

"Schematic representation of feeding interactions at trees of major fruit species [utilized by] *V. olivaceus*. Two major types are shown: those with small and with large seeds. Some fruit predators find their food in the trees, others on the ground. Fruit predators are divided into seed destroyers and seed disseminators." [From Gray's Monitor Lizard]

to criticize (for example, reptiles don't have "masseter" muscles), and some will disagree with more substantive aspects. For example, Auffenberg accepts an amalgam of previous phylogenies (themselves based on limited, inadequately analyzed, and conflicting evidence), treats living taxa as ancestors, and mentions the extensive fossil record of varanids only as evidence for predation by ancient humans. The resulting narrative falls short of a convincing evolutionary and biogeographic perspective.

However satisfying for its own sake, natural history often is more useful when guided by broader theoretical concerns. That can be hard, because both fieldwork and scholarship are highly time-intensive activities, but this book illustrates the rich potential rewards of the effort. It is even better than the author's *Behavioral Ecology of the Komodo Monitor* (University Presses of Florida, 1981), provides an intriguing, detailed case study for future conceptual syntheses, and will interest herpetologists, behavioral and evolutionary ecologists, and tropical biologists. The conservation recommendations are especially compelling because they incorporate an appreciation for the customs and economy of local people. Auffenberg is still studying monitors, and rumor has it we can look forward to still another compilation of hard-earned knowledge and important insights from this unusually broad biologist.

HARRY W. GREENE  
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and Department of Zoology,  
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Berkeley, CA 94720

## Some Other Books of Interest

**Three Decades of *Daedalus*.** American Academy of Arts and Sciences, Cambridge, MA, 1988. xii, 498 pp. Paper, \$5. Proceedings of the American Academy of Arts and Sciences, vol. 117, no. 3 (summer 1988).

Though the journal received the name *Daedalus* in 1955, it was in 1958 that the *Proceedings of the American Academy of Arts and Sciences* (which has been published intermittently since 1846) became a quarterly that took as its goal "to give the intellectual community a strong voice of its own." Hence this anniversary issue, which reprints essays by Erik H. Erikson, Alice S. Rossi, John Maynard Smith, Czeslaw Milosz, Robert N. Bellah, John T. Noonan, Jr., Roger W. Shattuck, Gerald Holton, Frank E. Manuel, Octavio Paz, Northrop Frye, Vernon E. Jordan, Jr., Kenneth S. Lynn, Lewis Thomas, Elizabeth Hardwick, David Baltimore, Jean Starobinski, Stanley Hoffmann, Judith N. Shklar, John Hope Franklin, Mary Douglas, and Per Olov Enquist. In a preface to the issue the journal's editor, Stephen R. Graubard, sketches its history, describes its editorial procedures (designed to bring together "men and women of disparate opinions who would not necessarily agree but could be counted on to maintain civilized discourse" and involving intensive interaction among contributors) and notes some of the broad social concerns that its content has reflected or anticipated. In conclusion, Graubard writes, "To say that contemporary scholarship may in another day be seen as one of the more attractive intellec-

tual features of the twentieth century, an age not conspicuous for its civilized qualities, is to express a wish that an editor, looking over such a record, may legitimately ask readers to consider."—K.L.

**A Bicentenary History of the Linnean Society of London.** ANDREW THOMAS GAGE and WILLIAM THOMAS STEARN. Published for the Linnean Society of London by Academic Press, San Diego, CA, 1988. x, 242 pp., illus. \$25.

"Because the Linnean Society is the world's oldest active biological society and because for virtually 200 years it has provided common ground for both zoologists and botanists, . . . no other society has gathered into its fellowship so many distinguished naturalists," writes William Stearn in the preface to this volume. In 1938 Andrew Gage produced a history of the society, and the present bicentenary volume brings that work up to date, retaining Gage's text with some emendations by Stearn. The first 12 chapters of the volume provide a chronological account of the society's activities, beginning with its forerunners and proceeding presidency by presidency to January 1988. Subsequent chapters are devoted specifically to the society's meetings, publications, awards and grants, botanical and zoological collections (which include those of Carl Linnaeus, along with his books and correspondence), library, portraits and busts of "worthies distinguished in natural history," membership, and finance. Appendixes give further details regarding publications, officers, and staff. "On the whole the Society's life has seemed unexciting," Stearn comments, "and has either been so respectable or so adept at the suppression of possible scandal . . . that unfortunately the readers will not find records here of the personal infighting and jealousy which enliven the histories of [some other British scientific institutions]." He expresses the hope, however, that "much of interest will be found . . . in the variety of characters who have contributed to the Linnean Society's maintenance and achievement for two centuries."—K.L.

## Books Received

**Analytical Isotachophoresis.** P. Boček et al. VCH, New York, 1987. xviii, 237 pp., illus. \$110. Electrophoresis Library, vol. 1.

**Analytical Techniques for Thin Films.** K. N. Tu and R. Rosenberg, Eds. Academic Press, San Diego, CA, 1988. xii, 493 pp., illus. \$89.95. Treatise on Materials Science and Technology, vol. 27.

**Animal Energetics.** Vol. 2, Bivalvia through Reptilia. T. J. Pandian and F. John Vernberg, Eds. Academic Press, San Diego, CA, 1987. xiv, 631 pp., illus. \$115.

**Angiotensin and Blood Pressure Regulation.** Joseph W. Harding et al., Eds. Academic Press, San Diego, CA, 1988. viii, 242 pp., illus. \$55. Research Topics in Physiology, vol. 10. From a lecture series, Pullman, WA, 1985.

**Biodiversity.** E. O. Wilson and Frances M. Peter, Eds. National Academy Press, Washington, DC, 1988. xiv, 521 pp., illus. \$32.50; paper, \$19.50. Based on a forum, Washington, DC, Sept. 1986.

**Brain 5-HT<sub>1A</sub> Receptors.** Behavioural and Neurochemical Pharmacology. C. T. Dourish, S. Ahlenius, and P. H. Hutson, Eds. Horwood, Chichester, U.K., and VCH, New York, 1987. 306 pp., illus., + plates. \$85. Ellis Horwood Series in Biomedicine.

**Branched Coverings and Algebraic Functions.** Makoto Namba. Longman Scientific, Harlow, U.K., and Wiley, New York, 1988. xiv, 201 pp. \$49.95. Pitman Research Notes in Mathematics, vol. 161.

**Calcium and Calcium Binding Proteins.** Molecular and Functional Aspects. Ch. Gerday, L. Bolis, and R. Gilles, Eds. Springer-Verlag, New York, 1988. xii, 259 pp., illus. \$71.60. Proceedings in Life Sciences. From a symposium, Crans-sur-Sierre, Switzerland, Sept. 1986.

**Capacity for Work in the Tropics.** K. J. Collins and D. F. Roberts, Eds. Cambridge University Press, New York, 1988. x, 297 pp., illus. \$39.50. Society for the Study of Human Biology Symposium Series, vol. 26. From a meeting, London, Dec. 1984.

**Cellular Concepts of Autoimmunity.** J. M. Cruse and R. E. Lewis, Jr., Eds. Karger, Basel, 1988. vi, 200 pp., illus. \$113.50. Concepts in Immunopathology, vol. 6.

**Cellular Mechanisms of Conditioning and Behavioral Plasticity.** Charles D. Woody, Daniel L. Alkon, and James L. McGaugh, Eds. Plenum, New York, 1988. xiv, 537 pp., illus. \$85. From a symposium, Seattle, WA, July 1986.

**Ceramic Microstructures '86.** Role of Interfaces. Joseph A. Pask and Anthony G. Evans, Eds. Plenum, New York, 1987. xvi, 986 pp., illus. \$135. Materials Science Research, vol. 21. From a conference, Berkeley, CA, July 1986.

**Ceramics Databook.** Shinroku Saito *et al.*, Eds. Gordon and Breach, New York, 1987. x, 739 pp., illus. \$298. Translated from the Japanese edition (Tokyo, 1986) by International Research Foundation.

**Chromatographic Separations.** Peter A. Sewell and Brian Clarke. Published for Analytical Chemistry by Open Learning, London, U.K., by Wiley, New York, 1988. xx, 335 pp., illus. Paper. \$29.95.

**Close Encounters with Insects and Spiders.** James B. Nardi. Iowa State University Press, Ames, 1988. xviii, 185 pp., illus. \$14.95.

**Color and Color Perception.** A Study in Anthropocentric Realism. David R. Hilbert. Center for the Study of Language and Information, Stanford, CA, 1988 (distributor, University of Chicago Press, Chicago). x, 146 pp., \$24.95; paper, \$11.95. CSLI Lecture Notes, no. 9.

**Communication Theory.** Eastern and Western Perspectives. D. Lawrence Kincaid, Ed. Academic Press, San Diego, CA, 1987. xvi, 364 pp. \$65. Human Communication Research Series.

**The Computer and the Mind.** An Introduction to Cognitive Science. P. N. Johnson-Laird. Harvard University Press, Cambridge, MA, 1988. 444 pp., illus. \$29.50.

**Critical Essays on Language Use and Psychology.** Daniel C. O'Connell. Springer-Verlag, New York, 1988. xx, 351 pp. Paper. \$27.

**Current Issues in Expert Systems.** A. van Lamsweerde and P. Dufour, Eds. Academic Press, San Diego, CA, 1987. xviii, 240 pp., illus. \$19.50. International Lecture Series in Computer Science.

**Cytology and Cell Physiology.** G. H. Bourne, Ed. 4th ed. Academic Press, San Diego, CA, 1987. xvi, 864 pp., illus. \$89. International Review of Cytology, Supplement 17.

**The Dark Matter.** Contemporary Science's Quest for the Mass Hidden in Our Universe. Wallace Tucker and Karen Tucker. Morrow, New York, 1988. 254 pp., illus. \$16.95.

**Dense Chlorinated Solvents in Porous and Fractured Media.** Model Experiments. Friedrich Schwillie. Lewis, Chelsea, MI, 1988. xxx, 146 pp., illus. \$55. Translated from the German edition by James F. Pan-kow.

**Experimental Phycology.** A Laboratory Manual. Christopher S. Lobban, David J. Chapman, and Bruno P. Kremer. Cambridge University Press, New York, 1988. xiv, 295 pp., illus. \$44.50; paper, \$16.95.

**Expert System Applications to Telecommunications.** Jay Liebowitz, Ed. Wiley-Interscience, New York, 1988. xvi, 371 pp., illus. \$39.95. Wiley Series in Telecommunications.

**Flavins and Flavoproteins 1987.** D. E. Edmondson and D. B. McCormick, Eds. De Gruyter, Hawthorne, NY, 1988. xxiv, 775 pp., illus. \$233. From a symposium, Atlanta, GA, June 1987.

**Flow Injection Analysis.** Jaromír Růžicka and Elo Harald Hansen, 2nd ed. Wiley-Interscience, New York, 1988. xxii, 498 pp., illus. \$75. Chemical Analysis, vol. 62.

**Food Crops for the Future.** The Development of Plant Resources. Colin Tudge. Blackwell, New York, 1988. viii, 225 pp., illus. \$49.95; paper, \$16.95.

**G. T. Fechner and Psychology.** Josef Brožek and Horst Gundlach, Eds. Passavia Universitätsverlag, Passau, 1988. 298 pp. Paper, DM 28. Passauer Schriften zur Psychologiegeschichte, no. 6. From a symposium, Passau, F.R.G., June 1987.

**Galápagos.** Discovery on Darwin's Islands. David W. Steadman and Steven Zousmer. Smithsonian Institution Press, Washington, DC, 1988. 208 pp., illus. \$24.95.

**Gassendi the Atomist.** Advocate of History in an Age of Science. Lynn Sumida Joy. Cambridge University Press, New York, 1988. xiv, 311 pp., illus. \$34.50. Ideas in Context.

**Genera Palmarum.** A Classification of Palms, Based on the Work of Harold E. Moore, Jr. Natalie W. Uhl and John Dransfield. Published for the L. H. Bailey Hortorium and the International Palm Society by Allen, Lawrence, KS, 1987. xxii, 610 pp., illus. \$74.95.

**Genetics of Translation.** New Approaches. Mick F. Tuite, Marguerite Picard, and Monique Bolotin-Fukuhara, Eds. Springer-Verlag, New York, 1988. xii, 524 pp., illus. \$150.30. NATO Advanced Science Institutes Series H, vol. 14. From a workshop, Aussois, France, May 1987.

**Geometric Measure Theory.** A Beginner's Guide. Frank Morgan. Academic Press, San Diego, CA, 1988. viii, 145 pp., illus. \$19.95.

**Geometrical Relationships of Macroscopic Nuclear Physics.** R. W. Hasse and W. D. Myers. Springer-Verlag, New York, 1988. x, 141 pp., illus. \$49.50. Springer Series in Nuclear and Particle Physics.

**Growth Factors and Other Aspects of Wound Healing.** Biological and Clinical Implications. Adrian Barbul *et al.*, Eds. Liss, New York, 1988. xx, 342 pp., illus. \$68. Progress in Clinical and Biological Research, vol. 266. From a symposium, Tarpon Springs, FL, May 1987.

**Hemostasis and Animal Venoms.** Hubert Pirkle and Francis S. Markland, Jr., Eds. Dekker, New York, 1988. xxii, 628 pp., illus. \$150. Hematology, vol. 7. Based on a symposium, San Diego, CA, July 1985.

**Immobilized Biocatalysts.** An Introduction. Winfried Hartmeier. Springer-Verlag, New York, 1988. x, 212 pp., illus. Paper. \$25. Translated from the German edition (Berlin, 1986) by Joy Wieser.

**Immunogenetics of Endocrine Disorders.** Nadir R. Farid, Ed. Liss, New York, 1988. xiv, 508 pp., illus. \$110.

**In the Age of the Smart Machine.** The Future of Work and Power. Shoshana Zuboff. Basic Books, New York, 1988. xx, 468 pp., illus. \$19.95.

**Inhaled Dust and Disease.** Paul F. Holt. Wiley-Interscience, New York, 1988. x, 325 pp., illus. \$74.95.

**Inorganic Mass Spectrometry.** F. Adams, R. Gijbels, and R. Van Grieken, Eds. Wiley-Interscience, New York, 1988. xii, 404 pp., illus. \$65. Chemical Analysis, vol. 95.

**Integrated Agriculture-Aquaculture in South China.** The Dike-Pond System of the Zhujiang Delta. Kenneth Ruddle and Gongfu Zhong. Cambridge University Press, New York, 1988. xiv, 173 pp., illus. \$49.50.

**International Conference on Circular Dichroism.** (Sofia, Bulgaria, Sept. 1985.) Bulgarian Academy of Sciences, Eds. VCH, New York, 1987. x, 442 pp., illus. Paper, \$60.

**Iron Transport in Microbes, Plants and Animals.** Günther Winkelman, Dick van der Helm, and Joe B. Neilands, Eds. VCH, New York, 1987. xxiv, 533 pp., illus. \$125.

**Language and Learning in the Cooperative Classroom.** Shlomo Sharan and Hana Shachar. Springer-Verlag, New York, 1988. xvi, 176 pp. Paper, \$29. Recent Research in Psychology.

**Language Contact, Creolization, and Genetic Linguistics.** Sarah Grey Thomason and Terrence Kaufman. University of California Press, Berkeley, 1988. xiv, 411 pp., illus. \$48.50.

**Laser-Induced Raman Spectroscopy in Crystals and Gases.** P. P. Pashinin, Ed. Nova Science, Commack, NY, 1988. xii, 215 pp., illus. \$58. Proceedings of the Institute of General Physics, Academy of the Sciences of the U.S.S.R., vol. 2. Translated from the Russian edition (Moscow, 1986) by Kevin S. Hendzel and Thomas Hill.

**Lepidopteran Anatomy.** John L. Eaton. Wiley-Interscience, New York, 1988. xiv, 257 pp., illus. \$49.95. Wiley-Interscience Series in Insect Morphology.

**Machine Learning of Robot Assembly Plans.** Alberto Maria Segre. Kluwer, Norwell, MA, 1988. xviii, 233 pp., illus. \$47.50. Kluwer International Series in Engineering and Computer Science.

**Manual of Pesticide Residue Analysis.** Vol. 1. Hans-Peter Thier and Hans Zeumer, Eds. VCH, New York, 1987. xvi, 433 pp., illus. \$95.

**The Mapping of Geological Structures.** K. R. McClay. Open University Press, Milton Keynes, U.K., and Halsted (Wiley), New York, 1988. vi, 161 pp., illus. Paper, \$16.95. Geological Society of London Handbook.

**Marine Minerals.** Advances in Research and Resource Development. P. G. Teleki *et al.*, Eds. Reidel, Dordrecht, 1987 (U.S. distributor, Kluwer, Norwell, MA). xiv, 588 pp., illus. \$99. NATO Advanced Science Institutes Series C, vol. 194. From a workshop, Gwynog, Wales, June 1985.

**Mathematical Logic and Its Applications.** Dimitar G. Skordev, Ed. Plenum, New York, 1987. xiv, 371 pp. \$79.50. From a conference, Druzhba, Bulgaria, Sept.-Oct. 1986.

**Molecular Genetics of Development.** John G. Scandalios, Ed. Academic Press, San Diego, CA, 1987. xxxii, 529 pp., illus. \$75. Advances in Genetics, vol. 24.

**Monoclonal Antibodies in Diagnostic Immunohistochemistry.** Mark R. Wick and Gene P. Siegal, Eds. Dekker, New York, 1988. xii, 654 pp., illus. \$125. Clinical and Biochemical Analysis, vol. 24.

**A Multidisciplinary Approach to Myelin Diseases.** G. Serlupi Crescenzi, Ed. Plenum, New York, 1987. x, 406 pp., illus. \$75. NATO Advanced Science Institutes Series A, vol. 142. From a workshop, Rome, Italy, Oct. 1986.

**Nonequilibrium Superconductivity.** V. L. Ginzburg, Ed. Nova Science, Commack, NY, 1988. viii, 289 pp., illus. \$89. Proceedings of the Lebedev Physics Institute of the Academy of Sciences of the U.S.S.R., vol. 174. Translated from the Russian edition (Moscow, 1986) by Kevin S. Hendzel.

**Nonlinear Optical and Electroactive Polymers.** Paras N. Prasad and Donald R. Ulrich, Eds. Plenum, New York, 1988. x, 454 pp., illus. \$85. From a symposium, Denver, CO, April 1987.

**Numerical Modeling of Water Waves.** Charles L. Mader. University of California Press, Berkeley, 1988. vi, 206 pp., illus. \$40. Los Alamos Series in Basic and Applied Sciences, vol. 8.

**Nutrition and Immunology.** Ranjit K. Chandra, Ed. Liss, New York, 1988. x, 342 pp., illus. \$96. Contemporary Issues in Clinical Nutrition, vol. 11.

**The Opiate Receptors.** Gavril W. Pasternak, Ed. Humana, Clifton, NJ, 1988. xviii, 499 pp., illus. \$79.50. The Receptors.

**The Origins of European Thought about the Body, the Mind, the Soul, the World, Time, and Fate.** New Interpretation of Greek, Roman and Kindred Evidence, also of Some Basic Jewish and Christian Beliefs. Richard Broxton Onians. Cambridge University Press, New York, 1988. xviii, 583 pp. \$59.50; paper, \$19.95. Reprint, 1951 edition.

**Oxygen.** W. Wagner and K. M. de Rueck. Blackwell Scientific, Palo Alto, CA, 1987. xviii, 231 pp. \$52. International Thermodynamic Tables of the Fluid State, vol. 9.

**Oxygen Complexes and Oxygen Activation by Transition Metals.** Arthur E. Martell and Donald T. Sawyer, Eds. Plenum, New York, 1988. x, 341 pp., illus. \$62.50. From a symposium, College Station, TX, March 1987.

**Phytolith Analysis.** An Archaeological and Geological Perspective. Dolores R. Piperno. Academic Press, San Diego, CA, 1987. xiv, 280 pp., illus. \$49.

**The Plant Viruses.** Vol. 3. Polyhedral Virions with Monopartite RNA Genomes. Renate Koenig, Ed. Plenum, New York, 1988. xiv, 294 pp., illus. \$59.50. The Viruses.

**The Predicament of Culture.** Twentieth-Century Ethnography, Literature, and Art. James Clifford. Harvard University Press, Cambridge, MA, 1988. xiv, 381 pp., illus. \$30; paper, \$15.95.

**The Preservation of Species.** The Value of Biological Diversity. Bryan G. Norton. Princeton University Press, Princeton, NJ, 1988. xii, 305 pp. Paper, \$16.95. Reprint, 1986 edition.

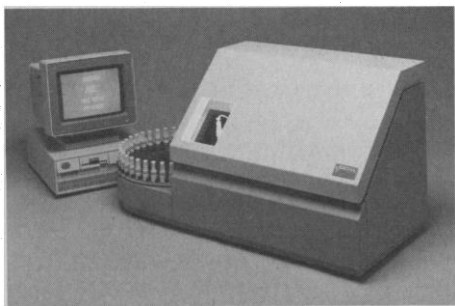
**Programming the Finite Element Method.** I. M. Smith and D. V. Griffiths. 2nd ed. Wiley, New York, 1988. xii, 469 pp., illus. \$49.95.

**Psychological Testing from Early Childhood Through Adolescence.** A Developmental and Psychodynamic Approach. Miriam G. Siegel. International Universities Press, Madison, CT, 1987. viii, 529 pp., illus. \$45.

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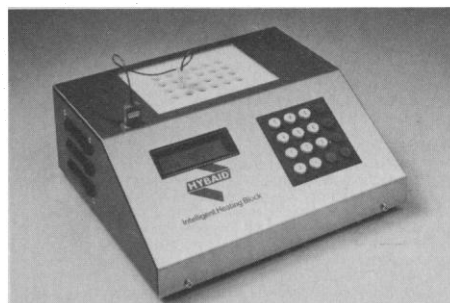
Monoclonal antibodies to rat leukocytes and major histocompatibility complex antigens. Serotec (United Kingdom). Circle 506.

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### Literature

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The *CM/IM Series* brochure describes a system for digital spectrofluorescence imaging. SPEX Industries. Circle 516.

*PC Software Developed for Scientists and Engineers by Scientists and Engineers* describes a line of scientific software for personal computers for data acquisition, instrument control, analysis, and graphics. Syst Software Technologies. Circle 519.

*NIM Peaks* is a newsletter that features nuclear instruments. EG&G Ortec. Circle 533.

The *1987-1988 Catalog* features monoclonal antibodies, polyclonal antibodies, purified antigens, immunological reagents, and enzyme immunoassay systems components and tests. Medix Biotech. Circle 534.

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## POSITIONS OPEN

**ACADEMIC POSITION—CALIFORNIA.** University of California, San Francisco School of Dentistry seeks applicants for a tenure-track position in the Division of Periodontology at the assistant or associate professor level. Applicants must have a dental degree (D.D.S., D.M.D. or equivalent) and a certificate of advanced training in periodontology. A Ph.D. in either oral biology, microbiology, or immunology is desirable, but not required. Responsibilities include teaching oral biology and periodontology at the undergraduate and graduate levels (30%) and research (50%–70%). Intramural practice (20%) opportunities are available. Salary commensurate with experience. Filing deadline is 1 March 1989. UCSF is an Equal Opportunity/Affirmative Action Employer; minorities and women are encouraged to apply. Send curriculum vitae to: **Dr. Mark I. Ryder, Division of Periodontology, Box 0650, University of California, San Francisco School of Dentistry, San Francisco, CA 94143-0650.**

**ASSISTANT PROFESSOR:** Applications are invited for a position at the level of assistant professor (tenure-track) in the Department of Chemistry at Stanford University, with primary research and teaching interests in the general area of organic or inorganic chemistry. Applicants must be strongly motivated toward creative research and have a commitment to teaching at the undergraduate and graduate levels. In applying, please send curriculum vitae, list of publications, a brief statement of research interests (three pages or less) and, in addition, have three letters of recommendation sent to: **Professor John Ross, Chairman, Department of Chemistry, Stanford University, Stanford, CA 94305.** Stanford is committed to Equal Opportunity through Affirmative Action in Employment, and we are especially eager to identify minority persons and women with appropriate qualifications. Applications should be received by 1 November 1988.

**ASSISTANT PROFESSOR OF ANATOMY—**The Department of Anatomy, University of Wisconsin-Madison, invites applications for a 12-month tenure-track position to begin on or after 1 July 1989. Applicants must have a doctoral degree and postdoctoral training. The department seeks candidates with experience in developmental neurobiology and expertise in cellular and molecular approaches. The successful candidate will be expected to establish an independent research program and participate in the teaching of medical and graduate students. Opportunities are available to participate in one of the inter-departmental graduate training programs. Send curriculum vitae, list of publications, three letters of recommendation and a summary of research interest to: **Dr. John K. Harting, Chairman, Department of Anatomy, Room 325SM1, 1300 University Avenue, Madison, WI 53706.** The deadline for applications is 1 November 1988. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

## ASSISTANT PROFESSOR (STEP I-III) MOLECULAR CELL BIOLOGY

The Biology Department at the University of California, Santa Cruz, invites applications for a tenure-track faculty position in molecular cell biology effective fall 1989. Ph.D. required. Preference given to applicants using molecular approaches to study basic problems in cell biology in areas such as (i) neurobiology and neurogenetics, (ii) developmental biology, and (iii) structure and function of cell membranes. The department is expanding, with expectation of new buildings, faculty, and resources. Applications from women and ethnic minorities are strongly encouraged.

Submit curriculum vitae, a brief description of research plans, reprints, and letters of reference submitted by three referees to: **Chair, Molecular Cell Biology Search Committee, Department of Biology, Thimann Laboratories, University of California, Santa Cruz, CA 95064** by no later than 1 December 1988. Refer to provision #127-889 in your reply. UCSC is an Equal Employment Opportunity/Affirmative Action/IRCA Employer.

## POSITIONS OPEN

### ASSISTANT PROFESSOR DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE UNIVERSITY OF PENNSYLVANIA

The Department is seeking an M.D. or M.D./Ph.D. with research interests in diabetes, especially insulin action, to join ongoing group in the Department. The person should have demonstrated research experience in this area and capable of establishing and/or maintaining an independent research program. The individual should be Board-certified or eligible in AP or CP and capable of performing some clinical activity in either area. Applications should include curriculum vitae, bibliography, summary of research interest, names of three references and be sent to: **Leonard Jarett, M.D., Chairman, Department of Pathology and Laboratory Medicine, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104.** Affirmative Action/Equal Opportunity Employer.

## UNIVERSITY OF TORONTO

The Department of Botany seeks applicants for a tenure-stream position at the **ASSISTANT PROFESSOR** level for 1 July 1989. Applicants should have a strong research background in plant physiology/biophysics, and will be expected to teach in their area of expertise as well as in a more general undergraduate course at the introductory level.

Send curriculum vitae and three letters of reference to: **Dr. J. A. Hellebust, Chairman, Department of Botany, University of Toronto, Toronto, Ontario M5S 1A1.**

Closing date for receipt of applications is 1 December 1988. The University of Toronto encourages applications from qualified women or men, members of visible minorities, and persons with a disability.

This advertisement is directed to Canadian citizens and permanent residents.

## ASSISTANT PROFESSOR OF BIOLOGY

The Department of Biology at the University of North Dakota invites applications from highly qualified individuals for a tenure-track position at the assistant professor level. Responsibilities will include the development of a creative and vigorous research program in genetics, cell biology, or molecular biology; candidates able to offer strength in two of the three areas are particularly welcome. The department provides an excellent supportive environment for building a competitive research program capable of attracting extramural funding at the national level; the opportunity exists for diverse interactions with colleagues having research strengths in related areas. Participation in the department's undergraduate and graduate teaching program is expected. A Ph.D. is required and postdoctoral experience is desirable. Starting date: 1 January 1989 or 16 August 1989. Review of applications will begin 14 October 1988. Applications will continue to be accepted until the position is filled. Send curriculum vitae, transcripts or coursework summary, description of research, statement of teaching interests, and arrange to have three letters of reference sent to: **Dr. John C. La Duke, Chairman, Search Committee, Department of Biology, University of North Dakota, Grand Forks, ND 58202-8238.** The University of North Dakota is an Equal Opportunity/Affirmative Action Employer.

## ASSISTANT PROFESSOR (STEP I-III) POPULATION GENETICS

The Biology Department at the University of California, Santa Cruz, invites application for a tenure-track faculty position in population genetics effective fall 1989. Ph.D. required. We seek a biologist that will apply modern experimental techniques to population and evolutionary problems, maintain an active research program and teach population genetics. The department is expanding, with expectation of new buildings, faculty, and resources. Applications from women and ethnic minorities are strongly encouraged.

Submit curriculum vitae, a brief description of research plans, reprints, and letters of reference submitted by three referees to: **Chair, Population Genetics Search Committee, Department of Biology, Thimann Laboratories, University of California, Santa Cruz, CA 95064** by no later than 1 December 1988. Refer to provision #126-889 in your reply. UCSC is an Equal Employment Opportunity/Affirmative Action/IRCA Employer.

## POSITIONS OPEN

### ASSISTANT PROFESSOR— TENURE-TRACK MOLECULAR/CELL BIOLOGIST

A faculty position will be available in 1989 for a eukaryotic molecular biologist with an independent research program. Ongoing research initiatives in the anatomy department are in neural, reproductive, muscle, and developmental biology. Teaching is in the medical and graduate curricula but prior training or teaching experience in anatomical disciplines is not required. Please send curriculum vitae and names of three references to: **Ludwig Sternberger, M.D., Search Committee, Department of Anatomy, University of Maryland School of Medicine, 655 West Baltimore Street, Baltimore, MD 21201.** For additional information telephone: **Dr. Ludwig Sternberger, 301-328-2203** or **Dr. Lloyd Guth, 301-328-3590.** *The University of Maryland at Baltimore is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR VIROLOGY

The Department of Biology, University of South Florida invites applications for a tenure-track position in virology. The position is at the level of assistant professor and is broadly defined for a virologist working in animal, microbial, or plant systems. A person with expertise in contemporary areas of virology, such as viral assembly, genetics, or pathogenesis, is sought to complement an active, growing microbiology group in a Department with research programs in cell/molecular biology, microbiology, physiology, and ecology. The successful candidate would be expected to establish an externally-funded research program, to train graduate students at the M.S. and Ph.D. levels, and to teach virology. Submit curriculum vitae, reprints of publications, statement of research and teaching interests, and three letters of recommendation by 15 October 1988 to: **Dr. Daniel V. Lim, Virologist Search Committee, Department of Biology, University of South Florida, Tampa, FL 33620.** *USF is an Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSORS.** The Biology Department of Rutgers University-Camden is seeking three outstanding biologists for 10-month tenure-track positions beginning 1 September 1989. The successful applicants have the potential of being awarded Henry Rutgers Research Fellowships which allow for a 50% reduction in teaching and research support for the initial 2 years of the appointment. A Ph.D. is required and postdoctoral experience expected. Teaching responsibilities include participation in undergraduate and graduate courses in the applicants' area of training and research.

**ESTUARINE BIOLOGIST/ICHTHYOLOGIST:** While quality applicants with strong field orientation from any area of estuarine biology are encouraged to apply, we are interested in the fish ecology area.

**MICROBIOLOGIST/IMMUNOLOGIST:** Applicants with strong microbiological orientation are being sought; however, those with expertise in immunology would be preferred.

**NEUROSCIENTIST/ELECTRONMICROSCOPIST:** We are seeking quality applicants for any area of neuroscience, especially those demonstrating expertise in electron microscopy.

Applicants should submit curriculum vitae, statement of research interests, and three letters of recommendation before 30 September 1988 to: **Dr. H. Lee, Chairman, Biology Department, Rutgers University, Camden, NJ 08102.** *Rutgers, The State University of New Jersey, is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT RESEARCH PHYSIOLOGIST** (Department of Medicine). Ph.D. in physiology or related field required. Experience required in respiratory and cardiovascular function measurements and analysis in large animal studies (i.e., oxygen delivery to peripheral tissues, isolated in situ gastrocnemius preparation in dog and rat, oxygen dissociation curves, oxygen consumption, muscle metabolism, and acid-base status, computer analysis of peripheral oxygen exchange). Salary related to established schedule of University of California, San Diego research series. Apply by 30 September 1988 to: **Dr. John B. West, Department of Medicine, Division of Pulmonary Physiology M-023A, University of California, San Diego, La Jolla, CA 92093-0623.** *Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### ASSISTANT PROFESSORS

**ANIMAL PHYSIOLOGY:** Tenure-track, undergraduate teaching position beginning 19 August 1989. Ph.D. required. Must have a strong commitment to teaching. Responsibilities include teaching introductory biology for majors and nonmajors, human anatomy and physiology, animal physiology, and immunology. A modest research program is expected.

**BOTANY:** One-year, sabbatical leave replacement beginning 19 August 1989. Part-time (instructor) or full-time (assistant professor) depending on funding. Ph.D. preferred. Must have a strong commitment to teaching. Responsibilities will include teaching introductory biology laboratories for majors, introductory botany, and one advanced botany course of the candidate's choice.

Candidate's for either position should submit a letter of application stating their teaching interests (and research interests for the animal physiologist), curriculum vitae, transcripts, and three letters of recommendation by 7 October 1988 to: **Dr. Robert L. Wallace, Chair, Biology Department, Ripon College, P.O. Box 248, Ripon, WI 54971-0248.**

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

### ASSISTANT OR ASSOCIATE EDITOR *The Milbank Quarterly*

To assist in planning and producing a journal of health and society, now in its 66th year. Position requires experience in writing and editing or comparable activities, quantitative and qualitative research/analysis, and multi-disciplinary policy interests in health and related areas. Advanced degree in a social science discipline desirable. Salary competitive. Send curriculum vitae and list of references to: **D. P. Willis, Milbank Memorial Fund, 1 East 75th Street, New York, NY 10021.**

The Department of Pathology, University of Kentucky, College of Medicine, has two tenure-track faculty positions at the **ASSISTANT/ASSOCIATE PROFESSOR** level for investigators with research interests in molecular biology, molecular genetics, and molecular cytogenetics. The appointees will be members of the Lucille P. Markey Cancer Center, a multidisciplinary group of investigators involved in cancer research and treatment. Excellent laboratory space is available within the newly developed Cancer Center. Responsibilities include research and teaching. Please send curriculum vitae, statement of research interests, and the names of three references to: **Deborah Powell, M.D., Professor and Chairman, Department of Pathology, University of Kentucky, 800 Rose Street, Lexington, KY 40536-0093.** *The University of Kentucky is an Equal Opportunity/Affirmative Action Employer.*

Brigham Young University, Department of Zoology, has three **ASSISTANT/ASSOCIATE PROFESSOR**, tenure-track positions in zoology to be filled over a 2-year period. Applicants should have expertise in comparative physiology or neuroendocrinology, population biology and/or behavioral ecology, or phylogenetic systematics. Applicants need not be LDS (Mormon) Church members, but must observe Church-approved university standards. Applicants should obtain job descriptions and copies of approved standards from: **Dr. Duane E. Jeffery, Department of Zoology, Brigham Young University, Provo, UT 84602.** *BYU is an Equal Employment Opportunity/Affirmative Action Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR OF PHARMACOLOGY

Mercer University School of Medicine wishes to fill a tenure-track position in pharmacology immediately. Applicants must possess a Ph.D. and/or M.D. with postdoctoral training. Preference will be given to candidates with experience in cardiovascular and/or autonomic pharmacology. However, others are also encouraged to apply. The successful candidate will be expected to develop a research program. Submit curriculum vitae, statement of objectives, and addresses and names of three references to: **Dr. Robert Moon, Chairman, Division of Basic Medical Sciences, Mercer University School of Medicine, Macon, GA 31207.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### ASSISTANT PROFESSORS (TENURE-TRACK) (TWO POSITIONS)

The University of Medicine and Dentistry of New Jersey-NJMS seeks tenure-track, assistant professors to develop an active, independent and productive research program and to obtain extramural support. Teaching duties will include participation in the medical and dental courses and the departmental graduate program. Preferred areas of research interests are: Membrane and muscle physiology and biophysics, and endothelial and epithelial cell biology. Qualifications: Ph.D., M.D., or equivalent degree, and a minimum of 2 years of postdoctoral experience. Deadline date: 1 October 1988.

Send a copy of your curriculum vitae, statement of research accomplishments and future goals, and the names of three references to: **Chairperson, Department of Physiology, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, 185 South Orange Avenue, Newark, NJ 07103-2757.** *The UMDNJ is an Affirmative Action/Equal Opportunity Employer M/F/H/V.*

### ASSISTANT/ASSOCIATE PROFESSOR PHYSIOLOGY AND BIOPHYSICS UNIVERSITY OF WASHINGTON

A tenure-track position open for outstanding candidates working at the molecular, cellular and/or integrative level in all areas of contemporary physiology. Applicants applying modern methods to study of the autonomic nervous system (including development and signal transduction) or to the cardiovascular system and its components (such as the endothelium) are particularly encouraged. Candidates are expected to develop a strong independent research program and to teach effectively at the graduate level. Submit curriculum vitae, statement of research interests and goals, and names and addresses of three references to: **Wolfhard Almers, Chair of Search Committee, Physiology and Biophysics, SJ-40, University of Washington School of Medicine, Seattle, WA 98195.** The application deadline has been extended to 31 October 1988. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT/ASSOCIATE PROFESSORSHIPS

The Department of Cell Biology and Anatomy, University of Health Sciences/The Chicago Medical School, has two tenure-track faculty positions available at the assistant/associate professor level. Applicants should have a demonstrated ability to develop a rigorous research program. Preference will be given to candidates whose research complements existing programs in membrane transport, intracellular protein processing and transport, signal transduction, cytoskeleton, extracellular matrix, neuropathology and molecular neurobiology. The candidate will also be expected to teach in histology, neuroscience or gross anatomy. Send applications with curriculum vitae and statement of research plan to: **David McCandless, Ph.D., Department of Cell Biology and Anatomy, University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064.**

**ASSOCIATE INVESTIGATOR/INVESTIGATOR—**Tenure-track position for project leader with record of publications and independent research in areas of virology or cell biology. Salary commensurate with experience. Excellent compensation package. Send curriculum vitae with references to: **JV/Human Resources, New York Blood Center, 310 East 67th Street, New York, NY 10021.** *Equal Opportunity Employer M/F.*

**ASSOCIATE RESEARCH SCIENTIST** position available immediately to participate in optical recording of neuron activity from rat cortex and molluscan ganglia. The candidate must have a Ph.D. in neurobiology. Previous programming experience with VERSADOS is required. A strong background in dye chemistry and electronics would be helpful. Salary and benefits competitive. Send curriculum vitae and the names of three references by 1 October 1988 to: **Dr. Lawrence B. Cohen, Department of Cellular and Molecular Physiology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.**

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



## POSITIONS OPEN

### ASSOCIATE/FULL PROFESSOR

A full-time, tenure-track position will begin in the fall of 1989 with the potential to become chairperson. Primary duties involve teaching undergraduate courses and laboratories in introductory biology and upper level electives in their specialty. A research program involving undergraduates is expected and will be supported. The Ph.D. and proven research is required as well as previous teaching experience. Please submit curriculum vitae and three letters of recommendation by 1 November 1988 to:

**Chairman, Biology Search Committee**  
Canisius College  
2001 Main Street  
Buffalo, NY 14208

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

**ASSOCIATE RESEARCH SCIENTIST.** Ph.D. with experience in immunology and cell culture required to be involved in project concerned with the development of a human cancer vaccine. Interested candidates are requested to send curriculum vitae, publications, and names of three references to: **Dr. Jean-Claude Bystryn, Department of Dermatology, New York University Medical Center, 550 First Avenue, New York, NY 10016.** *Equal Opportunity Employer M/F.*

**ASSOCIATE RESEARCH SCIENTIST/SCHOLAR or STAFF ASSOCIATE** position immediately available in the Orthopaedic Research Laboratory (ORL) at Columbia University. Minimum requirement is a Ph.D. in biomechanics or biomedical engineering, or M.S. with 2 years of experience. Emphasis is placed on soft tissue biomechanics and orthopaedic research. Responsibilities include: manager for material testing section of ORL, supervision of experimental research for graduate students and resident research fellows, and independent or interdisciplinary collaborative project development. Highly competitive starting salary commensurate with experience. Please contact and send curriculum vitae to: **Van C. Mow, Ph.D., Director, Orthopaedic Research Laboratory, Columbia-Presbyterian Medical Center, 630 West 168th Street, New York, NY 10032.** Telephone: 212-305-1515.

**BIOCHEMISTRY—UCLA:** The Department of Chemistry and Biochemistry has a **TENURE-TRACK OPENING** in biochemistry. The position probably will be filled at the assistant professor level, but applications for a more senior position may also be considered. We are seeking a candidate who will establish a strong and innovative research program in biochemistry and/or molecular biology. Teaching responsibilities will include undergraduate general biochemistry and participation in graduate courses appropriate to the appointee's interests. Candidates should submit curriculum vitae and statement of research plans, and should have three letters of recommendation sent to: **Dr. C. A. West, Department of Chemistry and Biochemistry, University of California, Los Angeles, CA 90024** by 1 November 1988. *The University of California is an Equal Opportunity/Affirmative Action Employer, and encourages applications from women and minority candidates.*

### DEPARTMENT OF BIOLOGY THE JOHNS HOPKINS UNIVERSITY

The Department of Biology invites nominations and applications for the position of **CHAIRMAN** of the Department. Qualifications: Ph.D. or equivalent. The candidate should be a well-established investigator with demonstrated leadership and administrative experience.

The Department of Biology offers a broad program of undergraduate, graduate and postgraduate study in the Biological Sciences including: Biochemistry and biophysical chemistry, cell biology, developmental biology and genetics.

Applications should be postmarked not later than 15 December 1988. Résumé to:

**Dr. William F. Harrington**  
Chairman, Search Committee  
The Johns Hopkins University  
Baltimore, MD 21218

*The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**CELL BIOLOGIST.** ProCyt Corporation, a Seattle-area biotechnology firm dedicated to the research and development of wound treatment and skin health products, seeks a Ph.D. in cell biology, histopathology, or related fields, 3 to 5 years of postdoctoral experience. We offer challenging work in an exciting field and excellent benefits for significant contributors. Please send curriculum vitae and letter of interest to: **ProCyt Corporation, Attention: Scientific Director, 2893 152nd Avenue, NE, Redmond, WA 98052.** *An Equal Opportunity Employer.*

### CHAIR— NEW DEPARTMENT OF GEOSCIENCES UNIVERSITY OF CALIFORNIA, IRVINE

The University of California at Irvine (UCI) invites applications for the position of Founding Chair of the planned Department of Geosciences. This position is the first of a number of new faculty appointments included in a long range commitment to develop a new department on this campus. The level of the appointment will be in the full professorial ranks and the salary will depend upon the qualifications of the candidate and based upon the U.C. pay scale. Candidates must have demonstrated excellence in their specialization of research. Administrative experience is not required but is desired since the candidate will have the opportunity and challenge of building a new department in the U.C. system.

The Department is envisaged to focus on the more quantitative disciplines of the geosciences and to specialize in global studies. It will ultimately include a spectrum of areas with an emphasis on the effects of changes in the geosphere-biosphere. The initial growth will likely be in areas such as atmospheric modeling, meteorology and climatic changes, global dynamics, geophysics, and geochemistry. Future expansion of the department will be into the areas of plate tectonics and seismology.

Please send a letter of application, curriculum vitae including research, teaching and administrative experience, and names of five references to: **Professor Myron Bander, Chair, Search Committee, Dean's Office, School of Physical Sciences, University of California, Irvine, CA 92717.** This search will continue until filled; first consideration will be given to applications received before 1 December 1988.

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

### CHAIRMAN DEPARTMENT OF PHARMACOLOGY

Jefferson Medical College of Thomas Jefferson University invites applications and nominations for the position of Professor and Chairman of the Department of Pharmacology. Candidates must have a distinguished record of achievement in a field of research of current importance, and demonstrated commitment to teaching at graduate and undergraduate levels. The position offers an excellent opportunity to develop an outstanding department in an atmosphere of strong University commitment to academic and scientific growth. Applications and nominations with a complete curriculum vitae should be sent to: **Emanuel Rubin, M.D., Search Committee for Pharmacology, Jefferson Medical College, 1020 Locust Street, Room M-63, Philadelphia, PA 19107.** *An Affirmative Action/Equal Opportunity Employer.*

**Ph.D. CYTOGENETICIST.** The Oregon Health Sciences University (OHSU) Hospitals and Clinics is seeking a research associate cytogeneticist. The candidate must have Ph.D. or D.Sc. in cytogenetics plus at least 5 years of experience in human cancer cytogenetics with at least two of these in a clinical cytogenetics laboratory. Require following expertise with human tissues and cells; preparation and culturing of bone marrow, solid tissues (normal and tumor), lymphocytes, amniotic fluid cells and chorionic villi; harvesting, slide making, differential staining; photomicroscopy and darkroom procedures. Candidate must have published at least five articles as primary author in peer-reviewed journals. This position requires teaching of medical students, residents and laboratory technology students. Annual salary range \$23,000 to \$27,000. Send curriculum vitae and names of three references to: **Dr. E. Magenis, Director, Clinical Cytogenetics Laboratory, OHSU, P.O. Box 574, Portland, OR 97207.** *Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### CHAIR ENVIRONMENTAL STUDIES PROGRAM DARTMOUTH COLLEGE

Dartmouth College is seeking a Chair for the Environmental Studies Program. The appointment will be tenure-track at the associate or full professor level, depending upon the qualifications of the candidate. Appointments at the full professor level are normally made with tenure.

Candidates must have an outstanding scholarly record, with an active research program in some field of natural science and evidence of interest and some experience in the broader societal or policy implications of environmental matters. In addition, candidates must be able to direct and participate in the broadly based interdisciplinary teaching and research program that has evolved at Dartmouth. The curriculum and research efforts of the Program involve environmental science, policy, and values, and there are foreign study programs in Kenya and the Soviet Union.

Applications should be sent to: **P. Bruce Pipes, Chair, Environmental Studies Search Committee, Dartmouth College, Nathan Smith Building, Hanover, NH 03755.** The search committee will begin to read applications on 15 October 1988.

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

**DEAN, Division of Sciences, College of Sciences and Arts, Washington State University.** Qualifications: Required: Ph.D. or equivalent (preferably in fields of the division); record of scholarly/instructional achievement commensurate with rank of professor; working knowledge of external funding sources and procedures as demonstrated by management of a significant funded research program. Preferred: Have administrative experience at department level or above in academic institution offering Ph.D. programs in the sciences. Send curriculum vitae or write for detailed information: **Reid C. Miller, Dean of Engineering and Architecture, Washington State University, Pullman, WA 99164-2714.** Applications due before 1 November 1988, or until the position is filled. *WSU is an Equal Opportunity/Affirmative Action Opportunity Educator and Employer. Protected group members are encouraged to apply.*

### DEAN COLLEGE OF NATURAL SCIENCES AND MATHEMATICS

Applications and nominations are invited for the position of Dean of the College of Natural Sciences and Mathematics, Indiana University of Pennsylvania (IUP).

The College of Natural Sciences and Mathematics has approximately 1500 undergraduate students and 170 faculty members and is organized into the departments of biology, chemistry, computer science, geoscience, mathematics, physics, and psychology. The College offers a doctoral degree program in clinical psychology, and masters programs in biology, chemistry, mathematics, and physics.

Duties and minimum qualifications: The Dean reports to the Vice President for Academic Affairs and Provost, and administers the College including the allocation of budgets and personnel. Candidates should have an earned doctorate in a field related to one of the disciplines offered by the College; proven leadership ability; administrative experience working with faculty, administrators, staff, graduate and undergraduate students, an excellent record of teaching, research, and professional activity; proven ability to work effectively with community representatives and groups. Additional relevant experience desirable: long range planning, program evaluation, sponsored research, formulation of academic policy, recruitment of faculty, and some experience in a collective bargaining setting.

Starting date: 1 July 1989.

Salary is competitive, with excellent fringe benefits.

Nominations, applications with résumé, and letter stating interest in the position and personal qualifications, along with a list of three references with address and telephone numbers should be sent to: **Dr. Melvin R. Woodard, Chairman, Search Committee—Dean, Natural Sciences and Mathematics, 354 Sutton Hall, IUP, Indiana, PA 15705.**

Initial screening begins 15 October 1988 and applications will be accepted until the position is filled.

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

## THE UNIVERSITY OF CALIFORNIA, DAVIS VICE CHANCELLOR—RESEARCH AND DEAN—GRADUATE STUDIES

The University of California, Davis, is seeking to fill two executive positions: Dean—Graduate Studies and Vice Chancellor—Research.

The Dean—Graduate Studies will provide overall management of the graduate programs; increase the number of graduate students from under-represented groups; help form new graduate degree programs to capitalize on present and emerging campus strengths; reevaluate and increase the bases of support for and strengthen the administration of interdepartmental programs and graduate groups; and increase financial support for graduate students. The Dean—Graduate Studies helps assess and plan for meeting campus needs for financial and other resources for graduate education and, in consultation with other administrators and faculty, plays a key role in the establishment, review, and revision of postbaccalaureate programs.

The Vice Chancellor—Research is the senior campus officer responsible for overall leadership, development, management, and quality of the research programs of the Davis campus. The Vice Chancellor—Research will enhance, promote, and oversee research within all of the campus's colleges, schools, hospitals, and clinics; enhance the research ethos of the campus; increase and manage extramural financial support including support for large, long-term, and interdisciplinary projects; increase the computing capacity of the campus; and further relationships with government and industry.

Nominations and applications should be sent to Chancellor Theodore L. Hullar, Office of the Chancellor, University of California, Davis, CA 95616. Applicants should include a curriculum vita and the names, addresses, and telephone numbers of five references. Applications and nominations desired by 17 October 1988; positions open until filled. Salary will be commensurate with experience and qualifications.

*An Equal Opportunity/Affirmative Action Employer*

## Toxicologist

The Drug Safety Evaluation Department of Pfizer Central Research has an opening for a Research Scientist with a PhD in Toxicology/Pharmacology or DVM with training in toxicology. Pharmaceutical or related toxicological experience is desirable but not required.

Responsibilities will include protocol design, safety study supervision, data analysis and preparation of reports for regulatory submissions. Effective oral and written communication skills are essential.

The position offers an exceptional opportunity for professional recognition and growth. We offer an excellent salary, benefit and relocation package, plus an attractive Connecticut shore location. Qualified applicants should submit their resume, including the names, addresses and phone numbers of three professional references, to: Mr. Donald R. Nelson, Manager of Employee Resources, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



An equal opportunity employer

## DIRECTOR, OCEAN BIOLOGY/OPTICS/CHEMISTRY DIVISION

The Office of Naval Research (ONR) is seeking an outstanding individual to serve in this Civil Service position in the Senior Executive Service. Salary range is \$64,700 to \$73,400, depending on qualifications. In addition to salary, career SES appointees are eligible to compete for performance awards and bonuses.

The Director, Ocean Biology/Optics/Chemistry Division is responsible for providing leadership, coordination and direction for ONR's \$12M fundamental and applied research programs in biological, optical and chemical oceanography. The Division Director is the scientific administrator of ONR R&D activity in the described fields with full responsibility for staffing his/her program, establishing overall priorities and procedures, and recommending changes in program objectives and policies to the Director, Ocean Sciences Directorate. The Division Director serves as the principal consultant to the Navy on developing naval applications in biological, optical and chemical oceanography and related fields.

Candidates should possess a Ph.D. or equivalent in oceanography with significant experience in biological, optical and/or chemical oceanography. Considerable experience in fiscal and program administration, plus management and performance of research and its application to development is also required.

Interested persons should submit a Standard Form 171, Application for Federal Employment (available at Federal Job Information Centers or from the address below) and a resume, including a list of publications, to:

### Office of the Chief of Naval Research

Civilian Personnel Division, Code 01242P  
Attn: Announcement #88-50 (S)  
800 North Quincy Street  
Arlington, VA 22217-5000

Applications will be accepted through 31 October 1988 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (202) 696-4705.

U.S. CITIZENSHIP REQUIRED • AN EQUAL OPPORTUNITY EMPLOYER

## POSITIONS OPEN

**CURATOR OF BOTANY.** The New Mexico Museum of Natural History seeks a collections-oriented botanist. Ph.D. required, with research experience in systematics; preferred interest in biogeography, especially Southwestern flora and paleobotany; and demonstrated potential to obtain outside funding. Duties include participation in public programs. Salary \$21,000 to \$30,000. Send curriculum vitae, selected reprints, and names of three references by 31 October 1988 to: **Chairman, Science Department, New Mexico Museum of Natural History, P.O. Box 7010, Albuquerque, NM 87194-7010.** *State of New Mexico is an Affirmative Action/Equal Opportunity Employer.*

The University of Miami invites nominations and applications for the position of **DEAN** of the Rosenstiel School of Marine and Atmospheric Science. The Dean is responsible for the administrative and academic programs of the School. In addition, the Dean must lead an aggressive campaign to acquire financial support from government agencies, foundations, and the private sector. The Dean of the Rosenstiel School reports to the University Provost. Candidates must have an earned Ph.D. and an established reputation as a distinguished scientist, as well as leadership and administrative experience. *The University of Miami is an Equal Opportunity Employer.*

Applications including cover letter, curriculum vitae, and names and addresses of three references as, well as nominations should be sent to: **Dr. Pamela A. Ferguson, Chair of Rosenstiel School Search Committee, Graduate School, 210 Ferre Building, P.O. Box 248125, University of Miami, Coral Gables, FL 33124.**

### **DIRECTOR OF CLINICAL HEMATOLOGY LABORATORY CASE WESTERN RESERVE UNIVERSITY/ UNIVERSITY HOSPITALS OF CLEVELAND**

The Division of Clinical Pathology of the Department of Pathology, Case Western Reserve University School of Medicine and University Hospitals of Cleveland is seeking a Director for its Clinical Hematology Laboratory. Duties involve hospital service, teaching and training, and research. The Laboratory is housed in new quarters, which are geographically and administratively integrated with the other components of the Division of Clinical Pathology. Rank and salary according to qualifications and experience. The new Director will also have the opportunity to appoint a more junior faculty colleague to work in laboratory hematology. Applicants should be certified in clinical pathology, and preferably also in the hematology subspecialty. Send curriculum vitae, bibliography, brief statement of background and career goals, and names of three references to: **Michael E. Lamm, M.D., Director, Institute of Pathology, Case Western Reserve University, 2085 Adelbert Road, Cleveland, OH 44106.** *Case Western Reserve University and University Hospitals are Equal Opportunity/Affirmative Action Employers.*

### **DIRECTOR OF CLINICAL PATHOLOGY CASE WESTERN RESERVE UNIVERSITY/ UNIVERSITY HOSPITALS OF CLEVELAND**

Applications are invited for Director of the Division of Clinical Pathology at University Hospitals of Cleveland, the 850-bed principal teaching hospital of Case Western Reserve University School of Medicine. This Division of the Department of Pathology, which includes hematology, chemistry, microbiology, immunology, and blood banking, is responsible for all clinical laboratory services, and is physically and administratively integrated in well equipped, new quarters with a new hospital laboratory computer system. Rank and salary commensurate with qualifications and experience. Applicants should be certified in clinical pathology, active in research, and committed to teaching and training. Send curriculum vitae, bibliography, names of three references, and a brief statement of background and career goals to: **Michael E. Lamm, M.D., Director, Institute for Pathology, Case Western Reserve University, 2085 Adelbert Road, Cleveland, OH 44106.** *Case Western Reserve University and University Hospitals are Equal Opportunity/Affirmative Action Employers.*

# CAREER OPPORTUNITY IN SCIENCE PUBLISHING

## PRODUCT DEVELOPER — TRAINING POSITION

Raven Press, a publisher of books and journals in clinical medicine and biomedical sciences, located in New York City, is seeking a creative and energetic person to enter its Product Development Training Program. The successful candidate will have a Ph.D. in genetics, microbiology/cell biology, virology or immunology and an ability to communicate at a high level with research authors. Under the direction of our Editor-in-Chief, Science, you will learn the entire publishing process, including the process of acquiring successful science products from the leading research scientists in the U.S. and abroad.

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## Ph.D RESEARCH SCIENTIST HEMODYNAMICS/VASCULAR DISEASE

Wyeth-Ayerst Research, subsidiary of Fortune 100 American Home Products Corporation, has an opening for a Ph.D. Scientist in its Cardiovascular Pharmacology Section.

We are currently seeking a scientist with a Ph.D. in Pharmacology or Physiology with 2 or more years relevant experience in the *in vivo* study of cardiovascular hemodynamics and vascular disease. The ideal candidate will be familiar with animal models of hypertension and/or myocardial ischemia, with experience in the measurement of regional blood flow and cardiac function. An understanding of the cellular events underlying cardiac and vascular contraction is an advantage. A strong publication record and the ability to communicate research findings orally and in written reports is essential. The successful candidate will interact closely with cardiovascular biochemists and cellular pharmacologists in the development of novel therapeutic agents for the treatment of hypertension and its sequelae, ischemic heart disease, thrombosis and sudden cardiac death. Preference will be given to those candidates with a demonstrated ability to perform independent and creative research.

Wyeth-Ayerst offers an excellent salary and benefit package plus career advancement opportunities along with an ultra-modern research facility.

Interested candidates should send resume and salary requirements to:

**Personnel Manager, Dept. TC**

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Princeton, NJ 08543-8000  
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## DEPARTMENT HEAD

### Genetics and Cell Biology

#### University of Minnesota Minneapolis-Saint Paul

The Department of Genetics and Cell Biology is seeking highly qualified candidates for a position of Department Head. This department of 27 faculty is a major teaching and research unit of the College of Biological Sciences.

The Department Head will be selected on the basis of administrative and leadership abilities. The individual selected for this position should have a strong, continuing record of research accomplishment and will be expected to maintain a vigorous research program in an area that is complementary to existing departmental research efforts in genetics, cell biology, and developmental biology. This appointment is at the rank of Professor with tenure.

Nominations, applications, and expressions of interest are invited and should be received as soon as possible. Applications for this position should include a *curriculum vitae* (with teaching experience indicated) and names and addresses of three potential referees. Applications must be received by November 1, 1988. Please address nominations and applications to **Ms. Ellen Dahl; Administrator, Department of Genetics and Cell Biology; 250 Biological Sciences Center; 1445 Gortner Avenue; The University of Minnesota; Saint Paul, Minnesota 55108; (Telephone 612/624-2240).**

The University of Minnesota is an equal opportunity educator and employer and specifically invites and encourages applications from women and minorities.

## FACULTY POSITION

The Department of Microbiology and Immunology, University of Rochester School of Medicine and Dentistry is seeking applicants for a tenure track **Assistant/Associate Professor** in the area of Prokaryotic Molecular Biology/Microbial Genetics. A Ph.D. in Microbiology, Biochemistry or a related field; at least two years of postdoctoral experience and a strong record of research funding or potential for funding is required.

The School of Medicine and Dentistry enjoys a long tradition of interactions among basic science departments and clinical units, and the Department of Microbiology and Immunology takes part in cooperative programs with other colleges in the University. Faculty in the Department teach in the graduate program, and may also be involved in the medical curriculum, in post-graduate dental education or in an undergraduate track leading to a B.S. in Biological Sciences. Salaries and research start up funds are competitive based on qualifications. Applicants should submit a complete curriculum vitae, including names of three referees and a description of research interests, to **Barbara H. Iglewski, Chair, Department of Microbiology and Immunology, Box 672, University of Rochester School of Medicine and Dentistry, Rochester, New York, 14642 to arrive before 1 November 1988.** The University of Rochester is an equal-opportunity employer (M/F).

## Enrico Fermi Scholar Program in Science and Engineering

Argonne National Laboratory seeks outstanding doctoral degree recipients for these distinguished research appointments. Individual Enrico Fermi Scholar opportunities will be available in most research areas at Argonne including Biology, Chemistry, Materials Science, Condensed Matter studies at the Intense Pulsed Neutron Source, Nuclear Physics, Atomic Physics, High Energy Physics, 7GeV Advanced Photon Source related accelerator and materials studies, Chemical Technology, Reactor Safety, Materials and Components Technology, Reactor Physics, Energy and Environmental Science and Technology, and Engineering.

Honoring Enrico Fermi who founded the laboratory which became Argonne, these appointments are intended to recognize scientists and engineers who exhibit the potential to emerge as leaders in their field. Appointments will be awarded on a competitive basis to promising scientists who are about to earn a doctorate or who have earned one within the last three years. Candidates should submit a resume and a statement of research interests. Applicants will be evaluated by a group of staff members assembled for this purpose in the appropriate Argonne Divisions. The candidates' excellence and creativity in research will be the basis for final selections.

Annual stipends will range from \$35K to \$50K, depending upon discipline and experience. Appointments will be for two years.

For more information and application material, write to: Ronald A. Johns, Appointments Officer, Ref. D-EFA-55, Argonne National Laboratory, 9700 So. Cass Avenue, Argonne, IL 60439. Completed applications must be received by January 1, 1989. Argonne is an affirmative action/equal opportunity employer.



**ARGONNE  
NATIONAL LABORATORY**

University of Chicago/DOE

## Research Scientist Molecular Biology/Virology

The Upjohn Company, a worldwide leader in the research and development of pharmaceuticals, is seeking a Research Scientist to join a Discovery Project Team investigating novel methods to enhance livestock production through the manipulation of gene expression. The candidate will be expected to carry out research employing viral/retroviral systems to introduce key genetic elements into specific cell types and tissues using the latest technologies. This individual will interface with project team members to work toward identification of genetic elements associated with adipose, hepatic and muscle cell growth and differentiation as well as the design and execution of experimentation to transfect those elements into test systems suitable for study. The successful candidate must have a PhD degree plus a minimum of 2 years' postdoctoral or recent and related experience. Demonstrated proficiency in virology/retrovirology and recombinant DNA technology is mandatory.

We are located in Southwestern Michigan, midway between Chicago and Detroit, in an area offering varied cultural events, lakes and woodlands minutes away, abundant year-round sports and recreation and a reasonable cost of living. Upjohn offers advancement opportunities, a highly competitive salary commensurate with experience, comprehensive benefits and relocation assistance. For prompt, confidential consideration, please send your CV/resume and a copy of transcripts to M. William Rex, The Upjohn Company—Corporate Employment, Kalamazoo, MI 49001. Please refer to advertisement number 23316-GA in your correspondence. We are an Equal Opportunity Employer M/F.

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## EDUCATION

### ASSOCIATE DEAN UNDERGRADUATE EDUCATION

The University of Maryland College Park is currently accepting applications for an Associate Dean to provide academic and administrative leadership for academic affairs, including undergraduate programs, for the College of Life Sciences and the College of Agriculture. Responsibilities include developing and administering high quality academic programs (including curriculum); participation in resource allocation decisions for undergraduate education; and serving as liaison to public schools, other colleges, extension faculty, and the community. Qualifications include an earned doctorate in life sciences or agriculture area; being tenurable in an academic department of one of the colleges; a proven record of excellence (of five or more years) in college teaching and scholarship; evidence of effective leadership and organizations skills; and a working knowledge of a college of agriculture of life sciences.

Qualified individuals should submit a letter of application and a detailed resume including names, addresses, and phone numbers of three references who may be contacted, to:

Dr. Arthur N. Popper, Chairman  
Search Committee for Associate Dean  
Department of Zoology  
Room 1200, Zoology/Psychology Building  
University of Maryland  
College Park, Maryland 20742

Complete applications should be received by October 17, 1988 for full consideration, but may be accepted until a suitable candidate is selected. The University of Maryland is an Equal Opportunity/Affirmative Action Employer.

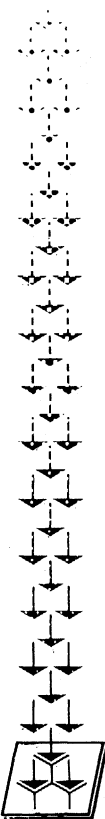
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**IDEON CORPORATION** is a biotechnology research and development company located in Redwood City, CA. IDEON's research focuses on the development of therapeutic products in the areas of cancer, infectious and autoimmune disease, using novel immunotherapeutics, recombinant antibodies and immunomodulators. IDEON is expanding and seeking two scientists with leadership ability to join our growing scientific and management teams.

#### Director of Molecular Biology Director of Immunology

These individuals will assume overall responsibility for leading research groups involved in several aspects of molecular biology or immunology at IDEON. These positions will require individuals with an outstanding record of productive research in either molecular biology or immunology who are innovative and have the ability to interact and lead others. In addition to a Ph.D., the successful candidates will have a minimum of five years of professional experience and accomplishment within an academic or industrial setting. The individuals will be encouraged to interact closely with IDEON's scientific advisers and academic collaborators, initiate new collaborations and take an active role in IDEON's ongoing postdoctoral program.

Qualified candidates will have an opportunity to join a growing company with the added strength of pharmaceutical manufacturing capability provided by IDEON's affiliation with INVITRON CORPORATION. These positions with IDEON CORPORATION offer excellent salary, substantial equity participation and other benefits. An equal opportunity employer.

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For confidential consideration, please forward your C.V. and a list of three references to IDEON CORPORATION, Attn: R & D Department, 301 Penobscot Drive, Redwood City, CA 94063.

### HEAD, DEPARTMENT OF VETERINARY PATHOBIOLOGY, COLLEGE OF VETERINARY MEDICINE

#### UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The position is available January 1, 1989 or until filled. Qualifications include DVM or equivalent degree, and/or PhD in a biological area. Organizational and administrative experience is required. A record of demonstrated fiscal responsibility, personnel management, and leadership is desirable. Applicants should have sufficient accomplishments to make them eligible for academic appointment as a full professor and for membership on the Graduate Faculty of the University.

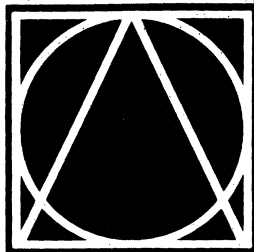
The incumbent will be responsible for the execution of departmental, College, and University policies and shall provide direction for departmental activities (research, professional and graduate teaching, and services). The department is organized in four divisions: microbiology-immunology, parasitology, pathology, epidemiology and public health. It maintains close liaison with the Diagnostic Laboratory and carries out diagnostic responsibilities.

The head is responsible for maintaining high standards of scholarship in the department and will initiate and supervise the departmental recruiting, promotion, and tenure activities. He/She will prepare departmental budgets and be responsible for distribution and expenditure of departmental funds and for care of space and property assigned to the department.

The salary is negotiable. The closing date is November 1, 1988. In order to ensure full consideration, applicants should submit resume and the names and addresses of three referees to:

Dr. Gary Jackson  
Chairman, Search Advisory Committee  
Office of the Dean  
College of Veterinary Medicine  
University of Illinois  
2001 South Lincoln Ave.  
Urbana, Illinois 61801  
Telephone: (217) 333-2760

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			J. Young

For Additional Information and Registration Forms, Contact:

Cathy Scandone  
Symposium Coordinator  
Mail Code L-108  
Post Office Box 1539  
King of Prussia, PA 19406-0939

○ = continuity of life

△ = quest for knowledge

□ = resolution

## POSITIONS OPEN

Brigham and Women's Hospital—Harvard Medical School solicits applications for the position of **DIRECTOR** of the Molecular Diagnostics Laboratory in the Department of Pathology. Candidates should have experience in application of molecular technology to diagnosis and characterization of human disease and evidence of substantial research productivity in molecular biology. Harvard Medical School appointment at the level of associate professor. Please send curriculum vitae and the names of three references to: **Dr. Ramzi S. Cotran, Department of Pathology, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115.** We are an Equal Opportunity Employer.

### POPULATION, BEHAVIORAL, OR EVOLUTIONARY ECOLOGIST

The Department of Life Sciences invites applications for a position as assistant professor (tenure-track) beginning January, 1989. Applicants must possess a Ph.D. and evidence of productive research. Applicants with research interests in studies of animals, plants, or plant-animal interactions and a strong background in ecological and evolutionary theory are encouraged to apply. All applicants must have a strong interest in teaching and research at the undergraduate and graduate levels and in directing doctoral dissertations. Applications received after 9 October 1988 cannot be assured of full consideration. Please send curriculum vitae, and names of three references to: **Dr. William J. Brett, Chairperson, Department of Life Sciences, Indiana State University, Terre Haute, IN 47809.** Indiana State University is an Equal Opportunity/Affirmative Action Employer.

### ENVIRONMENTAL SPECIALISTS

Limnologists, wetland and estuarine ecologists, environmental scientists. The St. Johns River Water Management District has current and projected openings in applied research and research management for surface water restoration and preservation programs. Appropriate areas of specialization include limnology, aquatic, wetland and estuarine ecology, and environmental sciences. Starting salaries are commensurate with experience and vary approximately \$20,000 to \$28,000. Bachelor's degree in limnology, biology, ecology, and related sciences required. Send résumé with ad by 23 September 1988 to: **St. Johns River Water Management District, Office of Employee Relations, P.O. Box 1429, Palatka, FL 32078-1429.**

Equal Employment Opportunity/Affirmative Action/Veterans Preference Employer.

### FACULTY POSITION DEPARTMENT OF MICROBIOLOGY UCLA

The Department of Microbiology, College of Letters and Science, University of California, Los Angeles (UCLA) invites applications for a tenure-track faculty position. Applicants should have strong training and research experience in the area of microbial development, symbiosis, diversity, cell-cell interactions, or microbial behavior. Emphasis must be at the molecular level. Candidates must be motivated toward excellence in teaching and basic research. They should have a Ph.D. or equivalent degree, plus several years of postdoctoral experience. Please submit curriculum vitae, brief description of research goals, and the names of at least three references, by 15 October 1988, to: **Dr. Robert P. Gunsalus, Chairman of Search Committee, Department of Microbiology, University of California, Los Angeles, CA 90024.** UCLA is an Equal Opportunity/Affirmative Action Employer.

University of Rochester. The Department of Chemistry invites applications for tenure-track **FACULTY POSITIONS** beginning fall 1989 at the level of assistant professor or higher. We seek applicants who will establish an outstanding research program; candidates in organic chemistry and inorganic chemistry including materials and surface science are encouraged. Applicants should submit curriculum vitae (including selected reprints), a statement of research plans and objectives and arrange for three letters of reference to be sent to: **Douglas H. Turner, Chairman, Search Committee, Department of Chemistry, University of Rochester, Rochester, NY 14627.** Deadline for receipt of completed applications is 1 November 1988. The University of Rochester is an Affirmative Action/Equal Opportunity Employer/M/F.

## POSITIONS OPEN

**ENVIRONMENTAL HEALTH SCIENTIST/TOXICOLOGIST.** The Board on Environmental Studies and Toxicology of the National Research Council is seeking a professional in toxicology, epidemiology, environmental health, or a closely related biological or biomedical field. Experience with risk analysis theory and/or practice is important. Acts as study project manager in areas such as biologic markers, lead analysis in human tissues, lead abatement methods, and risk assessment methodology, and assists with studies on immunotoxicology and monitoring of human tissues for toxicant exposures. Duties include working with committee of experts, providing intellectual overview and guidance for their work. Ph.D. or equivalent required, with several years in research, teaching, or administration in toxicologic research, policy, or program work. Understanding of utilization of scientific information in decision making and ability to integrate data from a wide variety of disciplines required. The NRC offers a starting salary based upon qualifications, plus exceptional benefits including paid relocation. Please respond in confidence, with curriculum vitae, a recent publication or writing sample, and names of references, to: **NRC/BEST/KLH, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.** Equal Opportunity Employer.

### UNIVERSITY OF FLORIDA FACULTY POSITION CLINICAL PHARMACOLOGIST/INTERNIST

The Department of Pharmacology and Therapeutics of the College of Medicine, in cooperation with the Department of Medicine, invites applications for a full-time tenure-track assistant professor for primary appointment in Pharmacology. Applicants must be Board qualified or eligible in a subspecialty of Internal Medicine and have had formal training in clinical pharmacology. The successful applicant will have leadership skills and be expected to develop an independent research program, coordinate the teachings of therapeutics to upper year medical students and residents, and participate in clinical care. Salary will be commensurate with level of experience and accomplishment. Applicants should send curriculum vitae including bibliography and names of three references to: **Dr. Kathleen Shiverick, Box J-267 JHMC, Gainesville, FL 32610** before 17 October 1988 with anticipated starting date as early as 1 July 1989. An Equal Opportunity/Affirmative Action Employer.

**FACULTY POSITION IN VIROLOGY.** Tenure-track assistant or associate professor position in a growing department with research strengths in molecular pathogenesis and immune regulation. Preference will be given to individuals with independent research programs in the interaction of viruses with cells of the immune system. Potential for collaboration with other large research programs in inflammation, oncology, atherosclerosis, and molecular genetics. The successful candidate will be expected to participate in the teaching of graduate and medical students. Send curriculum vitae, description of research goals, and names of three references to: **Dr. Steven Mizel, Chairman, Department of Microbiology and Immunology, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, NC 27103.** WFU is an Affirmative Action/Equal Opportunity Employer.

**FACULTY POSITION—MOLECULAR GENETICS AND IMMUNOLOGY.** The Center for Molecular and Cellular Medicine at Dartmouth Medical School has an academic track faculty position available (rank open) at the interface of molecular genetics and immunology. Candidates should hold the Ph.D. or M.D. degree and have a minimum of 2 years of postdoctoral experience. The successful candidate will join the Program in Molecular Genetics and will hold an academic appointment in an appropriate basic science or clinical department of Dartmouth Medical School. Faculty are expected to maintain a strong research program and participate in the teaching of medical and graduate students.

Send curriculum vitae, statement of research plans, and the names of at least three references to: **Molecular Genetics Search Committee, Dartmouth Medical School, HB7200, Hanover, NH 03756.** The closing date for applications is 31 October 1988.

Equal Opportunity Employer. Women and minority applications encouraged.

## POSITIONS OPEN

Applications are invited for the following **FACULTY POSITIONS:** (i) **ASSISTANT PROFESSOR OF PHARMACOLOGY/TOXICOLOGY:** Responsibilities include development of an independent research program, teaching graduate and undergraduate level courses and the direction of graduate students, (ii) **PROFESSOR/ASSOCIATE PROFESSOR OF TOXICOLOGY:** Responsibilities include those described above plus the recruitment and advisement of undergraduate students, and a leadership role in a growing B.S. Program in Toxicology. Precise activities are flexible and will reflect the areas of expertise of the candidate. The successful candidate will possess an earned Ph.D. degree and expertise in pharmacology and/or toxicology. There is considerable latitude relative to areas of research interest. Salary and rank associated with these 12-month tenure-track positions will be commensurate with experience and qualifications. These positions are available on or before January 1989. Interested individuals should submit a letter of application, a statement of career objectives, a complete résumé and the names of four references by 23 September 1988 to: **Dr. Philip J. Medon, Head, Department of Pharmacology and Toxicology, Northeast Louisiana University, Monroe, LA 71209-0470.**

Equal Opportunity/Affirmative Action Employer.

### FACULTY POSITIONS: STANFORD UNIVERSITY DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY POSITIONS: BACTERIOLOGY AND VIROLOGY

Two tenure-track positions at the level of assistant or associate professor in the Department of Microbiology and Immunology in the Stanford University School of Medicine are open and individuals holding the M.D. or Ph.D. degree with appropriate experiences are invited to apply.

The successful candidates will be responsible for the development of independent research programs as well as shared responsibility for teaching in their areas of expertise. We are particularly interested in candidates with a demonstrated record of productivity in the molecular biology of viral replication or viral pathogenesis and candidates with a demonstrated interest in the genetic and molecular basis of microbial pathogenesis.

The other faculty within the department have interests in viral, bacterial, and protozoal pathogenesis as well as in basic immune mechanisms. The Department of Microbiology and Immunology (formerly the Department of Medical Microbiology) is housed in recently constructed facilities with ample space and support for the establishment of a comprehensive research and teaching program.

Stanford University is committed to increasing the representation of women and minorities on its faculty, and particularly encourages applications from such candidates.

The deadline for receipt of applications is 1 December 1988. Interested individuals should send their curriculum vitae, together with one copy of two recent publications, a short description of future research interests and the names of three references to:

**Ms. Alicia Fonseca  
Bacteriology/Virology Search Committee  
Department of Microbiology and Immunology  
Stanford University School of Medicine  
Stanford, CA 94305-5402**

### FACULTY POSITION MOLECULAR PHARMACOLOGY/ TOXICOLOGY

The Department of Pharmacology, Northwestern University Medical School, invites applications for a tenure-track position at the assistant or associate professor level. Candidates should have a Ph.D. or M.D. degree or equivalent, have had postdoctoral training, and have demonstrated excellence in research and commitment to teaching. Preference will be given to those who have had experience in application of molecular biology, genetics, cell biology, or immunology to pharmacological and toxicological problems. Send curriculum vitae, letters from three references, and a brief statement of future research plans to: **Dr. Toshio Narahashi, Professor and Chairman, Department of Pharmacology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.** Telephone: 312-908-8284. An Equal Opportunity/Affirmative Action Employer.

## ADVERTISEMENT FOR POST OF DIRECTOR OF ICGEB

The International Centre for Genetic Engineering and Biotechnology (ICGEB) is an intergovernmental organization being established by 41 countries as a centre of excellence devoted to the application of genetic engineering and biotechnology for development. The United Nations Industrial Development Organization (UNIDO) assists the member countries of the ICGEB in establishing the Centre. Pending the formal establishment of the Centre, its activities are carried out through a project implemented by UNIDO.

The post of Director of the Centre is due for fresh election from 1 July 1989 for a period of three to five years. Applications from outstanding scientists are invited. The post will carry remuneration at a level not less than that of a Director of A Division in the United Nations. A higher salary level may be allowed in a suitable case. Candidates should be persons of the highest possible international standing and respect in the scientific and technological fields of the Centre. Due regard shall be given to (i) experience in the management of a scientific centre and a multidisciplinary team of scientists; (ii) ability to effectively interact with member governments, international institutions and the world scientific community; (iii) commitment to the objectives of the Centre and in particular to the strengthening of technological capabilities of developing countries; (iv) commitment to international co-operation in the field of genetic engineering and biotechnology. The candidate, if selected should be ready to move to Trieste from the day of appointment.

The selection process involves screening by scientific experts as well as by a committee comprised of members of the Panel of Scientific Advisers of the ICGEB and representatives of member governments. A final decision will be taken in February 1989.

The Centre has two Components: Trieste, Italy and New Delhi, India. At its full operation, it will have a staff of over 50 senior and junior scientists. Its functions will essentially be in research and training of nationals of developing countries. It will maintain close links with a number of affiliated centres in developing countries. The work programme includes application of genetic engineering and biotechnology in agriculture, human and animal health and productivity, industrial microbiology, energy and protein engineering. The Director's work will be reviewed by the Preparatory Committee of member states, which is the interim Board of Governors. He will initially be appointed as a project official of UNIDO and will be assisted by two senior scientists as the Heads of the two Components and other staff.

Applications, and/or nominations, for this challenging assignment indicating the date of availability and readiness to join the duty station in Trieste by 1 July 1989 and accompanied by detailed curriculum vitae should reach UNIDO before 15 October 1988 by telex or express letter addressed to the Senior Technical Adviser, Department of Industrial Promotion, Consultations and Technology, UNIDO, P.O. Box 300, 1400 Vienna, Austria. Telex No. 135612



Department of  
National Defence

Défense nationale

## Employment Opportunities

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Applications are invited from new graduates, students graduating within the coming year or recent graduates employed as Post Doctoral Fellows to meet present and future needs for civilian Defence Scientists. You would be joining a team of over 550 Defence Scientists distributed across seven research establishments in Canada who are involved with applied research and development; social, economic, and strategic analysis; and operational research. The main locations are near Halifax, Quebec City, Ottawa, Toronto, Victoria, and Medicine Hat (Alberta).

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Biology — microbiology, pharmacology,  
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radiobiology  
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Computer Science  
Economics  
Engineering — except forestry and geology  
History — military  
Mathematics — applied mathematics and  
operational research  
Physics  
Psychology — experimental  
Political Science — strategic studies,  
international relations  
Sociology

High academic standings and a Master's or Doctorate degree in one of the above fields from a recognized university are required.

Preference will be given to Canadian citizens. Due to the nature of the work, all employees will require security clearance. Starting salaries range from \$27,000 to \$40,000 dependent on individual qualifications. Benefit levels and salary advancement patterns are fully competitive.

Further information may be obtained at the address given below.

**To apply, forward your résumé and/or application form to the following address indicating your primary fields of interest. Please enclose copies of all your academic transcripts and the names and addresses of three individuals who may be contacted in reference to your professional abilities**

Director of Defence Scientist Personnel  
Programs  
National Defence Headquarters  
Ottawa, Canada  
K1A 0K2

**Attention: DDSPP-4**

Personal information you provide is protected under the Privacy Act. It will be held in Personal Information Bank  
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## POSITIONS OPEN

### UNIVERSITY OF CALIFORNIA SANTA CRUZ BOARD OF ENVIRONMENTAL STUDIES

The Board of Environmental Studies at the University of California, Santa Cruz announces a full-time senior **FACULTY POSITION** in environmental policy. Candidates should have expertise in such areas as: (i) the environmental decisionmaking processes of local, national and especially international government; (ii) institutional change, governmental and inter-organizational behavior, and approaches to environmental preservation and improvement; (iii) the nature of science and science policy, in particular the relationship and interaction between the natural and the social sciences with special reference to environmental issues and problems of sustainability; and (iv) the history and operation of regulatory and administrative bodies. The successful candidate will teach undergraduate courses, including the program's core courses, as well as courses dealing with environmental policy formulation, policy analysis, and institutional formation and change. Upon appointment she or he will also assume the Chair and direction of the program for a minimum of the following 3 years. Planning of a graduate program is envisioned. Candidates must be at the senior level with a Ph.D. in a field related to environmental sustainability. Experience at the international level is very desirable, and candidates should be able to demonstrate an established research program. Submit a letter of application, curriculum vitae, and names of three references to: **Gary Lease, Chair, Board of Environmental Studies, UC Santa Cruz, CA 95064.** Applications must be postmarked no later than 15 October 1988. Refer to 22-834. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

**FACULTY POSITIONS, TOXICOLOGY AND PHYSIOLOGY**—Applications are being accepted for two faculty positions in the Physiology/Chemistry Department at Palmer College of Chiropractic to teach toxicology and cardiovascular physiology. Additional duties include instruction of laboratories and participation in committees. Minimal qualifications: Master's degree in toxicology or pharmacology or physiology. Send curriculum vitae and three letters of recommendation to: **Search Committee, Department of Physiology/Chemistry, Palmer College of Chiropractic, 1000 Brady Street, Davenport, IA 52803.** *Equal Employment Opportunity/Affirmative Action.*

### FLOW CYTOMETER OPERATOR

Lederle Laboratories, An American Cyanamid Company, is seeking an experienced flow cytometer operator to work in a custom designed flow facility and operate an FACS 440 equipped with dual lasers, microasampler and cloning device. The operator will support our research efforts in immunoregulation, tumor immunology, and molecular virology. The ideal candidate will be experienced in all phases of instrumentation, flow cytometric analysis and sorting, utilizing the Consort 40 applications software. B.S./M.S. or equivalent experience is required. Lederle offers competitive salaries and a full range of benefits. For consideration, please send your résumé, including salary requirements, to: **Maureen Quigley, Professional Employment Representative, Lederle Laboratories, American Cyanamid Company, Pearl River, NY 10965.** *We are an Equal Opportunity Employer M/F.*

### HUMAN CARDIOPULMONARY/EXERCISE PHYSIOLOGIST

Faculty position available for an M.D. or Ph.D. interested in developing a strong research program in human cardiopulmonary or exercise physiology. Candidates should have a solid publication record and demonstrated expertise in obtaining research funding. Opportunities are encouraged for collaboration and formal interaction among the Divisions of Pulmonary Medicine, Occupational Medicine, and Environmental Physiology. Interested candidates should contact: **Solbert Permutt, M.D., Department of Environmental Health Sciences, Division of Environmental Physiology, The Johns Hopkins University School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205.** Telephone: 301-550-0545. *An Equal Opportunity/Affirmative Action Employer.*

## Vanderbilt University Faculty Positions in Molecular Biology

The Department of Molecular Biology invites applications and nominations for **three faculty members.**

- **Stevenson Professor of Molecular Biology**, a new chair endowed by the generous bequest of Eldon Stevenson. We seek an individual with an outstanding record of accomplishment whose research interests are molecular aspects of cell and/or developmental biology, primarily in mammalian systems.

- **Two faculty positions, open at any rank.**

(i) **Mammalian molecular biology.** All areas of cell/molecular/developmental biology will be considered.

(ii) **Molecular biophysics or structural biology.** Possible areas of interest include X-ray crystallography, 2-dimensional NMR and other spectroscopic methods, and electron microscopic image reconstruction.

Laboratory space and start-up funds will be appropriate for establishing vigorous research programs. Responsibilities include the conduct of productive research and participation in our instructional programs. Preference will be given to candidates who apply before November 1, 1988. Applicants should submit curriculum vitae, a description of research interests and plans, and names and addresses of at least three references to **Dr. Oscar Touster, Chairman, Department of Molecular Biology, Box 6076, Station B, Vanderbilt University, Nashville, TN 37235.** *Women and minority scientists are urged to apply. An Equal Opportunity/Affirmative Action Employer.*

## RESEARCH SCIENTIST ANIMAL SCIENCE

**Amgen** is a dynamic and growing organization producing pharmaceutical products for a variety of human and animal applications through applied biotechnology. As a result of our growth and continued commitment to the development of animal health care products, we have an immediate opportunity for an Animal Scientist to evaluate ongoing research products for their applications in farm animal health, growth and development.

Responsibilities for this position will include interaction with **Amgen** research and therapeutic development groups as well as study design, selection of field investigators, monitoring and coordinating field studies and evaluation of data.

Qualified candidates must have a Ph.D. and/or DVM. Specialization in animal physiology and endocrinology is desirable. Experience with farm management practices and disease problems as well as familiarity with field study design and statistics is essential. A thorough knowledge of field modeling methods is also important.

**Amgen** offers a stimulating and challenging research environment as well as an excellent compensation and benefits package, including equity offerings.

Our location northwest of Los Angeles in an attractive community in the Conejo Valley offers the best in Southern California living.

Qualified applicants should send a curriculum vitae, including references, in confidence, to:

**Recruitment, Dept. #307A  
AMGEN  
1900 Oak Terrace Lane  
Thousand Oaks  
CA 91320**

**Equal Opportunity Employer**



## HEAD, DEPARTMENT OF BIOLOGY EASTERN MICHIGAN UNIVERSITY

A twenty-one member department offering B.S. and M.S. degrees is re-opening search for an individual with successful administrative experience, a broad biology background, and preferably computer experience. A Ph.D. in the Biological Sciences and 5 years of college teaching experience are required. Eastern Michigan University, a state university with an enrollment of 23,000 students, is located in Southeastern Michigan. A cover letter, a vitae, and 3 letters of recommendation must be received by December 28, 1988. Send materials to: **Position DH-B, P.O. Box 920 - Human Resources, Eastern Michigan University, Ypsilanti, MI 48197.**

We take pride in the pursuit of our affirmative action objectives and encourage qualified women and minorities to consider this opportunity.



Eastern Michigan University

## DIRECTOR OF MAMMALIAN TOXICOLOGY

Major West Coast research institute seeks an experienced toxicologist for Director of Mammalian Toxicology Department. SRI INTERNATIONAL is a multidisciplinary research environment with programs encompassing acute, subchronic, chronic, inhalation, reproductive, genetic, and cellular toxicology.

Individual must have strong research background, ability to manage large programs, and obtain research funding from outside sponsors. Experience with conducting studies for regulatory approval desirable. Excellent facilities, support staff, and benefits.

Interested applicants should send curriculum vitae, including publications list and research interests, and names of three references, to Dr. Robert Sutherland, Vice President, Life Sciences Division, SRI INTERNATIONAL, 333 Ravenswood Ave., Menlo Park, CA 94025. An equal opportunity employer.



# CAREER OPPORTUNITY IN AGRICULTURAL BIOTECHNOLOGY

The Biotechnology Laboratory of EniChem Americas, Inc. has an opening for a Senior Scientist at our Research and Development Center near Princeton, N.J. This is a unique opportunity to join a group of highly motivated researchers developing programs on crop improvement through biotechnology.

The position requires coordinating and performing greenhouse and field evaluations of transgenic plants. Individual would become intimately involved in research projects aimed at production of transgenic plants having improved characteristics. The position will require considerable interaction with other researchers and university collaborators involved in the projects. The individual would also have responsibility for maintaining an awareness and insuring compliance with appropriate regulatory policies. Considerable interaction with outside collaborators and company personnel involved with commercial development is expected.

The ideal candidate would have prior industrial experience with plant biotechnology and should have a strong background in whole plant physiology and agronomy at the Ph.D. level.

The successful candidate will enjoy the benefits of joining a new research team in a well-equipped, custom-designed facility supported by a major European corporation. EniChem Americas Inc. is an affiliate of EniChem, the chemical arm of ENI (Ente Nazionale Idrocarburi, Italy). EniChem offers competitive starting salaries as well as an excellent benefits package.

If interested, please submit your Curriculum Vitae in confidence to:

Personnel Coordinator

**EniChem Americas, Inc.**

Research and Development Center  
2000 Princeton Park Corporate Center  
Monmouth Junction, New Jersey 08852

*Equal Opportunity Employer m/f*

## Cardiovascular Biochemist and Physiologist

Pfizer Central Research has openings for a PhD Biochemist and Physiologist in a Cardiovascular Drug Discovery Project within the Department of Metabolic Diseases and General Pharmacology. Primary responsibilities will include performing research in the development of novel pharmacological agents for the treatment of hypertension and congestive heart failure.

Persons applying for the Biochemist position should have at least 1-3 years postdoctoral training, with experience in enzymology, competitive binding assays, peptide identification techniques (HPLC), and/or the pharmacokinetics of drug disposition. A knowledge of protein chemistry of computer modeling of enzyme-inhibitor interactions would be helpful to the position.

Persons applying for the Physiologist position should have 1-3 years post-doctoral experience in cardiovascular or renal physiology. Research experience in the area of hypertension, and specifically the renin angiotensin system's involvement in hypertension is preferable. The ability to perform chronic cardiovascular and/or renal function studies with some knowledge of computerized data acquisition techniques is essential to the position. Experience in working with non-human primates would be helpful.

These positions offer a stimulating intellectual environment with potential for professional growth. We are located in an attractive southeastern Connecticut shore location and offer competitive salary/benefits package with relocation assistance. Qualified applicants should submit their resume and description of research experience to: Dr. Jerry K. Larson, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, Connecticut 06340.



An equal opportunity employer

## POSITIONS OPEN

### FISH ECOLOGIST/RESEARCH ASSOCIATE

The Natural Resources Research Institute of the University of Minnesota, Duluth has an opening for a senior level fish ecologist. We are seeking a person with expertise in either fish-habitat relationships or production ecology of lakes or streams. The initial appointment will be for 3 years; this is an appointment to the University's professional research staff. Minimum qualifications: Ph.D. in a biological science and 1 to 3 years of experience. Desired qualifications: Ph.D. in a biological science, 1 to 3 years of experience, publications in peer-reviewed journals and demonstrated ability to attract external funding. Salary and starting date: open and negotiable. Applications postmarked by 15 October 1988. To apply, send an application letter, résumé, and the names, addresses, and telephone numbers of five references to: **Personnel Director, Natural Resources Research Institute, University of Minnesota, Duluth, 3151 Miller Trunk Highway, Duluth, MN 55811.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

### INSECT PHYSIOLOGIST/BIOCHEMIST

Applicant must possess a Ph.D. degree in biology or biochemistry and have a minimum of 3 years of postdoctoral training. Ph.D. and postdoctoral education should include at least 3 years of work in insect physiology/biochemistry and hormonal control of energy metabolism in insects, such as *Manduca sexta*, as well as experience in lipid and carbohydrate metabolism, peptide purification and synthesis. The applicant is expected to conduct independent research, to publish original papers in the above areas, and to supervise students and technical employees. Forty hours per week, \$24,000 annual salary. Qualified applicants send résumé or application letter to: **AZ DES Job Service Attention 732-A Re: 0802682, PO Box 6123, Phoenix, AZ 85005** (Job Location: Tucson, AZ; Employer paid ad; Proof of authorization to work in U.S. required if hired.)

### JUNIOR OR SENIOR FACULTY POSITION MOLECULAR PATHOGENESIS

The Department of Microbiology and Immunology invites applications for a junior or senior level, tenure-track position focusing on significant problems in bacterial pathogenesis using genetic and molecular approaches. Senior candidates should have strong records of research accomplishment with sustained program growth and development. Junior candidates will be expected to develop high quality, independent research programs with long-term growth potential. Teaching responsibilities, which emphasize quality rather than quantity, include medical, dental and graduate students. A large Center of Excellence grant has resulted in establishment of a Molecular Resource Center within the Department featuring state-of-the-art facilities for: oligonucleotide synthesis, peptide synthesis, hybridoma antibody production, amino acid analysis, protein sequencing, molecular graphics, and flow cytometry. Funds for the initiation of research programs will be available and salaries will be highly competitive. Applications should consist of curriculum vitae, copies of several recent publications, a brief statement of future research goals and three letters of reference to be sent to: **Dr. Terrance G. Cooper, Department of Microbiology and Immunology, The University of Tennessee, Memphis, 858 Madison Avenue, Memphis, TN 38163.** Applications will be received until 1 October 1988 or until the position is filled thereafter. *The University of Tennessee is an Affirmative Action/Equal Opportunity Employer.*

**MOLECULAR BIOLOGIST**—Postdoctoral or junior level. Dual appointment at McLean Hospital/Harvard Medical School within a multi-disciplinary laboratory group. Research involves the expression and regulation of proteolytic enzymes in neural cells, the role of proteolysis in cytoskeleton-membrane interactions, and the relationship of these processes to Alzheimer's disease. Demonstrated past experience in molecular cloning and related molecular genetic techniques is required.

Send curriculum vitae and letters of reference to: **Ralph A. Nixon, Ph.D., M.D., Mailman Research Center, McLean Hospital, Belmont, MA 02178.**

## POSITIONS OPEN

**Italfarmaco s.p.a.** is an innovative, rapidly growing company, with headquarters located in Milano (Italy), dedicated to basic research in the field of cardiovascular disease and immunology. **ITALFARMACO** currently has two career opportunities for research scientists within the Pre-Clinical Research and Development Division.

### IMMUNOLOGIST/ CELL BIOLOGIST

The research scientist will conduct research on immune cells and their interaction in health and disease. The research goals of these positions will lead to the discovery of new drugs in the field of immunopharmacology. The individuals should have experience with in vitro immunological techniques, immune cell assays and/or expertise using nude mice for the propagation of human tumors, knowledge of radioisotopes and pharmacokinetics as well as "hands on" experience with tumor transplantation and drug administration in laboratory animals.

The successful candidate will have a Ph.D. in cell biology, immunology, pharmacology, or related, with 0 to 3 years of experience.

Other abilities sought include strong written and verbal communication in English, skills and research team experience. **ITALFARMACO** offers an excellent opportunity for professional recognition, career growth, competitive compensation and the advantage to live in an attractive area of Europe, known for its excellent cultural and educational environment.

For confidential consideration, please send résumé and position requirements to: **ITALFARMACO SPA—Direzione Personale, Viale Fulvio Testi 330—20126 Milano, Italy.**

### MOLECULAR BIOLOGIST

A professionally rewarding staff position exists for a molecular biologist in the expanding Medical Research Institute of The Mary Imogene Bassett Hospital, affiliated with Columbia University. Ample laboratory space, generous start-up funds, and excellent salary and benefits are offered. Academic appointment to an appropriate department in Columbia University is encouraged. The Institute provides a supportive, congenial environment in which the successful candidate will develop a full-time independent research program and interact with colleagues investigating significant biomedical problems. Postdoctoral experience is desirable. A starting date of July 1989, is anticipated. Located on a lake in the scenic foothills of the Catskill Mountains in upstate New York, Cooperstown and the surrounding area offer affordable housing, good schools, and a range of cultural and outdoor activities. Applicants should submit research interests, curriculum vitae, and the names of three references by 1 November 1988 to: **Dr. William E. Bowers, Associate Director of Basic Research, Medical Research Institute, The Mary Imogene Bassett Hospital, Cooperstown, NY 13326.**

### MOLECULAR BIOLOGY/BIOCHEMISTRY POSITION

Seeking a highly motivated individual interested in regulation of eukaryotic cellular protein expression using molecular biology techniques. The successful candidate will supervise ongoing research studies with opportunities for independent program development. Send résumés to: **Dr. Mervin Yoder, Department of Pediatrics, Indiana University School of Medicine, 702 Barnhill Drive, Indianapolis, IN 46223.** *Affirmative Action/Equal Opportunity Employer/M/F.*

**MOLECULAR GENETICIST.** The University of Nevada, invites applications for a 12-month tenure-track appointment in cell and molecular biology at the level of assistant or associate professor. The candidate will be expected to develop an independent research program in molecular genetics. A Ph.D. or M.D. degree and postdoctoral training is mandatory. Applicants should submit their curriculum vitae, a statement of research interests, and three letters of reference to: **Stephen St Jeor, Molecular Genetics Search Committee, Room 208, Howard Research Building, University of Nevada, Reno, NV 89557.** Application deadline is 1 November 1988 or until filled. *Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### MOLECULAR GENETICIST

Applications are invited for a tenure-track faculty position at the rank of associate professor or professor in the Department of Comparative Medicine, Schools of Medicine and Dentistry, University of Alabama at Birmingham (UAB). Applicants should have a Ph.D., M.D. or D.V.M. degree with extensive postdoctoral experience in molecular genetics and metabolic diseases. The successful candidate will be expected to develop a strong, extramurally-funded research program devoted to molecular mechanisms and treatment of inherited diseases of metabolism. Modest teaching, at the graduate level. Submit curriculum vitae, a statement of your career interests and goals, and three references to: **J. Russell Lindsey, Chairman, Department of Comparative Medicine, Schools of Medicine and Dentistry, University of Alabama at Birmingham, Birmingham, AL 35294. Telephone: 205-934-2117.** *UAB is an Affirmative Action/Equal Opportunity Employer.*

**MOLECULAR PHARMACOLOGY/CELL BIOLOGY: ASSISTANT PROFESSOR,** tenure-track positions (two) in pharmacology with possible joint appointment in new Medical Biotechnology Center. Candidates should have an M.D. or Ph.D. in biomedical field and at least 2 years of postdoctoral experience. Preferred areas of expertise include bioimaging, molecular, neuro- or cardiac biology, oncogenes and growth factors. Positions will involve teaching and developing strong, independent research program. Send curriculum vitae, statement of research interests, reprints of key publications, and names of three references by 1 November 1988 to: **Dr. David R. Burt, Head, Search Committee, Department of Pharmacology, University of Maryland School of Medicine, Baltimore, MD 21201.** *An Equal Opportunity/Affirmative Action Employer.*

### UNIVERSITY OF ALASKA FAIRBANKS MUSEUM DIRECTOR

University of Alaska Museum (AAM accredited natural history museum emphasizing the circumpolar north) seeks a director by nomination or application. Minimum qualifications: Ph.D., research accomplishments in a field of natural history, 5 years of experience in museum administration as a curator or director. University museum experience preferred. Candidates must be committed to developing the Museum's role within the University and sensitive to its tripartite mission of research, teaching, and public service. Director is responsible for development, balance and integration of programs, fundraising, budget planning and management, personnel, public relations, research, and other forms of scholarship.

Curriculum vitae, letter of interest, and names of three referees to: **D. F. Murray, Chair, Search Committee, University of Alaska Museum, Fairbanks, AK 99775-1200 (telephone: 907-474-7505)** by 31 October 1988. Position will be filled by 1 July 1989.

*UAF is an Affirmative Action/Equal Opportunity Employer and Educational Institution.*

The Anatomy Department of the Medical College of Ohio has openings for **NEUROBIOLOGISTS** who are studying neural organization and/or development at the cellular or molecular levels. Positions may be either tenured or tenure-track with teaching responsibility in either gross anatomy, microanatomy, or neurobiology. Applicants for assistant professorship should have demonstrated the ability to establish an independent and funded research program. Applicants for more senior positions should have ongoing and funded programs. The Medical College of Ohio offers an excellent research environment and very competitive salaries and start-up funds. Faculty hired in the upcoming year will join a growing neuroscience group that will be expanded by subsequent recruitment. Forward your curriculum vitae and the names of three references to: **Dr. Robert W. Rhoades, Chairman, Department of Anatomy, Medical College of Ohio, C.S. 10008, Toledo, OH 43699.** Consideration of applications will begin 1 December 1988. *Equal Opportunity Employer.*

# SCIENTISTS

Genencor, Inc. is a dynamic and growing biotechnology company located in South San Francisco, California. We specialize in the research and development of enzymes and enzyme processes as well as the production of industrial enzymes. We are actively recruiting for several imaginative and innovative scientists to join our Research and Development Departments:

## **AGRICULTURAL BIOTECHNOLOGY SCIENTIST.**

Develop uses for enzymes in such products as herbicides, pesticides and growth promoters. We require a PhD in Biochemistry, Plant Physiology, or Plant Pathology. Experience purifying and characterizing enzymes is essential. Knowledge of plant pests such as pathogenic bacteria or fungi is desirable. Refer to Dept. AJP-51.

## **FUNGAL PHYSIOLOGIST/ GENETICIST.**

Design and conduct research of the genetic and physiologic factors which enhance strain production. Utilize classical and molecular genetic approaches to optimize strain performance. Working with our fungal molecular genetics staff, scale up eukaryotic production processes to laboratory fermenters. Requires (1) PhD in Genetics, Microbiology, Biochemistry, or a related field; (2) up to three years of related post doctoral experience with emphasis on the genetic factors controlling gene expression in yeast or fungi; (3) demonstrated expertise in strain development by classical genetics and mutagenesis; and (4) commitment to product-oriented research within a strong team environment. Experience with the regulation of complex multi-enzyme systems is preferred. Current working knowledge of fungal molecular biology or experience with naturally secreted proteins is desired. Refer to Dept. DC-48.

## **BACTERIAL PHYSIOLOGIST.**

Develop and evaluate microbial hosts for the large-scale production of useful proteins. Conduct and optimize fermentations on both the laboratory and pilot plant scales. Requires a PhD in Microbiology or related field, knowledge of genetics and experience using the latest genetic techniques. Some knowledge of engineering principles is useful. Refer to Dept. MA-12.

We offer a generous compensation and benefits package combined with the challenge and opportunity to make a significant contribution to our outstanding organization. To apply, please send your *curriculum vitae* to GENENCOR, INC., 180 Kimball Way, South San Francisco, CA 94080. Attn: Human Resources. Please note appropriate Dept. GENENCOR is an equal opportunity employer.

## **ENZYMOLOGIST.**

As a member of our enzymology group, this position will be responsible for the analysis, characterization and design of enzymes in one or more of our protein engineering projects. Our multi-disciplinary group has made numerous changes in several protein sequences, improving or modifying various enzymes for use in industrial, personal, and health care products. Requires a PhD in Biochemistry or Chemistry, plus an extensive knowledge of protein chemistry, enzyme kinetics and enzyme mechanisms. A strong mathematical background is essential. Refer to Dept. DE-58.

## **MOLECULAR BIOLOGIST.**

Develop new approaches for heterologous gene expression and *in vitro* mutagenesis in bacteria and fungi. Work within a multidisciplinary team on a variety of projects. We require a PhD in Molecular Biology, Microbiology, or a related field and project leadership ability. Refer to Dept. HH-8.

## **PROCESS DEVELOPMENT ENGINEER.**

Research downstream processing of enzymes from bacteria and fungi. Develop new and improved recovery processes for laboratory – and pilot-scale testing and large-scale fermentation-based manufacturing of enzymes. We require a PhD in Biochemical or Chemical Engineering or an MS plus a minimum of two years related experience in the food, pharmaceutical or biotechnology industries. The successful candidate will have strong interpersonal, communication, and project leadership skills. About 25% travel will be required to implement technology transfers and support our manufacturing facilities. Refer to Dept. TR-59.

# GENENCOR

## POSITIONS OPEN

**NEPHROLOGY RESEARCH—A POSTDOCTORAL FELLOWSHIP** is available beginning 1 October 1988 in the Nephrology Research and Training Center at the University of Alabama at Birmingham. The applicant should be familiar with protein purification and separation, and with immunopurification techniques. The focus of the project is on the identification and purification of membrane transport proteins, especially the Na/H exchanger. Send curriculum vitae and three letters of recommendation to: **David G. Warnock, M.D., Director, Division of Nephrology and the Nephrology Research and Training Center, University of Alabama at Birmingham, University Station, Birmingham, AL 35294.** UAB is an Affirmative Action/Equal Opportunity Employer.

## NEUROBIOLOGY

The Department of Biology at Loyola University of Chicago invites applications for a 9-month tenure-track position at the level of **ASSISTANT PROFESSOR**. A Ph.D. and postdoctoral experience are required. Individuals having thorough training in the neurosciences and who are conducting innovative research using modern techniques will be considered. The successful candidate will develop an active, funded research program, direct graduate student research, develop and teach an introductory undergraduate neurobiology course, and teach at the graduate level. Submit curriculum vitae, a description of research interests, and the names of three references by 1 November 1988 to: **Dr. Albert Rotermund, Chairman Search Committee, Department of Biology, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, IL 60626.** An Equal Opportunity Employer.

**Ph.D. Roger Williams General Hospital** seeks a researcher with a Ph.D. in molecular pharmacology or related biomedical discipline. Candidates must qualify for a position on the medical faculty of Brown University as Assistant Professor of Medicine (research) and must have two or more years of relevant experience beyond the Ph.D. The successful candidate will direct a research program in the molecular pharmacology of cytochrome P-450 expression. Interested candidates should send their curriculum vitae and a one-page description of research interests by 21 October 1988, to: **Darrell Abernethy, M.D., Ph.D., Chairman, Search Committee, Roger Williams General Hospital, 825 Chalkstone Avenue, Providence, RI 02908.** Roger Williams General Hospital is an Equal Employment Opportunity/Affirmative Action Employer and actively solicits applications from minority and protected groups.

**PHYSIOLOGICAL PSYCHOLOGIST:** The Department of Psychology at the University of Southern California announces a tenure-track faculty position for 1989 at the assistant professor level for a physiological psychologist doing basic animal research in behavioral neurochemistry. Work in neural receptor systems, immunocytochemistry, and in situ hybridization is desirable. Candidates must have an established record of research publications and have had some teaching experience. Please send letter of interest, curriculum vitae, re/preprints, and arrange for three letters to be sent to: **Physiological Search Committee, Department of Psychology/SGM 501, University of Southern California, Los Angeles, CA 90089-1061.** Deadline for receipt of all materials is 1 December 1988. Equal Opportunity/Affirmative Action.

**POSTDOCTORAL AND JUNIOR STAFF POSITION** available immediately to study tumor-immunity relations and proteins and receptors involved in leukemia cell differentiation and growth. Background in biochemistry and immunology is desirable. Send curriculum vitae to: **Dr. J. W. Chiao, Department of Medicine, New York Medical College, Valhalla, NY 10595.** New York Medical College is located 25 miles north of New York City.

**POSTDOCTORAL FELLOW/\$24,000** to \$30,000. Position for Ph.D. or M.D. with 0 to 5 years of postdoctoral training in virology, cell biology, molecular biology or related area. Excellent compensation package. Send curriculum vitae with references to: **JV/Human Resources, New York Blood Center, 310 East 67th Street, New York, NY 10021.** Equal Opportunity Employer, M/F.

## POSITIONS OPEN

**POSTDOCTORAL ASSOCIATE**—Applications are invited for a postdoctoral associate position in the Laboratory of **Dr. Axel T. Brunger**, Assistant Investigator, Howard Hughes Medical Institute at Yale University. Principal areas of research are automated three dimensional structure determination/refinement and macromolecular structure/function relationships. Applicants should have a strong background in computational crystallography, NMR spectroscopy, or computational chemistry. Appointments are for 2 years with an additional year possible. The salary range is \$20,000 to \$25,000 per year, based on qualifications and experience, and an excellent benefits package is offered. Send curriculum vitae and three letters of reference to:

**Axel T. Brunger, Ph.D., Assistant Investigator  
Howard Hughes Medical Institute  
260 Whitney Avenue, JWG 604  
Yale University  
New Haven, CT 06511**  
*An Equal Opportunity Employer.*

## POSTDOCTORAL ASSOCIATE

Neurophysiologist to study synaptic interactions of neuronal pairs in brain slice preparation of visual thalamus and cerebral cortex. Experience in basic electrophysiology and intracellular recording is desirable. Newly equipped dedicated state-of-the-art laboratory set-up available. Position funded at \$18,000 to \$24,000 for up to 3 years. Available 1 February 1989. Send curriculum vitae, research interests, and names of three references to: **Michael Friedlander, Ph.D., Neurobiology Research Center, Volker Hall, University of Alabama at Birmingham Medical Center, Birmingham, AL 35294.**

**POSTDOCTORAL ASSOCIATE IN MOLECULAR CARCINOGENESIS** to conduct research in regulation of oncogene expression during tumorigenesis. Project will investigate cis- and trans-regulatory elements controlling expression of the Ha-ras oncogene during two-stage skin carcinogenesis. Background desired in molecular biology, or recombinant DNA and cloning, or cell culture, or DNA-binding proteins. Send curriculum vitae and names of three references to: **Dr. Jill C. Pelling, Eppley Cancer Institute, University of Nebraska Medical Center, Omaha, NE 68105.** Telephone: 402-559-6304. Equal Opportunity Employer.

**POSTDOCTORAL/ASSOCIATE RESEARCH SCIENTIST** positions available in the Department of Pharmacology at Yale University School of Medicine to study: (i) regulation of induced differentiation of neoplastic cells with emphasis on factors involved in epidermal cell differentiation, and (ii) mechanisms of action of drugs on hypoxic tumor cells with emphasis on the reductive activation of bioreductive alkylating agents. Ph.D. required and experience in biochemistry and/or molecular biology desired. Deadline for receipt of applications is 31 December 1988. Send curriculum vitae and three letters of reference to: **Dr. Alan C. Sartorelli, Director, Comprehensive Cancer Center, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.**

*Yale University is an Equal Opportunity/Affirmative Action Employer. The Department of Pharmacology encourages applications from women and minority group members.*

**POSTDOCTORAL FELLOW OR RESEARCH ASSISTANT PROFESSOR** to join multidisciplinary team investigating new approaches to brain tumor therapy. Individual should have laboratory (animal) background in pharmacology, tumor biology, brain research, or related field. Position available immediately. Send curriculum vitae, list of publications, salary requirements, and names and addresses of three references to: **Dr. B. F. Kimler, Department of Radiation Oncology, University of Kansas Medical Center, Kansas City, KS 66103.**

## POSITIONS OPEN

### POSTDOCTORAL FELLOWSHIP IN BIOMEDICAL ENGINEERING AT DUKE UNIVERSITY

A postdoctoral fellowship in Biomedical Engineering will be funded jointly by the Duke University/NSF Engineering Research Center for Emerging Cardiovascular Technologies, and by individual NIH grants held by **Drs. G. A. Truskey and W. M. Reichert** in the Department of Biomedical Engineering. The position carries a 2-year stipend in the range of \$25,000 to \$30,000 per year, depending upon background and qualifications. The optimum background for applicants is a Ph.D. in biomedical engineering, chemical engineering, or surface/colloid/polymer chemistry. The selected individual will be expected to perform research on the interaction of cells, formed elements, and/or proteins with artificial surfaces. The position is designed to encourage latitude in selecting the specific topic of study. For more information please contact: **W. M. Reichert, Department of Biomedical Engineering, Duke University, Durham, NC 27706, Telephone: 919-684-6185.** Duke University is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

**POSTDOCTORAL OR STAFF SCIENTIST** position immediately available for an **IMMUNOLOGIST/TOXICOLOGIST** to study the regulation of the immune response to small molecular weight toxins and to develop anti-idiotypic based vaccines. Approaches include development of new toxin-protein conjugates, hybridoma technology and anti-idiotypic antibodies. Experience in idiotype anti-idiotypic regulation preferred but not required. Work will be coordinated by **Dr. Tran C. Chanh**, associate scientist in our Department of Virology and Immunology. Please mail curriculum vitae with names and telephone numbers of three references to: **Personnel Director (876), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** Equal Opportunity Employer, M/F.

### DEPARTMENT OF NUTRITIONAL SCIENCES POSTDOCTORAL POSITION AVAILABLE

For research on biochemical reactions of folic acid and vitamin B12. Emphasis on the effect of thyroid status on folic acid binding proteins and regulation of folic acid metabolism. Ph.D. in nutrition, biochemistry or related field required. Experience in the folic acid field desirable. Salary: \$23,196 to \$25,332 per year. Starting date: 1 October 1988 or until filled. Send curriculum vitae and names and addresses of three references to: **Dr. E. L. R. Stokstad, Department of Nutritional Sciences, University of California, 131 Morgan Hall, Berkeley, CA 94720.** The University of California is an Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITION** available to examine the functional role of the secretory immune system of the eye. Research will focus upon developing an effective strategy for ocular immunization to both viral and non-invasive antigens. Send curriculum vitae and the names of three references to: **Dr. David A. Sullivan, Immunology Unit, Eye Research Institute, 20 Staniford Street, Boston, MA 02114.** Equal Opportunity/Affirmative Action Employer M/F/H/V.

**POSTDOCTORAL POSITION** available for Ph.D. or M.D. in cell biology or related field. Focus on regulation of hemoglobin synthesis at the cellular level. Experience in hematopoietic growth factors, cell purification, immunology, and/or tissue culture preferred. Send curriculum vitae and three references to: **Dr. Blanche P. Alter, Division of Hematology, Box #1079, The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029-6574.** An Equal Opportunity Employer.

**POSTDOCTORAL POSITION** in molecular endocrinology available July 1989 for study of aging and abnormal responses to growth factors in Werner's syndrome and normal fibroblasts. Experience in analysis of growth factor response pathways useful. Send curriculum vitae and names/telephone numbers of three references to: **Dr. R. W. Rees-Jones, Department of Medicine, Columbia University, 630 West 168th Street, New York, NY 10032.** Columbia University takes Affirmative Action to ensure Equal Opportunity.



## POSITIONS OPEN

**POSTDOCTORAL POSITION** available 1 October 1988, for 1 to 3 years, in laboratory studying the molecular and biochemical basis of differentiation and development in filamentous fungi. Research will involve identification and characterization of genes specifically involved in the initial steps of differentiation. Experience in recombinant DNA-molecular biology preferred, and experience with filamentous fungi desirable. Position open until filled. Send curriculum vitae and names of three references to: **Dr. Ian K. Ross, Department of Biological Sciences, University of California, Santa Barbara, CA 93106.** *The University of California is an Equal Opportunity/Affirmative Action Employer. Proof of U.S. citizenship or eligibility for U.S. employment will be required prior to employment (Immigration Reform and Control Act of 1986).*

**POSTDOCTORAL POSITION** to study either mechanism of assembly of enveloped viruses or mechanisms of recognition of viral antigens by cytotoxic T lymphocytes. Projects available offer training opportunity or experience in the use of eukaryotic expression vectors, membrane molecular biology techniques, and/or biophysical structural techniques to study interactions of viral and host membrane proteins. Send curriculum vitae and names of three references to: **Douglas Lyles, Ph.D., Department of Microbiology and Immunology, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, NC 27103.** *Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITION: CELL BIOLOGY

Applications are invited for a postdoctoral fellowship to study the role of plasminogen activators in epidermal function and pathology. Biochemical, molecular biological, and microscopic approaches will be utilized; applicants should have experience in one or more of these general areas. Opportunities for interactions with other basic scientists in the university community are available and encouraged.

Send curriculum vitae including description of research experience to: **Pamela Jensen, Ph.D., Department of Dermatology, 330 Medical Education Building, University of Pennsylvania, Philadelphia, PA 19104.** Telephone: 215-898-3462.

**POSTDOCTORAL POSITIONS**—To study the structure, function, and regulation of deoxyribonucleotide metabolizing enzymes in prokaryotic and eukaryotic organisms. Experience in molecular biology and recombinant DNA techniques, including DNA sequencing, isolation of eukaryote genes, and their expression in plasmid vectors, site-directed mutagenesis and transfection is preferred but not essential. Starting salary \$17,720 and up depending on experience. The appointment can be for 2 years or more. Send résumé and at least two letters of recommendation to: **Dr. Frank Maley, Wadsworth Center for Laboratories and Research, Box 509, Albany, NY 12201.** *Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS.** Cancer Research Center of Hawaii. (i) focus on the molecular biology of an inositol-phosphate-stimulated protein phosphatase, its role in cell division. (ii) investigate the cellular/biochemical mechanisms of  $Ca^{2+}$ , protein kinases and phosphatases in cell division and cancer. Experience in cell biology/biochemistry/molecular biology. Salary: \$25,388 (minimum). Send curriculum vitae, addresses, and telephone of three references to: **Dr. Alton L. Boynton, Cancer Research Center, 1236 Lauhala Street, Honolulu, HI 96813.**

### UNIVERSITY OF MISSISSIPPI MEDICAL CENTER JACKSON, MISSISSIPPI

**POSTDOCTORAL POSITIONS** in enzymology and bioenergetics. Projects include mechanistic studies of catalysis by PQQ-bearing enzymes, complex formation between electron transfer proteins, and characterization of membrane-bound redox proteins. Experience in rapid kinetics and protein and membrane biochemistry is desired. These are NIH-funded positions available from one to 5 years. Apply to: **Dr. V. L. Davidson, Department of Biochemistry, The University of Mississippi Medical Center, Jackson, MS 39216.** *Equal Opportunity Employer M/F/H/V.*

## Research Scientists

- Cellular Immunology
- Cell Biology
- Molecular Biology

ORTHO BIOTECH R&D, a recently formed Division of Johnson & Johnson's R.W. Johnson Pharmaceutical Research Institute, is dedicated to perfecting and creating biologicals for use in modulating the immune response and hemopoiesis. ORTHO BIOTECH has laboratories in Raritan, New Jersey (near Princeton) and in La Jolla, California. We have close working relationships with The Research Institute at Scripps Clinic in La Jolla, and with several University laboratories. Specific areas of active research include: hemopoietic growth factors; immune tolerance; blood coagulation; AIDS; tissue transplantation, repair and regeneration. Current openings are for:

### Cellular Immunologists

Opportunities are available for one Associate and one Senior Scientist (PhD). Both require general background in cellular immunology; experience and interest in immune tolerance is desired.

One appointment is planned for Raritan. (Dept. 67A)

One appointment is planned for La Jolla. (Dept. 67B)

### Molecular Biologists

Two openings in Raritan. One at the PhD level requires expertise in molecular biology and specific interest in receptor cloning and isolation. (Dept. 67C)

Another appointment will be at the BS/MS level and requires a lab background demonstrating the ability to work independently with PhD level scientists. (Dept. 67D)

### Cell Biologists

PhD level opening requires background in hemopoietic biological assays and tissue culture to work in areas of hemopoietic growth factors in Raritan. (Dept. 67E)

Another appointment will be at the PhD level to carry out studies in hemopoiesis and coagulation in La Jolla. (Dept. 67F)

### Postdoctorals and Sabbaticals

Postdoctoral fellows and University-based scientists wishing to do a sabbatical year in a stimulating industry-based basic research environment are encouraged to apply for a limited number of these positions. (Dept. 67G).

We offer competitive salaries and the comprehensive benefits you would expect from a Johnson & Johnson Company. We invite you to forward your resume, including salary requirements, to: **Mr. Frank Folio, Ortho Pharmaceutical Corporation, Dept. # as indicated above, P.O. Box 300, Raritan, New Jersey 08869-0602.**

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Deadline January 17, 1989

**DIRECTOR, MOLECULAR AND CELLULAR  
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**University of Maryland, College Park**

The University of Maryland is seeking a Director for a newly formed inter-departmental graduate program in Molecular and Cellular Biology. The Director will:

- be a tenured full professor in one of the departments of the College of Life Sciences or the College of Agriculture, and be the Program Director.
- work closely with the chairs of the departments involved in the program and report directly to the Dean of the Colleges of Life Sciences and Agriculture
- represent College Park in a University-wide Molecular and Cellular Biology Graduate Program

The individual selected for Director should demonstrate significant sustained contributions to molecular and/or cellular biology as well as an ability to direct and lead a large inter-departmental program. The individual is expected to maintain his/her own active research program, teach appropriate courses in the program, and foster development of the program.

Applicants for the position should send their curriculum vitae, a statement of research interests and the names and addresses of at least three potential references to: Dr. Arthur N. Popper, Chairman, Search Committee, Molecular and Cellular Biology Program, Department of Zoology, University of Maryland, College Park, MD 20742. (301) 454-3202

Closing date October 17th, or until suitable applicants are found. EOE/AA.



THE UNIVERSITY OF MARYLAND

**SENIOR RESEARCH  
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Battelle, a world leader in contract research, has two positions available in Columbus, Ohio. These opportunities involve working with a talented team of scientists developing therapeutic agents against major diseases. Both positions require a PhD in a relevant field and a minimum of 5 years of experience and excellent communication skills.

**SENIOR DRUG METABOLISM SCIENTIST**—Relevant degrees include chemistry, biochemistry, or pharmacology. Requires experience with disposition and metabolism in common laboratory animals (rodents, dogs, swine), pharmacokinetic parameter derivation and modeling, catheter implantation, radiotracer technology, autoradiography, and analytical instrumentation. Must be familiar with Good Laboratory Practices. Involves taking a leadership role in drug metabolism and assuming responsibility for study design and interpretation.

**SENIOR PULMONARY PHARMACOLOGIST**—Relevant degrees include pharmacology, physiology, or biochemistry. Requires experience evaluating the therapy of pulmonary diseases in animal models (rodents, dogs, non-human primates) and knowledge of pulmonary mechanics, intranasal or pulmonary drug absorption and distribution, and drug metabolism and clearance in the lung. Must have knowledge of major pulmonary diseases in humans and current therapeutic strategies. Involves development of animal and in vitro models to study new therapeutic agents and the respiratory system as a delivery site for systemically-active drugs.

Battelle offers competitive salaries and comprehensive benefits as well as opportunities for professional growth. Please send your resume to: **Mr. Richard W. Shaw, Department N-2, Battelle Columbus Division, 505 King Avenue, Columbus, Ohio 43201-2693.** An Equal Opportunity/Affirmative Action Employer M/F/H.



**Battelle**

**Research Scientist  
Parasitologist**

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Pfizer offers an excellent opportunity for professional recognition and career growth. We offer excellent compensation, comprehensive benefits and relocation assistance. Qualified applicants should submit a current resume with the names of three references to: Ms. Christina Batjer, Senior Personnel Supervisor, Pfizer Inc., P.O. Box 88, Terre Haute, IN 47808.



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Sandoz Crop Protection Corporation, a recognized leader in the development of specialized products for agricultural crop protection, is currently seeking 3 key individuals to join our Process Technology and Environmental Sciences Departments. Position openings are for the following qualified candidates:

### 1. ORGANIC CHEMIST

Primary responsibilities will include assisting in project planning, development of laboratory programs, conducting laboratory experimentation, documenting results and making recommendations based on results. Ph.D. in Organic Chemistry and 0-2 years experience required.

### 2. SENIOR PROCESS CHEMIST

Responsibilities include the development of new and improved Sandoz processes based on the acquisition of appropriate laboratory data. Requires project leadership, administrative, and excellent laboratory skills. Position involves organizing, conducting, monitoring, reporting, and making recommendations on the results of laboratory process R & D studies. Ph.D. in organic chemistry or equivalent and at least 5 years industrial process R & D experience required.

### 3. ENVIRONMENTAL SCIENTIST

Working within the Environmental Sciences & Analytical Chemistry Department, the qualified individual will be responsible for conducting environmental fate modeling using computer models and writing study protocols and final reports on fate studies. Position requires a Ph.D. in Environmental Sciences or a related field and at least 3 years experience in the fate and modeling of xenobiotics in the environment.

If you are interested in joining a progressive industry leader which offers growth and leadership potential, as well as an outstanding compensation and benefit package which includes relocation assistance and on-site employee fitness center, please send your resume complete with salary history to: Melanie Marshall-Park, #24, SANDOZ CROP PROTECTION CORP., 1300 E. Touhy, Des Plaines, IL 60018. PLEASE INDICATE ON ENVELOPE WHICH POSITION IS OF INTEREST. PRINCIPALS ONLY PLEASE.

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## POSITIONS OPEN

**POSTDOCTORAL POSITION** is available in the Department of Biochemical and Clinical Pharmacology for an individual with a Ph.D. in biochemistry, pharmacology, cell biology, or related field, to investigate mechanisms of anti-cancer drug action in cultured human tumor cells. The work involves an ongoing NIH-supported project on the role of DNA repair in cellular resistance to anti-tumor alkylating agents. St. Jude Children's Research Hospital is a major pediatric cancer research center and provides opportunities for interaction with research programs in biochemistry, molecular biology, tumor cell biology, virology, and immunology. Postdoctoral training stipends start at \$22,000. Send curriculum vitae and names and telephone number of three references to: **Dr. Thomas P. Brent, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. An Equal Opportunity/Affirmative Action Employer.**

### GLADSTONE FOUNDATION LABORATORIES FOR CARDIOVASCULAR DISEASE UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

The Gladstone Laboratories are involved in studying the cellular and molecular biology of lipoprotein metabolism and atherosclerosis. **POSTDOCTORAL POSITIONS** are available in the following areas: protein physical biochemistry, site-directed mutagenesis, mouse transgenics, regulation of gene expression, and regulation of intracellular cholesterol metabolism. Send curriculum vitae to: **Personnel, Gladstone Foundation Laboratories, University of California, San Francisco, P.O. Box 40608, San Francisco, CA 94140-0608.**

**POSTDOCTORAL POSITIONS** in neuroimmunology/neuro-oncology in the Division of Neurology, Harvard Medical School. A multidisciplinary approach is used to understand and manipulate the immune response to neural antigens. Focus is on neural tumors and autoimmune disorders. Send résumé with reprints and names of references to: **Dr. Lois Lampson, Center for Neurologic Diseases, Biosciences Research Building, Brigham and Women's Hospital, Boston, MA 02115. An Equal Opportunity Employer.**

**POSTDOCTORAL POSITIONS** presently available. (i) VLDL assembly/secretion: expression of fusion protein cDNA constructs in genetically defined tissue culture cells, and (ii) hepatic cholesterol metabolism: tracing the uptake, intracellular transport and metabolism of  $^{13}\text{C}$ -cholesterol-labeled lipoproteins using GC/mass spectroscopy. Experience in molecular and cell biology, biochemistry desired. Competence in powder skiing helpful, but not required. Send curriculum vitae to: **Dr. Roger Davis, Molecular and Cell Biology Unit, Box B158, UCHSC, 4200 East 9th Avenue, Denver, CO 80262. The University of Colorado Health Sciences Center is an Equal Employment Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITIONS** available immediately for antigenic characterization of an equine herpesvirus-1 (EHV-1) glycoprotein. The positions are in an established laboratory investigating the molecular structure of the B- and T-cell epitopes of EHV-1 antigens. Experience in hybridoma technology, immunoblotting, ELISA, T-cell cultures, and oligopeptides highly desirable. Salary: \$25,000. Send curriculum vitae, including references, to: **Dr. George Allen, Department of Veterinary Science, Gluck Equine Research Center, University of Kentucky, Lexington, KY 40546-0099. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITIONS** available immediately to perform studies of structural and functional correlations of retroviral gene products by site-specific mutagenesis. Systems being studied include murine leukemia viruses, spleen focus-forming viruses, and HIV. A molecular genetic background is essential, with experience in gene cloning and in vitro mutagenesis preferred. Salary will be commensurate with experience. Send curriculum vitae and three letters of recommendation to: **Dr. Abraham Pinter, Department of Retroviral Biology, Public Health Research Institute, 455 First Avenue, New York, NY 10016.**

## Cellular Electrophysiologist

A position is available in the Department of Membrane Biochemistry and Biophysics of Merck Sharp and Dohme Research Laboratories for a researcher in cellular electrophysiology. The department is conducting multidisciplinary studies on the function and pharmacology of ion channels. We are seeking candidates in voltage clamp techniques for characterizing ion transport. A strong background in quantitative data analysis is highly desirable, as evidenced by familiarity with computer programming and the kinetics of chemical reactions. Acceptable candidates will have a Ph.D. as well as postdoctoral experience.

Merck Sharp and Dohme Research Laboratories are located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Interested candidates should submit their resume with the name of three references and salary requirements to **Ms. Jacqueline A. Eiermann, Merck & Co., Inc., P.O. Box 2000, Rahway, New Jersey 07065.**

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## BIOCHEMISTRY DEPARTMENT

Wright State University School of Medicine and College of Science and Mathematics

### ASSISTANT PROFESSOR (TENURE TRACK)

#### MOLECULAR ENDOCRINOLOGY, RECEPTOR MECHANISMS, GROWTH FACTORS

The Department of Biochemistry at Wright State has a tenure track position open at the assistant professor level. We seek an outstanding individual who has demonstrated the potential to establish an externally funded research program for the study of peptide hormones, receptors, growth factors, or related compounds at the molecular level. This would include but need not be limited to investigations of their biosynthesis, structure, and mechanism of action. Applicants using techniques of molecular genetics or protein structure analysis are preferred. A doctoral degree in biochemistry, or a related field, and postdoctoral training are required. This position is salaried on a 12 months a year basis. Teaching responsibilities will include the endocrinology section of biochemistry courses for graduate (Ph.D. and M.S.) and medical students.

Applicants should submit a curriculum vitae, a detailed research plan, reprints of recent publications, and the names of three or more references to:

**Dr. Michael Leffak, Chair  
Department of Biochemistry Search Committee  
Wright State University, Dayton, Ohio 45435.**

Applications received before November 10th will be assured of full consideration in the screening process, but applications will be accepted until the position is filled.

*Wright State University is an affirmative action/equal opportunity employer.*

## Scientist

### Protein Analysis/Characterization

Genentech, Inc., a leader in the field of biotechnology, is seeking an individual to make innovative and original contributions performing protein analysis/characterization in the area of protein metabolism/pharmacokinetics. Collaborating with other Scientists, you will define the disposition of potential drug candidates and represent the Pharmacological Sciences Department on future development project teams.

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## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** (two) available immediately to study the mechanism and energetics of enzymatic catalysis employing novel transient-state kinetics [*J. Biol. Chem.* **263**, 11704-11710 (1988)] and biophysical approaches [*Advances in Enzymology*, **61**, 1-46 (1988)]. Experience or interest in the areas of enzyme structure and function is desired. Salary: \$17,000 to \$23,000 per year. Send curriculum vitae to or call: **Dr. Harvey F. Fisher**, VA Medical Center, 4801 Linwood Boulevard, Kansas City, MO 64128. Telephone: 816-861-4700 X455. An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITIONS—CELL SIGNALS.** Three collaborating laboratories have positions for the study of second messenger systems in various cell systems. Stimulus-secretion coupling in chromaffin cells (**E. W. Westhead**); ATP, ADP, AMP and Ado regulation of cAMP and  $Ca^{2+}$  in vascular endothelial and smooth muscle cells (**L. L. Slakey**); and EGF receptor mobility and signalling in human A-431 and fibroblast cells (**D. J. Gross**) are among the systems of interest. Techniques include quantitative optical microscopy (CCD and laser scan focal imaging), novel approaches to signalling kinetics, as well as standard biochemical measurements. Salaries start at \$21,000. Send résumé and names of three references to: **Dr. D. J. Gross**, Department of Biochemistry and Program in Molecular and Cellular Biology, University of Massachusetts, Amherst, MA 01003. Deadline for applications is 1 November 1988 or until suitable candidates have been found. Affirmative Action/Equal Opportunity Employer.

**TWO POSTDOCTORATE POSITIONS** are available at Bay Area non-profit research Institute. **MOLECULAR BIOLOGIST:** This position requires a person experienced in cDNA cloning and related techniques to participate in study of the molecular biology of antigenic variation in breast cancer related to immunotherapy. **IMMUNOBIOLOGIST:** To conduct research in breast cancer antigens and immunotherapy with monoclonal antibodies. Applicant with experience in serum immunology, pharmacology, and/or radiobiology is being sought. Available September 1988. Salary ranges from \$25,000 to \$32,000, based on experience. To apply, forward résumé and references to: **Roberto L. Ceriani, M.D., Ph.D./Jerry A. Peterson, Ph.D.**, John Muir Cancer & Aging Research Institute, 2055 North Broadway, Walnut Creek, CA 94596. Telephone: 415-943-1167.

**POSTDOCTORAL RESEARCH ASSOCIATE** to study the molecular biology of drug resistance. Project will emphasize determination of basic mechanisms of drug resistance occurring in human tumor cells at both the gene and sub-gene levels. Requires motivated individual with strong interest in clinically relevant basic cancer research. Federal law requires proper documentation of identity and employability at the time of employment. It is requested this documentation be included with your application. Please send curriculum vitae and three letters of recommendation by 31 September 1988, to: **Jonathan Nyce, Ph.D.**, Department of Pharmacology, East Carolina University, Greenville, NC 27858. Affirmative Action/Equal Employment Opportunity.

### POSTDOCTORAL RESEARCH ASSOCIATE, BROOKHAVEN NATIONAL LABORATORY

Immediate opening for a postdoctoral position in the Oceanographic Sciences Division of the Department of Applied Science for a term of 2 years. Position requires recent doctorate in chemistry, and background in synthetic organic and inorganic chemistry. The successful candidate would be expected to synthesize new ligands and Ru(II) complexes and apply them to the development of an oxygen sensor. The purpose of the sensor is to measure the partial pressure of dissolved oxygen in sea water. The project is a collaborative effort and much of the required research would be performed in the Chemistry Department at the State University of New York, Stony Brook. Salary will be commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Creighton D. Wirick**, Chair, Search Committee, Oceanographic Sciences Division, Building 318, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., NY 11973. Telephone: 516-282-3063. Equal Opportunity Employer M/F.

## POSITIONS OPEN

**POSTDOCTORAL/RESEARCH ASSOCIATE POSITION IN NEUROBIOLOGY** to study cell surface and extracellular matrix molecules that influence synapse formation [see *J. Cell Biol.*, **102**: 420 and 731, (1986); *J. Cell Biol.*, **105**: 2479, (1987); *J. Neurosci.*, **8**: 932, (1988)]. Background in biochemistry or molecular biology helpful. Apply to: **Joshua R. Sanes**, Department of Anatomy and Neurobiology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110.

### POSTDOCTORAL RESEARCH ASSOCIATE NORTHWESTERN UNIVERSITY DEPARTMENT OF NEUROBIOLOGY AND PHYSIOLOGY

Position available to use visually-defective mutant mice, the approach of injecting mRNA into *Xenopus* oocytes and more conventional techniques (patch-clamp, intracellular and extracellular recording; immunohistochemistry, dye-injection and retrograde labelling), to study ionic processes and information processing in the retina. Familiarity with any one of these is necessary; others will be taught as required.

Send curriculum vitae and names of three references to: **Professor Lawrence Pinto**, Hogan Hall, 2153 Sheridan Road, Evanston, IL 60208.

Affirmative Action/Equal Opportunity Employer.

### PROFESSOR/CHAIRPERSON PHARMACEUTICS AND PHARMACEUTICAL CHEMISTRY COLLEGE OF PHARMACY THE OHIO STATE UNIVERSITY

The Ohio State University College of Pharmacy invites applications for a professor/chairperson in the Division of Pharmaceutics and Pharmaceutical Chemistry. Candidates should possess a Ph.D. in the pharmaceutical or related sciences plus established research credentials in the area of pharmaceutics including pharmacokinetics, biopharmaceutics, physical pharmacy, and/or drug delivery.

The individual selected will be expected to participate in student instruction and to conduct scholarly research. The Ohio State University offers an excellent research environment including an interdisciplinary medical center complex.

Review of applications will begin 15 November 1988 with the position starting 1 July 1989 or sooner. Interested candidates shall submit a letter of application describing their current and future research interests and a brief abstract of their current research projects, a complete curriculum vitae and the names and addresses of three references to: **Alfred E. Staubus, Pharm.D., Ph.D.**, Chair, Search Committee, College of Pharmacology, The Ohio State University, 500 West 12th Avenue, Columbus, OH 43210. The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

**RESEARCH ASSISTANT PROFESSOR** with interest and expertise in development of molecularly based bioassays. Supervision and evaluation of results of bioassays and collaborative interactions with multidisciplinary group for the discovery of new biologically active natural products. Applicants must have Ph.D. in a biological or pharmaceutical science. Contact: **Dr. James D. McChesney**, Director, Research Institute of Pharmaceutical Sciences, School of Pharmacy, University of Mississippi, University, MS 38677. Telephone: 601-232-7132. Deadline to ensure consideration is 15 December 1988. Equal Opportunity Employer.

### RESEARCH ASSOCIATE/ASSISTANT

Several positions are available to work on the molecular mechanisms of *Pseudomonas* infection in Cystic Fibrosis, which involves signal transduction and subsequent activation of promoters [see for example *Biotechnology* **5**, 469 (1987); *NAR* **11**, 4567 (1987)], and also to work on biodegradation of synthetic toxic chemicals. The latter studies involve organization and regulation of newly evolved genes and their promoters [*PNAS* **84**, 4460 (1987)]. Candidates should have experience in protein purification and molecular biological techniques. Send résumé to: **A. M. Chakrabarty**, Department of Microbiology and Immunology, University of Illinois College of Medicine, 835 South Wolcott Avenue, Chicago, IL 60612. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

**RESEARCH ASSOCIATE PROFESSOR:** 10 years of postdoctoral clinical, psychophysical, and research experience in chemical senses with research experience and publications in psychophysical research in clinical populations, nutrition/metabolism using stable isotopes and magnetic resonance. Must have current research support and expected to generate 50+% of salary. Apply to: **James B. Snow, Jr., M.D.**, University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104. The University of Pennsylvania is an Equal Opportunity Employer.

**RESEARCH ASSOCIATE** position is available immediately, to study the mechanism of transformation of human breast epithelial cells, mainly the interaction of carcinogens with oncogenes. Research experience in molecular biology or cellular biology is required. Send curriculum vitae to: **Dr. J. Russo**, Department of Pathology, Michigan Cancer Foundation, 110 East Warren Avenue, Detroit, MI 48201.

**RESEARCH PHYSIOLOGISTS.** To conduct NASA-sponsored research at the Johnson Space Center in two related areas: Calcium metabolism and the response of the musculoskeletal system to the spaceflight environment. Please submit résumé to: **KRUG International**, P.O. Box 58827, Houston, TX 77258, Attention: **June E. Richmond**. KRUG International is an Equal Opportunity/Affirmative Action Employer. Employment eligibility verification required.

**RESEARCH SCIENTIST** for molecular and crystal structure determination of cardiac drug and anti-tumor drug. Biological membrane—drug complex crystal growth and structure determination. Must be familiar with the techniques of lipid and drug crystal growth, using x-ray diffraction camera, four-circle diffractometer and computer to solve the crystal structure. Salary: \$22,000 per year, 40 hours per week. Must have Ph.D. or equivalent, and 5 years of experience as a research scientist or senior research scientist. Send résumé to: **Job Service, Technical Unit**, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109. Refer to J.O. #2000679.

**SCIENTISTS/ENVIRONMENTAL:** Two positions in the Environmental Toxicology and Risk Assessment Section of the New Jersey Department of Environmental Protection. One position requires a Master's degree in public health/environmental science or related field to perform health assessments at Superfund sites. The second position requires a Master's degree in an environmental field to provide toxicological, risk assessment, and environmental fate support to several hazardous waste programs. Knowledge of soils, modeling helpful. Send résumés to:

**Catherine Clark**  
N.J. Department of Environmental Protection  
Division of Hazardous Site Mitigation  
401 East State Street—CN 028  
Trenton, NJ 08625  
Equal Opportunity Employer

### SENIOR FACULTY POSITION IN ALCOHOL AND DRUG ABUSE DEPARTMENT OF MEDICINE UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Invites applications for a senior faculty member to fill an endowed chair in alcoholism and drug abuse. The position will be supported by an endowment of approximately \$1.5 million and will be occupied by a senior clinician/investigator with background experience in this area. The successful candidate will be expected to establish research activities in this field as well as organize a teaching program for students and house officers. A detoxification unit and clinical research facility are available at the affiliated John L. McClellan Veterans Administration Hospital. Additional faculty positions, support for trainees and initial research support will be available. Collaboration with established research programs in several University of Arkansas for Medical Science basic science departments is encouraged. Send applications, curricula vitae, and letters of interest to: **George L. Ackerman, M.D.**, Professor and Vice-Chairman, Department of Medicine (640), 4301 West Markham Street, Little Rock, AR 72205.

## POSITIONS OPEN

**RESEARCH SCIENTIST/FELLOW** in endocrinology. Require M.D. or M.S. in biochemistry with 3 years of experience or 3-year ABIM accredited residency in internal medicine with Board eligibility in endocrinology and metabolism to conduct advanced research on the function of estrogen receptors. Five-day, 40-hour week. \$27,996 per year. Send résumé to: **The University of Pennsylvania School of Medicine, Attention: Endocrinology Section, 531 Johnson Pavillion, Philadelphia, PA 19104.**

**SENSORY NEUROPHYSIOLOGIST:** Tenure-track possibility for position available at assistant professor level. Serious commitment to collaborative work within the Microsurgical Research Center. Expertise required to characterize electrophysiologically the properties of central axons which have regenerated along peripheral nerve implants. Preference given to applicants experienced in spinal cord neurophysiology and tract-tracing and histological techniques. Please send curriculum vitae with three letters of recommendation to: **Dr. Julia K. Terzis, Microsurgical Research Center, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501.**

### SHAW DISTINGUISHED PROFESSOR OF BIOLOGICAL SCIENCES

The Department of Biological Sciences and the Center for Great Lakes Studies of the University of Wisconsin-Milwaukee are seeking to appoint jointly a second Shaw Distinguished Professor.

The successful candidate should have an outstanding research record involving a molecular approach to the investigation of environmental questions. The research should complement ongoing studies in molecular biology and aquatic ecology.

Qualified persons interested in this position are invited to submit a detailed curriculum vitae to:

**Dr. Kenneth Nealson**  
Shaw Distinguished Professor of Biological Sciences  
Search Committee for Shaw Distinguished Professor  
Department of Biological Sciences  
University of Wisconsin-Milwaukee  
P.O. Box 413  
Milwaukee, WI 53201

*The University of Wisconsin-Milwaukee is an Affirmative Action/Equal Opportunity Employer.*

### VECTOR-BORNE BACTERIAL DISEASES

The Centers for Disease Control (CDC) is developing a new program in vector-borne bacterial zoonoses at the Division of Vector-Borne Diseases in Ft. Collins, Colorado. Positions are open for **Chief, Bacterial Zoonoses Branch, Chief, Lyme Disease Section, and Research Microbiologist**, Molecular Biology Section. Applications are invited from persons holding medical, veterinary or other doctorate level degrees with experience and demonstrated expertise in epidemiology, clinical microbiology, molecular bacteriology, medical entomology or ecology. The Branch is responsible for surveillance of Lyme disease and related borrelioses, plague and tularemia and will develop research programs in the areas of ecology, control measures, clinical microbiology and molecular biology. The Lyme Disease Section is responsible for surveillance of Lyme and related borrelial diseases, and for implementing research programs toward prevention and control of these diseases. The Molecular Biology Section is responsible for design and implementation of research on the antigenic structure, genetics, replication, virulence factors, and pathogenesis of *Borrelia* and on development of improved diagnostic methods. The Branch Chief position is available at a GM 14/15 level (salary range \$46,679 to \$72,500, with an additional comparability allowance for physicians). The Lyme Disease Section Chief is available at a GM 13/14 level (salary range \$39,501 to \$67,642, depending on training and experience; with an additional comparability allowance for physicians). Both positions may be filled at equivalent levels under commissions in the U.S. Public Health Service. The research microbiologist position is available at a GS 12/13 level (salary range \$33,218 to \$51,354). Curriculum vitae and copies of publications should accompany applications to be sent to: **The Director, DVBD, CDC, P.O. Box 2087, Ft. Collins, CO 80522.** Deadline for receipt of completed applications is 14 October 1988. CDC is an Equal Employment Opportunity/Affirmative Action Employer.

9 SEPTEMBER 1988

## VICE PRESIDENT

### Association of Universities for Research in Astronomy, Inc.

Expressions of interest are solicited for the position of Vice President of the Association of Universities for Research in Astronomy, Inc. (AURA). Located in Washington, D.C., AURA is a consortium of 20 universities which manages the National Optical Astronomy Observatories (NOAO) in Tucson, Arizona, for the National Science Foundation, and the Space Science Telescope Institute (STScI) in Baltimore, Maryland, for the National Aeronautics and Space Administration.

The Vice President's functions include interactions with the AURA Board and its committees, professional societies, AURA member universities, industry, media, and funding agencies in carrying out assigned duties in technical management, administration, contract monitoring, and science matters. The Vice President will also interact with the management of NOAO and STScI on administrative and programmatic matters. Other duties of the Vice President will include the assessment and development of AURA initiatives to strengthen U.S. astronomy. Finally, the Vice President, as other officers of the corporation, will be expected to act for the President when so authorized.

The Vice President must have a degree in astronomy or in a related physical science; an advanced degree is preferred. Training or experience is also desired in administrative areas such as contracts, personnel, Federal regulations, compensation, and in communications with media, educated laymen, and the public.

The successful candidate will have: extensive experience in science policy and Federal science issues; experience in dealing with senior scientists, elected and appointed Federal officials, university administrators, and foreign dignitaries; and experience in presenting science issues to educated lay audiences. He/she should be able to operate on own initiative; be innovative; have strong writing, analytical, and communication skills; and be able to deal with highly complex priorities.

Nominations or expressions of interest for this position are desired by September 30, 1988, but will be accepted until October 31, 1988; submissions should be sent to:

**Dr. Robert Dorfman, Chairman**  
Search Committee  
AURA, Inc.  
Suite 701  
1625 Massachusetts Avenue, N.W.  
Washington, DC 20036

*AURA is an EEO/AA Employer*

## RESEARCH ASSOCIATES

### Pharmacological & Biochemical Sciences

Fortune 250 Allergan, Inc. is an international leader in eye and skin care. We are currently seeking applicants for the following positions:

**Biochemistry Research Associate**—The successful candidate will have experience in *in vitro* biochemical techniques, including enzyme analysis and isolation and quantification of metabolic intermediates. Knowledge of HPLC, radioimmunoassay and/or cell culture techniques is desirable. Responsibilities include methods development and evaluation of novel compounds for the treatment of ocular and dermatologic inflammation. The ability to function within a highly motivated research team is a necessity.

**Pharmacological Research Associate**—The successful candidate will have experience in *in vitro* pharmacological techniques, knowledge of radioligand binding or second messenger assays would be an additional advantage. Responsibilities will include methods development and interaction with an inter-disciplinary team committed to studying receptor pharmacology and discovery of novel therapeutics.

**Cardiovascular/Ophthalmic Research Associate**—The successful candidate would be experienced in cardiovascular research technique. Familiarity with ophthalmological techniques is desirable, but not essential. As part of an interdisciplinary team, responsibilities will include evaluation of the cardiovascular and ophthalmological pharmacology of novel agents for the treatment of glaucoma.

A B.S. or M.S. in biochemistry, pharmacology, or physiology and at least one year of relevant experience are required.

Allergan offers an excellent salary and benefits package. For immediate consideration please send your resume to: **Allergan, Inc., Human Resources, Dept. JS-1000-S, 2525 Dupont Drive, Irvine, CA 92715.** Equal Opportunity Employer M/F/H/V.



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## POSITIONS OPEN

Pierce, an expanding international biotechnology company focusing on the immunological field, has an immediate opening in its growing **TECHNICAL ASSISTANCE** Department. The successful candidate will be responsible for helping solve customer problems, writing technical copy, and performing laboratory applications work. Requirements include excellent communication skills, both written and oral, and diverse laboratory skills. A Ph.D. in immunology, biochemistry, or related science preferred, but will consider a M.S. with proven skills and abilities. Please send curriculum vitae and three letters of reference by 23 September 1988 to:

Human Resource Manager  
Pierce Chemical Company  
P.O. Box 117  
Rockford, IL 61105  
Equal Opportunity Employer

## TENURED OR TENURE-TRACK FACULTY POSITIONS

An expanding Department of Biochemistry with an established high quality scientific environment seeks to recruit two faculty at either the senior or junior levels. Applicants must hold the Ph.D. and/or M.D. degree, have at least 2 years of postdoctoral training, and an established record of excellent scientific contributions. Successful candidates will be expected to transfer or establish a vibrant, funded research program and to teach in Medical and Graduate Programs. All fields of biochemistry and molecular biology will be given serious consideration. The Department is particularly interested in further strengthening such areas as tumor biology, signal transduction, physical biochemistry of macromolecules and protein-protein or protein-DNA interactions. Please send curriculum vitae, a brief summary of future research directions, and names of three references to: **Dr. Michael P. Czech, Chairman** or **Dr. John E. Mole, Search Committee Chairman**, Department of Biochemistry, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01655.

An Equal Opportunity/Affirmative Action Employer.

## CENTER FOR ENERGY AND ENVIRONMENT RESEARCH UNIVERSITY OF PUERTO RICO

The Terrestrial Ecology Division invites applications for two positions: (i) a full-time position in **TERRESTRIAL ECOLOGY** to participate in long-term studies of forest ecosystems. Requirements include a Ph.D. in a relevant field, a strong publication record, the ability to work closely with other scientists, and a willingness to develop a research program centered on tropical rain forest. A knowledge of Spanish would be useful. The successful applicant will be based either at the El Verde Field Station in the Luquillo Experimental Forest or in San Juan, depending on research interests. (ii) a postdoctoral position in **GEOGRAPHIC INFORMATION SYSTEMS/REMOTE SENSING** to develop a research program on the effects of natural and anthropogenic disturbance on forest ecosystems. This is a 2-year position with the possibility of developing into a full-time post. Applicants for either position should send a statement of research interests and curriculum vitae by 1 October 1988, to: **Personnel Office, Center for Energy and Environment Research, College Station, Mayaguez, PR 00708.**

## AWARDS

**ANNOUNCEMENT: The Joseph P. Kennedy, Jr. Foundation** will make **RESEARCH AWARDS** of \$50,000 to \$100,000 for projects on the biomedical or biosocial bases of mental retardation on 1 July 1989. Applications from investigators new to mental retardation research or "high-risk" proposals from established investigators are encouraged. Two-page letters of intent including objectives, methodology, summary budget, and curriculum vitae of principal investigator are due 1 November 1988. Complete proposals will be solicited after preliminary review. Write to:

Jess G. Thoenes, M.D., Medical Director  
The Joseph P. Kennedy, Jr. Foundation  
1350 New York Avenue, Suite 500  
Washington, DC 20005-4709

## AWARDS

### THE HEISER PROGRAM FOR RESEARCH IN LEPROSY

Beginning **POSTDOCTORAL RESEARCH FELLOWSHIPS, RESEARCH GRANTS, and VISITING RESEARCH AWARDS** available in amounts up to \$21,000 per year, plus other allowances. Applicants should have M.D., Ph.D., or equivalent degree. Applications by 1 February 1989, for awards to be activated June to December 1989. For information, write or call:

The Heiser Program  
450 East 63 Street  
New York, NY 10021  
Telephone: 212-751-6233

## FELLOWSHIPS

### FELLOWSHIP IN REPRODUCTIVE GENETICS

The Division of Reproductive Genetics, Department of Obstetrics and Gynecology at The University of Tennessee, Memphis, is offering a two- or 3-year fellowship in reproductive genetics beginning July 1989. The fellowship program is approved by the American Board of Medical Genetics. Applicants must have completed a residency in obstetrics and gynecology, and eligibility for medical licensure in Tennessee is required. The fellowship is designed to provide a comprehensive experience in clinical genetics (counseling, prenatal diagnosis, amniocentesis, chorionic villus sampling, fetal blood sampling, ultrasonography, dysmorphology, teratology, alpha-fetoprotein screening). The program emphasizes laboratory training and research in cytogenetics, DNA analyses, inborn errors of metabolism, immunogenetics and population genetics. Fellows are actively involved in clinical and laboratory research projects. Applicants should send curriculum vitae to: **Sherman Elias, M.D., Director, Division of Reproductive Genetics, University of Tennessee, Memphis/University Physicians Foundation, Inc., 853 Jefferson Avenue, Memphis TN 38163.** The University of Tennessee, Memphis/University Physicians Foundation, Inc. is an Affirmative Action/Equal Opportunity Employer.

### 1989 MARKEY FELLOWSHIP PROGRAM:

Applications are invited from investigators in the biological and biomedical sciences for summer research fellowships at the Mount Desert Island Biological Laboratory, an internationally renowned institute for comparative physiology and marine biology. Using vertebrate and invertebrate fauna from the Gulf of Maine, Laboratory researchers pursue diverse interests including the comparative physiology of the kidney, cell membrane transport, the mechanisms of cell division, and cellular and molecular aspects of environmental toxicology. Preference is given to applicants who are several years beyond the completion of the doctorate, who demonstrate evidence of an independent research program, and who are still in relatively early phases of research careers. The Fellowships, sponsored by the Lucille P. Markey Trust, include laboratory space, housing, supplies and equipment, and other allowances, depending on individual needs. Applications and instructions for the preparation of brief proposals may be obtained by contacting: **Dr. Donald A. McCrimmon, Associate Director, Mount Desert Island Biological Laboratory, Dept. S, Salsbury Cove, ME 04672.** Telephone: 207-288-3605. The deadline for completed applications is 9 January 1989.

**STAFF FELLOWSHIPS:** The Cincinnati Research Labs, Division of Microbiology, Center for Food Safety and Applied Nutrition, FDA is seeking applicants to conduct research on the effects of nutritional, thermal and oxidative stress on pathogenesis of foodborne microbes. Candidates must have a strong background in microbiology/molecular biology, biochemistry or closely related disciplines, with no more than 7 years of research at the professional level. Applicants must be U.S. citizens or aliens eligible for citizenship within 4 years. The Staff Fellowship is an exempted appointment in the Federal Service. Salary (\$27,716 to \$42,135) is based on qualifications. Interested applicants should send curriculum vitae and bibliography to: **D. B. Shah, Ph.D., FDA, 1090 Tusculum Avenue, Cincinnati, OH 45226.** FDA is an Equal Opportunity Employer.

## FELLOWSHIPS

### THE BLAUSTEIN INTERNATIONAL CENTER FOR DESERT STUDIES

Postdoctoral fellowships are available for basic or applied research in the physical, life and social sciences in arid zones. Deadline for application is 15 December 1988. Send curriculum vitae, letter describing research interests, and have three letters of reference forwarded to: **Chairman, Postdoctoral Fellowship Committee, The Jacob Blaustein Institute for Desert Research, Ben-Gurion University of the Negev, Sede Boqer Campus, 84993 Israel.** Fax: 972-57-73631. Telex: 5280 DIRBG IL.

### THE PRINCE OF WALES CHILDREN'S HOSPITAL, RANDWICK (Teaching Hospital of the University of New South Wales) RESEARCH FELLOWSHIP IN CLINICAL GENETICS

The Prince of Wales Children's Hospital has recently received an endowment from the Arthur T. and Renee George Foundation to establish a Genetic Treatment Research Unit. This Unit has also been supported financially by the Minister for Health.

The Hospital has a large service for the management of thalassaemia and haemoglobinopathies, cystic fibrosis, Duchenne Muscular Dystrophy, and an established service for clinical genetics and cytogenetics.

Technology is advancing rapidly in the field of gene manipulation; it is envisaged that the successful applicant will train in this technology with a view to establishing the Research Unit at The Prince of Wales Children's Hospital.

Applicants should have appropriate qualifications in biochemistry and/or biology, and preferably completed one doctorate.

The appointee will be expected to undertake 2 years of training at an appropriate institute and will take up a position within The Prince of Wales Children's Hospital on completion of this training.

Enquiries: **Dr. V. A. Berdoukas, Staff Paediatrician, Telephone: (02)-399-4568.**

Salary: To be negotiated.

Applications must be in writing, containing full details of qualifications and experience, together with the names and addresses of three referees.

Please forward to:

The Staff Manager  
The Prince of Wales Hospital  
Administrative Centre  
Cnr. High and Avoca Streets  
Randwick, NSW. 2031.

## MARKETPLACE

### ANTI-VIRAL DRUG TESTING FOR HIV

**Pan-Data Systems, Inc. (PDS)**, offers assistance in drug testing using freshly isolated monocyte/macrophage cultures and PHA-stimulated leukocytes.

Contact **Dr. John Dahlberg**, Director of Research, for more information:

13 Taft Court, Rockville, Md. 20850  
(301) 294-2297 fax (8095)

1 (800) 543-6059

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GLAXO INC. ANNOUNCES:

# CARDIOVASCULAR DISCOVERY GRANTS

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*Glaxo Inc., a research-based pharmaceutical company whose purpose is the discovery, development, manufacture, and marketing of safe, effective medicines of the highest quality, is initiating the Cardiovascular Discovery Grants program to support scientists who are actively engaged in research that may ultimately lead to new cardiovascular therapeutic agents.*

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Up to 20 Grants will be awarded in 1989. Each Grant will be funded up to a maximum of \$250,000 annually for 3 years.

The program is open to scientists and physicians involved in cardiovascular research that may lead to the discovery of novel therapeutic agents for the treatment or prevention of cardiovascular disorders.

Selection of awardees will be based upon the recommendations of an independent Cardiovascular Advisory Board. Members include:

Nicolas G. Bazan, M.D., Ph.D.  
Peter B. Corr, Ph.D.  
James M. Downey, Ph.D.  
Joseph Loscalzo, M.D., Ph.D.  
Alan S. Nies, M.D.  
Raymond L. Woosley, M.D., Ph.D.

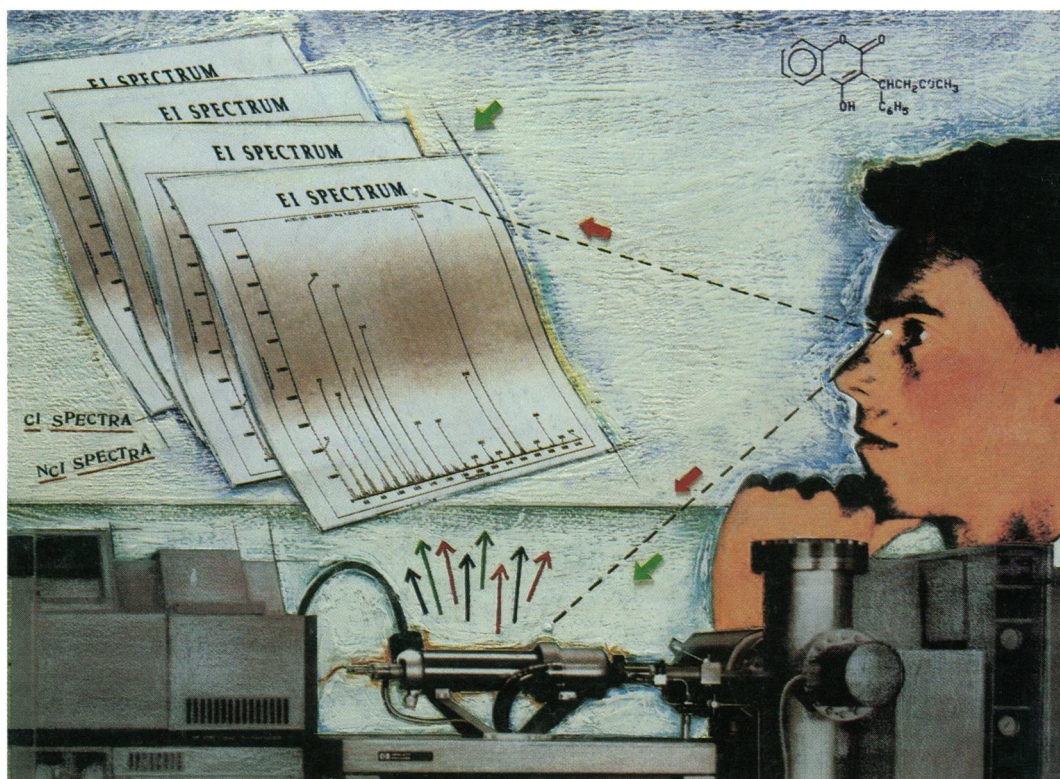
Louisiana State University Medical Center  
Washington University School of Medicine  
University of South Alabama College of Medicine  
Harvard Medical School  
University of Colorado Health Science Center  
Georgetown University School of Medicine

Submissions must be received by January 1, 1989.

Inquiries and requests for applications should be directed as follows:

Glaxo Cardiovascular Discovery Grants  
Room H216-S  
Glaxo Inc.  
Five Moore Drive  
Research Triangle Park, NC 27709  
(919) 248-2714





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Available as a complete system or as add-ons, the HP PB/LC/MS consists of an HP modular or integrated LC, an HP MS data system and an HP 5988A mass spec-

trometer equipped with the new HP PB interface. You can add all the most useful MS capabilities, too. Things like high mass, thermospray, NCI, FAB, DIP and much more. Add an HP GC and interface and you've got a versatile PB/LC/GC/MS system that can be switched between GC/MS and LC/MS in seconds.

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