

Driessche. Chapter 4, prepared by Christa Beurton *et al.*, is an annotated collection of 24 color plates by Renate Israel showing plant species in which lectins have been found.—K.L.

## Books Received

**Ada for Distributed Systems.** Colin Atkinson, Trevor Moreton, and Antonio Natali, Eds. Cambridge University Press, New York, 1988. x, 148 pp., illus. \$37.50. The Ada Companion Series.

**Advances in Cancer Control.** Cancer Control Research and the Emergence of the Oncology Product Line. Paul F. Engstrom, Paul N. Anderson, and Lee E. Mortenson, Eds. Liss, New York, 1988. xvi, 253 pp. \$50. Progress in Clinical and Biological Research, vol. 278. From a meeting, Washington, DC, March 1987.

**Advances in Immunohistochemistry.** Ronald A. DeLellis, Ed. Raven, New York, 1988. xii, 496 pp., illus. \$79.

**Advances in Post-Translational Modifications of Proteins and Aging.** Vincenzo Zappia *et al.*, Eds. Plenum, New York, 1988. xvi, 683 pp., illus. \$105. Advances in Experimental Medicine and Biology, vol. 231. From a symposium, Naples, Italy, May 1987.

**Aerospace Century XXI.** Three volumes. Part 1, Space Missions and Policy. George W. Morgenthaler and Gayle L. May, Eds. xxxii, pp. + pp. 1–605, illus., + appendixes. Part 2, Space Flight Technologies. George W. Morgenthaler and W. Kent Tobiska, Eds. xxxii pp. + pp. 607–1134 pp., illus., + appendixes. Part 3, Space Sciences, Applications, and Commercial Developments. George W. Morgenthaler and Jean N. Koster, Eds. xxxii pp. + pp. 1135–1777, illus., + appendixes. Each volume, \$75; paper, \$60. Published for the American Astronautical Society by Univelt, San Diego, CA, 1987. Advances in the Astronautical Sciences, vol. 64. From a conference, Boulder, CO, Oct. 1986.

**The American Development of Biology.** Ronald Rainger, Keith R. Benson, and Jane Maienschein, Eds. University of Pennsylvania Press, Philadelphia, 1988. xii, 380 pp. \$37.95. From a conference, Friday Harbor, WA, Sept. 1986.

**The Anatomy and Biology of the Human Skeleton.** D. Gentry Steele and Claud A. Bramblett, Eds. Texas A&M University Press, College Station, 1988. x, 291 pp., illus. \$55; paper, \$29.50.

**Anatomy of a Scientific Discovery.** Jeff Goldberg. Bantam, New York, 1988. xii, 228 pp. \$17.95.

**The Bile Acids.** Vol. 4, Methods and Applications. Kenneth D. R. Setchell, David Kritchevsky, and Padmanabhan P. Nair, Eds. Plenum, New York, 1988. xxii, 582 pp., illus. \$115.

**Biology of Human Milk.** Lars Å. Hanson, Ed. Raven, New York, 1988. xvi, 231 pp., illus. \$49. Nestlé Nutrition Workshop Series, vol. 15.

**The Biology of the Land Crabs.** Warren W. Burggren and Brian R. McMahon, Eds. Cambridge University Press, New York, 1988. xii, 479 pp., illus. \$59.50.

**Biotechnology and Materials Science.** Chemistry for the Future. Mary L. Good, Ed. American Chemical Society, Washington, DC, 1988. xx, 135 pp., illus. \$24.95; paper, \$14.95.

**Bird of Passage.** Recollections of a Physicist. Rudolf Peierls. Princeton University Press, Princeton, NJ, 1988. xii, 350 pp. + plates. Paper, \$12.50. Reprint, 1985 ed.

**Blood Magic.** The Anthropology of Menstruation. Thomas Buckley and Alma Gottlieb, Eds. University of California Press, Berkeley, 1988. xii, 326 pp., illus. \$45; paper, \$12.95.

**But Is It Science?** The Philosophical Question in the Creation/Evolution Controversy. Michael Ruse, Ed. Prometheus, Buffalo, NY, 1988. 406 pp. \$23.95. Frontiers of Philosophy.

**Cerebellum and Neuronal Plasticity.** Mitchell Glickstein, Christopher Yeo, and John Stein, Eds. Plenum, New York, 1987. viii, 359 pp., illus. \$69.50. NATO Advanced Science Institutes Series A, vol. 148. From a workshop, Oxford, U.K., April 1986.

**The Changing Face of Cities.** A Study of Development Cycles and Urban Form. J. W. R. Whitehand. Basil Blackwell, New York, 1987. x, 189 pp., illus. \$49.95. Institute of British Geographers Special Publications Series, vol. 21.

**The Collapse of Complex Societies.** Joseph A. Tainter. Cambridge University Press, New York, 1988. xiv, 250 pp., illus. \$39.50. New Studies in Archaeology.

**Computing Procurement.** Guidelines and Procedures. Henry Norton. Oxford University Press, New York, 1988. viii, 148 pp. \$29.95.

**Concise Encyclopedia Biochemistry.** 2nd ed. De Gruyter, New York, 1988. viii, 649 pp., illus. \$89.90. Translated and revised from the German edition (Leipzig, 1981) by Thomas Scott and Mary Eagleson.

**Conscious Mind, Sleeping Brain.** Perspectives on Lucid Dreaming. Jayne Gackenbach and Stephen LaBerge, Eds. Plenum, New York, 1988. xx, 447 pp., illus. \$49.50.

**Correlation Analysis of Chemical Data.** Otto Exner. Plenum, New York, and SNTL, Prague, 1988. 275 pp., illus. \$55. Translated from the Czech edition (1981) by the author.

**The Crayfishes and Shrimp of Wisconsin (Cambaridae, Palaemonidae).** H. H. Hobbs III and Joan P. Jass. Milwaukee Public Museum, Milwaukee, WI, 1988. viii, 177 pp., illus. Paper, \$14.95. Special Publications in Biology and Geology, no. 5.

**Critical Psychophysical Passages in the Life of a Woman.** A Psychodynamic Perspective. Joan Offerman-Zuckerberg, Ed. Plenum Medical, New York, 1988. xiv, 296 pp. \$35.

**Crystal Growth.** Principles and Progress. A. W. Vere. Plenum, New York, 1987. xiv, 258 pp., illus. \$47.50. Updates in Applied Physics and Electrical Technology.

**Crystals in Gels and Liesegang Rings.** In Vitro Veritas. Heinz K. Henisch. Cambridge University Press, New York, 1988. xiv, 197 pp., illus. \$54.50.

**Cytoskeleton.** Alexander D. Bershadsky and Juri M. Vasiliev. Plenum, New York, 1988. xii, 298 pp., illus. \$39.50.

**Developmental Biology.** Vol. 5, The Molecular Biology of Cell Determination and Cell Differentiation. Leon W. Browder, Ed. Plenum, New York, 1988. xx, 439 pp., illus. \$65.

**A Dictionary of Epidemiology.** John M. Last, Ed. 2nd ed. Oxford University Press, New York, 1988. xiv, 141 pp., illus. \$24.95; paper, \$12.95.

**The Ecology of Social Behavior.** C. N. Slobodkin, Ed. Academic Press, San Diego, CA, 1988. xii, 429 pp., illus. \$55.

**Educational Achievement in Japan.** Lessons for the West. Richard Lynn. Sharpe, Armonk, NY, 1988. xii, 157 pp. Paper, \$16.50.

**Electromagnetic Fields and Biomembranes.** Marko Markov and Martin Blank, Eds. Plenum, New York, 1988. x, 315 pp., illus. \$65. From a school, Pleven, Bulgaria, Oct. 1986.

**Electron Nuclear Double Resonance Spectroscopy of Radicals in Solution.** Application to Organic and Biological Chemistry. Harry Kurreck, Burkhard Kirste, and Wolfgang Lubitz. VCH, New York, 1988. xii, 374 pp., illus. \$79.95. Methods in Stereochemical Analysis.

**Emotions, Cognition, and Behavior.** Carroll E. Izard, Jerome Kagan, and Robert B. Zajonc, Eds. Cambridge University Press, New York, 1988. x, 620 pp., illus. Paper, \$29.95. Reprint, 1984 edition.

**Evolutionary Processes and Metaphors.** Macwan Ho and Sidney W. Fox, Eds. Wiley-Interscience, New York, 1988. xii, 333 pp., illus. \$84.95. Based on a conference, Hawk's Cay, FL, April 1986.

**Excellence and Equality.** A Qualitatively Different Perspective on Gifted and Talented Education. David M. Fetterman. State University of New York Press, Albany, 1988. xxii, 189 pp. \$34.50; paper, \$10.95. Frontiers in Education.

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**Excited States.** Vol. 7, Rotational Effects on the Behavior of Excited Molecules. Edward C. Lim and K. Keith Innes, Eds. Academic Press, San Diego, CA, 1988. xiv, 247 pp., illus. \$110.

**Experimental Hepatocarcinogenesis.** M. B. Roberffroid and V. Pr  at, Eds. Plenum, New York, 1988. x, 321 pp., illus. \$65. From a meeting, Spa, Belgium, May 1987.

**Exploring Statistics.** Damaraju Raghavarao. Dekker, New York, 1988. xii, 276 pp., illus. \$39.75. Statistics, vol. 92.

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**Facts on File Dictionary of Biology.** Elizabeth Tootill, Ed. 2nd ed. Facts on File, New York, 1988. viii, 326 pp., illus. \$19.95.

**The Facts on File Dictionary of Chemistry.** John Daintith, Ed. 2nd ed. Facts on File, New York, 1988. vi, 249 pp., illus. \$19.95.

**Family and Support Systems Across the Life Span.** Suzanne K. Steinmetz, Ed. Plenum, New York, 1988. xii, 291 pp. \$35.

**The Female Animal.** Irene Elia. Holt, New York, 1988. xvi, 318 pp., illus. \$21.95. A Donald Hutter Book.

**The Few Body Problem.** M. J. Valtonen, Ed. Kluwer, Norwell, MA, 1988. xviii, 432 pp., illus. \$119. Astrophysics and Space Science Library, vol. 140. From a colloquium, Turku, Finland, June 1987.

**Field Theory Handbook.** Including Coordinate Systems, Differential Equations and Their Solutions. P. Moon and D. E. Spencer. 2nd ed. Springer-Verlag, New York, 1988. viii, 236 pp., illus. Paper, \$39.50.

**First the Seed.** The Political Economy of Plant Biotechnology, 1492–2000. Jack Ralph Kloppenburg, Jr. Cambridge University Press, New York, 1988. xviii, 349 pp. \$37.50.

**Flavor Encapsulation.** Sara J. Risch and Gary A. Reineccius, Ed. American Chemical Society, Washington, DC, 1988. x, 202 pp., illus. \$54.95. ACS Symposium Series, vol. 370. From a symposium, New Orleans, LA, Aug.–Sept. 1987.

**Fractals.** Jens Feder. Plenum, New York, 1988. xvi, 283 pp., illus., + plates. \$49.50. Physics of Solids and Liquids.

**Freak Show.** Presenting Human Oddities for Amusement and Profit. Robert Bogdan. University of Chicago Press, Chicago, 1988. xiv, 322 pp., illus. \$29.95.

**From CA to CAS Online.** Hedda Schulz. VCH, New York, 1988. xii, 227 pp., illus. \$39.95.

**From Farming to Biotechnology.** A Theory of Agro-Industrial Development. David Goodman, Bernardo Sorj, and John Wilkinson. Basil Blackwell, New York, 1987. viii, 214 pp. \$39.95.

**Frontiers in Chemical Engineering.** Research Needs and Opportunities. National Research Council. National Academy Press, Washington, DC, 1988. xii, 219 pp., illus. Paper, \$19.95.

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**Fungal Infection of Plants.** G. F. Pegg and Peter G. Ayres, Eds. Cambridge University Press, New York, 1988. xiv, 428 pp., illus. \$89.50. British Mycological Symposium Series, vol. 13.

**Giant Oil and Gas Fields.** Anthony J. Lomando and Paul M. Harris, Eds. Society of Economic Paleontologists and Mineralogists, Tulsa, OK, 1988. Two volumes. Vol. 1. iv pp. + pp. 1–458, illus. Paper, \$35. Vol. 2. vi pp. + pp. 459–853 illus. \$32. The set, \$54. From a workshop, Houston, TX, March 1988.

**Globalization of Technology.** International Perspectives. Janet H. Muromaya and H. Guyford Stever, Eds. National Academy Press, Washington, DC, 1988. viii, 216 pp., illus. Paper, \$22.50. From a convocation, Washington, DC, March–Apr. 1987.

**Goethe Contra Newton.** Polemics and the Project for a New Science of Color. Dennis L. Sepper. Cambridge University Press, New York, 1988. xvi, 222 pp., illus. \$39.50.

**Handbook of Heats of Mixing.** Supplementary Volume. James J. Christensen, Richard L. Rowley, and Reed M. Izatt. Wiley-Interscience, New York, 1988. xviii, 1145 pp. + floppy disk in pocket. \$150.

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**Handbook of the Birds of Europe, the Middle East, and North Africa: The Birds of the Western Palearctic.** Vol. 5, Tyrant Flycatchers to Thrushes. Stanley Cramp, Ed. Oxford University Press, New York, 1988. viii, 1063 pp., illus., + plates. \$175.

**The Harlow Shapley Symposium on Globular Cluster Systems in Galaxies.** (Cambridge, MA, Aug. 1986.) Jonathan E. Grindlay and A. G. Davis Philip, Eds. Kluwer, Norwell, MA, 1988. xxxii, 751 pp., illus. \$145. International Astronomical Union Symposium no. 126.

**High-Temperature Superconducting Materials.** Preparations, Properties, and Processing. William E. Hatfield and John H. Miller, Jr., Eds. Dekker, New York, 1988. xvi, 389 pp., illus. \$99.75.

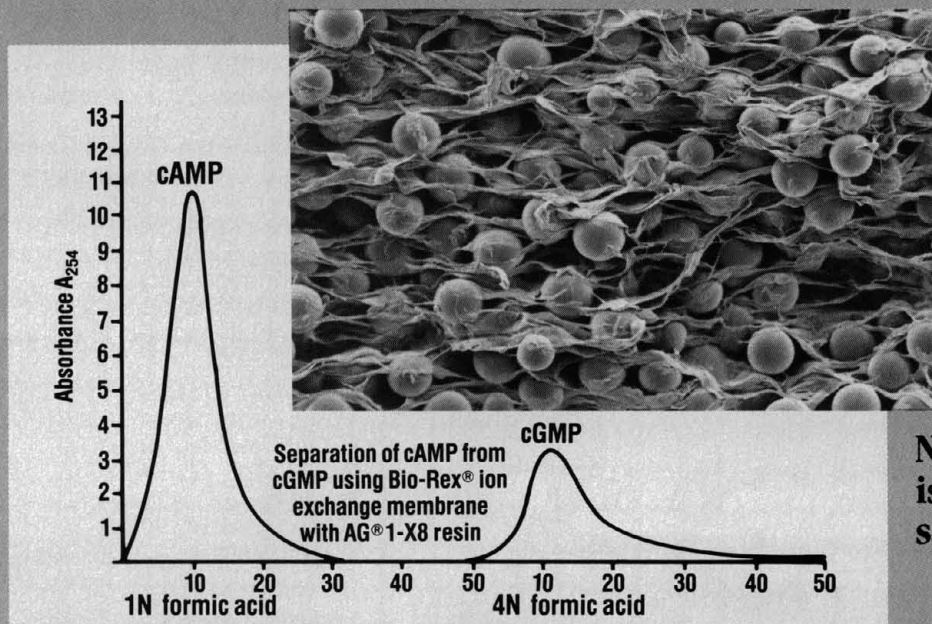
**History of Physics.** Selected Reprints. Stephen G. Brush, Ed. American Association of Physics Teachers, College Park, MD, 1988. iv, 235 pp., illus. Paper, \$16.

**Household and Community in the Mesoamerican Past.** Richard R. Wilk and Wendy Ashmore, Eds. University of New Mexico Press, Albuquerque, 1988. xii, 305 pp., illus. \$32.50. From a meeting, Pittsburgh, PA, 1983.

- Huygens' Principle and Hyperbolic Equations.** Paul Günther. Academic Press, San Diego, CA, 1988. lviii, 847 pp. \$69. Perspectives in Mathematics, vol. 5.
- Imaging Techniques in Biology and Medicine.** Charles E. Swenberg and James J. Conklin, Eds. Academic Press, San Diego, 1988. x, 369 pp., illus. \$70. Physical Techniques in Biology and Medicine.
- Immunobiology and Pathogenesis of Persistent Virus Infections.** Carlos Lopez, Ed. American Society for Microbiology, Washington, DC, 1988. xiv, 318 pp., illus. \$55; to ASM members, \$35. From a symposium, Atlanta, GA, April 1987.
- Immunobiology of Proteins and Peptides IV.** T-Cell Recognition and Antigen Presentation. M. Zouhair Atassi, Ed. Plenum, New York, 1987. xii, 333 pp., illus. \$62.50. Advances in Experimental Medicine and Biology, vol. 225.
- In Vitro Fertilization and Embryo Transfer.** A Manual of Basic Techniques. Don P. Wolf, Ed. Plenum, New York, 1988. x, 421 pp., illus. \$69.50. From a workshop, Madison, WI, Aug. 1985.
- Industrial Energy Management and Utilization.** Larry C. Witte, Philip S. Schmidt, and David R. Brown. Hemisphere, New York, 1988. xiv, 666 pp., illus. \$40.
- Integer and Combinatorial Optimization.** George L. Nemhauser and Laurence A. Wolsey. Wiley-Interscience, New York, 1988. xvi, 763 pp., illus. \$79.95. Wiley-Interscience Series in Discrete Mathematics and Optimization.
- Introduction to Microscale High-Performance Liquid Chromatography.** Daidō Ishii, Ed. VCH, New York, 1988. xiv, 208 pp., illus. \$59.95.
- Introduction to Theoretical Neurobiology.** Henry C. Tuckwell. Cambridge University Press, New York, 1988. Two volumes. Vol. 1, Linear Cable Theory and Dendritic Structure. xii, 291 pp., illus. \$49.50. Vol. 2, Nonlinear and Stochastic Theories. xii, 265 pp., illus. \$49.50.
- Intuitive Operational Amplifiers.** From Basics to Useful Applications. Thomas M. Frederiksen. 2nd ed. McGraw-Hill, New York, 1988. xxiv, 322 pp., illus. \$29.95; paper, \$19.95. McGraw-Hill Series in Intuitive IC Electronics.
- Judging Medicine.** George J. Annas. Humana, Clifton, NJ, 1988. xviii, 438 pp. \$24.95.
- Lambda-Calculus, Combinators, and Functional Programming.** G. E. Revesz. Cambridge University Press, NY, 1988. x, 181 pp., illus. \$29.95. Cambridge Tracts in Theoretical Computer Science, vol. 4.
- Late Quaternary Palaeoenvironments of Southern Africa.** Janette Deacon and N. Lancaster. Clarendon (Oxford University Press), New York, 1988. viii, 225 pp., illus. \$65.
- Law and Economics.** An Introductory Analysis. Werner Z. Hirsch. 2nd ed. Academic Press, San Diego, CA, 1988. xxiv, 409 pp., illus. \$39.95.
- Learning Issues for Intelligent Tutoring Systems.** Heinz Mandl and Alan Lesgold, Eds. Springer-Verlag, New York, 1988. xx, 307 pp., illus. Paper, \$20. Cognitive Science.
- Length-Based Methods in Fisheries Research.** D. Pauly and G. R. Morgan, Eds. International Center for Living Aquatic Resources Management, Manila, Philippines, and Kuwait Institute for Scientific Research, Safat, 1987. viii, 468 pp., illus. Paper, \$14. ICLARM Conference Proceedings, vol. 13. From a conference, Mazzara del Vallo, Italy, Feb. 1985.
- The Life It Brings.** One Physicist's Beginnings. Jeremy Bernstein. Penguin, New York, 1988. xii, 171 pp. + plates. Paper, \$7.95. Reprint, 1987 edition.
- Linear Stochastic Systems.** Peter E. Caines. Wiley, New York, 1988. xvi, 874 pp. \$59.95. Wiley Series in Probability and Mathematical Statistics.
- Linguistics.** The Cambridge Survey. Frederick J. Newmeyer, Ed. Cambridge University Press, New York, 1988. Four volumes. Vol. 1, Linguistic Theory: Foundations. x, 500 pp. \$49.50, illus. Vol. 2, Linguistic Theory: Extensions and Implications. viii, 320 pp., illus. \$39.50. Vol. 3, Language: Psychological and Biological Aspects. x, 350 pp., illus. \$39.50. Vol. 4, Language: The Socio-cultural Context. x, 292 pp. \$39.50. The set, \$150.
- Liposomes as Drug Carriers.** Recent Trends and Progress. Gregory Gregoriadis, Ed. Wiley-Interscience, New York, 1988. xxviii, 885 pp., illus. \$219.
- Mammal Population Studies.** Stephen Harris, Ed. Published for the Zoological Society of London by Clarendon (Oxford), New York, 1987. xviii, 350 pp., illus. \$98. Symposia of the Zoological Society of London, no. 58. From a symposium, London, U.K., Nov. 1986.
- The Mammalian Herbivore Stomach.** Comparative Anatomy, Function and Evolution. Peter Langer. Fischer, Stuttgart, 1988 (U.S. distributor, VCH, New York), xviii, 557 pp., illus. \$175.
- Mechanoreceptors.** Development, Structure, and Function. Pavel Hnák *et al.*, Eds. Plenum, New York, 1988. xvi, 442 pp., illus. \$89.50. From a symposium, Prague, Czechoslovakia, Aug. 1985.
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- Metamorphism and Crustal Evolution of the Western United States.** W. G. Ernst, Ed. Prentice-Hall (Simon and Schuster), Englewood Cliffs, NJ, 1988. xiv, 1153 pp., illus. Robey Volume 7. From a colloquium, Los Angeles, Jan. 1986.
- Microcomputers and Laboratory Instrumentation.** David J. Malcolm-Lawes. 2nd ed. Plenum, New York, 1988. xii, 272 pp., illus. \$39.50.
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- The Morphodynamics of the Wadden Sea.** Jürgen Ehlers. Balkema, Brookfield, VT, 1988. viii, 397 pp., illus. \$95.
- Mutation, Developmental Selection, and Plant Evolution.** Edward J. Klekowski, Jr. Columbia University Press, New York, 1988. xiv, 373 pp., illus. \$55.
- Mycobacterium tuberculosis.** Interactions with the Immune System. Mauro Bendinelli and Herman Friedman, Eds. Plenum, New York, 1988. xxii, 426 pp., illus. \$79.50. Infectious Agents and Pathogenesis.
- Natural and Man-Made Hazards.** M. I. El-Sabih and T. S. Murty, Eds. Reidel, Dordrecht, 1988 (U.S. distributor, Kluwer, Norwell, MA). xii, 894 pp., illus. \$149. From a symposium, Rimouski, Quebec, Aug. 1986.
- Needle Sharing Among Intravenous Drug Abusers.** National and International Perspectives. Robert J. Battjes and Roy W. Pickens, Eds. National Institute on Drug Abuse, Rockville, MD, 1988 (available from the Superintendent of Documents, Washington, DC). xiv, 189 pp. Paper, \$5.50. NIDA Research Monograph Series, vol. 80. Based on a meeting, Bethesda, MD, May 1987.
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- The Organizational State.** Social Choice in National Policy Domains. Edward O. Laumann and David Knoke. University of Wisconsin Press, Madison, 1987. xvi, 539 pp., illus. \$45; paper, \$19.95.
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- Pesticide Metabolism.** Extrapolation from Animals to Man. J. Miyamoto *et al.* Blackwell Scientific, Palo Alto, CA, 1988. viii, 120 pp., illus. \$22.50.
- Photosynthetic Light-Harvesting Systems.** Organization and Function. Hugo Scher and Siegfried Schneider, Eds. De Gruyter, Hawthorne, NY, 1988. xviii, 631 pp., illus. \$187. From a workshop, Freising, F.R.G., Oct. 1987.
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- Processing and Presentation of Antigens.** Benvenuto Pernis, Samuel C. Silverstein, and Henry J. Vogel, Eds. Academic Press, San Diego, CA, 1988. xiv, 324 pp., illus. \$75. Based on a conference, Harriman, NY, May-June 1986.
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- The Psychobiology of Emotions.** Jack George Thompson. Plenum, New York, 1988. xiv, 404 pp., illus. \$45. Emotions, Personality, and Psychotherapy. Intended primarily for use in undergraduate and graduate courses in emotion.
- Public Problems.** The Management of Urban Distress. Christopher J. Smith. Guilford, New York, 1988. viii, 276 pp., illus. \$40; paper, \$19.95.
- Quantitative Bioassay.** David Hawcroft, Terry Hector, and Fred Rowell. Published for Analytical Chemistry by Open Learning by Wiley, New York, 1988. xxiv, 300 pp., illus. Paper, \$26.95.
- Quasar Astronomy.** Daniel W. Weedman. Cambridge University Press, New York, 1988. xiv, 217 pp. Paper, \$22.95. Cambridge Astrophysics Series. Reprint, 1986 edition.
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- The Radical Renewal.** The Politics of Ideas in Modern America. Norman Birnbaum. Pantheon, New York, 1988. xii, 275 pp. \$17.95.
- Radiochemistry.** C. Keller. Horwood, Chichester, U.K., and Wiley, New York, 1988. 208 pp., illus. \$69.95. Ellis Horwood Series in Physical Chemistry.
- The Realities of Nuclear Power.** International Economic and Regulatory Experience. S. D. Thomas. Cambridge University Press, New York, 1988. vi, 289 pp. \$59.50. Cambridge Energy Studies.
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- A Safer Death.** Multidisciplinary Aspects of Terminal Care. Anne Gilmore and Stan Gilmore, Eds. Plenum, New York, 1988. viii, 220 pp. \$49.50. From a conference, Glasgow, Scotland, Sept. 1987.
- Sea-Level Changes.** Michael J. Tooley and Ian Shennan, Eds. Basil Blackwell, New York, 1987. x, 397 pp., illus. \$75. Institute of British Geographers Special Publications Series, vol. 20.
- Semiclassical Theory of Atoms.** Berthold-Georg Englert. Springer-Verlag, New York, 1988. viii, 401 pp., illus. \$34.80. Lecture Notes in Physics, vol. 300.
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# New membrane technology replaces classic column chromatography.



Now chromatography  
is as easy as  
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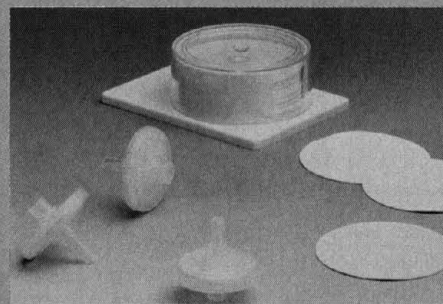
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### DNA Analysis Software

Gene-Master 2.0 software programs analyze DNA sequences. All programs prompt the user for the parameters and sequence files. The programs can conduct similarity searches of DNA and protein databases, locate any word in annotations in GenBank or Protein Identification Resource in less than 5 s, verify gel sequences entered by sonic digitizer, and insert one sequence file into another to simulate genetic engineering. Gene-Master 2.0 software is for the Gene-Master DNA workstation. Bio-Rad Laboratories, Chemical Division. Circle 445.

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

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flow 2 is for aqueous salt or buffer solutions or polar samples. Monoflow 3 is for highly aqueous samples. Monoflow 4 is for HPLC effluents with high concentrations of salt. Monoflow 5 is a nontoxic nonhazardous biodegradable liquid scintillator for HPLC effluents. All solutions come in unbreakable 4-liter nylon containers and in 20-liter polyethylene drums. National Diagnostics. Circle 439.

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### Literature

The *Model U-1000/1100 UV/Visible Spectrophotometer* product brochure features ultraviolet-visible spectrophotometers for routine applications. Hitachi Instruments. Circle 458.

*Multitasking MS ChemStation (HP-UX Series) for the HP 5970B GC/MSD System* is an 8-page brochure about a UNIX-based controller and data system for gas chromatography-mass spectroscopy applications. Hewlett-Packard. Circle 459.

*HPLC Instrumentation & Supplies 1988* is a 300-page catalog of columns, valves, fittings, tubing, filtration and sample preparation products, column heaters, pumps, detectors, autosamplers, and other equipment for high-performance liquid chromatography (HPLC). Rainin Instrument. Circle 460.

*1988-1989 Vacuum Products Catalog* contains 145 pages featuring turbomolecular, high-vacuum, and low-vacuum pumps. Welch Scientific Division, Sargent-Welch Scientific. Circle 461.

**Statistical Methods in Cancer Research.** Vol. 2, The Design and Analysis of Cohort Studies. N. E. Breslow and N. E. Day, Eds. International Agency for Research on Cancer, Lyon, 1987 (distributor, Oxford University Press, New York). xii, 406 pp., illus. \$45. IARC Scientific Publications, no. 82. Based on a workshop, Lyon, France, May 1983.

**Structural Modeling by Example.** Applications in Educational, Sociological, and Behavioral Research. Peter Cuttance and Russell Ecob, Eds. Cambridge University Press, x, 319 pp., illus. \$47.50.

**The T-Cell Receptors.** Tak W. Mak, Ed. Plenum, New York, 1988. xviii, 235 pp., illus. \$42.50.

**Théories Biologiques.** Éthique et Expérimentation en Médecine. Hervé Barreau, Ed. Editions du Centre National de la Recherche Scientifique, Paris, 1988. 262 pp., illus. Paper, 120 F. Fondements des Sciences.

**Three Scientists and Their Gods.** Looking for Meaning in an Age of Information. Robert Wright. Times Books (Random House), New York, 1988. xii, 324 pp., \$18.95. Considerations of Edward Fredkin, Edward O. Wilson, and Kenneth Boulding.

**Thyroid Autoimmunity.** A. Pinchera *et al.*, Eds. Plenum, New York, 1987. xvi, 638 pp., illus. \$95. From a symposium, Pisa, Italy, Nov. 1986.

**The Time Domain in Surface and Structural Dynamics.** Gary J. Long and Fernand Grandjean, Eds. Kluwer, Norwell, MA, 1988. xvi, 590 pp., illus. \$149. NATO Advanced Science Institutes Series C, vol. 228. From an institute, Il Ciocco, Italy, June 1987.

**Towards Understanding Galaxies at Large Red-shift.** Richard G. Kron and Alvio Renzini, Eds. Kluwer, Norwell, MA, 1988. xiv, 347 pp., illus. \$96. Astrophysics and Space Science Library, vol. 141. From a workshop, Erice, Italy, June 1987.

**Trace Amines.** Comparative and Clinical Neurobiology. A. A. Boulton, A. V. Juorio, and R. G. H. Downer, Eds. Humana, Clifton, NJ, 1988. xx, 476 pp., illus. \$75. Experimental and Clinical Neuroscience. From a conference, Isla Margarita, Venezuela, May 1987.

**The Transfer and Transformation of Ideas and Material Culture.** Peter J. Hugill and D. Bruce Dickson, Eds. Texas A&M University Press, College Station, 1988. xxii, 281 pp., \$29.50. Based on a conference, College Station, TX, Nov. 1984.

**Transformation of Organometallics into Common and Exotic Materials.** Design and Activation. Richard M. Laine, Ed. Nijhoff, Dordrecht, 1988 (U.S. distributor, Kluwer, Norwell, MA). xviii, 288 pp., illus. \$96. NATO Advanced Science Institutes Series E, no. 141. From a workshop, Cap d'Agde, France, Sept. 1986.

**Transition Metals and Organometallics as Catalysts for Olefin Polymerization.** W. Kaminsky and H. Sinn, Eds. Springer-Verlag, New York, 1988. xx, 442 pp., illus. \$77.60. From a symposium, Hamburg, F.R.G., Sept. 1987.

**Transposition.** A. J. Kingsman, K. F. Chater, and S. M. Kingsman, Eds. Published for the Society for General Microbiology by Cambridge University Press, New York, 1988. xvi, 375 pp., illus. \$75. Symposia of the Society for General Microbiology, vol. 43. From a symposium, Coventry, U.K., April 1988.

**Ubiquitin.** Martin Rechsteiner, Ed. Plenum, New York, 1988. xviii, 346 pp., illus. \$59.50.

**"Unless You Believe, You Shall Not Understand."** Logic, University, and Society in Late Medieval Vienna. Michael H. Shank. Princeton University Press, Princeton, 1988. xviii, 257 pp., \$35.

**The Water Planet.** A Celebration of the Wonder of Water. Lyall Watson. Crown, New York, 1988. x, 206 pp., illus. \$30.

**The Weather of the 1780s Over Europe.** John Kingston. Cambridge University Press, New York, 1988. x, 166 pp., illus. \$70.

**Weather Systems.** Leslie F. Musk. Cambridge University Press, New York, 1988. 160 pp., illus. \$11.95. Cambridge Topics in Geography.

**Why We Sleep.** The Functions of Sleep in Humans and Other Mammals. James Horne. Oxford University Press, New York, 1988. x, 319 pp., illus. \$49.95. Oxford Medical Publications.

**Women of Academe.** Outsiders in the Sacred Grove. Nadya Aisenberg and Mona Harrington. University of Massachusetts Press, Amherst, 1988. xii, 207 pp. \$30; paper, \$10.95.

**The Zoogeography of Israel.** The Distribution and Abundance at a Zoogeographical Crossroad. Y. Yom-Tov and E. Tchernov, Eds. Junk, Dordrecht, 1988 (U.S. distributor, Kluwer, Norwell, MA). x, 600 pp., illus. \$182. Monographiae Biologicae, vol. 62.

# Personnel Placement

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**Japanese Life Sciences Translations:** articles, patents, opposition statements, other documents translated from Japanese in cell biology, microbiology, mycology, plant pathology, immunology, pharmacology, and related fields. 1025 Laurel Street #3, Menlo Park, CA 94025. Telephone: 415-321-6317.

**Retrovirologist, Ph.D.** AIDS researcher with publications and experience in HIV biology, antiviral agents, and some molecular biology. Seeks research/government position in Washington, D.C., area. Box 162, **SCIENCE**.

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**ANATOMIST**—The Department of Biological Anthropology and Anatomy, Duke University, invites applications for a tenure-track position beginning 1 August 1989. The level of the appointment will depend on the qualifications of the successful candidate, who will be expected to participate in teaching medical gross anatomy, contribute to graduate teaching, and conduct an active program of research into the morphology, behavior, adaptations, or evolution of primates or other mammals. Completed Ph.D. and prior experience in teaching gross anatomy are desirable. Send curriculum vitae and a list of three references by 31 December 1988 to: **Search Committee, Department of Biological Anthropology and Anatomy, Box 3170, Duke University Medical Center, Durham, NC 27710.**

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## POSITIONS OPEN

**ASSISTANT PROFESSOR:** Applicants are being solicited for two tenure-track positions. The appointee should have at least 2 years of postdoctoral experience and proven research potential in cell biology, neurobiology, or developmental biology. Excellent facilities for research are available including start-up funds and intramural grants. Submit curriculum vitae, brief statement of research, and references to: **Dr. Leonard Seelig, Department of Anatomy, LSU Medical Center, P.O. Box 33932, Shreveport, LA 71130.** An Equal Opportunity Employer.

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The Department of Chemistry, Philadelphia College of Pharmacy and Science, invites applications for a full-time, tenure-track faculty position at the assistant professor level, starting August 1989. We seek a candidate who will establish a vigorous, productive research program and who will excel at teaching in both our undergraduate and graduate programs. Applicants in the areas of biochemistry or molecular biology are preferred, although exceptional candidates from other areas of chemistry will also be considered.

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Applications should consist of curriculum vitae, a brief statement of teaching experience and interests, and a description of research projects that would be pursued, as well as start-up requirements. Applicants should also arrange to have undergraduate and graduate transcripts, and three letters of recommendation, sent by 15 November 1988 to:

**Dr. Peter Campbell**  
Chair, Faculty Search Committee  
Philadelphia College of Pharmacy and Science  
Woodland Avenue at 43rd Street  
Philadelphia, PA 19104  
Telephone: 215-596-8839

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### ASSISTANT PROFESSOR—BIOCHEMISTRY.

The Department of Chemistry at the University of Denver invites applicants for a tenure-track position beginning September 1989. The successful applicant will be expected to show a strong commitment to teaching and develop a productive, externally-funded research program. Teaching duties will be primarily in the area of biochemistry at both the undergraduate and graduate levels, but may include lower division undergraduate courses. The Department of Chemistry offers an ACS approved undergraduate degree as well as M.S. and Ph.D. degrees. Applicants should send curriculum vitae, a brief description of research interests, and arrange to have three letters of recommendation sent to: **Dr. Sheldon S. York, Search Committee Chair, Department of Chemistry, University of Denver, Denver, CO 80208** by 1 December 1988. *The University of Denver is an Affirmative Action institution.*

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**ASSISTANT PROFESSOR:** Tenure-track position in pharmacology. Responsibilities include teaching medical, dental, allied health and graduate students, and conducting independent, externally fundable research, preferably in neuro/endocrine pharmacology, using cellular/molecular approaches. Qualifications: Ph.D. in pharmacology or the M.D. degree and 1 to 2 years of postdoctoral training and research experience. Applications accepted until position is filled. Send curriculum vitae, detailed description of academic goals, three reprints, and names of three references to: **Pharmacology Search Committee, Room 753 BMSB, University of Oklahoma College of Medicine, Oklahoma City, OK 73190.** *The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR

#### M. D. ANDERSON CANCER CENTER

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### ASSISTANT PROFESSOR MOLECULAR-CELL VIROLOGY

The Department of Microbiology and the College of Medicine at the University of Illinois, Urbana-Champaign, seeks candidates for a full-time tenure-track faculty position at the assistant professor level. Starting date is August 1989. Applicants should have a Ph.D. or M.D. degree, postdoctoral experience, and show exceptional promise to develop an active research program in virology that preferably focuses on virus structure, the molecular or cellular biology of viral infection, or the application of viruses to study molecular genetics, cell biology and/or development. Responsibilities will include teaching medical and graduate students. Salary commensurate with qualifications.

The University of Illinois at Urbana-Champaign offers outstanding research facilities that include state-of-the-art facilities for molecular engineering, hybridoma production, flow cytometry, electron microscopy, x-ray crystallography and computer analyses. There are extensive opportunities for interdepartmental interactions in both microbial and eukaryotic cell and molecular biology, virology, immunology, biochemistry, and biophysics.

Applicants should submit curriculum vitae, statement of research interests, and the names of three references to:

**Jeffrey F. Gardner**  
Department of Microbiology  
University of Illinois  
131 Burrill Hall  
407 South Goodwin Avenue  
Urbana, IL 61801  
Telephone: 217-333-1736

To ensure full consideration applications should be received by 15 January 1989. Interviews may be conducted prior to 15 January 1989 but all applications received by that date will be given full consideration.

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## POSITIONS OPEN

### ASSISTANT PROFESSOR DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

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**Robert Roskoski, Jr.**  
Head, Department of Biochemistry and  
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**ASSISTANT PROFESSOR—MARINE BIOLOGY:** Tenure-track position beginning September 1989. Specialty to be physiological ecology or biomechanics of marine organisms. Responsibilities include developing a strong research program, participation in an introductory biology course, teaching a course in marine biology and an advanced course based on one's specialty. Postdoctoral experience preferred. Please send curriculum vitae, statement of teaching and research interests, and three letters of reference to: **Dr. John Howland, Biology Department, Bowdoin College, Brunswick, ME 04011** by 1 December 1988. *Bowdoin College is committed to Equal Opportunity through Affirmative Action.*

### ASSISTANT PROFESSOR PROKARYOTE MOLECULAR BIOLOGY UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE IN CHICAGO

The Department of Microbiology and Immunology at the University of Illinois College of Medicine in Chicago is seeking to fill a position at the level of assistant professor (tenure-track; associate professor candidates will also be considered) in prokaryotic molecular biology, broadly defined. Candidates involved in protein engineering would be particularly welcome. Candidates will be expected to develop a strong independent research program with external funding. Adequate space and start-up funds are available. Participation in teaching and graduate student training is expected.

Applicants should provide the search committee with curriculum vitae, at least three letters of recommendation, and a brief statement of future research interests and plans. The first series of candidates will be considered after 1 November 1988 and applications will be accepted until the position is filled. Starting date can be September, 1989 or thereafter.

Send applications to: **Drs. A. M. Chakrabarty, Philip Matsumura, Simon Silver, and Karl Volz, Prokaryote Molecular Biology Search Committee, Department of Microbiology and Immunology, University of Illinois College of Medicine at Chicago, P.O. Box 6998, Chicago, IL 60680.**

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

### ASSISTANT PROFESSOR QUANTITATIVE ECOLOGIST

The Zoology Department at the University of Manitoba has a tenure-track position starting July 1989. Salary is dependent on qualifications and experience. A Ph.D. and postdoctoral experience in population dynamics and modeling is required and responsibilities include teaching and research. Applicants must submit curriculum vitae, description of research interests, and representative reprints by 15 January 1989 to: **Dr. J. H. Gee, Zoology Department, University of Manitoba, Winnipeg, MB, Canada R3T 2N2.** Both men and women are encouraged to apply. In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents.



## POSITIONS OPEN

### ASSISTANT PROFESSOR VERTEBRATE BIOLOGY

The Department of Ecology and Evolutionary Biology at the University of Connecticut invites applications for an anticipated tenure-track faculty position at the assistant professor level. A Ph.D. is required, with postdoctoral experience preferred. The successful candidate will be expected to establish an active research program in functional morphology, vertebrate biomechanics, or developmental aspects of morphological evolution. Research interests should complement those of current faculty in ecology, behavior, physiology, genetics, and systematics of vertebrates. Teaching responsibilities include comparative vertebrate anatomy, mammalogy, and introductory biology. Send curriculum vitae, reprints, statement of research plans and teaching interests, and names of four references by 1 January 1989 to: Dr. T. L. Taigen, Vertebrate Biologist Search Committee, Department of Ecology and Evolutionary Biology, U-42, University of Connecticut, Storrs, CT 06268. *Affirmative Action/Equal Opportunity Employer.*

### THE UNIVERSITY OF BRITISH COLUMBIA DEPARTMENT OF CHEMISTRY ASSISTANT PROFESSORSHIP

The Department of Chemistry, University of British Columbia, invites applications for a tenure-track assistant professorship in organic chemistry, starting 1 July 1989. Preference will be given to candidates in biological chemistry or physical organic chemistry; however, outstanding candidates in related areas of organic chemistry will be considered. A Ph.D. and postdoctoral experience is required. The salary will be commensurate with education and experience.

*The University of British Columbia offers Equal Opportunity for Employment to qualified female and male applicants. The position is subject to final budgetary approval and, in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.*

Applications consisting of curriculum vitae, list of publications, summary of research interests, a detailed research proposal, and the names and addresses of at least three references should be sent to:

Larry Weiler  
Professor and Head  
Department of Chemistry  
University of British Columbia  
2036 Main Mall  
Vancouver, British Columbia, Canada  
V6T 1Y6

Closing date for applications will be 15 January 1989.

### ASSISTANT PROFESSORS CELL BIOLOGY

The Division of Structural and Systems Biology, School of Basic Life Sciences at the University of Missouri-Kansas City, is seeking to fill several tenure-track positions at the assistant professor level.

The successful candidate will be expected to develop an independent research program focused in the area of cell biology. Preferred research areas include regulation of cell growth, cell differentiation, subcellular organization, and molecular and cellular aspects of neuroscience.

The successful candidate should have (i) at least 2 years of postdoctoral experience, (ii) demonstrated potential for or a proven record of extramural funding, and (iii) publications.

The Division has responsibilities in graduate studies and research within the School of Basic Life Sciences, which includes molecular and cellular biology and neurosciences and teaching anatomy and physiology in the professional health science schools of the University.

Send curriculum vitae, including statement of research and career goals, current or proposed research funding, and the names of at least three references to:

Dr. James D. Yarbrough, Head  
Division of Structural and Systems Biology  
School of Basic Life Sciences  
University of Missouri-Kansas City  
2411 Holmes  
Kansas City, MO 64108-2792

Screening of applicants will begin 15 December 1988 and continue until all positions are filled.

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

## POSITIONS OPEN

Middlebury College—Applications are solicited for a regular appointment (tenure-track) at the rank of **ASSISTANT PROFESSOR (Ph.D.) or INSTRUCTOR (A.B.D.)** from chemists or biochemists with backgrounds and interests in experimental physical, physical/analytical, or biophysical chemistry. Secondary interest in environmental chemistry would be particularly attractive. Candidates with postdoctoral or brief teaching experience will be given preferential consideration. The successful candidate should be committed to teaching at the undergraduate level and developing a productive research program that will significantly involve undergraduates. Please submit three current letters of reference that speak to experience as a classroom teacher and potential for developing a research program, an up-to-date résumé, graduate and undergraduate transcripts, and a description of research interests to: R. W. Gleason, Chairman, Department of Chemistry and Biochemistry, Middlebury College, Middlebury, VT 05753. Application deadline is 15 December 1988. *Middlebury College is an Equal Opportunity Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR TULANE MEDICAL SCHOOL

The Department of Microbiology and Immunology invites applications from cellular and/or molecular immunologists for a tenure-track position at the assistant or associate professor level. Minimum requirements for the position include a Ph.D. or M.D. and no less than 2 years of postdoctoral experience. Establishment of an independent research program funded by extramural support is expected, as is participation in the education of both medical and graduate students. All major disciplines are represented within the Department, and unique opportunities exist for collaborative and interdisciplinary research. *Applications from women and ethnic minorities are strongly encouraged.* It is expected that the position will be filled on or before 1 July 1989. To apply, send curriculum vitae, a brief overview of present and future research directions, and the names, addresses, and telephone numbers of three references by 1 December 1988, to: Dr. Judith Damer, Chairman, Search Committee, Department of Microbiology and Immunology, Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans, LA 70112. *Tulane University is an Equal Opportunity/Affirmative Action Employer.*

### YALE UNIVERSITY ASSISTANT OR ASSOCIATE PROFESSOR OF NEUROLOGY (NEUROSCIENCE)

The Department of Neurology at the Yale School of Medicine seeks outstanding candidates with a Ph.D. or M.D. and with at least 2 years of postdoctoral training and experience (preferably in cellular or molecular neuroscience or related disciplines) to establish a research program on molecular or developmental neurobiology. The position will include teaching of medical students, graduate students, and postdoctoral fellows. Especially favorable opportunities exist in the areas of molecular biology or biochemical pharmacology of ion channels and receptors, synaptic structure-function, cell-cell recognition, membrane structure-function, developmental neurobiology, and neurogenetics. Excellent facilities and support are available. Joint appointment may be arranged for appropriate candidate in basic science department.

Send curriculum vitae and names of three references by 1 December 1988 to: Jeffery D. Kocsis, Ph.D., Chairman, Neurology Search Committee, Department of Neurology, LCI 702, Yale Medical School, 333 Cedar Street, New Haven, CT 06510. *An Equal Opportunity/Affirmative Action Employer.*

### BIOCHEMIST

University in Philadelphia, Pennsylvania has a job opening for biochemist to join a research group studying molecular and/or cell biological interactions of blood coagulation. Applicant should have a Ph.D. in biochemistry with at least 3 years of postdoctoral experience in molecular or cell biology and cell culture. Familiarity with recombinant DNA techniques is desirable. A non-tenured faculty position with full benefits and the rank of research assistant professor is available. Salary: \$35,000 per year, full-time. Submit résumé or curriculum vitae to: The Philadelphia Job Bank, 444 North 3rd Street, 3rd Floor, Philadelphia, PA 19123; refer to Job Order #4208509.

## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR.** The Department of Microbiology and Immunology of the University of Michigan Medical School seeks an immunobiologist for a tenure-track appointment as assistant/associate professor. The successful applicant will establish an independent research program applying modern molecular/cell biological approaches to the study of the immune response. The position requires active participation in teaching of graduate and medical students. Salary support, a well-equipped laboratory and start-up funds are available from departmental resources. Send curriculum vitae, a brief statement of research interests and names and addresses of three referees by 30 December 1988 to:

Immunology Search Chairman  
Department of Microbiology and Immunology  
The University of Michigan Medical School  
M6643/0620 Medical Science Building II  
Ann Arbor, MI 48109-0620

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

**BIOCHEMIST.** Old Dominion University, Department of Chemical Sciences announces a tenure-track opening at the assistant professor level. A Ph.D. in chemistry or biochemistry is required, and postdoctoral experience is preferred.

A research interest in the area of biochemistry or clinical chemistry is expected. The successful candidate will teach in the graduate and undergraduate programs in a Ph.D. granting department. The candidate is expected to establish an active research program and seek external funding.

Qualified persons should submit their curriculum vitae, a description of their proposed research interests, and have three letters of recommendation sent to: Dr. R. L. Williams, Biochemistry Search Committee, Department of Chemical Sciences, Norfolk, VA 23529-0126. The deadline for applications is 30 November 1988. *Old Dominion University is an Equal Opportunity/Affirmative Action Employer; and minorities and women are especially encouraged to apply. Compliance with the Immigration Reform and Control Act of 1986 is required.*

The Department of Chemistry at the University of Maryland Baltimore County invites applications and nominations for a tenure-track position in **BIOCHEMISTRY** at the **ASSISTANT PROFESSOR** level. Applicants in all areas of biochemistry will be considered who have the potential to develop an exceptionally strong experimental research program. The successful applicant may participate in the departmental Ph.D. programs in chemistry, biochemistry, and molecular and cell biology. Send curriculum vitae, statement of research plans, and three letters of recommendation to: Search Committee, Department of Chemistry, University of Maryland Baltimore County, Baltimore, MD 21228. *UMBC is an Equal Opportunity/Affirmative Action Employer, and applications from qualified women and minority are especially encouraged. Applications will be received until a suitable candidate is found.*

### BIOCHEMISTRY— UNIVERSITY OF IOWA

The Department of Biochemistry in the College of Medicine of the University of Iowa seeks highly qualified applicants for faculty positions at the **ASSOCIATE AND FULL PROFESSOR** levels. Salaries are competitive and will depend on qualifications and experience. Support for equipping laboratories will be excellent. Applicants with research in any area of modern biochemistry will be considered. Quality of research, not a specific research area, will be the primary criterion.

All applicants must have a relevant graduate degree [Ph.D., M.D. (or both) or equivalent foreign degree], a well-funded on-going research program and significant national stature in their research area. In addition to continuing successful research programs, faculty participate in the department teaching programs. The training of graduate students and participation in appropriate graduate programs also is expected.

Applications, including a complete curriculum vitae, a brief description of current and future research, and the names of at least three references; or nominations, should be sent to: Alan G. Goodridge, Professor and Head, Department of Biochemistry, College of Medicine, University of Iowa, Iowa City, IA 52242. *The University of Iowa is an Affirmative Action/Equal Opportunity Employer.*



## POSITIONS OPEN

### BIOCHEMIST

A small Midwest manufacturer of specialty ingredients for the animal feed industry seeks a biochemist to join its technical service group. The position involves traveling with the company's sales force to affect technical training in the field, and to meet with prospective clients concerning use of the company's products in animal feed. The individual will also be charged with the responsibility of coordinating field experiments with various universities, and writing of technical/sales bulletins. This position involves 70% travel in the United States and abroad. The successful candidate will possess excellent verbal and written communication skills and enjoy communicating science to the feed industry. The position requires a Ph.D. in biochemistry or related field. An excellent compensation package is offered.

Interested parties should submit their résumé to: **Jed Harms, Executive Director of Sales and Marketing, Kemin Industries, Inc., P.O. Box 70, Des Moines, IA 50301.**

*An Equal Opportunity Employer.*

**BIOCHEMISTRY FACULTY POSITION.** Full-time tenure-track teaching and research position in the Department of Physiological Chemistry, College of Medicine. Candidates should hold a Ph.D. or M.D., have a minimum of 2 years of postdoctoral research experience, and show clear potential to sustain a viable, independent research program. Send curriculum vitae, names of three references, and a statement of research plans to: **Search Committee, Department of Physiological Chemistry, 5166 Graves Hall, The Ohio State University, Columbus, OH 43210.** Applications should be received by 31 December 1988. *OSU is an Equal Opportunity/Affirmative Action Employer, and we encourage applications from women and minority candidates.*

**BIOLOGIST:** The Biology Department of William Jewell College invites applications for a tenure-track assistant/associate professorship in biology beginning fall 1989. The candidate should have a Ph.D. in physiology with postdoctoral experience preferred. Address letters of application by 21 November 1988 to: **Dr. Judith A. Dilts, Chair, Department of Biology, William Jewell College, Liberty, MO 64068. Telephone: 816-781-7700, X5661.** *William Jewell is an Affirmative Action/Equal Opportunity Employer and specifically encourages applications from minorities and women.*

### BIOMEDICAL DIAGNOSTICS

PB Diagnostic Systems, Inc. (PBDS) is a new entry in the field of biomedical diagnostic instrumentation systems. Founded jointly by Behringwerke AG, and Polaroid Corporation, PBDS is a securely funded venture dedicated to bringing significant, novel products to the market place. As the company continues to grow and expand, there are opportunities available for experienced people to work in a very special start-up environment in the Boston area.

#### SCIENTIST, INFECTIOUS DISEASES

You will be responsible for the development of serological assays for the detection of antibodies to various viral agents. These assays will be based on a novel technique developed by PBDS. Supervision of assistant scientists and technicians, documentation, and technology transfer will be functions of the position.

The successful candidate will hold a Ph.D. degree in microbiology, biochemistry, or immunology with 3 to 5 years of experience in assay development from research stages through transfer to manufacturing. Experience with infectious disease serology assays such as HIV, Rubella, or other TORCH agents is highly desirable.

#### SCIENTIST, IMMUNOASSAY

You will be responsible for development of nonisotopic immunodiagnostic reagents including antibody purification, conjugation, assay optimization, correlation, cross-reactivity, precision, stability and interference studies. Additional duties will include supervision of laboratory staff, and interface with external groups responsible for 510(k) approval, manufacturing, and quality control.

The successful candidate will have a Ph.D. or M.S. in a chemistry-related area with a minimum of 3 years of experience in immunodiagnostics research and development, including supervisory experience. Demonstrated successful product development leading to FDA approval is required. Please send curriculum vitae to: **Human Resources, PB Diagnostic Systems, Inc., 151 University Avenue, Westwood, MA 02090.**

## DEPUTY DIVISION LEADERS

The Life Sciences Division at the Los Alamos National Laboratory has openings for two Deputy Division Leaders. The individuals will be responsible for assisting the Division Leader with leading, developing and coordinating the Division's multidisciplinary research projects in physiology, biochemistry, biophysics, cellular and molecular genetics, and cell biology and with the administrative management of the Division. The successful candidates will support strong interactions and collaborations with academia and private industry. One Deputy Division Leader will be responsible for financial and personnel management and for extensive interaction with sponsoring agencies including DOE, DOD, NIH and the private sector. The second Deputy Division Leader will be responsible for research planning including responsibility for the field of chromosome structure and function.

The successful candidates must have a PhD or equivalent in molecular biology, genetics, biophysics or other related sciences. A strong research record in fields relevant to LS Division research activities is required. Demonstrated successful program development and management experience are desirable.

To apply, submit detailed curriculum vitae to: **Richard O. Garcia (MS P280), Personnel Services Division 80556-CH, Los Alamos National Laboratory, Los Alamos, NM 87545.**

Affirmative Action/Equal Opportunity Employer  
U.S. Citizenship Required

University of California

# Los Alamos

## Plant Physiology/Biochemistry

### DeKalb-Pfizer Genetics



An equal opportunity employer

Plant Genetics Research at Pfizer Central Research, in conjunction with plant breeding stations worldwide, conducts research and development for DeKalb-Pfizer Genetics, a leading agricultural seed company. We invite applications from PhD-level scientists to join our multidisciplinary research team focused on the genetic improvement of corn. You must be an accomplished scientist who has innovative research approaches and is able to work effectively as part of an established research team.

You will join a research group investigating the physiological and biochemical basis for superior agronomic performance of corn. The short-term goals of this program are to identify germplasm sources for important agronomic traits and to develop methodology for following these traits in segregating populations. Longer term objectives include understanding the biochemical and molecular basis of superior agronomic performance with the potential for genetically manipulating these traits. Existing programs include investigating the response of corn to environmental stresses. All work would closely integrate with our cell biology, tissue culture and molecular biology teams involved with the transformation and genetic manipulation of corn. If you have experience in plant physiology, biochemistry and genetics, you are encouraged to apply.

This position provides excellent opportunities for professional recognition and growth. We offer an excellent salary, benefit and relocation package plus an attractive southeastern Connecticut shore location. Please send resume and description of research accomplishments to: **Dr. Jerry K. Larson, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.**

## POSITIONS OPEN

### BIOCHEMISTRY— UNIVERSITY OF IOWA

The Department of Biochemistry in the College of Medicine of the University of Iowa seeks highly qualified applicants for faculty positions at the **ASSISTANT PROFESSOR** (tenure-track) level. Salaries are competitive; support for equipping laboratories and initiating research programs will be excellent. Applicants with research in any area of modern biochemistry will be considered, but preference will be given to applicants whose research interests involve the structure, function and dynamics of macromolecules and membranes. In the final analysis, however, quality of research, not a specific research area, will be the primary criterion.

All applicants must have a relevant graduate degree [Ph.D., M.D. (or both) or equivalent foreign degree], at least 2 years of productive postdoctoral experience, and the potential to initiate and maintain a vigorous research program. In addition to establishing successful research programs, faculty participate in the department teaching programs. The training of graduate students and participation in appropriate graduate programs also is expected.

Applicants, including a complete curriculum vitae and a brief description of current and future research; or nominations, should be sent to: **Alan G. Goodridge, Professor and Head, Department of Biochemistry, College of Medicine, University of Iowa, Iowa City, IA 52242.** Candidates should arrange to have three letters of reference sent to the same addressee. *The University of Iowa is an Affirmative Action/Equal Opportunity Employer.*

**BIOLOGY:** Two tenure-track positions at **ASSISTANT PROFESSOR** rank, Berea College, to begin September 1989. Ph.D. required, along with demonstrated commitment to undergraduate teaching and ability to involve students in research. Cell physiology and molecular biology: Teach advanced courses in cell physiology and genetics, and other courses for majors and nonmajors. Anatomy and physiology: Teach human anatomy and physiology, advanced physiology, and other courses for majors and nonmajors. *In keeping with the College's Christian tradition and its emphasis on the worth and dignity of all persons, Berea encourages applications from women and members of minority groups.* Submit letter of application, curriculum vitae, and supporting materials by 15 December 1988 to: **Dr. Ralph Thompson, Biology Department, Berea College, Berea, KY 40404.**

**BIOLOGY:** Vertebrate Biology. Search Reopened. Cumberland College, a private, church-related liberal arts college, invites applications for a **TENURE-TRACK POSITION** to begin in August 1989. Courses taught will include comparative vertebrate anatomy, vertebrate field biology, comparative physiology, human anatomy and physiology, and general biology. Ph.D. required. Send letter of application, curriculum vitae, copies of transcripts, statement of teaching philosophy, and three letters of reference to: **Dr. Joseph E. Early, Academic Dean, Cumberland College, Williamsburg, KY 40769.** Deadline: January 1989.

### CANCER/CELL BIOLOGY POSITION AT THE UNIVERSITY OF ARIZONA

As part of a University-wide expansion of Biological Sciences and Biotechnology, the Department of Anatomy and the Arizona Cancer Center at the University of Arizona are seeking a new tenure-track faculty member. Preference will be given to applicants with research interests in the areas of cancer cell biology or molecular and genetic studies of development, although outstanding candidates in other areas will be considered. Candidates should have pertinent postdoctoral experience. We prefer candidates at the assistant professor level, but more senior appointments may be made for exceptional individuals. Successful candidates will be expected to establish an excellent research program and teach at the graduate level. Submit curriculum vitae, two copies of relevant papers, a detailed description of research goals, and have three supporting letters sent to: **Dr. Jeffrey Trent, Arizona Cancer Center, University of Arizona, 1515 North Campbell, Tucson, AZ 85724.** To insure consideration, applications should be received by 15 December 1988; however, applications will be accepted until the position is filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer and applications from females and minority group members are strongly encouraged.*

## POSITIONS OPEN

### CELL-MOLECULAR BIOLOGIST

Applications are being accepted for an anticipated tenure-track position, starting August 1989, in cell and molecular biology with emphasis in developmental genetics. The successful candidate must demonstrate potential for establishing an extramurally funded research program and should complement departmental strengths in cell, development or genetics programs. Establishment of an active graduate program and participation in upper level cell/tissue instruction is expected. Candidates must have a Ph.D. and postdoctoral experience is preferred. Salary commensurate with qualifications and experience. Curriculum vitae, selected reprints, statements of research and teaching interest, and names of three references should be forwarded to: **Chairman, Cell Biology Search Committee, Department of Zoology and Physiology, Louisiana State University, Baton Rouge, LA 70803-1725 (Telephone: 504-388-1132 BITNET: ZOOPHYS @ LSUVM).** Preference will be given to applications received by 15 January 1989. *LSU is an Equal Opportunity/Affirmative Action Employer.*

### CELL REPLICATION TECHNOLOGY

A NASDAQ listed, R&D company engaged in development and commercialization of novel, proprietary cell replication technologies seeks two outstanding **POSTDOCTORAL CANDIDATES** to fill new positions on its research team:

**CYTOTOXICITY**—The successful candidate for this position will have at least 2 years of experience at a prominent institution developing and conducting toxicity tests.

**LONG-TERM CELL CULTURE**—This position requires extensive experience in bone marrow cell culture or hematology; experience with progenitor assays and flow-cell cytometry will be a plus.

Successful candidates will have strong records of scientific achievement and have displayed a capacity for timely completion of projects with a minimum of supervision.

The company is currently based in New York City area. In 1 year, the R&D facility will be divided between Vermont and San Diego.

Compensation is designed to attract the best candidates and will include base salary, incentives, and stock participation.

Reply in confidence enclosing curriculum vitae to: **C.W.C. Capital Corporation, 420 Lexington Avenue, New York, NY 10170. Telephone: 212-697-2143.**

### CELLULAR/MOLECULAR IMMUNOLOGIST

An outstanding opportunity is immediately available for a postdoctoral immunologist to join a multi-disciplinary research group studying the autoimmunity of insulin-dependent diabetes. Generous, long-term support will be provided to an individual who demonstrates potential for developing an independent research program. Tenure-track position; send curriculum vitae, statement of research goals, and names of three references to: **Fredda Ginsberg-Fellner, M.D., Box 1198, The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029-6574.** *An Equal Opportunity Employer.*

### CHAIR, DEPARTMENT OF ANATOMY

Morehouse School of Medicine (MSM) invites applications for the position of Professor and Chair of the Department of Anatomy to begin 1 July 1989. The candidate should be a well-established investigator in a current field of research who has demonstrated a strong commitment to teaching medical students. The applicant should also have demonstrated academic administration capabilities. Applicants must have the Ph.D. or M.D./Ph.D. degree.

MSM is an expanding, new, private medical school with a strong commitment to the academic and scientific growth of minority students. The position offers an excellent opportunity to develop an outstanding, progressive department in an institutionally supported atmosphere of cooperative growth and development.

Initial screening of candidates will begin 1 December 1988. Applications or letters of interest along with curriculum vitae, including research, teaching, and administrative experience should be sent to: **Collins Baber, M.D., Chair, Search Committee for the Chairperson of Department of Anatomy, Morehouse School of Medicine, 720 Westview Drive, S.W., Atlanta, GA 30335.**

## POSITIONS OPEN

**CELLULAR NEUROPHYSIOLOGIST/ANIMAL PHYSIOLOGIST.** The Department of Biology at Bryn Mawr College has a tenure-track opening for a highly qualified young investigator having an active interest in both research and teaching. The successful applicant will be expected to establish a funded research program and to participate in the undergraduate and graduate teaching programs of the department and of an anticipated new interdepartmental program in neural and behavioral sciences. We seek a broadly trained cellular neurobiologist whose program will complement existing strengths in neuroscience, and who is able to teach both cellular neurophysiology and animal physiology. Applications, including curriculum vitae, a statement of research and teaching interests, selected reprints, and the names of three references, should be sent to: **Dr. Paul Grobstein, Department of Biology, Bryn Mawr College, Bryn Mawr, PA 19010.** *Affirmative Action/Equal Opportunity Employer.*

**DIRECTOR, DUKE UNIVERSITY MARINE LABORATORY.** Duke University invites nominations and applications for the position of Director of the Duke University Marine Laboratory (DUML). We seek an individual with a Ph.D. in a marine or related science, a superior record of leadership qualities, a record of program management and proven entrepreneurial skills. Candidates will be evaluated on the basis of their potential to lead the program, attract outstanding faculty, and lead a development program to enhance quality and productivity. In addition to administrative responsibilities the Director is expected to play a major role in the development of an emerging university-wide program in ocean studies. The Director reports to the University Provost.

The Duke University Marine Laboratory is situated on fifteen acres of Pivers Island, adjacent to the historic town of Beaufort, North Carolina. The facility comprises 23 buildings including a library, auditorium, dormitories, classroom, cafeteria, and several research buildings and labs. At present, the permanent research staff at DUML numbers 12 with a support staff of 60.

Interested candidates should send an application letter, curriculum vitae, and the names and addresses of three references to: **Dr. Ronald D. Perkins, Chairman of DUML Search Committee, Department of Geology, Duke University, Durham, NC 27706.** Closing date for applications is 15 December 1988. It is hoped that the appointment will be made on or before 31 August 1989. *Duke University is an Equal Opportunity/Affirmative Action Employer.*

### BIOCALORIMETRY CENTER

The Biocalorimetry Center, a newly created national Research Technology Resource Facility, invites applications for the position of **DIRECTOR OF OPERATIONS.** Applicants should have a Ph.D. degree and postdoctoral experience in the development and/or application of calorimetric techniques in biomedical research. The successful applicant will have a non-tenure track research faculty appointment at the assistant professor level and is expected to supervise the day-to-day operations of the Center as well as to develop an independent, vigorous research program.

Interested individuals should submit a letter of intention, curriculum vitae, and three letters of reference to: **Dr. Ernesto Freire, Department of Biology, The Johns Hopkins University, Baltimore, MD 21218.**

**ELECTRON MICROSCOPIST/CELL BIOLOGIST**—The Grace Cancer Drug Center of Roswell Park Memorial Institute is seeking a staff member to assume the responsibilities of the electron microscopy unit. These include (a) establishing an independent scientific program in the area of non-erythroid spectrin function and organization and (b) interacting on a collaborative basis with other staff members in research problems related to ultrastructural localization of oncogene products, anticancer drugs and membrane-associated proteins. Applicants should have 1 to 2 years of postdoctoral experience with expertise in various localization strategies, in situ hybridization, protein purification and monoclonal antibodies. Please send résumé to: **Dr. Enrico Mihich, Chairman, Grace Cancer Drug Center, Roswell Park Memorial Institute, Elm and Carlton Streets, Buffalo, NY 14263.** *An Equal Opportunity Employer.*

THE AMERICAN ASSOCIATION FOR CANCER RESEARCH ANNOUNCES

The Second

AACR Special Conference in Cancer Research

**THE ROLE OF DNA VIRUSES IN HUMAN TUMORS**  
**Supported by a Generous Grant from the General Motors**  
**Cancer Research Foundation**

January 22-26, 1989  
Catamaran Resort Hotel, San Diego, California

**PROGRAM COMMITTEE**

Jesse W. Summers      Harald zur Hausen, Chairman  
R. Palmer Beasley      George Miller

**SCIENTIFIC PROGRAM**

**KEYNOTE ADDRESS** (An Anniversary in Virus Research  
in Human Tumors)

"Twenty-five Years of Epstein-Barr Virus Research:  
Present State and Perspectives," M. A. Epstein,  
Oxford, UK

**DNA TUMOR VIRUSES: CONCEPTS AND NEW  
DEVELOPMENTS**

R. Dulbecco, La Jolla, CA  
R. P. Beasley, Houston, TX  
H. zur Hausen, Heidelberg, FRG  
R. C. Gallo, Bethesda, MD

**VIRAL DNA IN HUMAN TUMORS**

G. Barbanti-Brodano, Ferrara, Italy  
G. Orth, Paris, France  
E.-M. de Villiers, Heidelberg, FRG  
K. Koike, Tokyo, Japan

**VIRUS-HOST CELL INTERACTIONS IN  
ONCOGENESIS**

G. Miller, New Haven, CT  
F. Wettstein, Los Angeles, CA  
F. V. Chisari, La Jolla, CA  
D. Lowy, Bethesda, MD

**REGULATION OF VIRAL GENE EXPRESSION IN  
LATENTLY INFECTED CELLS**

J. Summers, Albuquerque, NM  
E. Kieff, Boston MA  
A. Sergeant, Lyon, France  
P. Howley, Bethesda, MD

**MECHANISMS OF CELL TRANSFORMATION AND  
IMMORTALIZATION**

L. Laimins, Chicago, IL  
B. Sugden, Madison, WI  
E. Schwarz, Heidelberg, FRG  
P. Tiollais, Paris, France

**VIRUSES WITH INITIATOR-LIKE FUNCTIONS  
AND VIRUSES ACTING AS ANTICARCINOGENS**

J. Rommelaere, Brussels, Belgium  
R. Heilbronn, Heidelberg, FRG  
O. Yalkinoglu, Heidelberg, FRG  
E. Winocours, Rehovot, Israel

**IMMUNOLOGICAL CONTROL OF DNA TUMOR  
VIRUS INFECTION AND ONCOGENESIS**

G. Klein, Stockholm, Sweden  
A. Rickinson, Birmingham, UK  
S. Jablonska, Warsaw, Poland  
L. Gissmann, Heidelberg, FRG

**INFORMATION AND APPLICATION FORMS**

American Association for Cancer Research, Inc.  
530 Walnut Street, 10th Floor  
Philadelphia, PA 19106  
215-440-9300  
215-440-9313 (FAX)

Attendance is limited; applications will be accepted on a first-come, first-served basis.

**ADVANCE REGISTRATION ENDS:**

**DECEMBER 5, 1988**

## MEDICAL REVIEW

The Gillette Medical Evaluation Laboratories, a division of The Gillette Company, has an entry level opening in Medical Review to implement Company Medical/Legal procedures and applicable government regulations in order to ensure the distribution of safe consumer products. Work includes initiating medical/biological studies, some participation in industrial hygiene projects, and reviewing drug/device claims and adverse reaction claims. Ph.D. in Physiology, Pharmacology, Toxicology or related science is required. Experience in designing toxicological or clinical tests and evaluating data and a knowledge of industrial hygiene is desirable.

Gillette Medical Evaluation Laboratories is located in a new facility, just outside of Washington, D.C., in an area rich in government, private, and academic scientific laboratories. We offer excellent compensation, comprehensive benefits, and relocation assistance. For consideration, please send a confidential resume to:

Gillette Medical Evaluation  
Laboratories  
401 Professional Drive  
Gaithersburg, MD 20879  
(301) 590-1508

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# Basic Research Advanced Drug Delivery Systems San Francisco Bay Area

Liposome Technology, Inc. (LTI), develops and manufactures innovative liposome based pharmaceutical products. These products are designed to improve efficacy, safety and convenience of pharmaceutical products. Our impressive technological breakthroughs have created exciting opportunities in our research headquarters for:

## Postdoctoral Fellows

### Immunochemistry

PhD level chemist with proven skills in monoclonal antibody technology including purification, enzymatic fragmentation, chemical modification and conjugation chemistry. Ability to develop sensitive and reliable research assays designed to assess binding affinity and specificity is also required.

### Protein Biochemistry

PhD level biochemist with hands-on experience in formulating and handling bioactive peptides and proteins. The successful candidate will have proven ability to set up assays to measure biological activity of molecules (RIA, ELISA,

bioassay) as well as in-depth understanding of peptide/protein stability issues. A strong background in the basic aspects of protein analytics is a must.

### Molecular Biology/Virology

PhD level cell or molecular biologist with strong interest in retrovirology and biological/biopharmaceutical orientation. Hands-on experience in cell culture (including primary lymphocyte/monocyte lines) as well as in vitro and in vivo infectivity models is essential. Preference will be given to candidates with experience in assessing activity of antiviral agents.

LTI is committed to providing its employees with both sophisticated facilities and a competitive salary/benefits package. Postdoctoral positions last 1-2 years. For immediate consideration, please send your resume, indicating position of interest, to: LTI, Professional Staffing, Dept. HR/INST, 1050 Hamilton Court, Menlo Park, CA 94025. Principals only; please, no phone calls. LTI is an equal opportunity employer.



## POSITIONS OPEN

### DEVELOPMENTAL BIOLOGIST DIVISION OF BIOLOGY AND MEDICINE BROWN UNIVERSITY

Developmental Biologists are invited to apply for a full-time tenure-track position at the level of assistant professor in the Section of Molecular, Cellular, and Developmental Biology, commencing in the fall of 1989. We seek an individual who will establish an active, independent research program focussed on basic mechanisms of development and who will interact effectively with other members of the Graduate Program in Molecular Biology, Cell Biology, and Biochemistry. While we are particularly interested in applicants with research interests in mammalian development, final selection will be for candidates of outstanding ability, regardless of the system studied. At least 2 years of postdoctoral experience and potential for excellence in teaching are required. Teaching responsibilities include participation in graduate and undergraduate courses in Developmental Biology and Embryology. *Applications from women and minority candidates are encouraged.* Send curriculum vitae, recent reprints, summary of research interests, and have three letters of recommendation forwarded by 15 December 1988 to: **Dr. John R. Coleman, Division of Biology and Medicine, Brown University, Providence, RI 02912. FAX: 401-863-3700.** *Brown University is an Equal Opportunity/Affirmative Action Employer.*

**ENZYMOLOGIST / BIOCHEMIST / X-RAY CRYSTALLOGRAPHY POSTDOCTORAL** position available to join our ongoing research efforts examining the structural basis of enzyme specificity using a combination of x-ray crystallography, site-directed mutagenesis and kinetics analysis.  $\alpha$ -Lytic protease provides an idea model system for examining all aspects of specificity structure-function relationships. Two Xentronix area detectors, two diffractometers, two E&S displays, and state-of-the-art computational resources are available. Applicants should send curriculum vitae and names and addresses of three referees to: **Dr. David A. Agard, HHMI Structural Biology Unit, Department of Biochemistry, UCSF Medical Center, San Francisco, CA 94143-0448.**

### THE UNIVERSITY OF CHICAGO

The Joseph P. Kennedy, Jr. Mental Retardation Research Center and the Department of Pharmacology and Physiological Sciences are recruiting new **FACULTY** with research interests related to the molecular and cellular biology of the nervous system. Applicants should send their curriculum vitae and bibliography, a brief statement of research interests and plans, and the names of three references to:

**Dr. Robert L. Perlman, Director  
Kennedy Mental Retardation Research Center  
Department of Pediatrics  
The University of Chicago  
5841 South Maryland Avenue, Box 413  
Chicago, IL 60637**

*From the time of its original charter, the principle of the University of Chicago has been to appoint scholars without regard to race, color, religion, sex, or national origin.*

The Eppley Institute for Cancer Research of the University of Nebraska Medical Center invites applications for a **FACULTY POSITION** (tenure-leading) at the assistant professor level to strengthen its program in the molecular biology of cancer. Candidates should possess a Ph.D. or M.D., have several years of postdoctoral experience, and should be engaged in such research areas as oncogenic virology, molecular genetics, tissue-specific gene expression, or development of tools for gene therapy. Start-up funds and a competitive salary are available. The successful candidate will be expected to contribute to the academic programs of a department in the College of Medicine or Pharmacy in which he/she will hold an appointment. Submit curriculum vitae, a one-page summary of your research interests, and have three letters of reference forwarded to: **Dr. Edward Bresnick, Director, Eppley Institute for Research in Cancer and Allied Diseases, University of Nebraska Medical Center, Omaha, NE 68105.** *The University of Nebraska Medical Center is an Equal Opportunity Employer/Affirmative Action Employer. Please refer to position #8-6158. Closing date: 30 November 1988.*

## POSITIONS OPEN

### FACULTY POSITION—BIOCHEMISTRY CARLETON COLLEGE

The Department of Biology of Carleton College invites applications for a 1-year faculty leave replacement. Teaching responsibilities will include biochemistry and associated laboratory, cell/molecular physiology, a seminar in the candidates research specialty and participation in a team taught introductory course. A Ph.D. is required and the appointment will be at the assistant professor level. *Women and minorities are especially encouraged to apply.* Carleton College is an undergraduate institution dedicated to excellence in teaching. The position begins on 1 September 1989. Interested candidates should send curriculum vitae, graduate transcripts, and three letters of recommendation by 15 January 1989 to: **Dr. John Tymoczko, Department of Biology, Carleton College, Northfield, MN 55057-4025.**

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

### FACULTY POSITION IN CHEMISTRY

The Chemistry Department at the University of California, Berkeley, solicits applications for positions as assistant professor of chemistry, beginning in the fall 1989. We have particular interest in applicants in inorganic, analytical, organic, and bio-organic chemistry. Creative and energetic candidates who show exceptional promise in research and teaching are sought. Individual(s) selected for this position will be expected to establish an outstanding research program. Subject to budgetary approval, exceptional candidates with established programs may be considered for appointment with tenure as professor or associate professor. Candidates should send curriculum vitae, a proposed research program, and arrange to have three letters of recommendation sent to: **Professor Paul A. Bartlett, Chairman, Faculty Recruiting Committee, Department of Chemistry, University of California, Berkeley, CA 94720.** The deadline for receipt of applications is 1 December 1988. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITION IN PHARMACOLOGY UNIVERSITY OF CALIFORNIA IRVINE

Applications are invited for a tenured or tenure-track faculty position in pharmacology. We are especially interested in candidates with an active research program in molecular pharmacology and expertise in neuropharmacology, but qualified candidates in other areas will be considered. A Ph.D. in pharmacology or related area, or an M.D. is required. Level of appointment and salary will be commensurate with achievement and experience. Curriculum vitae, references, and a summary of research interests should be sent before 31 December 1988 to:

**Dr. Larry Stein, Chairman  
Department of Pharmacology  
College of Medicine  
University of California  
Irvine, CA 92717**

*The University of California is an Affirmative Action Employer.*

**FACULTY POSITION IN POPULATION BIOLOGY:** The University of Illinois at Urbana-Champaign invites applications for a full-time tenure-track position as an assistant professor in the Department of Ecology, Ethology, and Evolution, starting 21 August 1989. Candidates should have strong interests in and an empirical approach to ecological/evolutionary genetics. We are seeking a person who will interact with our current staff, which includes evolutionary ecologists, evolutionary geneticists, population ecologists, and behavioral ecologists. A Ph.D. must be earned by the starting date. Salary commensurate with qualifications. Teaching responsibilities include population biology and other courses in her/his area of expertise. To assure full consideration applicants should send curriculum vitae, statement of research and teaching interests, and three letters of reference by 15 December 1988 to: **Dr. Lowell L. Getz, Department of Ecology, Ethology, and Evolution, University of Illinois, 515 Morrill Hall, 505 South Goodwin Avenue, Urbana, IL 61801. Telephone: 217-333-7802.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### FACULTY POSITION PLANT MOLECULAR SYSTEMATICS

The Department of Botany, Iowa State University, invites applications for a tenure-track position at the assistant or associate professor level. Preparation for development of a strong research program applying molecular methods to questions of plant systematics and evolution is required. Teaching responsibilities will include a specialty graduate course and participation in undergraduate teaching in biology or botany. Candidates must have a Ph.D. or equivalent.

Applications must include curriculum vitae, statements of research interests and teaching philosophy, and reprints of selected publications. Applications and at least three letters of reference should be sent to: **Dr. David C. Glenn-Lewin, Chair, Department of Botany, Iowa State University, Ames, IA 50011** by 15 December 1988.

*Women, minorities, and members of other protected groups are strongly encouraged to apply. Iowa State University is an Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS IN BIOLOGICAL SCIENCES AND SCIENCE EDUCATION

The Department of Biological Sciences, San Jose State University, invites applications for four tenure-track positions to begin August 1989. Applicants must have earned doctorate and teaching experience. Postdoctoral research experience desired. Significant professional contributions and development of active research program will be expected. All positions include teaching general education science, advising undergraduate and/or graduate students and participation in the Master's degree program. The University is especially interested in hiring faculty members who are aware of and sensitive to the educational goals and requirements of an ethnically and culturally diverse student population. (i) **GENETICIST/MOLECULAR BIOLOGIST.** Assistant Professor. Candidate should have a research interest in eukaryotic molecular genetics and will teach an undergraduate course in recombinant DNA techniques, an advanced course in candidate's specialty, and/or courses in general genetics. (ii) **TOXICOLOGIST/CELL BIOLOGIST.** Assistant Professor. Candidate will teach introductory and advanced courses in toxicology, course(s) in cell biology for biology majors, and/or introductory biology courses. (iii, iv) **SCIENCE EDUCATOR/BIOLOGIST.** Two positions: one each at the Assistant Professor and Associate Professor levels. Successful applicants will contribute to the pre-service secondary science teacher training program, supervise secondary science student teachers, teach secondary science methods and/or biological specialty, and maintain biological or educational research program. Prefer experience in secondary science teaching and supervision. Completed applications, with transcripts, curriculum vitae, statement of professional goals, and three current letters of reference must be sent by 5 January 1989 to: **Dr. Wayne Savage, Chairman, Department of Biological Sciences, San Jose State University, San Jose, CA 95192.** *SJSU is an Equal Opportunity/Affirmative Action, Title IX Employer.*

### FACULTY POSITIONS IN MOLECULAR PHARMACOLOGY

The Department of Pharmacology, University of Missouri-Columbia (UMC), invites applications for junior and senior level, tenure-track positions focusing on the application of molecular biology to analysis of significant problems in pharmacology. One of the positions (assistant professor) is under the auspices of a campus-wide eminence program in molecular biology. Successful candidates are expected to have a strong record of research accomplishments and the potential to develop high quality, independent research programs with long-term growth potential. Research areas of interest include but are not limited to: structure, function and regulation of receptors, membrane transport proteins, and ion channels; molecular mechanisms of transmembrane signaling; and, actions of drugs, neurotransmitters and growth factors. Successful candidates also will be expected to participate in the teaching of medical and graduate students. Please send curriculum vitae, a brief description of research plans, and the names of three references to: **Dr. Hyun Dju Kim, Professor and Chairman, Department of Pharmacology, University of Missouri-Columbia, School of Medicine, M517B Medical Sciences Building, Columbia, MO 65212.** *An Equal Opportunity/Affirmative Action Employer.*



**NATIONAL INSTITUTES OF HEALTH  
PUBLIC HEALTH SERVICE  
NATIONAL CANCER INSTITUTE  
DIVISION OF CANCER TREATMENT  
OFFICER OF THE DIRECTOR**

**Deputy Director, Medical Officer,  
GM-602-15**

Salary: \$58,135 - \$72,500, depending upon qualifications. An additional bonus of up to \$20,000 per year is available through the Physicians Comparability Allowance.

Applicants should be Board certified in a medical or surgical specialty, or in radiotherapy, and should possess comprehensive knowledge of the preclinical and clinical sciences relating to cancer. Additional experience as an independent clinical investigator welcomed. Applicants should have mastery of both oral and written communications.

Primary responsibilities of the Deputy Director involve assisting the Director in conceptualization, design and implementation of short- and long-range plans related to Divisional research programs of both an intramural and extramural (contract or grant-supported) nature. Deputy Director represents the Director and the DCT at various scientific meetings, international forums, and national media sessions; assists in the day-to-day management of the Division including establishment of operating plans and policies, budget development, and integration of Division program with other Divisions, Institutes, and organizations; suggests scientific areas to pursue based on review of proposed programs and the knowledge of current developments in the field of cancer treatment.

Point of Contact for Further Information: Mr. Lawrence J. Ray, Administrative Officer, Division of Cancer Treatment, National Cancer Institute, NIH; 9000 Rockville Pike, Bldg. 31/Room 3A50; Bethesda, Maryland 20892, Phone: (301) 496-2775.

Deadline for applications is Nov. 28, 1988  
**NIH is an Equal Opportunity Employer**

**CENTER FOR GENETIC AND  
BIOCHEMICAL ALTERATION OF  
PLANT LIPIDS AND STARCH  
Michigan State University**

**Postdoctoral Research Associateships  
Graduate Assistantships**

Michigan State University has received funding to establish a **Plant Science Center** under a program sponsored by USDA, NSF and DOE. Several positions are available in four established labs for scientists wishing advanced training in plant biochemistry and molecular biology. The core laboratories of this center are united in their interest in the fundamental processes of plant lipid and carbohydrate biosynthesis. The long term goal of the center is to provide the basic knowledge which will permit genetic manipulation of crop species to produce new classes of industrially valuable lipids and carbohydrates.

For information about this program contact one of the following individuals at Michigan State University, East Lansing, MI 48824:

- **John B. Ohlrogge**  
Dept. of Botany and Plant Pathology  
*Biochemistry and molecular biology of plant lipid synthesis*
- **Jack Preiss**  
Dept. of Biochemistry  
*Biochemistry and molecular biology of plant and microbial carbohydrate synthesis*
- **Christopher R. Somerville**  
Plant Research Laboratory and Dept. of Botany and Plant Pathology  
*Biochemistry, genetics and molecular biology of plant lipid synthesis*
- **N. Edward Tolbert**  
Dept. of Biochemistry  
*Photosynthetic carbon metabolism, peroxisomes, glycerol metabolism.*

MSU is an Affirmative Action Equal Opportunity Institution

**NEW ENGLAND BIOLABS**

**Postdoctoral Positions**

New England Biolabs, a pioneer and leader in biotechnology, located twenty miles north of Boston, is seeking applicants for postdoctoral positions.

**Nucleic Acid Enzymologist**—To study endonuclease/DNA interactions. Candidate should have training in biochemistry/enzymology and/or molecular biology. Experience with overproduction and mutagenesis of proteins in bacterial systems would be helpful.

**Molecular Genetics**—Candidate should have strong background in molecular biology or bacterial genetics to study the interaction between restriction modification systems and the host cell. Knowledge of protein chemistry would be helpful.

**Immunologist/Parasitologist**—To study the cellular immune response to recombinant filarial antigens (Molecular Parasitology Division).

In addition to competitive salary, New England Biolabs offers a very generous fringe benefits package. Attendance at meetings, publication of research results and open communication with others are encouraged.

Candidates please submit curriculum vitae with three references to:

New England Biolabs, Inc.  
Human Resources  
32 Tozer Road  
Beverly, MA 01915-5510



**Ph.D.-Molecular Biologist**

Merck Sharp & Dohme Research Laboratories is currently offering an excellent career opportunity for a Ph.D. level Molecular Biologist in the Department of Cellular and Molecular Biology. Research in this department focuses on the isolation and expression of genes of potential pharmaceutical interest, in addition to the development of live viral vectors. Past successes within this department have been the development of Recombivax<sup>®</sup>, the first licensed human vaccine derived by recombinant DNA technologies, and the use of live Varicella viruses as vectors. Another significant strength of this department is the application of recombinant yeast expression systems. Merck Sharp & Dohme Research Laboratories provides an environment that enhances scientific growth and productivity and encourages scientific publications and attendance at scientific meetings.

We are seeking a highly motivated individual with a desire for a position of visibility and leadership. Relevant interest and experience in full length cDNA library construction, new viral vector applications and protein structure-function relationships are desirable. A Ph.D. in Molecular Biology/Biochemistry/Microbiology or the equivalent is required with at least four years of significant postdoctoral and academic/industrial experience.

Excellent salary and benefits programs accompany this position at our modern research facilities in West Point, Pennsylvania.

Please send your resume, including the names of three professional references whom we may contact, and salary requirements in complete confidence to:

Manager, Personnel Relations, (W42-2)

**Merck Sharp & Dohme  
Research Laboratories**

West Point, PA 19486

EEO/AA/VH/Employer



**Merck & Co., Inc.**

## TRUSTEE PROFESSORSHIP IN COMPUTER SCIENCE SYSTEMS

Applications/recommendations are invited for this newly established Trustee Professorship in the Department of Computer and Information Science at the University of Pennsylvania. Strong interactions with the following departments and schools within the University provide an interdisciplinary matrix in which the Computer and Information Science Program thrives: Electrical Engineering, Chemical Engineering, and Mechanical Engineering (in the School of Engineering and Applied Science); Linguistics, Philosophy, Psychology, and Mathematics (in the School of Arts and Sciences under the auspices of the Cognitive Science Program and the Logic and Computation Group); the Wharton School and the Medical School.

The person appointed to the Trustee Professorship will be a distinguished scholar who has performed outstanding research of both theoretical and practical significance, especially in one or more of the areas of computer systems, computer architecture, parallel processing, programming languages and software engineering, among others. The incumbent should not only be able to exercise scholarly leadership in his/her areas of expertise, but should also be willing to interact with one or more of the department's major interdisciplinary research activities.

Applications and nominations should be directed to **Professor Aravind K. Joshi, Chair, Trustee Professorship Search Committee.**



### University of Pennsylvania

Department of Computer and  
Information Science  
Philadelphia, PA 19104-6389

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## ERI

### CANCER BIOLOGIST / RESEARCH SCIENTIST (Ph.D.)

The growth of our research consulting firm has created an excellent opportunity for a **CANCER BIOLOGIST** to join a group of scientists in the design of experimental studies, in the preparation of literature reviews and in the conduct of health-risk assessments. The ideal candidate will possess a Ph.D. with 0-3 years postdoctoral experience in the cell and tissue biology of cancer (e.g. tumor promoters, growth factors, mutagenesis). Excellent analytical and communication skills are a must.

ERI is a rapidly-growing environmental research and information consulting firm, with offices in New York City, Watertown (Mass.) and Palo Alto (Calif.). We offer qualified candidates a challenging and rewarding work environment, top salaries commensurate with experience, and a full benefits package. This opening is at the New York City office. Please send Resume to:

Dr. William H. Bailey  
Environmental Research Information, Inc.  
575 Eighth Avenue  
New York, N.Y. 10018-3011

ERI, Inc. is an Equal Opportunity Employer

# Scientist

**BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc.**, a major researcher, developer, manufacturer and marketer of prescription and over-the-counter drugs, currently has an opening in the Viral Drug Discovery Group at our Research and Development Center located in DANBURY, CONNECTICUT.

The successful candidate we seek should have an MS Degree or equivalent in Molecular Biology/Cell Biology with 3+ years laboratory experience. Requirements include an understanding of cell biology, immunochemical techniques, DNA purification/ligation and restriction enzyme analysis, purification of proteins in prokaryotic expression systems, gene cloning and gel electrophoresis lab systems.

Our state-of-the-art environment is combined with a highly competitive compensation/benefits package and the opportunity to have your contributions recognized.

Please send your resume and salary history to: Dept. PTG-1J, R&D, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. We are an equal opportunity employer m/f/h/v.



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## **DIRECTOR, NEUROTOXICOLOGY DIVISION**

The U.S. Environmental Protection Agency (EPA) is seeking candidates for the position of Director, Neurotoxicology Division (NTD). This position is located in the Health Effects Research Laboratory (HERL), Research Triangle Park, NC. This is a permanent full-time position with a salary range of \$54,907 to \$71,377 per annum commensurate with qualifications.

HERL has a staff of about 325, over 100 of whom hold doctoral level degrees. The Laboratory has a diverse program which includes *in vitro*, animal, human clinical, and epidemiological research designed to address issues related to the health effects of air and water chemical and biological pollutants.

THE NTD is a multidisciplinary program organized into three branches: Behavioral Toxicology, Neurophysiology and Systems Engineering with a combined staff of 33. The Division is a focal point for planning, conducting, coordinating, supporting and evaluating a program aimed at studying the effects of chemical and/or physical agents on nervous system functions. The program includes both intramural investigations and extramural arrangements with universities, industry, private research institutions and other government agencies. The primary responsibilities of the Director are to direct and manage the program. This includes developing the program to meet the evolving needs of EPA, presenting the program, developing and managing budgets, supervising the staff, directing the progress of the program, and ensuring the scientific quality and productivity of the program.

Qualifications for the position include:

1. Advanced degree in Pharmacology, Toxicology, Psychology, Physiology or Biology with a minimum of six years of professional research experience in any of these areas. Applicable graduate coursework may be substituted for a portion of the required experience. This required education and experience must include a substantial background in neurotoxicology.
2. Experience in developing and managing budgets.
3. Experience as supervisor of a scientific/professional staff.
4. Applicants must have recognized scientific expertise as evidenced by multiple publications in peer-reviewed literature and invitations to participate in national and international meetings/panels.
5. Proven ability to provide leadership in directing the development and progress of a creative and effective research program in neurotoxicology.
6. U.S. Citizenship is required.

Forward curriculum vitae and names of three references prior to December 2, 1988 to:

**Dr. Lawrence W. Reiter  
c/o Terri Burrell, HRMD (MD-29)  
U.S. Environmental Protection Agency  
Research Triangle Park, NC 27711**

*AN EQUAL OPPORTUNITY EMPLOYER*

## **AAAS EXECUTIVE OFFICER**

The American Association for the Advancement of Science (AAAS) is conducting a search to fill the position of Executive Officer. This position reports to the Chairman of the elected Board of Directors.

The Association, founded in 1848, is a 501C(3) not-for-profit organization. It has an individual international membership of 135,000 and is affiliated with nearly 300 scientific, engineering, and learned societies. The principal publication of AAAS is *Science*. The Executive Officer serves as publisher of this weekly international journal. A staff of some 230 people, headquartered in Washington, DC, handles the Association's publishing activities, as well as the planning and support of annual meetings and symposia, a range of special programs in science, education, international cooperation, science and public policy, opportunities in science, and science communication.

The Board of Directors is seeking a person of substantial experience and accomplishment. Appropriate background may be in scientific or engineering research, education, academic administration, scientific or technical society management and/or publishing, or public administration of research and development policy. Initiative, management skill, and knowledge of the interactions of science with public policy are salient requirements. Successful candidate must have 15 years of relevant experience in one or more of the above areas including 10 years of experience in planning, budgeting, and management. Demonstrable interest in the goals of the AAAS is essential. Salary is negotiable.

Letters of application, accompanied by curriculum vitae, should be addressed to:

**Executive Officer Search Committee  
Chairman, Walter E. Massey,  
President, AAAS  
c/o William R. Engelman  
1333 H Street N.W., Washington, DC 20005  
Telephone: (202)326-6470**

**The closing date for receipt of applications is 9 December 1988.**

AAAS, one of the largest general science organizations in the world, is an Equal Opportunity Employer.

## POSITIONS OPEN

### FACULTY POSITIONS IN MOLECULAR EVOLUTION AND POPULATION BIOLOGY

The Department of Biological Sciences, University of Cincinnati is expanding its research and teaching in the areas of population biology and evolution and announces the availability of three tenure-track positions at the assistant professor level for the 1989-1990 academic year. The University of Cincinnati has an enrollment of approximately 36,000 students and the department currently has 29 full-time faculty in the biological sciences and a graduate enrollment of 65 students, approximately 60% of whom are pursuing the Ph.D. degree. The openings include: (i) **MOLECULAR EVOLUTIONARY BIOLOGIST**: Conduct research using molecular techniques to address questions in evolutionary biology. (ii) **EVOLUTIONARY ECOLOGIST**: Conduct research directed toward understanding species interactions (e.g. coevolution; host/parasite; plant/pollinator). Preference will be given to those using mathematical and/or molecular/biochemical approaches in their research. (iii) **POPULATION BIOLOGIST**: Conduct research using quantitative approaches and field experimentation in the study of plant or animal populations. Preference will be given to those who can interact with our plant sciences faculty. Successful candidates will be expected to develop vigorous, externally funded research programs, train graduate students, and teach courses at the undergraduate and graduate levels. The Ph.D. is required and postdoctoral experience is preferred. Applicants should submit a description of their research interests and future research plans, a current curriculum vitae, and three letters of reference to: **Dr. J. Robie Vestal, Evolution Search Committees, Department of Biological Sciences, University of Cincinnati, Cincinnati, OH 45221-0006** by 1 December 1988. Candidates should indicate the position for which they are applying. *The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.*

The Retrovirus Diseases Branch, Centers for Disease Control, Atlanta, Georgia, invites application for a position as **MEDICAL EPIDEMIOLOGIST**. Responsibilities include working on various aspects of the epidemiology of non-AIDS retroviruses including designing and conducting studies concerning the seroprevalence, transmission, and risk factors for HTLV-III infection, risk factors for the development of ATL or TSP, as well as designing and implementing surveillance systems for ATL. Knowledge/expertise in molecular epidemiology will be necessary as the applicant will also be expected to develop and conduct molecular research related to the epidemiology of these retroviruses. Applicant must hold a medical doctorate degree, have epidemiologic training and 3 years of experience in outbreak investigation and the design and analysis of prospective epidemiologic studies. 1 year of experience in the design and execution of epidemiologic studies related to retroviruses, residency and Board certification in internal medicine, specialty training in infectious diseases, and 2 years of bench-type experience in molecular biology. Salary range is from approximately \$39,471 to \$59,781 depending on experience. Submit curriculum vitae and names of three references to: **Sharlyn Wilkinson, Personnel Management Office, Building 1, Room 1058, Centers for Disease Control, Atlanta, GA 30333**; for technical questions, contact: **Dr. Thomas Folks, Chief, Retrovirus Diseases Branch, Centers for Disease Control, Atlanta, GA 30333. Telephone number: 404-639-3628.** *CDC is an Equal Opportunity Employer and provides for a smoke free work environment. Applications must be received within 3 weeks of publication date.*

**NMR SPECTROSCOPIST/POSTDOCTORAL RESEARCH AFFILIATE**: Stanford Magnetic Resonance Laboratory has a position open for a postdoctoral researcher with experience in NMR spectroscopy. SMRL systems include a Bruker AM-500, HX-360 and Bruker Biospec II Horizontal Imaging Spectrometer. Current research projects focus on the development of in vivo NMR techniques, the structure of proteins in solution and mechanisms of action of the trp repressor. Proficiency with 2DFT NMR techniques essential. Candidates must have a Ph.D. in chemistry, physics, or a related field. Contact: **Dr. Oleg Jardetzky, Stanford Magnetic Resonance Laboratory, Stanford University, Stanford, CA 94305-5055.** *Stanford is an Affirmative Action/Equal Employment Opportunity Employer.*

## POSITIONS OPEN

**FACULTY POSITIONS IN VISION RESEARCH**: The Combined Program in Ophthalmology, Eye Foundation Hospital—University of Alabama (UAB) at Birmingham School of Medicine will accept applications for tenure-track, faculty positions (two) at the assistant professor level. Applications are invited from individuals with a demonstrated ability to conduct productive independent research in the areas of visual psychophysics and retinal pharmacology/anatomy. Successful applicants will be expected to obtain and maintain extramural grant support. Laboratory space, appropriate start-up support, and the facilities of UAB's interdepartmental Vision Science Research Center are available. Interested and qualified individuals should submit curriculum vitae, statement of research interests and three letters of reference to: **Dr. Harold W. Skalka, Chairman, Department of Ophthalmology, School of Medicine/Eye Foundation Hospital, University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294.** *UAB is an Affirmative Action/Equal Opportunity Employer.*

### HUMAN NUTRITION AND FOOD SCIENCE

The Département de Nutrition de l'Université de Montréal invites application for two **FACULTY POSITIONS** in the areas of Human Nutrition and Food Science. Candidates should hold a Ph.D. or M.D. and Ph.D., with preferably postdoctoral training or experience in research. They will teach in the undergraduate and graduate programs, and are expected to develop independent research programs. Knowledge of French must be sufficient to enable candidates to teach in French within 2 years of the appointment. Send curriculum vitae, outline of research program, and three letters of reference to: **Dr. Eugenio Rasio, Directeur, Département de nutrition, Université de Montréal, P.O. Box 6128, Station A, Montréal, Qc, Canada, H3C 3J7.**

*In accordance with Canadian laws, preference will be given to Canadians and landed immigrants.*

**INFECTIOUS DISEASES**—The Division of Infectious Diseases, Department of Medicine, Stanford University School of Medicine invites applications for a tenure-line position at the rank of **ASSISTANT PROFESSOR**. An outstanding opportunity exists to pursue an academic clinical research career for an individual with excellent clinical and teaching skills and ability to conduct independent research. The successful candidate will be stationed at the VA-affiliated hospital that is geographically near the Stanford Medical Center. Applicants should send curriculum vitae, a brief statement of research interests, and three names for reference to: **Peter O'Hanley, M.D., Ph.D., Chief, Infectious Diseases (111), Veterans Administration Hospital, 3801 Miranda Avenue, Palo Alto, CA 94304.** *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.*

**MOLECULAR NEUROBIOLOGY RESEARCH**. Postdoctoral research position available in molecular neurobiology to study voltage gated ion channels. A multidisciplinary approach including electrophysiology, protein purification and recombinant DNA techniques will be used. A highly motivated individual who is willing to work with other scientists and has a background in molecular biology or biochemistry is preferred. Please send résumé and names of three references to: **Dr. A. Blume, Molecular Neurobiology, c/o Maureen Quigley, Professional Employment Representative, Lederle Laboratories, American Cyanamid Company, Pearl River, NY 10965.** *Equal Opportunity Employer.*

**OCEANOGRAPHY: STAFF SCIENTIST** position is available to teach oceanography in an innovative undergraduate program, Sea Semester. Courses consist of 6 weeks of intensive classroom instruction followed by 6 weeks of teaching on board our sailing research vessels in waters between the Caribbean and Newfoundland. Successful candidates will teach two courses per year, spending about 15 weeks per year at sea. Ph.D. in marine science required. Starting date May 1989. Please send résumé and three letters of recommendation by 15 November 1988 to: **Dr. Jerry Cheney, Sea Education Association, P.O. Box 6, Woods Hole, MA 02543.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

### LABORATORY RESEARCH SPECIALIST

Immediate opening in the section of Endocrinology and Metabolism in the ECU School of Medicine for a scientist to conduct and supervise basic research in diabetes. The candidate must have a Master's Degree in a related field and several years of research laboratory experience. Expertise in protein chemistry, cell isolation and tissue culture are required. Salary range: \$22,704 to \$36,336. Please submit detailed résumé to: **Personnel Department, East Carolina University, Greenville, NC 27858. Telephone: 919-757-6352.**

*Federal law requires proper documentation of identity and employability at the time of employment. It is requested this documentation be included with your application. East Carolina University is an Affirmative Action/Equal Employment Opportunity Employer, and encourages applications from qualified women and minorities.*

**NEUROBIOLOGIST**, research faculty position, assistant or associate level, to develop an independent research program in neurochemistry or molecular biology. Federally funded through 1991, the position can become a tenure-track, State-funded position. Applicants should have postdoctoral experience appropriate to the rank, provide evidence of independent research productivity and of potential to obtain extramural funding. Earliest starting date 2 January 1989. Send a résumé, statement of research interests, representative publications, and names of three references to: **Dr. I. Cooke, University of Hawaii, PBRC, 1993 East-West Road, Honolulu, HI 96822**, by 9 December 1988. Inquiries: **808-948-6776.** Interviews available at Society for Neuroscience meeting. *Equal Employment/Affirmative Action Employer.*

**OCEAN/WEATHER MONITORING AND RESEARCH: MARINE RESOURCES SCIENTIST I**. Full-time entry level position in a fisheries laboratory located in a beautiful resort town on the Maine coast. Requires baccalaureate degree and minimum of 2 years of experience or equivalent in ocean science or related field. Knowledge of computer-based data management/statistics, fisheries oceanography, electronics and remote sensing desirable. Applicants should contact: **Emily Morris, Bureau of Human Resources, State House Station #4, Augusta, ME 04333. Telephone: 207-289-3761** to request application packet. Deadline: 8 December 1988. *Affirmative Action/Equal Opportunity Employer.*

### PHARMACOLOGY FACULTY POSITION OHIO UNIVERSITY

The Program in Physiology and Pharmacology at Ohio University seeks to fill a tenure-track pharmacology faculty position at the assistant or associate professor level. A Ph.D. degree in pharmacology and 2 years of postdoctoral research experience is required. This position is a joint appointment in the College of Osteopathic Medicine and the Department of Zoological and Biomedical Sciences. Although preference may be given to candidates with training and expertise in neuropharmacology, candidates from other specialties are strongly encouraged to apply. The successful candidate is expected to develop a strong, independent and externally fundable research program. Collaborative opportunities exist in several areas including: biochemical pharmacology particularly signal transduction and second messengers in stimulus response coupling, cardiovascular and autonomic pharmacology, endocrinology, molecular and cellular biology, smooth muscle physiology and neurobiology. The successful candidate is required to participate in teaching of pharmacology to osteopathic medical students, and to participate in training of graduate (M.S./Ph.D.) students in the Program in Physiology and Pharmacology within the Department of Zoological and Biomedical Sciences.

The letter of application, curriculum vitae, description of current and future research plans, copies of most significant publications, and three letters of recommendation must be received by 15 December 1988. Address to: **The Chairperson, Pharmacology Search Committee, Program in Physiology and Pharmacology, Room 228, Irvine Hall, Ohio University, Athens, OH 45701.**

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



## POSITIONS OPEN

**NEUROBIOLOGY.** Franklin and Marshall College seeks a broadly trained neuroscientist for a new tenure-track position as **ASSISTANT PROFESSOR**, beginning 1 July 1989, to teach neuroscience and areas such as introductory biology or cell biology. A commitment to research, including work with undergraduates, is also essential. Candidates should bring a diversity of approaches to modern neurobiology. A research laboratory and start-up research support are available. This coeducational liberal arts college has a strong program in the sciences. Send curriculum vitae, graduate and undergraduate transcripts, and statement of research interests by 5 December 1988, and arrange to have three letters of recommendation sent to: **Dr. David King, Department of Biology, Franklin and Marshall College, Lancaster, PA 17604-3003.** *Women and members of minority groups are encouraged to apply. An Equal Opportunity Employer.*

### NEUROSCIENTIST

A basic research position in neurochemistry, neuroimmunology, neuropharmacology, or molecular neurobiology, is available at the R. S. Dow Neurological Sciences Institute of Good Samaritan Hospital and Medical Center. Persons with interests in neural regeneration, plasticity, development, transmitter or receptor function are especially encouraged to apply. Opportunities exist for interaction with basic research programs related to CNS function and with active clinical programs in neurosurgery and neurology. M.D. or Ph.D. and postdoctoral experience required. Substantial startup funds from the "Cooper Foundation for Neurologic Research and Education" are available, with the expectation that continued funding will be from extramural grant support. Level of appointment will depend upon experience. Please submit résumé and names of three references by 15 December 1988 to: **Robert S. Dow, M.D./Ph.D., Chairman, Irving Spencer Cooper Laboratory Search Committee, Good Samaritan Hospital and Medical Center, 1015 NW 22nd Avenue, Portland, OR 97210.** *Good Samaritan Hospital and Medical Center is an Equal Opportunity Employer.*

### OPTICAL PHYSICIST

Faculty position for optical physicist to do research and teach in new Biomedical Imaging Division. Individual desired whose area of interest would complement those of existing members of an active and growing biomedical imaging group composed of biomedical researchers, mathematicians, computer scientists, and engineers. Possible areas of interest of applicant: confocal microscopy, high speed imaging, holography. Modern image processing facilities available to the candidate. Joint appointment at nearby engineering school also possible. Rank and salary are negotiable depending on background and experience of applicant. To apply send by 30 November 1988 curriculum vitae and names of three references to:

**Dr. Fredric S. Fay  
University of Massachusetts  
Medical Center  
55 Lake Avenue North  
Worcester, MA 01655**

*University of Massachusetts Medical Center is an Equal Opportunity/Affirmative Action Employer.*

### PHYSIOLOGIST

Applications are invited for an anticipated tenure-track assistant professor position in the Department of Zoology and Physiology, Louisiana State University. The Department is seeking an individual with research competence in one of the following areas to complement its existing strengths in comparative physiology: neuroendocrine/neurosensory physiology, comparative biochemistry and membrane biophysics. The successful candidate will be expected to establish a strong research program and contribute to graduate and undergraduate teaching, primarily in vertebrate systems physiology. Candidates must have the Ph.D. degree and postdoctoral training is preferred. Salary commensurate with qualifications and experience. Applicants should send curriculum vitae, a statement of research and teaching interests, and names of three references by 15 January 1989 to: **Dr. Albert H. Meier, Department of Zoology and Physiology, Louisiana State University, Baton Rouge, LA 70803-1725** (Telephone: 504-388-1132 BITNET: ZOOPHYS @ LSUVM). *LSU is an Equal Opportunity/Affirmative Action Employer.*

28 OCTOBER 1988



## WORKSAFE AUSTRALIA

### (NATIONAL OCCUPATIONAL HEALTH AND SAFETY COMMISSION) NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH AND SAFETY

The National Institute is seeking a suitably qualified person for appointment to the following position which is located in Sydney, Australia. The successful applicant may be offered an appropriate academic title at the University of Sydney.

## HEAD - ERGONOMICS UNIT

**\$A50,103-\$A66,831**

The successful applicant will be responsible for the development and supervision of a unit which will undertake research, high level consultancy and teaching in the ergonomics field. Tasks will include the administration and overall development of the Unit; the development, oversight and co-ordination of research activities of the ergonomics laboratory, and of postgraduate teaching and curriculum development.

Applicants should possess a successful record of productive research and postgraduate qualifications in an appropriate discipline. Experience in graduate and postgraduate teaching, including supervision of PhD and Masters research is highly desirable.

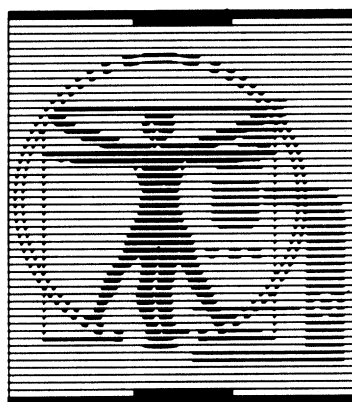
Further information on this position is available from Dr E. A. Emmett; telephone Sydney (02) 265 7501.

Duty statement and selection criteria may be obtained from Mrs M. Carrasco; telephone Sydney (02) 265 7454.

To be eligible for appointment, applicants must hold Australian citizenship. However, applicants who are accepted for immigration and are willing to take out Australian citizenship may be appointed on probation pending their obtaining citizenship. In some circumstances, a fixed-term engagement of up to five years may be negotiated.

Applications, together with curriculum vitae giving details of qualifications, experience and publications, and the names of three referees should be sent by 3rd February, 1989, to:

**Executive Officer, Personnel Operations,  
Worksafe Australia,  
GPO Box 58, Sydney, NSW 2001, AUSTRALIA**  
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## SCIENTIST

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You'll work in a campus-like setting in Frederick, MD near Baltimore and Washington, D.C. Plus, PRI will reward your expertise with a salary commensurate with credentials and an attractive fringe benefits program, including insurances, relocation allowance, and a 401(K) savings plan. For consideration, please forward CV in confidence to Barbara Norton-Gill, Technical Recruiter.

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RESOURCES,  
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## POSITIONS OPEN

### PLANT BIOCHEMIST

The Department of Botany, University of Florida invites applications for a tenure-track assistant professorship. The appointee will be expected to establish a vigorous research program that complements existing strengths in ecology, physiology and systematics. Teaching will include participation in undergraduate and graduate courses. Submit curriculum vitae and a statement of research interests, and have letters from four referees sent to: **Dr. J. Thomas Mullins, Search Committee Chair, Department of Botany, University of Florida, Gainesville, FL 32611** by 16 December 1988.

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

### PLANT POPULATION BIOLOGIST/ECOLOGIST

The Department of Biology at Trinity University invites applications for a tenure-track assistant professor position beginning August 1989. Candidates must possess a Ph.D., and have interests in mechanisms-oriented plant population biology. Duties include the development of a lecture/laboratory course in the area of speciality, participation in core courses for majors, and academic advising. The successful candidate will also be expected to establish a vigorous research program in which undergraduates can participate.

Applicants should send curriculum vitae, summary of research experience and names of three references to: **Professor Thomas L., Koppeneffer, Chairman, Department of Biology, Trinity University, San Antonio, TX 78284.** Application deadline is 17 November 1988. Women and minority candidates are strongly encouraged to apply.

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

### PLANT SYSTEMATICS

The Rancho Santa Ana Botanic Garden invites applications for a staff position in systematic and evolutionary botany, available 1 September 1989. Individuals specializing in cytogenetics are particularly encouraged to apply. The successful candidate will be expected to maintain a vigorous, independent research program and to participate in the graduate program in Botany. Applicants representing various levels of experience are welcome, corresponding with assistant professor to full professor levels, and if hired, will be appointed to the faculty of the Claremont Graduate School. Send curriculum vitae, statement of research interests, reprints, and at least three letters of reference by 15 December 1988 to: **Search Committee, Rancho Santa Ana Botanic Garden, 1500 North College Avenue, Claremont, CA 91711.**

### POSTDOCTORAL AND/OR RESEARCH ASSOCIATE POSITIONS IN CELL BIOLOGY

Positions are available for persons interested in projects involving functional and molecular aspects of the cytoskeletal system of cells from different human tissues. Emphasis is being placed on studies of human diseases which are related to alterations in cytoskeletal or cell surface components. Applicants should possess a Ph.D. degree with experience in cell biology, biochemistry, and/or molecular biology.

Please send a recent curriculum vitae to: **Dr. Robert D. Goldman, Department of Cell Biology and Anatomy, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.**

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

### LADY DAVIS INSTITUTE POSTDOCTORAL FELLOWSHIPS

Postdoctoral positions available immediately for ongoing research programs investigating various molecular aspects of gene expression and the control of cell proliferation. Expertise in biochemistry, cell and/or molecular biology essential.

Send inquiries, curriculum vitae, and names and addresses of three references to: **Dr. Herbert M. Schulman, Acting Director, Lady Davis Institute for Medical Research, Sir Mortimer B. Davis Jewish General Hospital, 3755 Cote Ste-Catherine, Montreal, Quebec, Canada, H3T 1E2.**

## POSITIONS OPEN

**WAKSMAN INSTITUTE/MERCK POSTDOCTORAL FELLOW.** A fellowship provided by Merck, Inc. is available mid 1989 at the Waksman Institute for study of microbial systems. Applicants can choose from several diverse areas of research: Protein-DNA interaction and transcription—**Dr. R. Ebright.** Structural studies of important microbial enzyme systems—**Dr. A. Goldman.** Diversity in nitrogen-fixing actinomycetes—**Dr. H. and M. Lechevalier.** Protein degradation in *E. coli*—**Dr. L. Simon.** DNA replication/mutagenesis—**Dr. N. Sinha.** Interested individuals should contact prospective mentors directly for discussion of possible projects and completion of application. For consideration, send curriculum vitae to one of the Institute members above at: **Waksman Institute, Rutgers University, P.O. Box 759, Piscataway, NJ 08855-0759.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL FELLOW** position is available to study free radical processes in cells and the pathways by which these reactive species mediate cell injury. We seek individuals with training in cell biology, biochemistry and chemistry to join an active research program. Send curriculum vitae and references to: **Dr. Gerald M. Rosen, Department of Pharmacology and Toxicology, University of Maryland School of Pharmacy, 20 North Pine Street, Baltimore, MD 21201.**

### POSTDOCTORAL FELLOW IN ECOLOGY

Applications are solicited for an anticipated 2-year postdoctoral appointment beginning August 1989 with preferred interests in animal-microbe interactions in aquatic systems or larval ecology. The successful applicant will initiate an independent research program, participate in on-going departmental research projects, and teach one course per academic year. Salary commensurate with qualifications and experience. Closing date is 15 January 1989. Please send curriculum vitae, a letter describing research interests and three letters of recommendation to: **Dr. John Fleeger, Department of Zoology and Physiology, Louisiana State University (LSU), Baton Rouge, LA 70803-1725** (Telephone: 504-388-1738 BITNET: ZOFLER @ LSUMVS). *LSU is an Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL FELLOWSHIP

in molecular biology of genes expressed in connective tissues with special emphasis on mutations that produce genetic diseases. Opportunities will be provided to learn current recombinant DNA technologies and to develop new ones. Applicants must have Ph.D. in biochemistry or related areas. Salary competitive. Apply to and send letters of recommendation to: **D. J. Prockop, Jefferson Institute of Molecular Medicine, Department of Biochemistry, Thomas Jefferson University, 1020 Locust St., Philadelphia, PA 19107.**

*Equal Opportunity Employer*

**POSTDOCTORAL POSITION** available 1 January 1989 to characterize T cell receptors on human alloreactive T cell clones. Experience in tissue culture techniques and molecular biology including cDNA cloning and sequencing are essential. Fellows have an opportunity to interact with an active immunogenetics group with diverse interests. Interested individuals should submit a current curriculum vitae including bibliography, brief statement of relevant experience, and the names of three references to: **Dr. Carolyn Hurley, Microbiology Department, Georgetown University School of Medicine, 3900 Reservoir Road NW, Washington, DC 20007.**

**POSTDOCTORAL POSITION** available in the field of bone marrow stem cell research and bone marrow transplantation. Current projects include the influence of the pedigree of donor marrow on long term hematopoietic function in recipients following marrow transplantation, mechanisms of engraftment and graft rejection of T depleted marrow across varying genetic barriers, and the role and long term effect of lymphokine use in engraftment and hematopoietic recovery following marrow transplantation. Salary is negotiable depending on experience. Applicants should send curriculum vitae and three letters of reference to: **Dr. Peter Mauch, Joint Center for Radiation Therapy, Harvard Medical School, 50 Binney Street, Boston, MA 02115.** An Equal Opportunity Employer.

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available 1 December 1988 to study the use of fetal cortical transplants in the repair of CNS lesions in the newborn rat. Background in immunocytochemistry, electrophysiology, liquid chromatography, or receptor binding is desirable. Send curriculum vitae and the names of three references to: **Dr. Anthony J. Castro, Department of Anatomy, Loyola University Stritch School of Medicine, Maywood, IL 60153.** *Loyola University of Chicago Medical Center is an Equal Opportunity Educator and Employer.*

**POSTDOCTORAL POSITION.** Available immediately for cell and molecular biologist to participate in a comprehensive study examining DNA repair mechanisms and cellular recovery processes and their relationship to radiation resistance in cultured insect cells. Emphasis will be on isolation of genetic material associated with the pronounced radioresistance. Experience in modern molecular biology techniques desirable. Please submit curriculum vitae and names of three references to: **Dr. T. M. Koval, Department of Oncology, Mayo Clinic, Rochester, MN 55905.** An Equal Opportunity/Affirmative Action Institution.

### POSTDOCTORAL POSITION

Available immediately, for computer studies of protein structure and folding. Applicant should have strong background in biophysical chemistry and computer programming. Starting salary \$20,000. Send curriculum vitae, statement of research interests, and names of three references to:

**Dr. George Rose  
Department of Biological Chemistry  
The Milton S. Hershey Medical Center  
The Pennsylvania State University  
P.O. Box 850P  
Hershey, PA 17033**

*An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL POSITION** available immediately to join a well-established research program using three-dimensional electron microscope tomography to investigate the three-dimensional structure of mitotic and polytene chromosomes. Of fundamental interest is understanding the higher order structure of chromosomes throughout the mitotic cell cycle and to relate such structural dynamics to chromosome function. Thick-section tomographic data is collected using our 300-Kv Phillips EM430 IVEM with an ultra-high tilt ( $\pm 80^\circ$ ) eucentric stage and a cooled 1024<sup>2</sup> CCD image detector. State-of-the-art computation and image display systems are available. Applicants should send curriculum vitae and names and addresses of three referees to either: **Drs. David A. Agard or John W. Sedat, HHMI Structural Biology Unit, Department of Biochemistry, UCSF Medical Center, San Francisco, CA 94143-0448.**

**POSTDOCTORAL POSITION** available immediately to study any of the following areas of blood platelet biochemistry: receptor/G-protein/protein kinase regulation of cellular responses; regulation of the phosphoinositide and arachidonic acid-mobilizing systems; intracellular fluorescence measurements of  $Ca^{2+}$  and pH; and the molecular biology of the protein components of the  $IP_3$ -activated  $Ca^{2+}$  mobilizing system. A strong background in protein biochemistry, biophysics, or molecular biology is required. Send curriculum vitae and three letters of reference to:

**Dr. Maurice B. Feinstein  
Department of Pharmacology  
University of Connecticut Health Center  
Farmington, CT 06032**

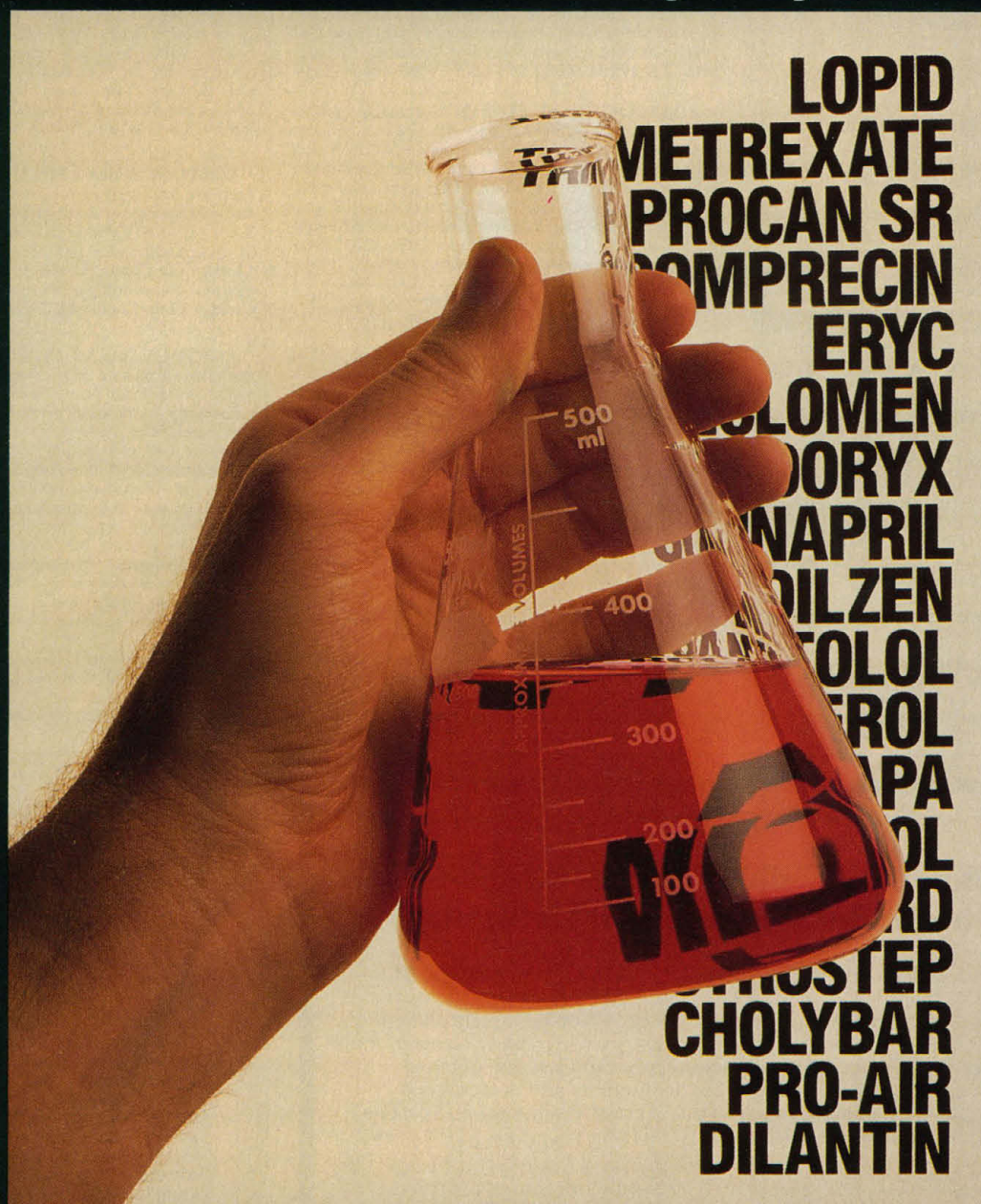
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### POSTDOCTORAL POSITION

A postdoctoral position is available to genetically construct microbial strains capable of degrading toxic chemicals, and to study the molecular basis of such degradation. The work is to be performed at the Biotechnology Research Laboratory of the U.S. Army at Aberdeen Proving Ground in Maryland; approximate annual salary \$32,000. The project is for 3 years under the supervision of **A. M. Chakrabarty.** Please send curriculum vitae and the names of three references to: **A. M. Chakrabarty, University of Illinois College of Medicine, Department of Microbiology/Immunology, 835 South Wolcott, Chicago, IL 60612.**



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## POSITIONS OPEN

### POSTDOCTORAL POSITION UNIVERSITY OF PENNSYLVANIA MEDICAL SCHOOL

A position is available immediately to study the regulation of gene expression in growth factor stimulated immune cells. Primary work involves either GM-CSF stimulated myelopoiesis or IL-2 stimulated lymphocyte proliferation.

Send curriculum vitae and the names and addresses of three references to:

**Dr. Michael B. Prystowsky**  
Department of Pathology  
University of Pennsylvania  
Philadelphia, PA 19104-6082

**POSTDOCTORAL POSITION** available January 1989 for NIH-funded studies on the role of oxidative stress and energy in cardiac reperfusion injury. The candidate should have a recent Ph.D. in pharmacology, biochemistry or a related field. Experience in membrane isolation is desirable. Send curriculum vitae and two letters of recommendation to: **James P. Kehrer, Ph.D., Division of Pharmacology, College of Pharmacy, The University of Texas at Austin, Austin, TX 78712.** An Equal Opportunity Employer.

### POSTDOCTORAL POSITION UNIVERSITY OF PENNSYLVANIA MEDICAL SCHOOL

A position is available immediately to study mechanisms of human oncogene activation and function in lymphomas and lymphoid leukemias. Primary work involves novel oncogenes cloned from translocation breakpoints, and encompasses investigations of oncogene function through gene transfer, regulation of oncogene expression, and characterization of oncogenic proteins.

Send curriculum vitae and the names and addresses of three references to:

**Dr. John C. Reed**  
Department of Pathology  
School of Medicine  
University of Pennsylvania  
Philadelphia, PA 19104-6082

## POSITIONS OPEN

**POSTDOCTORAL POSITION** in immunology, to study mechanisms of induction and maintenance of tolerance in T lymphocytes. Focus on biochemical events responsible for tolerance in cloned T cell lines. Recent Ph.D. in immunology, biochemistry or molecular biology preferred. Send résumé and names of three references to: **Dr. Helen Quill, Department of Pathology, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6082.** An Equal Opportunity Employer.

**POSTDOCTORAL POSITION** available immediately for molecular biologist to join research program studying mechanisms of antigen recognition, regulation, ontogeny, and effector properties of epithelial and mucosal T cells. Salary in accord with NIH guidelines; excellent benefits. Send curriculum vitae and names of three references to: **Dr. John R. Klein, Department of Biological Science, The University of Tulsa, Tulsa, OK 74104.** An Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL POSITION IN CELLULAR NEUROBIOLOGY

Position available immediately to study physiology and pharmacology of synaptic events in the spinal slice preparation and molecular mechanisms of tachykinin actions. Project involves the use of single-electrode voltage-clamping and whole-cell voltage-clamping with a patch electrode. Send curriculum vitae, statement of research interests, and names of three references to: **Mirjana Randic, Department of Veterinary Physiology and Pharmacology, College of Veterinary Medicine, Iowa State University, Ames, IA 50010.** Closing date: 15 January 1989.

**POSTDOCTORAL POSITION IN NEUROBIOLOGY** to study cell surface and extracellular matrix molecules that regulate cell-cell interactions in the developing mammalian nervous system [see *Dev. Biol.* 120, 65 (1987); *BioEssays* 9, 19 (1988)]. Send curriculum vitae and names of three references to: **Dr. Gerald Schwarting, Department of Biochemistry, E. K. Shriver Center, 200 Trapelo Road, Waltham, MA 02254.** An Equal Opportunity Employer.

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available to study molecular structure-function relationships of the interaction of neurotropic viruses and neurotoxins with the acetylcholine receptor and other neuronal receptors and to develop antiviral agents. Background desired in recombinant DNA techniques, protein chemistry, virology, or tissue culture. Beginning position available immediately. Send curriculum vitae and addresses of three references to: **Dr. Thomas L. Lentz, Department of Cell Biology, Yale University School of Medicine, 333 Cedar Street, P.O. Box 3333, New Haven, CT 06510.** Yale University is an Equal Opportunity Employer.

**POSTDOCTORAL POSITIONS** available for two scientists interested in molecular biology, cell biology, and immunology of hepatoma or esophageal carcinoma. Salary: U.S. \$14,000 with possibility of free housing. Send curriculum vitae and three references to: **Professor Chungming Chang, Graduate Institute of Microbiology and Immunology, National Yang-Ming Medical College, Shih-Pai, Taipei, Taiwan, Republic of China.**

**POSTDOCTORAL POSITIONS:** We anticipate openings at various times during the coming year for several postdoctoral positions with members of the Graduate Group in Immunology at the University of Pennsylvania and other associated institutions. Research programs involve basic studies in T-cell, B-cell, and macrophage immunology, immunogenetics, viral immunology, and include disease-associated immune phenomena. Applicants must be U.S. citizens or permanent residents and should be recent degree recipients. For further information, please contact: **Ms. Gail Heimberger, Administrative Assistant, Immunology Graduate Group, 2023 Nurses Education Building, University of Pennsylvania, Philadelphia, PA 19104-6020.** To apply, send current curriculum vitae and the names of three references, one of which must be your present research mentor, to: **Dr. John J. Cebra, Department of Biology, University of Pennsylvania, Philadelphia, PA 19104-6018.**

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## Dean

### Columbian College of Arts & Sciences The George Washington University

Applications and nominations are invited for the position of Dean of Columbian College, the undergraduate liberal arts component of The George Washington University. The Dean is the principal administrative officer and educational leader of the college, which has an enrollment of about 3,300 in programs in arts, humanities, social sciences, sciences and mathematics. The George Washington University is a private, non-sectarian university with undergraduate, graduate and professional programs, located in one campus in the heart of Washington, D.C. The location provides unparalleled opportunities for programs which draw upon the resources of the nation's capital.

Candidates should possess an earned doctorate or other appropriate terminal degree, significant administrative experience, and suitable qualifications for senior appointment in one of the departments or programs of the College. The Search Committee will seek evidence of a comprehensive vision for qualitative growth in liberal arts colleges and awareness of the specialized needs and opportunities afforded by our location.

- Salary: commensurate with experience and qualifications
- Preferred starting date: July 1, 1989
- Closing date for applications: Dec. 20, 1988



GEORGE  
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UNIVERSITY

Send nomination or letter of application, résumé, and a short statement of personal educational goals and philosophy to:

Chair, Columbian College Search Committee,  
c/o Vice President for Academic Affairs  
Rice Hall  
The George Washington University  
Washington, D.C. 20052

GW is an affirmative action, equal opportunity employer.

## DIRECTOR

### POSTDOCTORAL PROGRAMS & GRADUATE EDUCATION POLICY

The OFFICE of SCIENTIFIC AND ENGINEERING PERSONNEL of the NATIONAL RESEARCH COUNCIL is seeking candidates for Director of Associateship Programs. Candidates should have a Ph.D. or equivalent, preferably in physical or biological sciences, engineering or mathematics with a combination of at least 10 years of productive faculty teaching, research, and administrative experience at the graduate level, including supervision of senior scientists and staff and administration of program financing and budgets. The selected candidate will have responsibility for the direction of the Associateship Programs, the salient activity of the Office of Scientific and Engineering Personnel (OSEP), maintaining 25 contracts, totaling \$32m at 75 national laboratories, overseeing 500 postdoctoral appointments. The selected candidate will also serve as a consultant to the executive director of OSEP on graduate education policies, identifying and responding to issues of national concern. This position requires experience working with a broad spectrum of the graduate community from university presidents to graduate and postgraduate students. Send resume in confidence to:

**A. Fetcher, Executive Director**  
**OFFICE OF SCIENTIFIC AND**  
**ENGINEERING PERSONNEL**  
**2101 Constitution Avenue, N.W.**  
**Washington, D.C. 20418**

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Food Sciences	Toxicology
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Functions for these disciplines include product development, toxicology, environmental sciences, regulatory affairs, and microbiology.

Openings are in Brussels, Belgium; Newcastle or Egham, England; Schwalbach (near Frankfurt) or Mainz, Germany; Osaka, Japan; Caracas, Venezuela, or Mexico City, Mexico. *Applicants must be bilingual (including English). Not all discipline openings are available at all locations.*

**POSITIONS IN:** EMPLOYMENT IS CONTINGENT UPON POSSESSION OF APPROPRIATE CITIZENSHIP, IMMIGRATION VISA, OR WORK PERMIT FROM COUNTRIES INDICATED BELOW:

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Japan . . . . . Japan

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Procter & Gamble is a multinational, technically-based corporation with over \$19 billion in world-wide sales in the pharmaceutical, health care, beauty care, paper, household care, beverage, food, detergent, and fabric care consumer product categories. We have consumer brands in 38 product categories with sales in 140 countries. Support of research and product development reached \$652 million last year.

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lent benefits package including pension, health care, and paid relocation.

To apply, please send your resume and publication list to the address below.

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**The Procter & Gamble Company**  
**Miami Valley Laboratories**  
**P.O. Box 398707**  
**Cincinnati, Ohio 45239-8707**

*Allow 8-10 weeks for response.  
 No agency referrals, please.*

## Procter & Gamble

## POSITIONS OPEN

**POSTDOCTORAL POSITION IN PHYSIOLOGY OF AGING** available immediately for quantitative study of dendritic structure and synaptic physiology in hippocampus in a mammalian model of aging. Study techniques include intracellular recording, intracellular dye marking, analysis of synaptic potentials, and mathematical reconstruction of neurons. Experience in cellular neurophysiology desirable but will consider alternative backgrounds. Applicants should send curriculum vitae to: **D. A. Turner, Neurosurgery, 112N, Veterans Administration Medical Center, One Veteran Drive, Minneapolis, MN 55417.**

**POSTDOCTORAL POSITIONS** available immediately. One position requires molecular biology experience to characterize genes encoding dechlorinating enzymes from a *Flavobacterium* spp. Second position requires a background in biochemistry with experience in enzyme immobilization techniques. Individuals will participate in a project to degrade synthetic organics in situ using extracellular enzymes. Salary is \$21,000 per year for 2 years. Send curriculum vitae and names of three references to: **Dr. Cindy S. Orser, Department of Biochemistry and Bacteriology, University of Idaho, Moscow, ID 83843.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL/RESEARCH ASSOCIATE** to study the photoperiodic control of body and lipid mass and reproduction in hamsters as orchestrated by the pineal gland and melatonin. Studies include identification of CNS and peripheral target sites for melatonin's effects and fat-pad-specific changes in lipid metabolism. Experience with the following techniques desirable: immunocytochemistry and/or tract tracing, RIA, or in vitro fat cell metabolism. Send curriculum vitae and names of three references to: **Dr. Timothy J. Bartness, Department of Psychology and Biology, Georgia State University, Atlanta, GA 30303** by 1 January 1989. Georgia State University, a unit of the University system of Georgia, is an Equal Opportunity/Affirmative Action Employer.

**A POSTDOCTORAL RESEARCH ASSOCIATE** position is available immediately. We are seeking candidates with a doctorate in molecular/cellular biology, genetics or related disciplines and/or experience in plant molecular/cellular biology to work on a collaborative project with **Drs. N. J. Panopoulos and S. E. Lindow** at the Department of Plant Pathology, University of California, Berkeley, CA (UCB). The work will involve the transfer of a bacterial gene into plants and the quantification of its expression in different cells and organelles. The candidate will work mostly at UCB but may spend short periods of time at Oregon State University. Application deadline 15 November 1988. Interested candidates should send their résumé, transcripts, and provide names of three references to: **Dr. Tony Chen, Department of Horticulture, Oregon State University, Corvallis, OR 97331-2911.** Telephone: 503-754-3695. OSU is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973. OSU has a policy of being responsive to the needs of dual-career couples.

**POSTDOCTORAL RESEARCH POSITION**, immediately available, devoted to the purification and molecular biology of human platelet thromboxane  $A_2$  receptors. Opportunity to work with an interdisciplinary group. Experience with protein purification desired. Send curriculum vitae to: **Dr. Perry V. Halushka, Department of Cell and Molecular Pharmacology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.** MUSC is an Equal Opportunity/Affirmative Action Employer.

**RESEARCH ASSISTANT** to perform synthesis and analysis of heterocyclic compounds utilizing chromatography, spectrophotometry and spectroscopy. The structure-activity relationship of the synthesized compounds will be determined with peridine dependent enzymes involved in cancer chemotherapy and neurotransmitter synthesis. Require M.S. in organic/biochemistry and 2 years of experience in heterocyclic synthesis. Salary: \$17,500 per year for 40-hour week. Apply with résumé to: **Deborah Abernathy, Alabama State Employment Service, P.O. Box 81309, Mobile, AL 36689**, or apply in person at any Alabama State Employment Service Office. Job Order Number AL0595630. Equal Employment Opportunity.

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE** position available beginning 1 February 1989 for quantitative single-unit neurophysiological and correlative anatomical studies of ascending pathways relevant to nociception, thermoreception and endogenous opioid analgesic mechanisms in a unique and vital multidisciplinary research institute. Direct application (curriculum vitae, references and a brief description of interests) and inquiries to: **Dr. A. D. Craig, Division of Neurobiology, Barrow Neurological Institute, 350 West Thomas Road, Phoenix, AZ 85013.** Equal Opportunity Employer.

**POSTDOCTORAL RESEARCH POSITION**—Postdoctoral training position in the molecular cell biology of clathrin coated membranes. Focus is on the regulation of coat assembly in cells and on coat-membrane receptor interactions in endocytosis. Experience in protein chemistry or molecular biology preferred but not required. Send curriculum vitae and names of three references to: **Dr. James H. Keen, Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, Philadelphia, PA 19140.** An Equal Opportunity/Affirmative Action Employer.

Applications are invited for a **PROFESSORSHIP IN MARINE GEOLOGY** at the Institute of Geology, University of Aarhus, Denmark. The position is available from 1 March 1989.

The Institute of Geology has been engaged in research within the field of marine geology, using geophysical, sedimentological and biostratigraphical methods. Research has mainly been related to Danish waters, but also to projects involving the ocean floor.

The projects have involved basic research and applications related to raw materials and constructions.

The Institute of Geology wants to strengthen the marine geological research milieu in the years to come. Applicants with broadly based research fields who can coordinate geophysical, sedimentological and biostratigraphical efforts, as well as carrying out specialized research within one of these fields, will be preferred.

The position includes participation in teaching at all levels.

Each applicant should submit curriculum vitae, a description of teaching experience, a list of publications, and three copies of publications to be considered in the evaluation. A statement of professional goals and research interests should be included.

According to Danish ministerial regulations, the selection committee's written evaluation of the applicant is sent to all applicants.

Applications should be addressed to the Queen of Denmark, and sent to: **University of Aarhus, Ndr. Ringgade 1, DK-8000 Aarhus C, Denmark**, and marked: 211-37. The deadline for the receipt of all application material is 2 January 1989, at 12:00.

For further information on salary, research and teaching duties, staff, laboratory and other facilities, please contact: **Gunnar Larsen, The Institute of Geology, C. F. Møllers Alle, Building 120, DK-8000, Aarhus C.** Telefon: 06 128233.

**RESEARCH ASSISTANT PROFESSOR**—The University of Pennsylvania Smell and Taste Research Center and the Department of Otorhinolaryngology and Human Communication seek a research assistant professor. Applicants should have at least 4 years of postdoctoral experience and have publications in the areas of radiation-induced taste aversion, animal taste psychophysics, and quantification of rodent oromotor taste responses. Send curriculum vitae and letters of recommendation to: **James B. Snow, Jr., M.D., 3400 Spruce Street, Philadelphia, PA 19104.** The University of Pennsylvania is an Equal Opportunity Employer.

**RESEARCH ASSOCIATE/POSTDOCTORAL POSITION** is available for a neuropharmacologist to participate in studies of brainstem and spinal regulation of nociceptive behavior. Applicants should have a Ph.D. or M.D. degree with research experience. The work involves neurochemical studies of nociceptive neurotransmitters, stereotaxic catheter placement for microinjections, and the use of nociceptive testing paradigms. Send résumé to: **David J. Smith, Ph.D. (Anesthesiology/Pharmacology) at the Department of Anesthesiology, West Virginia University, Health Sciences Center, Morgantown, WV 26505.** The position is funded by the University Health Associates which is an Equal Opportunity Employer/M/F/H.

## POSITIONS OPEN

**RESEARCH ASSISTANT PROFESSOR**—The University of Pennsylvania Smell and Taste Research Center and the Department of Otorhinolaryngology and Human Communication seek a research assistant professor. Applicants should have at least 8 years of postdoctoral experience and have publications in the areas of laser bioregulation and tissue culture. Send curriculum vitae and letters of recommendation to: **James B. Snow, Jr., M.D., 3400 Spruce Street, Philadelphia, PA 19104.** The University of Pennsylvania is an Equal Opportunity Employer.

**RESEARCH ASSOCIATE:** This position involves cytogenetics research with rodent oocytes, spermatocytes, and early embryos. Academic requirements include a degree in genetics/cell biology and 3 years of experience in mammalian germ cell cytogenetics research. Salary is \$21,000 per annum. Send curriculum vitae and references to: **Camille Thomas, Human Resource Management, Louisiana State University School of Medicine in Shreveport, P.O. Box 33932, Shreveport, LA 71130.** An Equal Opportunity Employer.

## RESEARCH SCIENTIST PHARMACOKINETICS

We are seeking a qualified research scientist to design and participate in several drug disposition studies of novel chemical entities for eye and skin use; to conduct pharmacokinetic studies to support drug discovery and/or toxicology; to supervise personnel for bioanalytical analyses; and to publish results in scientific literature. Must have Ph.D. in pharmaceuticals, pharmaceutical chemistry or pharmacology, and 1 year of experience in drug disposition research of ocular drugs. Must demonstrate knowledge to apply pharmacokinetic principles to problem solving in drug disposition, and must be familiar with bioanalytical method development. Must possess excellent written and oral communication skills and have ability to work in multidisciplinary environment. Salary is \$3,500 per month. Job site: Irvine, California. Send this ad and a résumé to: **Job# TC9931, P.O. Box 9560, Sacramento, CA 95823-0560** not later than 12 November 1988.

## RESEARCH SCIENTISTS

California State Department of Health Services, Division of Laboratories has positions available for the civil service classes of Research Scientist II and III (Environmental Biochemistry), and Research Scientist II (Atmospheric Chemistry). Selection of the candidates will be on the basis of a competitive examination, followed by job interviews. Candidates in environmental biochemistry should demonstrate qualifications for appointments in water chemistry with emphasis on total organic analysis of natural waters (Level III), in environmental analysis with emphasis on methods development, sampling and analysis for non-conventional pollutants, and environmental fate studies (Levels II and III). Candidates in atmospheric chemistry should demonstrate qualifications for appointments in electron microscopy and microprobe analysis of air particulates and in incinerator performance evaluation and incinerator field studies.

Level III is supervisory and requires leadership qualities besides an earned doctorate and minimum of 3 years of broad research experience in the last 7 years in the stated specialty or a closely related field. Level II is a lead position requiring either a doctorate and a minimum of 2 years of relevant research experience in the last 5 years, or a M.S. degree and a minimum of 3 years of research.

Final postmark date for submission of applications is 5 December 1988. Request copy of examination announcement with salary information and an application form from: **Division of Laboratories, California Department of Health Services, Room 452, 2151 Berkeley Way, Berkeley, CA 94704.** Telephone: 415-540-2408. Résumé with list of publications must accompany application.

An Equal Opportunity/Affirmative Action Employer.

Louisiana State University (LSU) Eye Center is looking for a **SENIOR PHARMACOLOGIST**. Applicant should be interested in drug delivery systems although other areas of research will be considered.

Previous experience in ophthalmology not necessary. Interested applicants send curriculum vitae to: **Herbert E. Kaufman, M.D., LSU Eye Center, 2020 Gravier Street, Suite B, New Orleans, LA 70112.** LSUMC is an Equal Employment Opportunity/Affirmative Action Employer.

## OPPORTUNITIES IN BIOTECHNOLOGY

RepliGen Corporation is a leader in the application of Biotechnology to the health care and personal care markets. We are currently developing an AIDS vaccine and AIDS therapeutic products, products for the treatment of infectious diseases, cancer therapies, and novel biocompatible personal care products. We take pride in the high caliber of our scientific staff and our collaborations with major research institutions and corporate partners in Europe and the United States. The expansion of our effort has created the following opportunities:

### Cell Culture Services

**Manager, Cell Culture Services**—A Ph.D. is preferred with 5+ years' experience in tissue culture and laboratory management. We are looking for a Manager of Cell Culture Services to be responsible for coordinating mammalian cell culture, insect cell culture, and cell-based assays. Experience in large-scale production would be a plus.

### Virology and Cell Biology

**Research Scientist**—This position requires a Ph.D. in Virology or other appropriate field with specialization in Virology. The scientist would be expected to direct a group studying HIV neutralization and cell surface interactions. Experience in human infectious agents is a must.

**Research Associates/Technicians**—BS/MS in a biological science and experience in virology and cell culture. Experience working with human pathogens would be helpful.

RepliGen Corporation offers a competitive salary, excellent benefits, and equity participation. Please submit a cover letter, resume, and references to **Barbara Fleming, Professional Recruiter, RepliGen Corporation, One Kendall Square, Bldg. 700, Cambridge, MA 02139**. An Equal Opportunity Employer.

**RepliGen**



## Enzyme Purification & Molecular Cloning

### Postdoctoral Position

CIBA-GEIGY Pharmaceuticals Division's 100 acre headquarters complex in Summit, New Jersey is engaged in research and development of drugs to treat cardiovascular and other disorders.

We seek a PhD in Biochemistry, Molecular Biology or a related field to participate in important work involving purification and molecular cloning of an enzyme of the cardiovascular system. To qualify for this challenging postdoctoral opportunity, you should also have training in one or more of the following areas: protein purification, enzymology, molecular cloning.

Salary and benefits are excellent, in a highly professional environment. Apply in confidence with resume and salary history to: **CIBA-GEIGY Corporation, Staffing Center, Pharmaceuticals Division, Dept. ATR, 556 Morris Avenue, Summit, New Jersey 07901**. We Are An Equal Opportunity Employer M/F/H/V.

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**MICROBIOLOGICAL ASSOCIATES INC.**

MICROBIOLOGICAL ASSOCIATES has the following career opportunities for senior scientific personnel.

### DIRECTOR, MOLECULAR VIROLOGY

Applicants should have a strong background in virology (preferably retroviruses) and molecular biology. Responsibilities include the management of government contracts and research relating to HIV and other viruses, and the development and execution of commercial assays.

### SENIOR SCIENTIST, GENETIC TOXICOLOGY

Join our world-recognized Division of Genetic Toxicology. We are seeking a Study Director with extensive experience performing bacterial mutagenesis assays, particularly the Ames test. Responsibilities include oversight of a large technical staff, interaction with commercial clients and management of several government contracts. You will join our cytogenetics, mammalian mutagenesis and DNA damage/repair teams in coordinated efforts to provide both R&D and commercial testing services.

Prospective candidates should have excellent communication skills, both oral and written. Previous industrial experience is highly desirable.

Our state-of-the-art facility is located in the northern suburbs of Washington, D.C. We offer an excellent compensation, relocation and benefits package. Please join us as we continue to build on our 40-year commitment to high quality science. For immediate consideration send your resume to:

**MICROBIOLOGICAL ASSOCIATES INC.**

**Life Sciences Center**

**9900 Blackwell Road, Rockville, MD 20850**

**EOE/m/f/h/v**

## POSITIONS OPEN

**RESEARCH TECHNICIAN:** To study the estrogen and progesterone receptors in surgical samples of patients suffering from cancer and normal individuals. To investigate any correlation between the biochemical characteristics of these receptors with time point of menstrual cycle or age. B.S. in biology and M.S. in endocrinology. Must be able to use tissue homogenizers, centrifuges, ultracentrifuge, liquid scintillation counters, analytical balance, SDS-PAGE Power supply, light microscope, cryotome, darkroom. Must be fluent in following techniques: SDS-PAGE, DCC, CPG, Immunoblotting, and detection of radioactive bands by autoradiography. Thirty-seven hours per week; 9 a.m. to 4 p.m.; \$22,285 per year. Applicants send résumé to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605. Attention: Ms. Marie Ninneman. Reference #7362.** An employer paid ad.

### SUMMER FACULTY POSITIONS IN SLSTP, A NASA PROJECT

Four project counselor positions are open in the 1989 Space Life Sciences Training Program (SLSTP) to be held at the Kennedy Space Center, Florida. Project counselors will be involved in the implementation of the 6-week long program activities for undergraduate college students. An applicant must have a minimum of M.S. degree, preferably Ph.D. degree and some experience of teaching and research in life sciences and related fields. If interested, please send a letter of application, complete curriculum vitae, and three letters of recommendation before 31 December 1988:

**Program Director, SLSTP  
Florida A&M University  
College of Pharmacy  
and Pharmaceutical Sciences  
P.O. Box 367  
Tallahassee, FL 32307  
Telephone: 904-599-3636**

### CALIFORNIA STATE UNIVERSITY, HAYWARD

The Department of Biological Sciences invites applications for a full-time **TENURE-TRACK POSITION** at assistant professor level, subject to budgetary approval, beginning September 1989. Ph.D. required. Expected to teach undergraduate lecture and laboratory, major and non-major courses; to teach graduate courses and conduct seminars; to develop a productive, independently funded research program and to direct graduate students in M.S. degree program.

**TERRESTRIAL ANIMAL ECOLOGIST.** Teaching and research interests in population, community and ecosystem ecology with strong quantitative skills and field/laboratory applications. Active participation in environmental biology program is expected.

*CSUH seeks to create a stimulating atmosphere for its ethnically diverse faculty and student population. Women and minorities are especially encouraged to apply.* Interested individuals should send a copy of their curriculum vitae, a brief summary of their teaching and research goals, and arrange to have three letters of reference sent to: **Chair, Department of Biological Sciences, California State University, Hayward, Hayward, CA 94542.** To be assured of full consideration, applications should be received by 31 December 1988.

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

University of California, Santa Barbara. **TENURE-TRACK POSITION IN GEOGRAPHY-OCEANOGRAPHY**, available 1 July 1989. Salary and rank are dependent upon qualifications; however, preference will be given at the assistant professor level. The Geography Department seeks applicants with background in physical oceanography and/or air-sea interaction with an interest in remote sensing. Ph.D. normally required at time of appointment, substantial qualifications in marine research, and a strong commitment to teaching and research. Submit résumé and names of three references to: **Chair, Search Committee, Department of Geography, University of California, Santa Barbara, CA 93106.** This search will continue until filled; first consideration will be given to applications received before 15 January 1989. *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).*

## POSITIONS OPEN

**SENIOR RESEARCH INVESTIGATOR.** Establish and maintain a capability for research in molecular biology, recombinant DNA, and microbial genetics; to use these techniques to generate novel microbial strains for improved phenylalanine production and potential new products. Specifically, to make use of wide-ranging skills in protein engineering and special expertise with Gram-positive and thermophilic bacteria; instigate novel research. Ph.D. in genetics or microbiology required together with 1 year and 6 months of experience in the job offered or 1 year and 6 months of experience as a postdoctoral research associate or scientist. The required experience must have involved the conduct of research and development in the production of phenylalanine utilizing Gram-negative, Gram-positive, and thermophilic bacteria as well as protein engineering. Forty hours; Monday to Friday; 9 a.m. to 5 p.m., \$53,550 per year. Send résumé and Social Security number to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605. Attention: Mr. Robert S. Felton, Reference # V-IL 8618-F.** An employer paid ad.

**SENIOR RESEARCH INVESTIGATOR.** Establish and maintain a capability for research in molecular biology, recombinant DNA and microbial genetics; to use these techniques to generate novel microbial strains for improved phenylalanine production and potential new products. Specifically, to work principally on evaluation of genetically-engineered microorganisms in fermentations; design and implement a research program aimed at optimizing fermentation conditions and developing new fermentation products. Ph.D. in biochemistry or microbiology required together with 1 year and 6 months of experience in the job offered or 1 year and 6 months of experience as a postdoctoral research associate or scientist. The required experience must have involved the conduct of research and development in the production of phenylalanine by optimization and process research of fermentations for aromatic amino acid synthesis with recombinant/non-recombinant strains of *E. coli*. Forty hours; Monday to Friday; 9 a.m. to 5 p.m.; \$47,700 per year. Send résumé and Social Security number to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605. Attention: Mr. Robert S. Felton, Reference # V-IL 8620-F.** An employer paid ad.

### THE UNIVERSITY OF TULSA TWO TENURE-TRACK POSITIONS 1) MOLECULAR BIOLOGY/IMMUNOLOGY 2) DEVELOPMENTAL GENETICS

Two assistant/associate professor positions in The Faculty of Biological Science and The Mervin Bovaird Center for Studies in Molecular Biology and Biotechnology are available for fall 1989. Preferred areas of research: 1) molecular biology of the immune response and 2) animal developmental genetics; however, those in related disciplines are also encouraged to apply. Requirements: Ph.D., postdoctoral experience and a publication record indicative of the potential to establish and maintain an externally funded research program. Salary and rank will be commensurate with experience. Generous start-up funds and newly renovated laboratory space will be provided. All faculty are expected to teach both undergraduate and graduate students, and to maintain a record of excellence and productivity in scholarly research.

The department has a faculty of 16 and offers B.S., M.S., and Ph.D. degrees. Extramural funding in 1987 to 1988 totaled 2.7 million dollars. Facilities include state-of-the-art laboratories and equipment.

The University of Tulsa is a private, heavily endowed, comprehensive university with a strong commitment to teaching and research. The city of Tulsa is an economic and cultural center of 750,000 population, surrounded by lakes and located in the foothills of the Ozark Mountains. Interviews will commence 1 December 1988. Applicants and nominees should submit curriculum vitae, statement of research interests and three letters of reference to:

**Dr. Kenton S. Miller  
Search Committee Chair  
Faculty of Biological Science  
The University of Tulsa  
600 South College Avenue  
Tulsa, OK 74104**

*Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### TUMOR CELL GROWTH FACTOR GROUP

Postdoctoral positions available to study the roles of hormones, growth factors and new attachment proteins in tumor cell growth. Individuals sought for projects: (i) **Molecular Biologist** to clone and sequence cDNA of new attachment proteins and modified thyroid hormone and estrogen receptors. (ii) **Cell Biologist/Immunologist** to develop monoclonal antibodies to growth factor receptors for radioimmunotherapy and mechanism studies. (iii) **Biochemists** (two) to purify new serum proteins and receptors regulating estrogen and thyroid hormone dependent growth. Salary: \$23,000. Send curriculum vitae and names of three references to: **Dr. David A. Sirbasku, Professor, Department of Biochemistry and Molecular Biology, University of Texas Medical School, P.O. Box 20708, Houston, TX 77225.** An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.



### THE UNIVERSITY OF IOWA VICE PRESIDENT FOR RESEARCH

The Vice President for Research promotes and facilitates research and scholarship and fosters their excellence; strengthens relationships with public and private agencies that support research and other scholarly endeavors; advances the role of the University in economic development; develops research agreements; and formulates and implements policies regarding research, patents, copyrights, and intellectual property rights. The Vice President reports directly to the President.

The Vice President should have an established record of research accomplishment and the capacity to promote research and scholarship and foster their excellence in all areas of a comprehensive research university. Although administrative experience is a highly desirable qualification, it is not a prerequisite. Candidates must have the ability to communicate university policies relating to research to all of the University's constituencies, both internal and external. It is important that the Vice President have extensive experience and familiarity with funding agencies.

The Vice President is expected to have a Ph.D., or equivalent degree or achievement, and preferably also experience at a major research organization. *The President and the Search Committee are particularly eager to identify qualified women and minority candidates.*

The position will be available 1 July 1989. Nominations will be accepted until the position is filled. Screening will begin immediately. Please send nominations or applications to:

**Professor John F. Kennedy, Chair  
Search Committee  
Vice President for Research  
101 Jessup Hall  
The University of Iowa  
Iowa City, IA 52242**

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

### FOX CHASE CANCER CENTER VIROLOGY FACULTY POSITIONS

The basic science component of the Fox Chase Cancer Center is expanding its program in virology. Current programs include: **William Mason** (hepadna viruses), **Ann Marie Skalka** (retroviruses), and **John Taylor** (hepatitis, delta virus and retrovirus). The Search Committee invites applications from new and established investigators to set up independent research programs. All positions are tenured or in tenure-track. Please send curriculum vitae and a letter describing current scientific interest to: **Dr. John Taylor, Virology Search Committee, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** The Center is an Equal Opportunity Employer.



**THE UNIVERSITY OF ADELAIDE  
SOUTH AUSTRALIA**

invites applications from both women and men  
for appointment as:

**DIRECTOR  
OF THE WAITE AGRICULTURAL RESEARCH INSTITUTE**

(Ref: 1112) to succeed Professor J.P. Quirk A.O., F.T.S., F.A.A. who retires in 1989.

The Waite Agricultural Research Institute is the premier agricultural research institute in Australia. In addition to conducting research in agriculture and allied subjects, the Institute provides facilities for teaching in the degree of B.Ag.Sc. and has a strong postgraduate school which draws students from a wide range of countries.

The Director will be the research director and executive officer of the Institute.

The University seeks a person with a distinguished record of scientific achievement, outstanding leadership qualities and administrative ability of a high order.

The appointment as Director of the Institute is for an initial term of seven years and otherwise in accordance with the University Statute on the Waite Institute.

FURTHER INFORMATION about the duties of the position and the general conditions of appointment may be obtained from the Registrar at the University.

**SALARY** per annum: Professorial salary plus 25% (presently at AU\$76,938), plus other benefits.

APPLICATIONS, IN DUPLICATE, quoting reference number 1112 and giving full personal particulars (including whether candidates hold Australian permanent residency status), details of academic qualifications and names and addresses of three referees should reach **The Registrar at the University of Adelaide, GPO Box 498, Adelaide, South Australia, 5001, Telex UNIVAD AA 89141/Fax no. (618) 224 0464** not later than **16 December 1988**.

The University reserves the right to make enquiries of any person regarding any candidate's suitability for appointment, not to make an appointment or to appoint by invitation.

THE UNIVERSITY OF ADELAIDE IS AN EQUAL OPPORTUNITY EMPLOYER

**WOODS HOLE OCEANOGRAPHIC  
INSTITUTION  
POSTDOCTORAL FELLOWSHIPS**

**Ocean Science and Engineering**

Applications are invited from new or recent doctorates in science or engineering with interests in physical oceanography, meteorology, marine chemistry, marine geology and geophysics, biological oceanography, or oceanographic engineering. Recipients of awards are selected on a competitive basis, with primary emphasis placed on research promise.

**Marine Policy and Ocean Management**

Research fellowships are offered to individuals in the social sciences, law, the humanities, or natural sciences to apply their training to problems or issues that involve the use of the oceans. Presently research follows thematic areas such as Marine Science and Public Policy; Ocean Jurisdictions, Law of the Sea, and International Relations; Development and Management of Ocean Resources; and Areawide Planning and Management. Emphasis is placed on the economics of ocean space and on the role of science in governmental and industrial decision making. Topics of special current interest include marine biological diversity, the quality of marine habitats and marine reserves, and the impacts of sea-level change. Other research interests are also appropriate.

Fellowships are awarded for one year with a stipend of \$28,500 plus group health insurance and a modest research budget. Recipients are encouraged to pursue their own research interests independently or in association with resident staff. Completed applications must be received by January 15, 1989 for 1989-90 awards. Awards will be announced in March. Write for application forms to: Dean of Graduate Studies, P.O. Box S, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543

Equal Opportunity/Affirmative Action Institution

Damon Biotech, Inc., a leading biotechnology company engaged in developing and marketing biological products, is offering the following positions:

**SUPERVISOR OF LARGE SCALE  
CELL CULTURE**

Supervise large scale mammalian cell culture department in GMP Pilot Lab. Experience in biochemical engineering, cell biology, tissue culture and with GMPs for manufacturing of biological products.

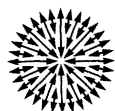
**GROUP LEADER,  
MEDIA PREPARATION**

Responsible for supervising large scale media and solutions group in a GMP Pilot Lab. Experience with GMP requirements for solution preparation and ability to supervise diverse activities and support manufacturing.

**DIRECTOR OF QUALITY  
CONTROL AND QUALITY  
ASSURANCE**

Manage all aspects of QC/QA for a biological production group including testing, GMP compliance, validation, product release, and FDA inspections. Position requires 5 to 10 years experience with a pharmaceutical or biological manufacturer in the QC/QA function.

Interested applicants should send a resume to Damon Biotech, Inc., Human Resources, 119 Fourth Avenue, Needham Heights MA 02194. We are an equal opportunity employer m/f/h/v.



**DAMON**Biotech

**TUMOR  
METASTASIS  
RESEARCH**

We have an immediate need for a Research Biologist to become part of our innovative tumor biology group. This position provides an opportunity to do fundamental research on the biochemical and cell biological basis of tumor metastases with an ultimate goal to identify novel antimetastatic agents. The applicant should have a Ph.D. in biological sciences with 1-2 years of post doctoral experience in tumor metastasis research. The ability of the applicant to work independently as demonstrated by publication records and to work well as part of a group is essential.

Merrell Dow Research Institute is located in suburban Cincinnati. We offer excellent compensation, comprehensive benefits and relocation assistance. If you are interested in fundamental research and would like to work for a rapidly growing research institute, please send your curriculum vitae with names of three references to:

**Merrell Dow**

Personnel Services Manager  
Refer to Job Code SPS

**MERRELL DOW  
RESEARCH INSTITUTE**  
2110 East Galbraith Road  
Cincinnati, OH 45215  
Equal Opportunity Employer M/F/H/V

## POSITIONS OPEN

### VIROLOGIST DIVISION OF BIOLOGY AND MEDICINE BROWN UNIVERSITY

Applications are invited for a full-time, tenure-track position in animal virology at the rank of assistant professor in the Section of Molecular, Cell and Developmental Biology commencing in the fall of 1989. We seek an individual with at least 2 years of postdoctoral training, who will establish an active, independent research program and will interact effectively with other members of the Graduate Program in Molecular Biology, Cell Biology and Biochemistry. While we are interested in individuals working with retroviruses, final selection will be for candidates of outstanding ability regardless of the system studied. The successful candidate will participate in teaching virology to medical, graduate and undergraduate students. Send curriculum vitae, recent reprints, summary of research interests, and have three letters of recommendation forwarded no later than 15 December 1988 to: **Dr. Peter R. Shank, Division of Biology and Medicine, Brown University, Providence, RI 02912. FAX: 401-863-3700. Brown University is an Equal Opportunity/Affirmative Action Employer.**

Viagene, Inc. is an expanding biopharmaceutical company developing novel drugs and diagnostics based on gene delivery. We are seeking a **VIROLOGIST, IMMUNOLOGIST** for a senior project management position with expertise in growing and characterizing retroviruses. Candidates should have a Ph.D., M.D. or equivalent plus several years of research and project management experience. This is a challenging position in a dynamic environment with good opportunity for growth and advancement. Please send résumé/curriculum vitae with three references to:

**Douglas Jolly, Ph.D.**  
Director of Research  
Viagene, Inc.  
11075 Roselle Street  
San Diego, CA 92121

## FELLOWSHIPS

**GRADUATE FELLOWSHIPS** available from the American Psychological Association's Minority Fellowship Program/Neuroscience. The Program aims to increase the number of racial and ethnic minorities who complete the doctorate in the neuroscience field. The Program accepts applications each fall (deadline 15 January) from students who plan to pursue the Ph.D. at any full-time doctoral program listed in *Neuroscience Training Programs in North America*. This federally funded program provides awards for up to 3 years contingent on satisfactory academic progress in the doctoral program. For more information, write:

**The American Psychological Association  
Minority Fellowship Program/Neuroscience  
1200 17th Street, N.W.  
Washington, DC 20036  
Telephone: 202-955-7761**

**POSTDOCTORAL FELLOWSHIPS IN ENVIRONMENTAL TOXICOLOGY AND PATHOLOGY** are available at Northwestern University Medical School (NIH training grant). The preceptors and their research areas are: **Toshio Narahashi** (Mechanisms of action of insecticides on neuronal ion channels by patch clamp); **Philip Iannaccone** (Effects of carcinogens on mammalian embryo); **Michael Morin** (Antineoplastic agents: Signal transduction and therapeutic application); **Ryoichi Oyasu** (Mechanisms of urinary bladder cancer); **M. Sambasiva Rao** (Pancreatic carcinoma); **Janardan K. Reddy** (Pancreatic carcinoma and liver peroxisome proliferators); **Dante G. Scarpelli** (Mechanisms of pancreatic carcinoma); **Jerome Seidenfeld** (Mechanisms of pancreatic carcinoma); **Jerome Seidenfeld** (Polyamines: Biosynthesis inhibitors and role in growth regulation); **Dennis Solt** (Carcinogen modification of epithelial cells); **Chau H. Wu** (Action of environmental toxins on nerve membranes by patch clamp). *The applicants must be U.S. citizens or permanent residents.* Send a letter stating a specific area of interest, curriculum vitae, and three reference letters to: **Dr. Toshio Narahashi, Program Director, Department of Pharmacology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611. Telephone: 312-908-8284. An Affirmative Action/Equal Opportunity Employer.**

## FELLOWSHIPS

**FELLOWSHIPS** are available for pre- and postdoctoral study in the **PHARMACOLOGY GRADUATE PROGRAM** of the Grace Cancer Drug Center, Roswell Park Memorial Institute, a Graduate Division of the State University of New York at Buffalo. Stipends and tuition waivers are available for eligible candidates. The program offers diversified training related to the pharmacological, molecular and biochemical basis for drug action with emphasis on cancer therapeutics. Specific areas include: cellular differentiation and growth regulation; cellular ultrastructure; oncogenes; drug resistance; immunopharmacology and metabolic regulators; inhibition or alteration of nucleic acid; protein and membrane components; pharmacokinetics and drug metabolism; mechanisms of carcinogenesis; genetic basis for drug action; preclinical and clinical pharmacology; medicinal chemistry and toxicology. *U.S. citizens and permanent residents may send applications to:*

**E. Mihich, M.D., Chairman  
Graduate Pharmacology Program  
Roswell Park Memorial Institute  
Grace Cancer Drug Center  
Elm and Carlton Streets  
Buffalo, NY 14263**

Please include curriculum vitae and indicate two references. *An Equal Opportunity/Affirmative Action Employer.*

## ASSISTANTSHIPS

The newly formed Institute for Biotechnology at Texas Tech University announces the creation of **RESEARCH ASSISTANTSHIPS** for graduate study leading to the Ph.D. degree in the areas of biochemistry, cell biology, genetics, microbiology, or molecular biology. Beginning in the spring of 1989, a total of five assistantships in the amount of \$12,000 per year are being offered by the Departments of Biological Sciences, Chemistry and Biochemistry, and Agronomy, Horticulture and Entomology. Interested applicants should apply for admission into one of the three departments before 1 December 1988. Those students seeking admission for spring 1989 are encouraged to apply as soon as possible. For more information, contact: **Dr. David B. Knaff, Director, Institute for Biotechnology, P.O. Box 4260, Texas Tech University, Lubbock, TX 79409.**

## GRANTS

### PARKINSON RESEARCH GRANTS OUTSIDE UNIVERSITY OF MIAMI 1 JUNE 1989—31 MAY 1990

The National Parkinson Foundation, of Miami, Florida, invites the submission of grant proposals for Parkinson research. A total of \$200,000 will be made available to support basic bench research on Parkinson's Disease. *None of the monies are to be utilized for administrative overhead.* The award for a single grant will not exceed \$40,000. The application deadline is 1 February 1989; grant starting date will be 1 June 1989. It is required that proposed studies specifically focus on mechanisms involved in the disease process and that they have the potential of finding the cause and prevention of Parkinson's Disease. Proposals will be assessed by the National Parkinson Foundation Scientific Advisory Board. To obtain submission information, please write to:

**National Parkinson Foundation, Inc.  
Research Grants  
1501 N. W. 9th Avenue  
Miami, FL 33136**

## PROGRAM

### CAREER CHANGE OPPORTUNITY

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

## RESEARCH GRANTS

### RESEARCH INQUIRIES INVITED

The Smokeless Tobacco Research Council, Inc. invites inquiries regarding grant applications.

The Council sponsors independent research into questions of smokeless tobacco and health. Research support is through a program of grants-in-aid.

Grant applications are evaluated by the Scientific Advisory Board to the Council and will be judged solely on the basis of scientific merit and relevance.

Deadlines for submission of grant applications are **31 December** for 1 July funding and **30 June** for 1 January funding. Address inquiries or requests for applications to: **The Smokeless Tobacco Research Council, Inc., 420 Lexington Avenue, New York, NY 10170. Telephone: 212-697-3485.**

## TRAINING PROGRAM

### PREDOCTORAL AND POSTDOCTORAL TRAINING IN HUMAN CANCER BIOLOGY AT THE UNIVERSITY OF WISCONSIN

Applications are invited for graduate study toward the Ph.D. degree and for postdoctoral Traineeships in Human Cancer Biology. Financial assistance will be awarded on a competitive basis. *Postdoctoral Traineeships are restricted to U.S. citizens and those with permanent U.S. residence visas.*

Research areas include experimental pharmacology and cancer endocrinology, biological response modifiers and cancer immunology, biology and biochemistry of carcinogenesis and tumor promotion, and radiation biology. The Department of Human Oncology is the core department of the UWCCC, an NCI-designated comprehensive cancer center.

For information, write:

**Chairman, Graduate Steering Committee  
Department of Human Oncology  
K4/330 UW Clinical Cancer Center  
600 Highland Avenue  
Madison, WI 53792**

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

Opportunities for scientific **TRAINING** in trauma-related subjects with a multidisciplinary group, funded by NIH training grant. Tenure 2 years, possible extension to three. U.S. citizenship, 3 years of surgical training, and commitment to trauma research required. Limited number of non-surgeon Ph.D.'s. Emphasis is on acquisition of scientific skills. Write: **Trauma Training, University of California Medical Center, 839 HSE, San Francisco, CA 94143-0522. UC is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.**

## 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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