidates not responding to our previous ads are invited to reply. Candidates should have several years of postdoctoral experience. They will be expected to carry out an independent research program and participate in the teaching of biochemistry to graduate and professional students. Candidates with research interests in cellular biochemistry and metabolism, membranes and receptors, neurochemistry, or eukaryotic molecular biology are encouraged to apply; however, candidates will be considered in all areas. Any interested person should submit a copy of his or her curriculum vitae, research plans, reprints or preprints of his or her three most significant publications, and two letters of reference to:

**John N. Fain, Ph.D.**  
Professor and Chairman  
Department of Biochemistry  
University of Tennessee  
Center for the Health Sciences  
800 Madison Avenue  
Memphis, TN 38163  
Attention: Cheryl M. Colson

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

### CELL BIOLOGY/IMMUNOLOGY/VIROLOGY

Postdoctoral scientist to be involved in NIH-supported research program focused on specificity and role at the clonal level of virus-induced immune responses. **Professor F. A. Ennis, Department of Medicine and Molecular Genetics, University of Massachusetts Medical School, Worcester, MA 01605**.

## POSITIONS OPEN

### BIOLOGICAL ANTHROPOLOGY/ANATOMY NORTHWESTERN UNIVERSITY

The Departments of Anthropology (College of Arts and Sciences) and Cell Biology and Anatomy (Medical/Dental Schools), Northwestern University, are seeking to jointly appoint **TWO BIOLOGICAL ANTHROPOLOGISTS** as tenure-track assistant professors. The appointments will require teaching human gross anatomy in cell biology and anatomy, as well as courses in anthropology. We seek candidates whose research is in the general area of primate or human evolution and morphology, especially functional morphology or paleontology. Ph.D. required. We will continue to accept applications until suitable candidates are found. Send curriculum vitae, statement of research interests, and have three knowledgeable referees send letters to: **Anthropology/Anatomy, Search Committee, Department of Anthropology, Northwestern University, Evanston, IL 60201. Northwestern University is an Equal Opportunity/Affirmative Action Employer.**

### COLBY-SAWYER COLLEGE DEPARTMENT OF NATURAL SCIENCES

**BIOLOGIST**—assistant professor, tenure track. Ph.D. required, evidence of college level teaching experience is desirable. Primary teaching responsibility in human anatomy and physiology but successful candidates will have the ability to teach other biology courses at the introductory and advanced level.

**PHYSICAL SCIENTIST**—Assistant professor, tenure track. Ph.D. required; evidence of college level teaching experience is desirable. Responsible for courses in introductory physics and college level mathematics, but successful candidates will have the ability to teach other physical sciences courses in the departmental curriculum. Send letter of application, curriculum vitae, and the names of three current references by 1 April to:

**Douglas Atkins**  
Assistant to the Vice President  
for Administration and Finance  
Colby-Sawyer College  
New London, New Hampshire 03257

### UNIVERSITY OF NEBRASKA—LINCOLN Biotechnology Coordinator

Responsibilities include research and facilitating the development of an expanding biotechnology and molecular biology program in the College of Arts and Sciences and the Institute of Agriculture and Natural Resources of this major land grant university. Substantial resources are available to support research in any area of basic molecular biology.

A 12-month academic appointment in the School of Biological Sciences at the level of associate professor or full professor with tenure is available. Rank and salary are negotiable.

Send nominations and applications with names of three references by 1 May (or until suitable candidates apply thereafter) to:

**Dr. Myron K. Brakke, Chairman**  
Search Committee  
School of Biological Sciences  
348 Manter Hall Life Sciences  
University of Nebraska—Lincoln  
Lincoln, Nebraska 68588-0118  
Telephone: 402-472-2166 or 472-2858

*Affirmative Action/Equal Opportunity Employer*

**KRUKOFF CURATOR OF AMAZONIAN BOTANY**. Applications are being accepted for a research position in plant taxonomy available 1 July 1986. This appointment can be made at any rank in our curatorial system, and salary will be commensurate with experience. Applicants should be willing to develop a vigorous research and publishing program in angiosperm plant families represented in the Amazon region of South America. Applicants should have previous field experience in the tropics and should be willing to conduct an active field program in the Amazon. Send curriculum vitae, a statement of research interests, and at least three letters of recommendation by 1 April 1986 to: **Dr. Ghilleen T. Prance, New York Botanical Garden, Bronx, NY 10458**.

## VICE PRESIDENT AND DEAN College of Medicine

The State University of New York Health Science Center at Syracuse invites applications and nominations for the position of Vice President and Dean of the College of Medicine. The SUNY Health Science Center at Syracuse (formerly Upstate Medical Center) is a comprehensive tertiary care facility with a 358 bed teaching hospital serving the 15 counties of Central New York in the areas of patient care and research and offering degree programs through the Colleges of Medicine, Health Related Professions, Graduate Studies and Nursing.

The College of Medicine enrolls 600 medical students, 50 graduate students and 352 house officers. There are 320 faculty in five basic science and 17 clinical departments and a program of continuing medical education.

The Vice President and Dean of the College of Medicine reports directly to the President and is responsible for all academic programs of the College and for the administration of budgets, facilities, planning activities and the appointment and development of faculty.

Candidates must hold an M.D. degree and have previous faculty and administrative experience in a medical school environment. Demonstrated ability to provide leadership in academic program and policy development and fiscal planning and management required.

Nominations and letters of application, including complete resumes and names of three references should be submitted, by March 24, 1986, to:



State University of New York  
Health Science Center  
Syracuse

Dr. Charles R. Ross, Chair  
Dean's Search Committee  
SUNY Health Science Center at Syracuse  
College of Medicine  
766 Irving Avenue  
Syracuse, NY 13210

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## UNIVERSITY VETERINARIAN

The University of Pennsylvania seeks a University Veterinarian to head its laboratory animal care and use program. This new position has been created in response to the increased emphasis the University is placing on the care and utilization of laboratory animals. The University Veterinarian will have the responsibility for determining policy regarding laboratory animal care and use at the University. He or she will work closely with the University's Institutional Animal Care and Use Committee and report administratively to the Vice Provost for Research.

The University Veterinarian is also expected to maintain an academic research program of distinction, and to qualify for appointment as a tenured full professor in either the School of Medicine or the School of Veterinary Medicine. It is anticipated that the University Veterinarian will have a primary academic appointment in one of these Schools and a secondary appointment in the other.

The responsibilities of the position include:

- the establishment of uniform standards for the entire University that meet or exceed those required by the Animal Welfare Act and by the NIH.
- the supervision, administration and design of programs providing the resources and services that ensure that all animal housing, care, and laboratory facilities meet these standards.
- the development of research, teaching and training programs in laboratory animal medicine.

Potential candidates should send a curriculum vitae to:

### University of Pennsylvania

Office of the Vice Provost for Research  
106 College Hall  
Philadelphia, PA 19104-6381

The University of Pennsylvania is an  
Equal Opportunity, Affirmative Action Employer



## BIOCHEMISTRY

Microgenics is a biotechnology company which has developed an advanced and proprietary diagnostic test system based on protein engineering by recombinant DNA techniques. New positions are available for exceptional research scientists.

**IMMUNOCHEMISTS, PhD.** Candidates will supervise product development of CEDIA homogeneous enzyme immunoassays. A PhD in immunology or chemistry and prior industrial product development experience required. Candidates will be familiar with validation of diagnostic assays, generation of GLP/GMP protocols, and submission of FDA documentation.

**CHEMISTS/BIOLOGISTS, BA/BS/MS.** Candidates will be familiar with the performance and documentation of an EIA/ELISA 510(k) validation. Responsibilities will include development of commercial immunoassays and applicable FDA documentation. Supervisory experience preferred.

**MOLECULAR BIOLOGISTS, PhD.** Candidates will protein engineer hybrid and tribrid polypeptides at the recombinant DNA level for commercial immunoassays within eukaryotic and prokaryotic expression vectors.

**CHEMISTS/BIOLOGISTS, BS/MS/PhD.** Candidates will function in protein chemistry with a practical knowledge of liquid chromatography, SDS-PAGE, Western-Blots and enzyme-immunoassays.

Microgenics offers a scientific challenge and equity participation with competitive salaries and fringe benefits. For immediate consideration, forward your resume in strict confidence to:

**MICROGENICS CORPORATION**  
2341 Stanwell Dr. • Concord, CA 94520



**MICROGENICS**

## POSITIONS OPEN

**BIOLOGY**, August 1986—Two positions, Cumberland College, a church-related liberal arts college, invites applications for two tenure-track positions. **PLANT BIOLOGIST**—Courses taught will include introductory biology, dendrology, plant physiology, and plant taxonomy. The successful applicant will be expected to participate in development of the expanding herbarium and in utilization of greenhouse facilities. **CLINICAL/HUMAN BIOLOGIST**—Courses taught will include introductory biology, human anatomy and physiology, medical microbiology and/or parasitology.

Both positions require a strong commitment to undergraduate education in a liberal arts, Christian atmosphere. In addition to classroom teaching and student advising, the individual will share in directing undergraduate research projects of upper division students. Ph.D. required. Excellent fringe benefits; salaries negotiable. Send letters of application, résumé, and references to: **Dr. Joseph E. Early, Academic Dean, Cumberland College, Williamsburg, Kentucky 40769**, by 1 April 1986.

**DEPARTMENT CHAIRMANSHIP**: College of St. Thomas, a Catholic coeducational liberal arts institution of some 7000 students, seeks a chairperson for the Department of Psychology. Qualified candidates will possess a Ph.D. and credentials as an accomplished teacher, practicing scholar, and efficient, accomplished administrator. The department will give preference to individuals in the following areas: (i) physiological psychology; (ii) industrial and/or organization psychology; (iii) personality studies. Nominations and/or applications should be sent to: **Dr. John Nemo, Dean of the College, P.O. Box 5051, 2115 Summit Avenue, St. Paul, Minnesota 55105**. In addition to a letter of application, interested individuals should send a current résumé (including names, addresses, and telephone numbers of at least three references). Applications and nominations are due by 15 March 1986. However, the search will remain open until the position is filled. *The College of St. Thomas is an Affirmative Action/Equal Opportunity Employer.*

**CHAIRPERSON**, Department of Microbiology/Immunology, Northeastern Ohio Universities College of Medicine. The Northeastern Ohio Universities College of Medicine, in consortium with the University of Akron, Kent State University, and Youngstown State University, offers a 6-year combined B.S./M.D. degree program. Undergraduate clinical education takes place in associated hospitals in Akron, Canton, Youngstown, and surrounding areas. Chairperson is responsible for teaching human genetics, immunology, and microbiology to medical students; for recruitment and development of microbiology/immunology faculty; for the day-to-day administration of the microbiology/immunology department; for a personal research program; and for participation in the education of graduate students in biomedical engineering, cell biology, and biochemistry/molecular biology through the graduate programs of the college's consortium universities.

The college enjoys strong support from the State of Ohio, with a capital expansion program about to begin on the basic medical sciences campus, Rootstown, Ohio. Position requires Ph.D. or M.D. degree, qualifications for senior faculty appointment, experience in medical school education and administration, demonstration of an active research program, enthusiasm and ability to interact with students and faculty.

Candidates should send curriculum vitae, a one-page statement of teaching and research interests and research funding, including names and addresses of three references no later than 15 April 1986. Applications or nominations should be sent to: **The Office of Human Resources, Northeastern Ohio Universities College of Medicine, P.O. Box 95, Rootstown, Ohio 44272**. *An Affirmative Action/Equal Opportunity Employer.*

### Ph.D. CYTOGENETICIST

New position immediately available for an experienced cancer cytogeneticist for research and clinical program. Opportunities include collaboration with other molecular geneticists. Curriculum vitae to: **Aubrey Milunsky, M.D., D.Sc., Director, Center for Human Genetics, Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118**, or telephone: 617-638-7083. *Equal Opportunity Employer, M/F.*

## POSITIONS OPEN

### CHIEF EXECUTIVE OFFICER (CEO)

Venture capital/corporate backed start-up in neurosciences, initially focused on Alzheimer's Disease, seeks a chairman/CEO. The ideal candidate will have had significant P & L responsibility in the pharmaceutical industry, will possess a technical undergraduate degree, and an M.B.A. from a first-rate business school. This individual will have a flair for marketing and finance to complement the president's scientific management talent. Competitive salary and substantial equity offered. Replies in confidence.

**Lawrence Bock  
650 Town Center Drive, Suite 810  
Costa Mesa, California 92626**

**DIAGNOSTICS DEVELOPMENT, MANAGER**—B.S. or M.S. in microbiology, chemistry, or related field; minimum 5 years of experience in practical immunology/chemistry required. Applied experience in composition, standardization, and formulation of immunodiagnoses preferred. Development begins with completed laboratory assay. Work for biotechnology firm emphasizing agriculture and animal health; associated with major universities. Send inquiry and résumé to: **Personnel Director, 620 Leshar Place, Lansing, MI 48912-1509**.

### EDUCATIONAL CONSULTANT Academic Doctorates in Any Field

Educational consultants with any academic doctorate to provide instruction to surgeons in use of our small surgical bonework motor. Video and hands-on instruction provided for surgeons who use equipment with fresh butcher bones to simulate procedures. Executive level work mixed with menial chores associated with courses. Approximately 60 days travel per year. Educational consultants are to be assigned to permanent instruction sites in New York, West Palm Beach, Chicago, and Anaheim. Additional sites are anticipated. Beginning salary \$35,000 to \$40,000 annually.

Send curriculum vitae, references, transcripts, and credit references to:

**Director of Education  
Midas Rex Psychomotor Institute  
3001 Race Street  
Fort Worth, Texas 76111**

Applications are invited for a full-time, permanent **FACULTY POSITION** in the Department of Physiology and Biophysics. The responsibilities of this position are the management of a large enrollment "Keller-Plan" laboratory course in human physiology for undergraduates, the preparation of instructional and test materials for the course and the supervision of the course staff. A doctorate in a physiological science and a demonstrated interest in the advancement of undergraduate education are required.

For full consideration, letters of application should be mailed by 20 April 1986 to: **Dr. Dennis E. Buetow, Head, Department of Physiology and Biophysics, 524 Burrill Hall, University of Illinois at Urbana-Champaign, 407 South Goodwin Avenue, Urbana, IL 61801**. Telephone: 217/333-1734. Please include your curriculum vitae, reprints of recent publications, and names of three references. The proposed starting date for this position is 15 June 1986.

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

### FACULTY POSITION

**Cardiovascular Research Institute (CVRI) and  
Department of Biochemistry and Biophysics  
University of California, San Francisco (UCSF)**

Applications are invited for appointment to a new faculty position in the general area of cell surface structure/function relationships. The successful applicant will hold a joint appointment in the department and in the institute. It is expected that the appointment would be at the associate professor level, although others with a strong research program in the area are encouraged to apply. Candidates should send their curriculum vitae and names and addresses of references to: **C. J. Fielding, Chair, Search Committee, CVRI, 1327-Moffitt Hospital, University of California, San Francisco, CA 94143-0130**. Applications are requested by 1 May 1986. *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

## POSITIONS OPEN

### EXECUTIVE DIRECTOR

**Harold and Helen McMaster Leadership Institute**

Bowling Green State University is now accepting applications for the position of executive director of the newly established Harold and Helen McMaster Institute for Scientific and Technical Industry.

The institute will focus primarily on the ways in which entrepreneurial firms in scientific and technical industry can maintain and enhance their creative energies, activities, and opportunities in a rapidly changing society. To accomplish its goals, the institute will hold major focused conferences and a series of specially designed workshops, and disseminate the outcomes to the scientific and technical business community.

The executive director will report to a board of directors composed of leaders in the scientific business community and representatives of the university and will be responsible for the organization and implementation of the institute's program and activities.

We are seeking an individual who can interact comfortably with professionals and academics in the field and who has managerial experience in the scientific and technical industry.

To apply or request additional information, please contact:

**Diane D. Regan  
Executive Assistant to the Dean  
College of Arts and Sciences  
Bowling Green State University  
Bowling Green, OH 43403**

*Equal Opportunity/Affirmative Action Employer*

### FACULTY POSITION

**Eye Research Institute of Retina Foundation**

The Eye Research Institute is seeking an investigator whose research interests focus upon or can be applied to the pathophysiology of diabetic retinopathy. Allied research areas could include cell biology, physiology, and biochemistry. Individuals should be willing to collaborate with both basic scientists and clinicians. Established investigators with ongoing funding are encouraged to apply; endowed funds are presently available for salary and/or research costs. Curriculum vitae and letter of interest should be forwarded to: **Sheldon M. Buzney, M.D., Search Committee, Eye Research Institute, 20 Staniford Street, Boston, MA 02114**. *ERI is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION

**The Department of Biology, Georgia Southwestern College**, invites applications for a tenure-track position to begin September 1986. A Ph.D. is preferred. Teaching duties will include entry level biology; human anatomy and physiology; and some upper level biology courses. Expertise in vertebrate biology is desirable. Although this is primarily a teaching position, research interest is encouraged. Salary and rank are commensurate with education and experience. Applicants should submit curriculum vitae; a statement of professional goals; and names, addresses, and telephone numbers of at least three references by 28 March 1986 to: **Dr. Elisabeth D. Elder, Chairman, Biology Search Committee, Department of Biology, Georgia Southwestern College, Americus, Georgia, 31709**. Telephone: 912-928-1250.

*Georgia Southwestern College is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION IN MICROBIOLOGY—

The Department of Microbiology of Jefferson Medical College, Thomas Jefferson University, is seeking a full-time, assistant professor with research interest and background in pathogenesis of infectious diseases. The candidate must have at least 2 years of postdoctoral experience and demonstrated research achievement in delineating pathogenesis at the molecular level. Responsibilities include establishing an active, independent research program, supervision of Ph.D. student training, participating in courses for M.D. and Ph.D. students and developing a graduate course. Submit a letter outlining research interests and goals, curriculum vitae, and names and addresses of three references to: **Harry L. Smith, Ph.D., Chairman, Faculty Search Committee, Department of Microbiology, Thomas Jefferson University, 1020 Locust Street, Philadelphia, PA 19107**. *An Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.*

## Ph.D. Biochemist

For major roles in new protein purification research.

Schering-Plough offers a challenging environment for high-level achievement. You will be backed by the vast research resources of a \$1.9 billion worldwide pharmaceutical pacesetter.

As principal contributor to our Bioisolation Process Development laboratory, you'll increase your professional stature interacting with industry-leading scientists, and Pilot Plant and analytical personnel in developing new protein purification techniques. Involvement extends to troubleshooting existing purification and isolation processes.

This opportunity requires a highly technical hands-on specialist experienced in isolation and purification of biologically active protein. A Ph.D. in Biochemistry is essential. We will also consider doctoral graduates with an appropriate scientific background.

We offer competitive salary and benefits. For immediate consideration, please forward resume including salary history to: Isabel Connelly, Personnel Manager, Schering-Plough Corporation, 1011 Morris Avenue, Union, NJ 07083.



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## LABORATORY MANAGER

Borden, Inc., a Fortune 100 company committed to the highest standards of quality, is continually expanding a broad line of food and dairy products. We have an excellent opportunity at our Research Center in Syracuse, N.Y. for a resourceful scientist with a minimum of 10-15 years of experience in food technology.

As Laboratory Manager, you would be responsible for providing analytical services for chemical or bacteriological research to other research department personnel. Our Center would rely on you for all testing procedures, including quality control techniques and shelf-life testing, as well as all microbiological analyses. You would consult with other areas of our company on matters relating to analytical procedures and environmental and plant studies.

This visible position requires solid scientific credentials and strong communication skills. A PhD concentrated in the field of Chemistry or Microbiology is preferred. A salary reflecting this position's significant responsibilities is complemented by attractive benefits. For confidential consideration, direct your resume and salary requirements to: **Professional Staffing, Dept. LM.**

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TM

## Postdoctoral Scientist Endothelial Cell Biology/ Vascular Pharmacology

Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking a Postdoctoral Scientist to work with Dr. Barry A. Berkowitz in an environment designed to foster creative innovative research and to promote personal and professional growth.

We consider postdoctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and a full interaction with the scientific community.

Our postdoctoral appointments are normally of 2 years duration. The successful candidate will undertake an independent program in endothelial cell biology and vascular pharmacology.

Candidates are required to have:

- a Ph.D./MD in Cell Biology, Biochemistry or Pharmacology with 0-2 years postdoctoral experience.
- a strong background and experience in tissue culture: endothelial cell, vascular smooth muscle.
- an interest in mechanism of vascular contraction and relaxation; vascular pharmacology.
- excellent academic record and communications skills.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and names of three references to: Walter B. Flagg, Senior Employment Consultant, SmithKline Beckman Corporation, 1576 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

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## AN OUTSTANDING OPPORTUNITY OFFERED BY MAJOR UPSTATE NEW YORK PHARMACEUTICAL COMPANY

### PHD PHARMACOLOGY

An entry level position is available immediately in the bone metabolism department of Norwich Eaton Pharmaceuticals in Norwich, New York. Candidates must have a PhD (Post-Doctoral experience preferred but not required) in one of the relevant Life Sciences. The candidate will be participating in a collaborative research effort with a select group of Scientists in the investigation in control mechanisms in bone cell physiology. The applicant will provide the pharmacological expertise for the team; experience in whole animal research, pharmacokinetics, drug bio-availability will be stressed. Candidate must demonstrate an innovative approach to research as well as strong interpersonal skills. Specific experience in pharmacology relevant to bone research is highly desirable but not absolutely required.

Norwich Eaton is located in a beautiful rural location, 200 miles northwest of New York City. Besides offering a stimulating environment for professional growth, the Company provides a competitive employment package including paid relocation, and company-paid health, dental, and retirement benefits. Some of Norwich Eaton Rx products include Macrochant, Dantrium, Sarenin, Vivonex, Entex LA and Buprenex. Resumes and inquiries should be addressed to:

**Robert M. Powers**  
Employment Manager  
Norwich Eaton Pharmaceuticals, Inc.  
A Procter & Gamble Company  
17 Eaton Avenue  
Norwich, NY 13815 U.S.A.

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## POSITIONS OPEN

### ENVIRONMENTAL/SANITARY ENGINEERS MINNESOTA POLLUTION CONTROL AGENCY

\$24,993 to \$31,299

Positions in the Division of Solid and Hazardous Waste require B.S. in environmental, sanitary, or civil engineering and 18 months of related professional engineering experience after graduation. M.S. in environmental or sanitary engineering may be substituted for 1 year of experience. These are State of Minnesota Civil Service positions.

For application instructions, send résumé to:

Department: AA  
Personnel Office  
Minnesota Pollution Control Agency  
1935 West County Road B2  
Roseville, MN 55113

For additional information, you may contact:

John Holck in Program Development  
at 612-296-7743

or  
Steve Reed in Regulatory Compliance  
at 612-296-7786

**FACULTY POSITIONS IN MOLECULAR IMMUNOLOGY AND VIROLOGY.** The Department of Microbiology and Immunology at the University of Miami has several tenure-track faculty positions at the assistant or associate professor level open for molecular biologists with research interests in immunology. Candidates are sought with interests and skills in the study of the structural genes, their regulation and their products that relate to immunoglobulins, T cell receptors for antigen, lymphocyte differentiation antigens, and the major histocompatibility complex. We are also interested in individuals that study the molecular biology of retroviruses or oncogenes of lymphoreticular cells. Quality research facilities, generous start-up funds, and salary will be made available to the successful candidates. Interested individuals are invited to write a letter of intent and enclose curriculum vitae, list of publications, description of future research plans, and names of three references to: **Dr. Thomas Malek, Molecular Immunology Search Committee** or **Dr. Diana Lopez, Retrovirology/Oncogene Search Committee, Department of Microbiology and Immunology, University of Miami School of Medicine, P.O. Box 016960 (R-138), Miami, FL 33101.**

*Equal Opportunity/Affirmative Action Employer.*

### TRUDEAU INSTITUTE

A position is available for an **IMMUNOLOGIST** interested in establishing a program in basic cellular immunology, transplantation immunology, tumor immunology, or immunity to infectious diseases. The appointment will be made at the level of assistant or associate professor, depending on the amount of postdoctoral experience and publication record. Preference will be given to applicants interested in immunoregulation. No teaching is required. The successful applicant will be guaranteed 3 to 5 years of support, depending on the level of appointment, but will be expected to compete for outside funding. Campus housing is available.

The Trudeau Institute is a not-for-profit pure research institute that specializes in studying the immunology of host defense mechanisms. It is located on the shore of Saranac Lake, 8 miles from Lake Placid, New York.

Send curriculum vitae and the names of three references to:

Robert J. North, Ph.D.  
Director  
Trudeau Institute, Inc.  
P.O. Box 59  
Saranac Lake, NY 12983

### IMMUNOLOGIST

The Department of Neurosciences, University of Medicine and Dentistry (UMDNJ) New Jersey Medical School is searching for a highly qualified immunologist at the **postdoctoral or junior faculty level.** Individual must be experienced in RIA, cellular immunology, Western blotting techniques. Studies will be carried out with ongoing multiple sclerosis research group. Applicants are requested to submit curriculum vitae and three letters of evaluation to: **Dr. Stuart Cook, Department of Neurosciences, UMDNJ-NJ Medical School, 100 Bergen Street, Newark, NJ 07103.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### HUMAN DIAGNOSTICS/INFECTIOUS DISEASES

MicroProbe Corporation, a new medical diagnostics company focusing on the use of DNA probes, has several immediate openings for senior scientists and research associates in the following disciplines:

- Molecular Biology
- Anaerobic Microbiology
- Immunochemistry
- Nucleic Acid Chemistry
- Diagnostic Kit Development

The successful senior scientist candidate will have a Ph.D., plus several years of experience beyond postdoctoral training, preferably in a company setting, and be capable of independent, innovative science. Research associate candidates will be at the B.S. or M.S. level, and will have experience beyond academic training.

MicroProbe offers a competitive salary and benefits package, the opportunity for a significant equity position and a market-driven R&D environment in a suburban Seattle setting.

We invite you to submit a letter of application and your résumé in confidence to:

MicroProbe Corporation  
1725 220th Street SE, 104  
Canyon Park Boulevard SE  
Bothell, WA 98021

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### IMMUNOLOGISTS AND MOLECULAR BIOLOGISTS

The Center for Biotechnology, Baylor College of Medicine, offers an academic environment for application-oriented research in frontiers of biomedical sciences. Several **RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW** positions are available in the immunological and molecular biological studies of

- (i) HTLV-III and AIDS,
- (ii) growth factors and immunoregulatory factors, and
- (iii) the nervous system

The center will locate to a new, permanent building in the harmonious and beautiful Houston suburb, The Woodlands, in 1986.

Innovative, self-motivated immunologists, cell and molecular biologists please write: **Dr. Tse-wen Chang, Professor of Biotechnology, Head, Hybridoma Division, or Dr. Nancy Chang, Associate Professor of Biotechnology, Head, Recombinant DNA Division, Center of Biotechnology, Baylor College of Medicine, One Baylor Plaza, Houston, Texas 77030.**

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**INVERTEBRATE ZOOLOGIST** to teach introductory biology, invertebrate zoology, freshman seminar, and to direct research of undergraduates. One year appointment at appropriate rank. Send application, transcript, and three letters of recommendation to: **J. E. Perley, Department of Biology, The College of Wooster, Wooster, Ohio 44691,** no later than 7 April. The College of Wooster, an independent liberal arts college, is an *Affirmative Action/Equal Opportunity Employer.*

### TRUDEAU INSTITUTE

A **POSTDOCTORAL POSITION** is available to study the immune response to tumors as a model of immunoregulation. Candidates with training in cellular immunology and interested in employing in vitro assays to analyze in vivo models of successful and unsuccessful immune responses should apply. A competitive salary and fringe benefits are offered and institute housing will be made available. Future employment is possible, depending on performance.

The Trudeau Institute is a not-for-profit pure research institute that specializes in studying the immunology of host defense mechanisms. It is located on the shore of Saranac Lake, 8 miles from Lake Placid, New York.

Send curriculum vitae and the names of three references to:

Robert J. North, Ph.D.  
Director  
Trudeau Institute, Inc.  
P.O. Box 59  
Saranac Lake, NY 12983

## POSITIONS OPEN

**INSTRUCTOR,** St. Lawrence University. One year replacement. Coordinator of Freshman Laboratories, to assist in the instruction of the introductory biology courses. Duties commence 26 August 1986, include setup and presentation of laboratory materials, supervision of student teaching assistants, and student contact in recitation and laboratory sessions. Master's degree required and preferred as highest degree; background must be suitable for instruction in general biology. Closing date 30 March 1986. Send résumé, transcripts, and three letters of recommendation to: **Mrs. C. Budd, Biology Department, St. Lawrence University, Canton, NY 13617.** *Equal Opportunity/Affirmative Action Employer.*

**INSTRUCTOR, BIOCHEMISTRY—RICE UNIVERSITY.** The Department of Biochemistry seeks applications for a 1-year appointment of a special postdoctoral teaching-research associate position. The candidate will participate in a high level undergraduate biochemistry laboratory program in both the fall and spring semesters. The candidate is also expected to carry out independent research in association with one of the full-time faculty members. The salary will depend on the quality of the candidate. Interested parties should send a complete résumé, reprints, and the names of three references as soon as possible to: **J. S. Olson, Chairman, Department of Biochemistry, Rice University, P.O. Box 1892, Houston, Texas 77251.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

**INSTRUCTOR IN MEDICINE (Research)**—Division of Endocrinology and Metabolism. Duties: Research work to analyze hormones and factors influencing bone formation and resorption. Use tissue cultures of fetal rat bones; perform assays and biochemical tests; write up and present results for scientific meetings and publications. Requirements: M.D. or Ph.D. in cell biology, biochemistry, or physiology; training in endocrinology and metabolism; 2 years of research experience in bone metabolism. Salary: \$30,000 per year. Send résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.** Refer to Job order number 514466. *An Affirmative Action/Equal Opportunity Employer, M/W/H.*

### ILLINOIS LEGISLATIVE SCIENCE INTERN

Sangamon State University invites applications from graduates (baccalaureate, masters, doctorate) of science or engineering programs for two 10.5-month science internships beginning 1 October 1986, as part of the Illinois Legislative Staff Internship Program. The science interns will be assigned to the Springfield and Chicago Science Offices of the Illinois Legislative Research Unit. The Science Office provides legislators with information and research about policy issues that involve science and technology. As part of the program, the science interns will participate in an academic seminar with other legislative interns. Send curriculum vitae by 1 April 1986 to: **Dr. Kent Redfield, Coordinator, Illinois Legislative Staff Internship Program, Sangamon State University, Springfield, Illinois 62708.**

### POSTDOCTORAL POSITION RICE UNIVERSITY

The Department of Biochemistry announces the availability of a postdoctoral position in the area of rapid reaction, structural, and spectral studies of ligand binding to heme proteins and synthetic model compounds. Strong background in chemistry, biochemistry, and instrumentation is desired. Available 1 July 1986. Salary will depend on experience. Send résumé and three letters of reference to: **Dr. John S. Olson, Professor and Chairman, Department of Biochemistry, Rice University, P.O. Box 1892, Houston, Texas 77251.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

**VISITING ASSISTANT PROFESSOR OF BIOLOGY.** One year replacement, Ph.D. required. Duties commence 26 August 1986. To teach sophomore-level general microbiology with laboratory (fall), winter term (January, topic optional), molecular genetics with laboratory (spring—upper level), two other courses (1 fall, 1 spring). Application including curriculum vitae, publication list, statement of aims, and letters from three references by 30 March 1986, to: **Professor Allen Rogerson, Biology Department, St. Lawrence University, Canton, NY 13617.**

*An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### MAMMALIAN DEVELOPMENTAL GENETICS

The Section of Genetics and Development of the Division of Biological Sciences at Cornell University is seeking to make a faculty appointment in mammalian developmental genetics at the assistant professor level. Candidates should be interested in joining a unit of individuals who have considerable genetic interests in their research and teaching. Beyond an active research program, applicants should have a disposition to the teaching of mammalian and/or human genetics at the undergraduate level.

Applications will be reviewed beginning 1 April 1986 and employment of successful candidate is anticipated in the fall of 1986, or later by negotiation. Applications should include curriculum vitae, a statement of proposed research objectives, and three letters of recommendation. Applications, letters and inquiries should be directed to: **Dr. Antonie W. Blackler, Genetics and Development, Emerson Hall, Cornell University, Ithaca, NY 14853.**

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

### MARINE SCIENTISTS

The Louisiana Universities Marine Consortium (LUMCON) is reopening its search for marine scientists in the following disciplines: **COASTAL PHYSICAL OCEANOGRAPHY** (continental shelf or estuarine processes), **FISHERIES BIOLOGY AND ECOLOGY** (life history and experimental studies of important commercial and recreational species), **TOXICOLOGY** (effects of pollutants on marine organisms), and **MARINE GEOCHEMISTRY** (processes associated with riverine inputs and sediment-water exchange).

Positions will be based at the newly completed Louisiana Universities Marine Center on the coast southwest of New Orleans. The Marine Center is a large, modern facility for research and education and is also the base of two new research vessels (17-m and 32-m in length). These are permanent, state-supported positions. Appointment is expected at the assistant or associate scientist level. Primary duties are research, but faculty affiliation with member universities is expected. Applicants must have a Ph.D. and postdoctoral experience is preferred. Successful candidates are expected to develop an active, independent research program, and to cooperate in the development of multidisciplinary programs.

Send a letter of application, a statement of research interests, curriculum vitae, and the names of three references before 7 April to: **Dr. Donald F. Boesch, Director, Louisiana Universities Marine Consortium, Star Route Box 541, Chauvin, LA 70344. An Affirmative Action/Equal Opportunity Employer.**

**MEDICAL WRITER.** Major international public relations firm seeks medical writer to work on pharmaceutical/health care accounts, in New York City office. Challenging, diverse job with growth potential. Candidate must have experience writing on medical topics for a lay audience. Newspaper or wire-service experience and strong science background (Ph.D.) preferred. Excellent salary and benefits. Send résumé and three writing samples to: **Box 12, SCIENCE.**

**MOLECULAR BIOLOGIST**, assistant professor—Ph.D., microbiology or molecular biology, experience in rDNA techniques. Will identify virulence and antigenic factors of infectious agents, collaborate with faculty in development of genetically engineered microbial agents, conduct studies of disease mechanisms of livestock and poultry. Deadline 1 May 1986. **Food Animal Health Research Program, Ohio Agricultural Research and Development Center, Ohio State University, Wooster, OH 44691. Telephone: 216-263-3739. Equal Opportunity Employer.**

**LIFECODES CORPORATION** has an immediate opening for a **MOLECULAR GENETICIST** for research and development of diagnostic tests for leukemia and lymphoma. Experience in immunoglobulin gene and T-cell receptor gene rearrangements and/or study of oncogenes an advantage. Candidates should have a Ph.D., good communicative and technical skills. Lifecodes Corporation, a rapidly growing biotechnology company, is located in Westchester, New York, 30 minutes from midtown Manhattan. To apply, send curriculum vitae and names and telephone numbers of three references to: **Peter A. Benn, Ph.D., Lifecodes Corporation, 4 Westchester Plaza, Elmsford, New York 10523.**

## MOLECULAR BIOLOGIST Senior Research Scientist

Collaborative Research, Inc. has an immediate opportunity available in the Human Genetics Department. The successful candidate will join a vigorous research team dedicated to the application of recombinant DNA technology to genetic mapping in humans and the development of diagnostics for inherited disorders.

Qualifications include a PhD and experience in one or more of the following areas: genetics, molecular biology, recombinant DNA technology, computer-based data analysis. Good communication skills and the ability to work cooperatively in a group setting are essential.

Collaborative Research, Inc., a leader in molecular genetics, is located 10 miles west of Boston. We offer a comprehensive salary and benefits program.

For consideration, please submit resume and names of 3 references to the Human Resources Department.

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## MANAGER ENVIRONMENTAL TOXICOLOGY

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Count on making a contribution  
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Hoechst-Roussel Agri-Vet Company, a subsidiary of American Hoechst Corporation, a Fortune 250 pharmaceutical/chemical company, has a newly created position for a qualified Environmental Toxicologist.

The successful candidate will join our New Products Coordination Group to manage environmental field studies in the U.S. and eventually become the company's resident expert in this area.

Responsibilities will include:

- Prepare protocols, locate study sites and recommend contractors for environmental field studies.
- Provide interpretation of scientific and statistical data and practical conclusions resulting from field studies.
- Interact with EPA, university, registration and contractors personnel to provide scientific expertise in ecological/environmental matters.
- Establish computer environmental fate modeling and provide input, interpretation and modifications of existing

programs to aid in estimations of pesticide exposure and to provide information for the design of field studies.

- Maintain current awareness of rapidly changing EPA protocols and positions on issues regarding pesticide exposure including run-off, groundwater contamination, etc.

Requirements include a PhD or equivalent with 3-5 years experience in performing aquatic, avian, drift and other field studies and will involve 25% travel.

This position, located at our modern corporate complex in a pleasant suburban setting, provides an excellent salary with comprehensive, full paid benefits package.

Send resume with salary history and requirements, to: James Hamilton, Human Resources Department, Section 50, American Hoechst Corporation, Route 202-206 North, Somerville, New Jersey 08876. An affirmative action employer M/F/H.

**Hoechst**



## POSITIONS OPEN

**MICROBIOLOGIST.** A tenure-track position at the assistant professor level is available for a candidate with research and teaching interests in medical microbiology. Postdoctoral experience, proven research ability, and commitment to graduate and undergraduate teaching in microbiology are required. Salary will be commensurate with experience. Send résumé, a statement of research interests and goals, transcripts of all academic work, and names and addresses of three references to: **Professor D. E. F. Talburt, Department of Botany and Microbiology, University of Arkansas, Fayetteville, Arkansas 72701.** Applications will be reviewed beginning 15 March 1986. *The University of Arkansas is an Equal Opportunity/Affirmative Action Institution.*

**MICROBIOLOGIST**—National Animal Disease Center, U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Ames, Iowa. ARS is seeking a microbiologist for research on pseudorabies (Aujeszky's disease) virus. Research areas include mapping viral genes that code for glycoproteins, virulence, and immunogens. Candidate must be knowledgeable in the molecular constitution of the herpes group of viruses and in molecular biological techniques. Possession of a Ph.D. and one or more publications in referred journal are desirable. Must be U.S. citizen. Salary is commensurate with experience (\$26,381 to \$48,876). For information on the research program and/or position, contact: **Dr. E. C. Pirtle, telephone: 515-239-8324.** For information on application procedures/forms, contact: **Mr. Lee Triplett, telephone: 305-344-1863.** Applications in response to this advertisement should be marked 6N006. Application must be received by 15 April 1986. Mailing address: **USDA, Agricultural Research Service, Personnel Operations Branch, Northcentral Section-6N006, Room 318H, Building 003, BARC-W, Beltsville, MD 20705.** *An Equal Opportunity Employer.*

### MOLECULAR BIOLOGIST, DEPARTMENT OF PATHOLOGY NORTHWESTERN UNIVERSITY MEDICAL SCHOOL

Applications are invited for a tenure-track position at the assistant or associate professor level with the possibility of a secondary appointment in the Department of Molecular Biology. Candidates must have a Ph.D. or M.D. degree and at least 2 years of postdoctoral experience. Preference will be given to candidates having research interests and experience in the molecular biology of differentiation of mammalian cells or the modulation of gene expression during chemical carcinogenesis including oncogene activation, and the demonstrated ability to develop a creative research program. The successful applicant will be expected to participate in graduate teaching, and training of graduate students and postdoctoral fellows, and will have the opportunity to interact with a large and active group involved in chemical carcinogenesis research. Please send curriculum vitae and names of at least three references by 30 April 1986 to: **Dr. D. G. Scarpelli, Department of Pathology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.**

*Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

### DANA-FARBER CANCER INSTITUTE AND HARVARD MEDICAL SCHOOL POSTDOCTORAL ASSOCIATE

To study interaction of protein toxins and immunotoxins with cultured mammalian cells (genetical, cell biological, and biochemical approaches). The date of appointment is open. Applicants should arrange for curriculum vitae and three letters of recommendation to be sent to: **Dr. V. S. Goldmacher, Room D720, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115.** *An Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately for recent Ph.D. with experience in cell ultrastructure and immunocytochemistry to study neurons in *Hydra*. Opportunity to use various electron microscopic techniques and computer reconstruction and to manage an electron microscope facility while director is on sabbatical leave. Send résumé and names of three references by 21 March 1986 to: **Dr. Jane A. Westfall, Department of Anatomy and Physiology, Kansas State University, Manhattan, Kansas 66506.**

## POSITIONS OPEN

**MOLECULAR IMMUNOLOGIST**—Tenure-track faculty position with a highly competitive salary, excellent continuing institutional research support, and new physical facilities. The appointment will be as a university research associate professor or university research professor. Applicants should send a statement of their research interests; curriculum vitae and list of publications; and names, addresses, and telephone numbers of three persons who may be contacted as references to: **Molecular Immunology Search Committee, Department of Microbiology, Box 7615, North Carolina State University, Raleigh, NC 27695-7615.** Closing date for applications is 30 April 1986.

*North Carolina State University is an Equal Opportunity Employer.*

### PALEONTOLOGIST

The Department of Geology of the University of Oregon invites applications for a faculty position as visiting assistant professor in the general area of paleontology. Appointment at a more senior rank will be considered only in the case of applicants desiring this position during sabbatical leave from their own institute. The exact area of expertise is less important than are demonstrated and potential achievement in research and teaching. The department currently includes two paleontologists, two additional faculty in allied areas of sedimentary geology, and five participating faculty from other departments. In addition to a variety of laboratory facilities for modern paleontological research, the department maintains the Condon Collection, Oregon's leading collection of fossils, rich in type material of Tertiary mammals. This appointment is initially for four academic terms (September 1986 to December 1987), after which it will be reconsidered. The deadline for applications is 15 April 1986, but late applications will be considered until the position is filled. Candidates should send an outline of their research and teaching aims, together with the names, addresses, and telephone numbers of three referees, curriculum vitae, and selected reprints of professional publications to: **Dr. G. J. Retallack, Department of Geology, University of Oregon, Eugene, OR 97403.** Minimum salary, \$24,000.

*The University of Oregon is an Equal Opportunity/Affirmative Action Institution.*

**PHYSIOLOGICAL PSYCHOLOGIST.** The University of Wisconsin, Department of Psychiatry, is seeking to fill a project associate opening. This position is full time, with an initial appointment through June 1987, renewable annually. The applicant should have a doctorate in physiological psychology or a related area and 2 years of postdoctoral experience. The appointee will be expected to help sustain an ongoing research program in the area of controllability of stress and the relationship to endocrine, autonomic, and behavioral systems in rats. Candidates should send curriculum vitae by 1 March 1986 to: **Ned Kalin, M.D., Wm. S. Middleton Veterans Hospital, 2500 Overlook Terrace, Madison, WI 53705.**

### PLANT MOLECULAR GENETICIST

The Department of Botany at the University of British Columbia is currently seeking applicants for a tenure-track position in the area of plant molecular genetics, effective 1 July 1986, subject to final budgetary approval. The candidate is expected to establish an active research program in some aspects of this area and to participate in the teaching of both undergraduate and graduate courses in genetics. The position will be filled at the level of assistant professor.

Candidates for this position should have demonstrated expertise in recombinant DNA technology in plants and have at least 1 or 2 years of postdoctoral experience.

Applicants should submit curriculum vitae, including a summary of future research plans, and arrange for three letters of reference to be sent directly to:

**Dr. Anthony Griffiths,  
Search Committee Chairman  
Department of Botany  
University of British Columbia  
Number 3529-6270 University Boulevard  
Vancouver, BC, Canada V6T 2B1**

Salary commensurate with qualifications and experience. The application deadline is 31 March 1986. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

## POSITIONS OPEN

**PLANT PHYSIOLOGIST-ECOLOGIST.** Marietta College, a small 4-year liberal arts college, is seeking to fill this tenure-track, biology position at the **Assistant Professor** level, beginning 15 August 1986. Ph.D. required with primary interest in teaching. Principal duties include teaching courses in plant anatomy and taxonomy, plant physiology, field ecology, and introductory biology. Opportunities to guide independent student research are available. Expertise in computers desirable and a secondary expertise in molecular biology is preferred. Send résumé and three letters of reference by 28 March 1986 to: **Dr. Peter E. Hogan, Chairman, Biology Department, Marietta College, Marietta, Ohio 45750.**

*Marietta College is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL BIOCHEMIST.** Position available immediately for Ph.D. familiar with work on bacterial respiration-phosphorylation. Applicants with a record of productivity in research should submit curriculum vitae and references to: **Dr. Fritz Lipmann, The Rockefeller University, 1230 York Avenue, New York, NY 10021.** *An Equal Opportunity Employer.*

### POSTDOCTORAL FELLOW

Postdoctoral positions available in a comprehensive program on the structure and function of excitable membrane proteins. Function is studied using patch clamp, internal perfusion, mRNA injection, and reconstitution in lipid bilayers. Isolation and purification use chromatography, radioligand binding, development of monoclonal and polyclonal antibodies, specific neurotoxins, and recombinant DNA technology. Applicants must have experience in either structural or functional methodologies and commitment to a broadly based approach. Send résumé and addresses for three letters of reference to:

**Arthur M. Brown, M.D., Ph.D., Professor and Chairman, Department of Physiology and Molecular Biophysics, Baylor College of Medicine, One Baylor Plaza, Texas Medical Center, Houston, Texas 77030.**

**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE:** A position is immediately available in a collaborative group interested in applications of peptide hormone growth factors in the regulation of human lung cancer. Experience with peptide biochemistry/chromatography required and with mass spectroscopy desirable. Project will involve using thermospray LC/MS. Send curriculum vitae and references to: **James Mulshine, M.D., National Cancer Institute—Naval Medical Oncology Branch, Naval Hospital, Bethesda, MD 20814.**

*An Equal Opportunity Employer*

**POSTDOCTORAL POSITION BIOCHEMISTRY/PHARMACOLOGY:** The Laboratory of Experimental Oncology, College of Veterinary Medicine, University of Tennessee has an immediate opening for an individual with a recent Ph.D. in biochemistry/pharmacology or related area. The successful candidate will be working with a multidisciplinary research group on mechanisms of nitrosamine induced respiratory tract carcinogenesis using whole animal and in vitro systems. Hands-on experience in HPLC, in vitro techniques, and assays pertinent to enzyme mediated drug metabolism required. Starting salary: \$18,000/annum with full faculty benefits. Salary increase negotiable pending on grant support and performance. Contact: **Dr. H. M. Schuller, College of Veterinary Medicine, University of Tennessee, P.O. Box 1071, Knoxville, TN 37901-1071.**

*The University of Tennessee Institute of Agriculture is an Equal Opportunity/Affirmative Action, Title XI, Section 504 employer.*

**POSTDOCTORAL POSITIONS** for teaching and research starting August 1986, for 2 years to support half-time teaching of laboratory sections in introductory biology and half-time research in collaboration with a member of the faculty who provides the facilities. To obtain information on areas of research or to apply, send résumé and three letters of recommendation by mid-April to: **Paul Megrew, Department of Biology, University of Iowa, Iowa City, Iowa 52242.** *An Equal Opportunity/Affirmative Action Employer.*

## CHIEF, MENTAL RETARDATION AND DEVELOPMENTAL DISABILITIES BRANCH

Center for Research for Mothers and Children  
National Institute of Child Health and Human Development  
National Institutes of Health  
Bethesda, Maryland  
U.S. Public Health Service

The MRDD Branch fosters and supports the nation's largest program of research and research training in the etiology, pathogenesis, epidemiology, treatment and prevention of mental retardation and developmental disabilities. It includes administration of a centers program for research in these specific areas.

The Chief of this Branch develops new program plans, oversees ongoing program management and provides overall scientific direction for extramural research and training in mental retardation and developmental disabilities. Candidates should have an M.D. or Ph.D. with research experience in the fields of mental retardation and/or developmental disabilities. In addition, applicants should have significant managerial experience in initiating and directing a research program in mental retardation, developmental disabilities or related areas.

Salary Range—\$52,262 to \$67,940 per annum  
(may be eligible for up to \$10,000 additional physician's comparability allowance)

Position information may be obtained by contacting:

Michael M. Rosenthal  
NICHD Personnel Office  
National Institutes of Health  
9000 Rockville Pike  
Building 31, Room 2A25  
Bethesda, Md. 20892

Applications (Personal Qualifications Statement, SF 171, CV, bibliography, letters of reference) must be submitted to the above address and postmarked by May 5, 1986.

*NIH IS AN EQUAL OPPORTUNITY EMPLOYER*

## NATIONAL INSTITUTES OF HEALTH Fellowships in Molecular Genetics

The Molecular and Medical Genetics Section of the Developmental and Metabolic Neurology Branch, National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, Public Health Service, invite applications for medical staff and research fellowship positions to study the molecular aspects of inherited disorders. Research opportunities involve utilization of recombinant DNA techniques to investigate: 1) effects of mutation on expression and translocation of proteins and enzymes related to neuro-genetic disorders; 2) developmentally regulated expression of neural and glial specific proteins; and 3) somatic cell gene therapy. Participation in the NIH Interinstitute Medical Genetics program is also possible. Medical fellowships are filled through the NIH Medical Staff Fellowships Program and appointments are made for two or three years. Applicants for clinical fellowships should have completed residency training. Starting salary is \$30,000 per annum. Research fellowships are filled through the NIH Visiting, NIH Staff or Senior Staff Fellowship Programs and appointments vary in duration from three to seven years. Stipend is determined by the candidate's educational and professional experience. All positions are located in Bethesda, Maryland.

Applications are invited from exceptionally qualified individuals having the Ph.D., M.D., or combined degrees, and pertinent clinical and/or research experience. NIH is an equal opportunity employer. Applications from women and minorities are invited. Interested candidates should submit their curriculum vitae to or request further information from:

**Dr. John Barranger or Dr. Edward Ginns**  
**Molecular and Medical Genetics Section**  
**DMNB, NINCDS**  
**Building 10, Room 4N248**  
**National Institutes of Health**  
**Bethesda, Maryland 20892 (301) 496-1465**

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

Opening Date: March 1, 1986 / Closing Date: March 31, 1986  
(All applications must be postmarked before closing date)

### DIRECTOR, NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES

The National Institutes of Health invites nominations and applications for the position of Director, National Institute of Arthritis and Musculoskeletal and Skin Diseases, (NIAMS). This Institute conducts, fosters, and supports research and research training on the prevention, management, and cure of arthritis, musculoskeletal and skin diseases. Programs encompass intramural laboratory research and extramural (grants and contracts) activities in fundamental arthritis and musculoskeletal and skin diseases.

This is a Civil Service position in the Senior Executive Service (SES), with a salary range from \$61,296 to \$68,700 per annum depending on qualifications. Candidates may be eligible for Physicians Comparability Pay up to \$10,000 per year. Alternately, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service. The SES individual selected, if not presently in the SES, must serve a one-year probationary period.

The mandatory qualifications are: (1) meet the minimum educational requirements for Medical Officer, GS-602, or Health Scientist, GS-601, or equivalent combination of experience and training, which demonstrates a broad knowledge and understanding of major public health problems; and (2) have research experience of research programs in one or more areas related to diabetes, digestive and kidney disorders. In addition, candidates must meet the following managerial/executive qualifications: experience in the leadership/management of a basic or clinical research program, demonstrating competence to assume leadership responsibilities in: (1) assuring the national and agency goals and priorities are considered in carrying out the functions

and responsibilities of the organization; (2) establishing and maintaining relationships with key individuals and groups outside the organization; (3) directing and guiding programs and projects, including long-term and short-term planning and establishing objectives and priorities; (4) establishing procedures for the development and defense of the organization's budget, and allocating fiscal and personnel resources to support program implementation; (5) developing processes and overseeing activities to assure the fair and equitable employment of qualified persons, and implementing EEO/Affirmative Action objectives; (6) developing and implementing procedures for monitoring program performances, including periodic analysis and evaluation.

Candidates who meet the mandatory requirements will be further evaluated by the Search Committee on the following factors: additional managerial/executive qualifications; scientific reputation/peer recognition; training and education; honors and awards; and communications and interpersonal skills.

Applications (Personal Qualifications Statement, SF-171) are to be sent to **Helen C. Stafford, Executive Secretary, Search Committee for Director, NIAMS, National Institutes of Health, Building 1, Room 19, Bethesda, Maryland 20892**. For further information, contact her on (301) 496-4197. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.

*NIH IS AN EQUAL OPPORTUNITY EMPLOYER*

# Research

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*...to build a better tomorrow*

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**GENETICS INSTITUTE, INC.**, located in Cambridge, MA, is a recognized leader in the field of biotechnology. Our research is committed to the development and application of recombinant DNA technology to human health care, agriculture and chemicals. Current expansion of our research and development efforts has created the following openings:

## **PROTEIN BIOCHEMISTRY**

A Ph.D. protein biochemist is needed to work on the purification and characterization of protein pharmaceuticals produced through recombinant DNA technology. Ideal candidate will have 0-3 years' postdoctoral experience with a strong background in bioseparation techniques (conventional, HPLC, and immunoaffinity) and practice in elucidating structure function relationships of proteins.

## **INSECT CELL CULTURE**

Ph.D. and M.S./B.S. level opportunities to join our process development department. Ph.D. or equivalent working experience and background in large scale insect cell culture required to lead a group involved in process development for large scale insect culture. Talented M.S./B.S. candidate needed to share responsibilities in this group which works closely with our insect cell expression group and process development engineers.

## **LARGE SCALE PURIFICATION**

Staff scientist opportunity to develop purification processes to pilot plant and production level. Ideal candidate will have Ph.D. in protein biochemistry or related field, with at least 4 years' experience in large scale purification and isolation in an industrial setting. Experience in immunoaffinity-based separations desired.

## **IMMUNOLOGY**

Seeking an immunologist/immunochemist to be responsible for supervision of our monoclonal and polyclonal antibody laboratory as well as immunoassay development. Ph.D. in immunology or related discipline with at least 2 years' postdoctoral experience in immunology/immunochemistry and immunoassay development required.

## **MICROBIAL PHYSIOLOGY**

Two positions are open in our fermentation laboratory to assist in fermentation optimization of recombinant proteins and other fermentation products. Qualifications include Ph.D. or M.S./B.S. in microbiology, biochemistry or related field, with experience in fermentation development and/or microbial physiology and metabolism.

## **MAMMALIAN CELL CULTURE**

Staff scientist sought to join our mammalian cell culture group. Participate in all laboratory aspects which include process development for large scale mammalian cell culture and physiological studies of high cell density suspension and microcarrier culture. Responsible for analyses of heterologous products from genetically engineered mammalian cells using ELISA, RIA, intrinsic labeling techniques, Western blot analysis, etc. Candidate should have (or be completing) Ph.D. in a relevant biological science, experience in mammalian cell culture, interest in techniques for large scale culture and a working knowledge of the analytical techniques named above.

*Genetics Institute offers a stimulating scientific environment in addition to excellent salary, equity participation and a complete benefits package. Qualified candidates should forward their resumes, in confidence, to **Barbara Covel**.*

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# Genetics Institute

87 CambridgePark Drive, Cambridge, MA 02140

## DEAN COLLEGE OF AGRICULTURE University of Idaho

The University of Idaho invites applications and nominations for Dean of the College of Agriculture, whose principal responsibility is to administer the College of Agriculture which includes the Idaho Agricultural Experiment Station and the Idaho Cooperative Extension Service. The Dean is the chief administrative officer of the College and is responsible to the Vice President for Academic Affairs. The Dean is assisted by an Associate Dean and Director of Resident Instruction, an Associate Dean and Director of the Agricultural Experiment Station and an Associate Dean and Director of the Cooperative Extension Service. College of Agriculture activities are conducted in nine on-campus departments, six research and extension centers, four district extension offices and 42 county offices throughout the state.

The Dean is responsible for overall administration and planning and has authority for decisions involving policy, personnel, and overall budget matters. The Dean provides leadership for and seeks support of the public, agricultural and related industries, state and local governments, and the University. The qualities of vision and leadership are considered essential characteristics in the Dean's role.

Minimal qualifications include an earned doctorate in an appropriate discipline and a proven record of professional achievement; an appropriate combination of successful administrative experiences in planning and evaluation, complex budget processes, public relations, policy formulation, and personnel management in the areas of research, teaching, or extension; vision and leadership to address present and future agricultural and societal needs; experience in and/or an understanding of a land grant system; ability to communicate and interact with diverse groups and develop agricultural policy; demonstrated ability to generate financial support; a commitment to excellence in teaching, research, and extension.

The University of Idaho is the land grant and senior research institution in the state. Diverse programs provide instruction for more than 9,000 undergraduate and graduate students enrolled in nine colleges. The University, with its statewide agricultural research and cooperative extension programs, is a major force for the advancement of agriculture in the state and region.

The Dean may assume duties as early as July 1, 1986 or as soon thereafter as possible. Salary is commensurate with qualifications and experience.

Nominations will be accepted until April 1, 1986. Letters of nomination should include a brief statement about the nominee's qualifications for the position. Individuals wishing to apply should submit a letter of application, a curriculum vitae and any other information which may be helpful to the search committee. Names, addresses and telephone number of five individuals who can serve as referees should be included with the applications. All application materials, including letters of reference, must be received by April 18, 1986. Nominations and applications should be submitted to:

**Dr. Dale Gentry**  
**Chairman, Search Committee**  
**University of Idaho**  
**College of Education**  
**Moscow, Idaho 83843**  
**(208) 885-6772**

*The University of Idaho is an equal opportunity/affirmative action employer and educational institution.*

## VIRGINIA COMMONWEALTH UNIVERSITY

### ASSOCIATE PROVOST FOR RESEARCH AND DEAN OF THE SCHOOL OF GRADUATE STUDIES

Nominations and applications are invited for the position of Associate Provost for Research and Dean of the School of Graduate Studies at Virginia Commonwealth University. This official is one of three Associate Provosts reporting to the Provost of the University, and is a key university-wide academic administrator. The responsibilities of the position include:

- the promotion and maintenance of excellence in research and scholarship;
- the promotion of excellence in graduate education and oversight of graduate programs;
- administration of special units reporting to the office of the Associate Provost for Research and Dean of the School of Graduate Studies;
- interaction with public and private sources of support for University research activities;
- formulation and implementation of policies regarding patents, copyrights and intellectual property rights in research agreements with private sponsors; and
- administration of federal and state regulations relating to research activities.

The Associate Provost and Dean should have a commitment to excellence in research, scholarship, and graduate education in all areas of a leading, comprehensive university. He or she should have the following qualities:

- leadership ability and success in working with agencies which support research, both within and outside the University;
- ability to work with administrative units and faculty to maintain and strengthen the Virginia Commonwealth University as a major center of the highest quality graduate education and research; and
- ability as a scholar and teacher, with experience in supervising Ph.D. dissertations.

Salary open. Position available July 1, 1986. To be assured of full consideration, nominations and applications (including resume) should be submitted by March 28, 1986, to:

**Dr. Louis Harris, Co-chair**  
**Search & Screening Committee**  
**c/o Office of Provost and Vice President**  
**for Academic Affairs**  
**Box 2527**  
**Virginia Commonwealth University**  
**Richmond, Virginia 23284-0001**

*Virginia Commonwealth University  
is an Affirmative Action, Equal Opportunity employer.*

## RESEARCH MANAGER

### Molecular Immunology

Ortho Pharmaceutical, a Johnson & Johnson Company, commits significant resources to the advancement of scientific research. To enhance the focus of our on-going efforts, we currently seek a scientist with a specific background in cellular immunology/immunoregulation.

Your responsibilities will include the supervision of four laboratories and twelve scientific personnel involved in immunoregulation research and monoclonal antibody generation utilizing *in vitro* human systems and *in vivo* animal models.

The successful candidate will have a Ph.D. or equivalent in immunology or a related field, and 8-10 years' experience in the field of immunology, molecular biology or cellular biology.

We offer a competitive salary and the outstanding professional growth and opportunity you would expect of a Johnson & Johnson Company. For prompt, confidential consideration, please forward a resume with salary history and requirements to: Dr. Gideon Goldstein, Dept. 8, ORTHO PHARMACEUTICAL CORPORATION, Box 300, Route 202, Raritan, New Jersey 08869-0602

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CORPORATION**

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## POSITIONS OPEN

**FOUR POSTDOCTORAL POSITIONS** available in the Developmental Genetics Laboratory, Department of Physiology, Johns Hopkins University School of Medicine, Baltimore, Maryland. Recent Ph.D.'s required in mammalian developmental biology, neurobiology, and cell/molecular biology. Positions are for research in (i) early embryonic and placental development of aneuploid mice (with J. Gearhart); (ii) and (iii) neural crest and cerebellar development in trisomic mice and mouse chimeras (with M. L. Oster-Granite); and (iv) control of growth and differentiation of embryonal carcinoma cells in culture (with J. Littlefield). Send curriculum vitae and references to: **Dr. John Gearhart, Developmental Genetics Laboratory, CMSC 604, Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, MD 21205.**

*An Equal Opportunity/Affirmative Action Employer. Applications from all qualified candidates are welcome; applications from women and minorities are encouraged.*

**POSTDOCTORAL POSITION** available immediately in biochemical toxicology to study the effects of chemicals on enzymes. Knowledge of enzyme chemistry is essential. Send curriculum vitae and names of three references to: **Dr. R. Craig Schnell, Dean for Graduate Studies and Research, North Dakota State University, Fargo, ND 58105.** *NDSU is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately for NIH-funded studies on structure-function relationships of thrombin-like venom enzymes. Amino acid sequencing and comparative three-dimensional molecular modeling using computer graphics in collaboration with **Dr. R. M. Stroud, University of San Francisco**, leading to site-directed mutagenesis experiments. Candidates should have background in molecular biology and protein chemistry. Competitive salary, dependent on experience. Send letter describing interests, curriculum vitae, and names and addresses of three referees to: **Dr. H. C. Pirkle, Department of Pathology, Medical Sciences I, University of California, Irvine, CA 92717.** *Equal Opportunity/Affirmative Action Employer.*

**TWO POSTDOCTORAL POSITIONS** are available to work on the immunobiology of T cell clones, IL-2, lymphokine-activated killer cells, antigen processing and presentation, mechanisms of tumor cell recognition and lysis by macrophages, and/or the role of cytokines in T cell and macrophage activation. Send curriculum vitae and letters of reference to: **Dr. Martin Cheever or Dr. Philip Greenberg, Department of Medicine/Oncology, RK-25, University of Washington, Seattle, WA 98195.**

### POSTDOCTORAL RESEARCH ASSOCIATES

Positions for NCI postdoctoral training program in molecular and cellular mechanisms of carcinogenesis are available at The University of Texas System Cancer Center-Science Park. Research programs focus on the following areas: somatic cell genetics, DNA repair and mutagenesis, carcinogen metabolism and adduct formation, tumor promotion, mechanisms of lymphomagenesis, normal and tumor cell differentiation, biochemical genetics, growth factors. Current approaches in whole animal and in vitro culture systems include; flow cytometry (BD FACS 440), HPLC, monoclonal antibody production, Southern blot analysis and DNA sequencing, isoenzymes analyses, and electron microscopy. Applicants must be U.S. citizens or permanent residents and have a Ph.D., M.D., or D.V.M. degree. For application forms contact: **Dr. Thomas J. Slaga, Director, UTSCC, Science Park-Research Division, P.O. Box 389, Smithville, TX 78957, Telephone: 512-237-2403.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE**, involving the elucidation of molecular mechanism of anesthetics and effects of anesthetics on macromolecular chemicals. Require Ph.D. in chemical (fuels) engineering and knowledge of analytical instrumentation and ability to perform Fourier transform infrared spectrophotometry, Raman scattering spectroscopy, differential scanning calorimetry, gas chromatography, x-ray diffraction and modern spectroscopy. Salary: \$16,200. Send résumé to: **Job Service, P.O. Box 11750, Salt Lake City, Utah 84147. Telephone: 801-533-2400.** Job Order Number 38251. *Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to conduct projects on protoplast fusion, with emphasis on organelle transfer and evaluation of tomato somatic hybrid plants for breeding. The initial appointment is for 2 years, with opportunity for extension. Interested candidates should hold a Ph.D. in plant genetics, horticulture or crop science, and have training and experience in tissue culture and plant breeding. Salary is commensurate with experience and qualifications. Send curriculum vitae and names of three references to: **Dr. K. C. Sink, Department of Horticulture, Michigan State University, East Lansing, MI 48824-1112.** *MSU is an Affirmative Action/Equal Opportunity Institution.*

### POSTDOCTORAL TRAINING OPPORTUNITIES IN DRUG DELIVERY RESEARCH

The research emphasis of this multidisciplinary drug delivery research/training program is on the innovative applications of biochemical and chemical principles to improve the transport of drugs through biological membranes and to direct drugs to specific cellular and subcellular sites. Initial emphasis is being placed on delivery of peptides and proteins. Specific areas of research include (i) the development of cell culture systems as models for the epithelial and endothelial cellular barriers; (ii) use of these cell culture systems to study the transport and metabolism of drugs; and (iii) development of carrier-based systems for enhancing membrane flux and for targeting of drugs to specific cellular sites. Applicants should have a Ph.D. degree in biochemistry, pharmacology, chemistry, pharmaceutical chemistry or related disciplines. Send curriculum vitae with names and addresses of three references to: **Dr. Ronald T. Borchardt, Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS 66045.** *An Equal Opportunity/Affirmative Action Employer.*

**RESEARCH ASSISTANT.** The Department of Cardiovascular/Thoracic Surgery at Rush Medical Center is currently seeking a dedicated, highly competent individual experienced in immunohistochemical techniques for its broadly based tumor marker research laboratory. Candidates should have experience with embedded and frozen sections, expertise in photomicrography, and be capable of working with a considerable degree of independence. Potential exists to pursue own research interests as well. Submit résumé along with three references to: **Dr. William Warren, Suite 202 Professional Building, Rush-Presbyterian-St. Luke's Medical Center, 1725 West Harrison Street, Chicago, Illinois 60612.** *Rush is an Equal Opportunity Employer.*



### RESEARCH IMMUNOLOGIST

**Nova Pharmaceutical Corporation**, a young company dedicated to the discovery of novel therapeutic and diagnostic products using the most current techniques, has an immediate opening for a Research Immunologist. Minimum requirements are B.S. or B.A. in Biochemistry, Immunology or equivalent. Some previous chemistry background is preferred, and a minimum of 2 years experience with hybridoma techniques and ELISA assays is essential.

Nova occupies new facilities at the Francis Scott Key Medical Center in Baltimore, and has strong intracampus links with The Johns Hopkins University, NIDA, and NIA. Nova has a full complement of chemical, biochemical, and pharmacological support personnel.

Nova offers competitive salaries and an excellent benefits package. For further information, please submit a current résumé with salary requirements to:

**Mrs. Lydia K. Battaglia  
Director of Personnel  
Nova Pharmaceutical Corporation  
5210 Eastern Avenue  
Baltimore, Maryland 21224-2788**

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

### PROFESSOR AND HEAD DEPARTMENT OF WILDLIFE AND FISHERIES SCIENCES TEXAS A&M UNIVERSITY

Texas A&M University seeks an accomplished scientist-educator to head this diverse department of about 40 faculty and professional staff, 160 graduate students, and 230 undergraduate majors. The department's programs focus on ecology and management of wildlife and fisheries resources, aquaculture, vertebrate genetics and systematics, museum science, and conservation education. Responsibilities of the head include intellectual and philosophical leadership of faculty, staff, and students, to maintain and strengthen the department's preeminence in wildlife and fisheries sciences; management and coordination of departmental resources; and service as principal liaison between the department and external entities. The department head not only holds an academic appointment as professor in the College of Agriculture, but also is an officer of the Texas Agricultural Extension Service. Qualifications include an earned Ph.D. in ecology or other discipline central to wildlife and fisheries sciences; a record of outstanding scholarly achievement and teaching effectiveness in the large-university environment; and demonstrated capability for leadership, management, and integration of academic, research, and extension programs. Send application, including curriculum vitae and names of at least three references, by 1 April 1986 to: **Dr. William H. Neill, Chairman, Search Advisory Committee, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX 77843-2258.** *Texas A&M University is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately in the Department of Chemotherapy, Roche Research Center. The successful applicant will join an interdisciplinary research team working on the rational design of new antibiotics. General area of research will be antibiotic targets and mechanisms of resistance. The position requires a Ph.D. in biochemistry or related field with training in membrane biochemistry. Knowledge of mechanisms of antibiotic action is helpful. Position is for 2 years; salary is competitive. Please send résumé to: **Dr. N. H. Georgopapadakou, Department of Chemotherapy, Hoffmann-La Roche Inc., Nutley, NJ 07110.** *Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available immediately in **NEUROIMMUNOLOGY**. We are defining the molecular bases of the immune response to neural antigens, with particular reference to the modulation and function of the major histocompatibility complex. The approach is multi-disciplinary. Experience in immunocytochemistry, neuroanatomy, or developmental biology is desirable. Send résumé and names of references to: **Dr. Lois Lampson, Department of Anatomy, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6058.** *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

### RESEARCH ASSOCIATE I

The individual will propose, plan, conduct, and evaluate experiments designed to further the scientific community's understanding of the functions of the D-alanyl ester residues of lipoteichoic acid in bacterial physiology. To accomplish this goal, the individual will propose, plan, conduct, and evaluate experiments involving the biosynthesis and functions of D-alanyl lipoteichoic acid with specific emphasis on the isolation of mutants defective in the synthesis of D-alanyl lipoteichoic acid. The individual will propose, plan, conduct, and evaluate biochemical and structural studies of these mutants in order to define the physiological role of D-alanyl lipoteichoic acid and to establish the pathway of D-alanyl lipoteichoic acid biosynthesis.

**Requirements:** Ph.D. biochemistry. One-year experience in a doctoral program or postdoctoral work experience in performing radioisotopic techniques. Six months of experience in a doctoral program or postdoctoral work experience in performing photo affinity labeling, cell disruption, wall and membrane isolation, in vitro RNA and DNA manipulation and electron microscopic and recombinant DNA techniques. Forty hours per week, 8:00 a.m. to 5:00 p.m.—\$19,939 per year. Send résumés with Social Security numbers to: **The Illinois Job Service, 910 South Michigan Avenue, Room 333, Chicago, Illinois 60605, Attention: Minaflor Y. Jaskowiak (Ref. Number 5130-J).**

## Dermatological Research

Pfizer Central Research seeks an individual with a PhD in the Biological or Pharmaceutical Sciences to participate in an existing, multi-disciplinary Investigative Dermatology research group. We are seeking individuals to investigate topically applied drugs for the treatment of local pain and inflammation, dermatological disorders such as acne and psoriasis, along with more basic studies of the structure/function of the stratum corneum and epidermis. A background in skin biology and/or pharmacology is a strong plus, but not a prerequisite.

This position provides excellent opportunities for professional recognition and considerable interaction with scientists in other disciplines. In addition, we offer an excellent salary, benefit and relocation package plus an attractive southeastern Connecticut shore location. Qualified applicants should submit their resume in confidence to: Dr. J.K. Larson, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



An equal opportunity employer

## AN OUTSTANDING OPPORTUNITY OFFERED BY MAJOR UPSTATE NEW YORK PHARMACEUTICAL COMPANY

### PhD PHARMACOLOGIST/BIOCHEMIST

Norwich Eaton Pharmaceuticals, Inc., a wholly-owned subsidiary of the Procter & Gamble Company, is seeking a Research Scientist to fill a position in product development.

Applicant should have a PhD degree in Pharmacology, Biochemistry or other appropriate field, with 0-2 years of Post-Doctoral experience. Requirements include a good understanding of mechanisms that govern the action/toxicity/metabolism of drugs and related IN VITRO and IN VIVO techniques for the evaluations of these mechanisms. Specific responsibilities will include designing, developing, & executing studies design; (1) to elucidate the pharmacology & biochemistry of novel muscle relaxant, and (2) to develop an understanding of the mechanism of drug action and toxicity.

Norwich Eaton is located in a beautiful rural location, 200 miles northwest of New York City. Besides offering a stimulating environment for professional growth, the Company provides a competitive employment package including paid relocation, and company-paid health, dental, and retirement benefits. Some of Norwich Eaton Rx products include Macroductin, Dantrium, Sarenin, Vivonex, Entex LA and Buprenex. Resumes and inquiries should be addressed to:

**Robert M. Powers**  
Employment Manager  
Norwich Eaton Pharmaceuticals, Inc.  
A Procter & Gamble Company  
17 Eaton Avenue  
Norwich, NY 13815 U.S.A.

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### POSTDOCTORAL FELLOWSHIPS IN MOLECULAR AND CELLULAR PHARMACOLOGY

Fellowships are available for postdoctoral training in modern pharmacology to recent recipients of the Ph.D. or M.D. degree. This multidisciplinary program provides opportunities for research in several areas related to the mechanism of action of drugs and hormones at the cellular and molecular level. Opportunities to gain hands-on experience 1) in nucleic acid biochemistry, including gene cloning and transcription, 2) in protein biochemistry, including methods for purification and study of hormone/drug receptors, adenylate cyclase, transglutaminase, protein kinases and phosphatases, phosphodiesterases, ornithine decarboxylase and RNA polymerases, 3) in methods for antigen-antibody detection including monoclonal antibody production, 4) in study of cell adhesion, cytoskeleton and somatic cell genetics, and 5) in evaluation of drug/hormone/receptor interactions and membrane biochemistry.

Applications from individuals who have been trained in areas other than molecular and cellular pharmacology but who have a sincere interest in the program are welcome.

Applications should include a current curriculum vitae, statement outlining research interests and career goals and three letters of recommendation addressed to:

Program Director  
Cellular and Molecular Pharmacology  
Postdoctoral Research Program  
Department of Pharmacology  
University of Texas Medical School  
P.O. Box 20708  
Houston, TX 77225

*The University of Texas is an equal opportunity, affirmative action employer.*

## SCIENTISTS NEEDED FOR R&D CENTER

The U.S. Department of Energy's Morgantown Energy Technology Center (METC) needs individuals for the following positions:

- A physical chemist, surface chemist, or geochemist with graduate-level research experience dealing with fluid-rock interactions in reservoirs, or a closely related field, to define and lead theoretical and laboratory research in enhanced oil recovery, and to provide senior-level consultation in related areas such as gas hydrates. An in-depth knowledge of fluid-fluid and fluid-surface interactions, phase relationships, and flow behavior of aqueous and hydrocarbon fluids in porous media, as evidenced by research experience is essential. The ability to develop and evaluate theoretical concepts for tertiary oil recovery techniques such as miscible fluid injection and to define laboratory experiments to test such concepts is also essential. Experience with chemistry of gas hydrates, geochemistry of gas/oil formation and transformation, isotopic or other analytical techniques for identification of hydrocarbon sources, or other research topics related to unconventional hydrocarbon resources would be highly desirable.
- A physicist or physical scientist with graduate-level research experience in advanced magnetic resonance techniques or a closely related field to define and lead research in application of pulsed nuclear magnetic resonance (NMR), magnetic resonance imaging (MRI), X-ray imaging, and other nondestructive analysis methods to geological materials such as oil and gas reservoir rocks, gas hydrates, and oil shale. An in-depth knowledge of theory and fundamentals of electromagnetic interactions with matter and the ability to apply such knowledge in the laboratory to investigate techniques such as solid-state NMR and MRI are essential. Experience with advanced NMR and X-ray tomographic equipment, with computerized data acquisition and processing techniques, with image processing methods, and with geological or fossil fuel materials is highly desirable.
- A physical chemist, kineticist, or combustion chemist with graduate-level research experience in reaction kinetics, flame chemistry, or mechanisms of fuel-related pollutant formation to conduct research in pyrolysis, kinetics and chemistry of combustion, contaminants release and removal, and other phenomena related to utilization of coal- and shale-derived fuels. Direct knowledge of and experience with chemical kinetics theories and calculation techniques, chemical equilibrium calculations, and techniques of kinetics measurements are essential. Experience with fuels chemistry, flame chemistry, reaction chemistry of contaminants such as sulfur and nitrogen, and specific techniques such as high-temperature flow reactors and spectroscopy of reactants is highly desirable.

Salary range \$31,619 to \$57,759. U.S. citizenship is required.

Inquiries and resumes should be addressed to:

William J. Bailey  
Personnel Officer  
Morgantown Energy Technology Center  
P.O. Box 880  
Morgantown, WV 26507-0880

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## Peptide Chemistry

The Peptide Chemistry Department of SK&F Laboratories is seeking outstanding chemists interested in synthesis, purification and characterization of peptides; synthesis of unusual amino acids and peptide bond replacements; optimization of synthetic reactions and scale-up of syntheses; assisting in the design of biologically active peptides; and analyzing biological results in the context of structure-activity relationships.

Successful candidates must have:

- M.S. in Organic Chemistry or equivalent or a B.S. in Chemistry with a minimum of three years experience.
- Minimum of two years experience in synthesis, purification and characterization of organic compounds.
- Experience with modern analytical techniques including HPLC, column chromatography, and the interpretation of NMR and mass spectra.

Located near Valley Forge, PA. in a new state-of-the-art research facility, we offer an excellent salary, benefits, and relocation package as well as the opportunity for personal and professional growth. Please forward your resume to William L. Walker, Senior Employment Consultant, SK&F Laboratories, 1572 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

All replies will be kept confidential.

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## UNIVERSIDAD AUTONOMA DE CD. JUAREZ ESCUELA DE MEDICINA

### ADVANCED STANDING ADMISSION PROGRAM.

The University of Ciudad Juarez, School of Medicine has established a procedure of individuals possessing certain doctoral degree, whereby these individuals may be considered of admission into the medical curriculum at an advanced level as students in the regular five-year program.

It is possible for successful students to complete the core clinical courses and clinical training for the M.D. degree within 36 months.

To be considered for admission an individual must possess credentials in one of the following categories.

- 1.- A. Ph. D., in a basic medical science.
- 2.- A doctoral degree from certain professional school of Dentistry or Veterinary Medicine where the basic sciences is equivalent in content to that of the Medical School.
- 3 - A Ph. D., in a (Non-Basic) science are where the transcript can demonstrate appropriate scientific training.

Individuals with a professional degree in Chiropractic Medicine, Optometry, Osteopathy, or Stomatology are not eligible for advanced standing.

Applications must be completed by April 30 1986 prior beginning study in Cd. Juarez.

DIRECT INQUIRES BY MAIL TO:

ADMISSION COMMITTEE  
INSTITUTO DE CIENCIAS ICB.  
UNIVERSIDAD AUTONOMA DE CIUDAD JUAREZ  
APDO. POSTAL 231-  
CD. JUAREZ, CHIH. MEX.

Integrated Genetics of Framingham, Massachusetts is a leading biotechnology firm specializing in the health care field with emphasis on DNA probe diagnostic technology and production of complex therapeutic proteins.

## Diagnostics Project Leader

A challenging opportunity exists in our non-isotopic detection program for an experienced, self-motivated Senior Scientist with a proven track record in the development of sophisticated and innovative detection systems for diagnostic assays. The successful applicant will have a Ph.D. with emphasis in biochemistry and enzymology and 3-5 years of hands-on industrial experience in assay development. A background in immunology, immunoassay, and DNA probe technology would be advantageous.

Integrated Genetics offers an attractive compensation and benefits package. For immediate consideration, forward your resume to: **Elaine Rosenberg, Director of Human Resources.**



Integrated Genetics, Inc.  
Dept. S-37  
31 New York Avenue  
Framingham, Massachusetts 01701  
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## MICROBIOLOGIST/ BIOCHEMIST

The Tennessee Valley Authority's National Fertilizer Development Center in Muscle Shoals, Alabama, is seeking an individual with a Ph.D. in microbiology or biochemistry with solid experience in the use of microorganisms in bioconversion processes.

This individual will be responsible for assessing the potential for applying microbiological or bacteriological techniques to the development of new or improved fertilizer materials, monofactoring and processing methods for agronomically useful compounds, and managing or minimizing the environmental impact of fertilizer manufacture and use.

This is a temporary appointment which will not exceed 12 months. If you are qualified and eager to contribute to a new program during the initial formulation, please send your resume with social security number to:

TENNESSEE VALLEY AUTHORITY  
Employment Branch SM0061  
Room 240 MIB  
Knoxville, TN 37902



EQUAL OPPORTUNITY EMPLOYER: TVA may consider for appointment only U.S. citizens and others eligible for payment under applicable statutes.



## Provost and Vice President for Academic Affairs MICHIGAN STATE UNIVERSITY

Michigan State University, one of the nation's leading institutions of higher education, seeks an outstanding individual to be its Provost and Vice President for Academic Affairs.

The prototype of the national land-grant institutions, Michigan State University is committed to instruction, research, and public service. The University comprises fourteen colleges having an enrollment of 40,000 students and a faculty and academic staff of 3,600, with programs leading to bachelor's, master's, Ph.D., and graduate professional (medical) degrees. The University is a member of the Association of American Universities, the National Association of the State Universities and Land-Grant Colleges, and the American Council of Education. It is noted for the diversity and strength of its international studies and programs. Located on a beautifully landscaped campus in East Lansing, MSU is a part of the Lansing metropolitan area, sharing with it a rich cultural life.

The Provost is the principal academic officer of the University and is responsible to the President and an elected, eight-member Board of Trustees.

### Responsibilities

- leadership and administration of the academic programs of the University;
- assembly and administration of the academic budget;
- administration of all academic personnel procedures, including appointments, promotions, terminations, salaries, tenure, and working conditions;
- ensuring that administrative procedures preserve academic freedom and promote academic responsibility;
- supervision of policies and procedures regarding admissions and registration;
- administration of academic facilities and support services, including libraries and computer facilities;
- representation of the University to state, national, and international publics;
- carrying out the responsibilities of the President in the President's absence.

### Qualifications

- distinguished scholarly achievement sufficient to qualify for appointment as Professor with tenure in an appropriate academic unit;
- devotion to academic excellence;
- understanding of and commitment to the land-grant philosophy;
- outstanding ability in oral and written communication;
- commitment to the participation of faculty and students in academic governance;
- significant and successful experience in administering the academic programs of a complex and comprehensive university, including personnel and budgetary matters;
- ability to articulate the mission and needs of the University to its constituencies in a unique agricultural-industrial state;
- demonstrated commitment to equal opportunity for all individuals.

**Preferred Starting Date: July 1, 1986**

### Procedures

Nominations and letters of application with curriculum vitae should be submitted as soon as possible and preferably by April 1, 1986. Requests for confidentiality will be honored.

Please write to: Professor Edward C. Ingraham, Chairperson  
Provost Search Advisory Committee  
Michigan State University  
406 Administration Building  
East Lansing, Michigan 48824-1046

Telephone — (517) 353-3530

*MSU is an Equal Opportunity, Affirmative Action Employer*

## POSITIONS OPEN

**RESEARCH ASSOCIATE** position available immediately to identify and clone a gene conferring resistance to potato virus X. Experience in plant recombinant DNA research desired. Candidates with a recent Ph.D. or a M.S. with 2 years of research experience are invited to apply. Salary is competitive depending on qualifications. Send résumé and three letters of reference to: **Dr. S. M. Tavantzis, Department of Botany and Plant Pathology, University of Maine, Orono, ME 04469.**

**RESEARCH DIRECTOR.** Manage and direct research laboratory of company engaged in contract research, testing, and analysis for food industry. Direct research projects involving food fermentation; prediction of food spoilage potential and shelf life; and determination of causes of food poisoning outbreaks and food spoilage. Develop and evaluate analytical techniques employing latest technologies, including genetic engineering, monoclonal antibody, and so forth. Forty hours per week. 8 a.m. to 5 p.m. Salary: \$30,000 per year. Must have Ph.D. in food science and 2 years of experience in the offered position or 2 years of experience in research or teaching in food microbiology. Either the 2 years of experience required above OR at least 2 years of the Ph.D. studies and thesis work must have included research or work in food microbiology and biochemistry, especially food fermentation; isolation and identification of microbial metabolites produced during food fermentation; and use of HPLC, GLC, electrophoresis, and chromosomal DNA isolation techniques. Send résumé to: **Illinois Job Service, 910 South Michigan Avenue, Room 333, Chicago, IL 60605, Attention: D. Doli-gala, Reference Number 5294-D. An Employer Paid Ad.**

The National Weather Service announces three **SENIOR EXECUTIVE SERVICE REGIONAL DIRECTOR (RD)** positions: (i) Western RD, Salt Lake City, Utah; (ii) Eastern RD, Garden City, NY; and (iii) Southern RD, Fort Worth, Texas. Applicants will be evaluated on the basis of demonstrated ability to administer or direct large scientific or service programs. Professional experience or background in the physical sciences is required especially with the scientific techniques associated with weather and river forecasting, for example, data acquisition, analysis, prognosis, program refinements, and dissemination. Also desirable is experience in the forecasting of convective weather phenomena, and experience that demonstrates an understanding of the forecast and warning services of the National Weather Service. Experience is also sought that demonstrates a full understanding of advanced computer concepts, applications technology, and operational experience associated with agriculture, aviation, air pollution, and fire weather. *Applicants must demonstrate a sensitivity to minority groups and women with respect to equal employment opportunity and affirmative action.* Demonstrated interpersonal skills are also required, that is, the ability to interact with others, to represent the agency in various forums and media, and to make clear oral and written presentations. To APPLY: Interested persons should contact: **Louise Parrish, telephone: 301-443-6667, for application forms.** Reference Vacancy Number NS86-02LP (Eastern Region), Number NS86-03LP (Western Region), Number NS86-04LP (Southern Region). Applications must be received prior to the closing date of 31 March 1986. *An Equal Opportunity Employer.*

## TOXICOLOGIST

The New Hampshire Division of Public Health Services is seeking a toxicologist with experience and training in environmental public health. Position requires 5 to 7 years of experience. M.S. in toxicology, biochemistry, or pharmacology, with a strong emphasis on environmental and occupational toxicants. Ph.D. level training preferred. The ideal candidate will have a thorough knowledge of quantitative/qualitative risk assessment, occupational toxicology, regulatory toxicology, and health hazards associated with low dose exposure to toxicants. Permanent position located in Concord, New Hampshire. The salary range is \$25,213 to \$30,966, with a 5 percent increase effective in June. Closing date for filing applications: 22 March 1986. Contact: **Barbara Ingerson, telephone: 603-271-4614,** for further information. Obtain applications from and return to: **New Hampshire Department of Personnel, State House Annex, Concord, NH 03301. An Equal Opportunity Employer.**

## PROGRAM

### CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a doctor of optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Ph.D.-O.D. Program Director, Admissions Office, The New England College of Optometry, Room 15, 424 Beacon Street, Boston, MA 02115.**

## COURSE

**M.Sc. COURSE IN MICROBIAL PHYSIOLOGY RELATED TO BIOTECHNOLOGY**—King's College offers a 1-year advanced taught course to well-qualified students leading to the degree of master of science (University of London). The course concentrates on those aspects of microbial physiology relevant to biotechnology and is taught over 1 calendar year. A major part of the course is a research project of 6 months' duration. We expect the results of these projects to be of publishable quality and they form a major part of the course assessment. Tuition and bench fees for the course are £5,200 (ca. \$6250). Accommodation for the year can be provided and costs approximately £1,500 (ca. \$1800). For further information, please contact: **Dr. M. J. Bazin, King's Biotechnology, King's College London, Campden Hill Road, Kensington, London W8 7AH, United Kingdom.**

## CONFERENCE

### VI INTERNATIONAL CONFERENCE ON CYCLIC NUCLEOTIDES CALCIUM AND PROTEIN PHOSPHORYLATION

2 to 7 September 1986

National Institutes of Health, Bethesda, Maryland

Opening Lecture: **D. Koshland**

Plenary Sessions:

**Receptor Structure:** J. Goldstein, J. Schlessinger, R. Stroud.

**Receptor Regulation:** R. Lefkowitz, H. Lodish, M. Schramm.

**GTP Regulatory Proteins:** A. Gilman, H. Bourne, M. Ui.

**Ion Channels:** H. Reuter, M. Ladzunski, W. Catterall, I. Levitan.

**Regulation of Protein Phosphorylation:** E. Fischer, P. Cohen, Y. Nishizuka, J. Corbin.

**Integration of Cellular Information:** E. Kandel, P. Greengard, P. Baker.

**Calcium Homeostasis—Role of Inositol Triphosphates:** R. Michell, E. Carafoli, R. Denton, A. Somlyo.

**Oncogenes:** S. Aaronson.

Poster Sessions and Round Table Discussions will be held on related topics (program to be announced).

**FOR FURTHER INFORMATION PLEASE CONTACT:**

**Cyndy Fowler**  
Foundation for Advanced Education  
in the Sciences, Inc.  
Building 10, Room B-1-L-101  
National Institutes of Health  
Bethesda, MD 20892  
Telephone: 301-496-7976

## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIPS

You'll be involved with in vivo/in vitro work on growth factors, osteoblasts, and receptor physiology. Interested applicants with experience in physiology of somatomedins, receptor interactions, working with small animals, or osteoporosis are encouraged to apply. Salary will be paid according to NIH scale. Please send curriculum vitae, brief description of research interests, and three letters of recommendations to: **E. Martin Spencer, M.D., Ph.D., Director, Laboratory of Growth and Development, Children's Hospital of San Francisco, CA 94118. We are an Equal Opportunity Employer.**

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIP JULY 1987**—Pathologist or other biomedical scientist (M.D., D.D.S., D.V.M., Ph.D.) for 1- or 2-year program at the Armed Forces Institute of Pathology beginning July 1987. Excellent research training and educational opportunity. Generous support provided as a grant from the American Registry of Pathology. *Equal opportunity position; women and minorities encouraged.* Send curriculum vitae and brief statement of interests and qualifications to **Box 31, SCIENCE**, by 1 October 1986.

**DIABETES-ENDOCRINOLOGY-METABOLISM FELLOWSHIPS:** NIH-funded research training program. New positions available July 1986. Multidisciplinary faculty provides basic and clinical research training with emphasis on diabetes mellitus, regulation of energy metabolism, and clinical nutrition. Contact: **Edward S. Horton, M.D., Endocrinology-Metabolism-Nutrition Unit, C352 Given, University of Vermont College of Medicine, Burlington, VT 05405. Affirmative Action Employer.**

### PREDOCTORAL FELLOWSHIPS IN ANATOMY LOYOLA UNIVERSITY OF CHICAGO STRITCH SCHOOL OF MEDICINE

Fellowships leading to the Ph.D. degree in anatomy are available on a competitive basis. Included are 12-month stipends and full tuition remission. Departmental research interests are concentrated in the fields of neuroscience, immunology, and cell biology. The medical center campus is located in the near western suburb of Maywood, which affords reasonably priced housing and easy access to downtown Chicago. For further information and application forms contact: **Dr. Frederick Wezeman, Director of Graduate Program, Department of Anatomy, Loyola University Stritch School of Medicine, Maywood, IL 60153.**

## SYMPOSIUM

### THIRD SYMPOSIUM ON RECENT ADVANCES IN THE IMMUNOLOGY AND BIOCHEMISTRY OF TROPICAL DISEASES

Sponsored by  
Division of Biomedical Sciences  
School of Graduate Studies  
Meharry Medical College  
Nashville, Tennessee  
Tuesday, 22 April 1986

This 1-day symposium brings together molecular biologists, immunologists, and biochemists who share an interest in parasitic disease research. Seven speakers include: **Anthony Cerami** (Rockefeller), **Cachexia in Parasitic Diseases;** **James Young** (Smith Kline Foundation), **Malaria Vaccines;** **Phillip LoVerde** (State University of New York—Buffalo), **Schistosome Gene Expression;** **Jacob Frenkel** (University of Kansas), **Human Toxoplasmosis;** **Richard Young** (MIT), **Leprosy Vaccines;** **Larry Simpson** (University of California, Los Angeles), **Mitochondrial Genome;** **C. C. Wang** (University of California, San Francisco), **Trypanosome Glycosome.**

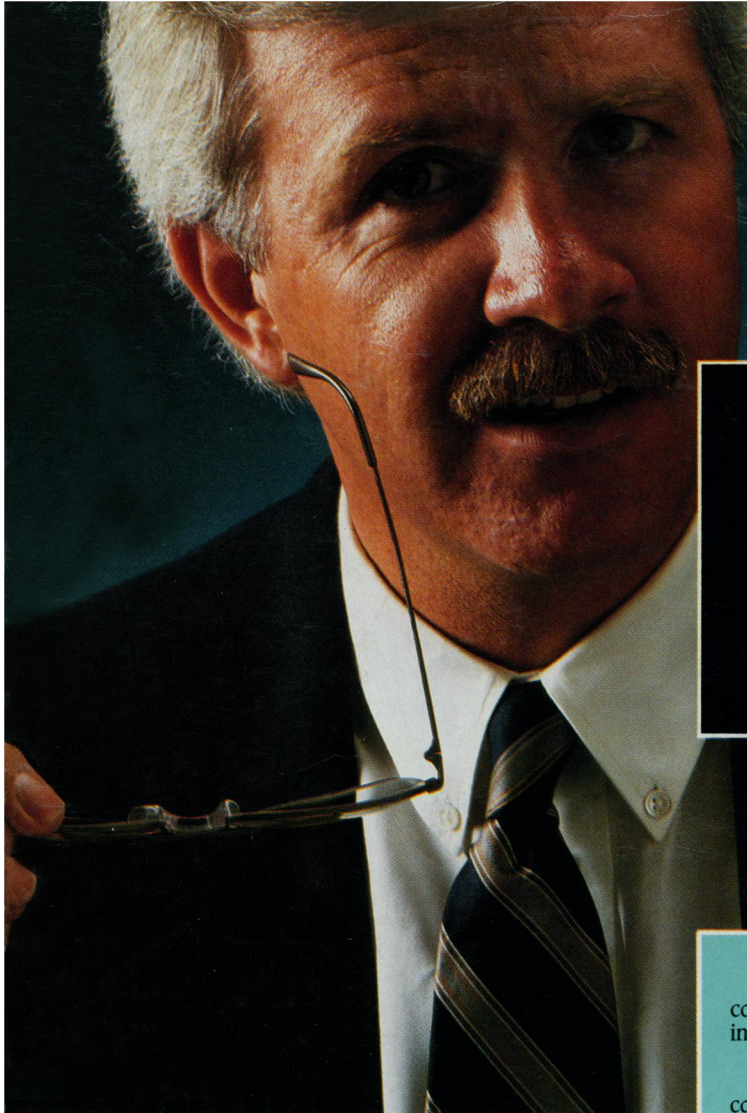
Registration \$20.00—Students \$4.00. Contact: **Dr. George C. Hill, Division of Biomedical Sciences, Meharry Medical College, 1005 D. B. Todd, Jr. Boulevard, Nashville, TN 37208; telephone: 615-327-6193.**

This symposium is part of a Molecular Parasitology Training Program with predoctoral and postdoctoral fellowships available.

## MARKETPLACE

**WANTED TO BUY:** Good condition Polarimeter for quantitative starch assay of corn meal.

**Box 30, SCIENCE**



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Mention Ortho and many people automatically think gynecological company. That's understandable. When you are the dominant company in a certain field, people tend to think that's all you do.

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So, whether or not you have considered Ortho in the past, perhaps you should now. We're a lot more than you think. We invite you to forward your resume and salary requirements in confidence to: Manager Selection, Dept. C-2, Ortho Pharmaceutical Corporation, Route 202, Raritan, NJ 08869-0602. An equal opportunity employer.



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